# The World's Work

AN ILLUSTRATED MAGAZINE OF
NATIONAL EFFICIENCY AND SOCIAL PROGRESS

**Edited by Henry Norman, M.P.**

VOL. II.

JUNE TO NOVEMBER 1903

LONDON
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21 BEDFORD STREET, W.C.

Beresford

HIS EXCELLENCY THE HON. JOSEPH CHOATE
UNITED STATES AMBASSADOR TO GREAT BRITAIN
*Specially taken for* THE WORLD'S WORK

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## The March of Events

### A QUESTION FOR THE PEOPLE

OUR system of party Government is based upon a doctrine known as "collective responsibility." Like all the parts of our constitutional practice this is not to be found in any code or law, but rests upon inviolable tradition. It means that the Government in power always speaks with one voice, and always shares responsibility for the utterances or actions of its individual members. When a Cabinet Minister speaks upon policy, he speaks for all his colleagues; if Parliament decides against him upon a matter of policy, all his colleagues resign with him. Without this rule, a Ministry would merely be a collection of individual and often warring atoms. To depart from it would be to throw our whole system of Parliamentary Government into confusion.

This is apparently the position of Mr. Balfour's Ministry. After the Prime Minister, Mr. Chamberlain is, of course, the most important and influential member of the Cabinet. He has now announced a line of policy, in view of the next General Election, to which several of his colleagues, and certainly a large proportion of his party, have always been opposed, and a policy, moreover, which runs counter to British methods strenuously adhered to for more than half a century. Namely, a policy of preferential trade within the Empire. Addressing his constituents on May 15, he advocated this in set terms. We are to impose duties upon goods of all kinds coming to us from foreign nations in competition with the same goods from our Colonies, when these Colonies admit our goods into their markets on better terms than they admit non-British goods. That is the scheme. In other words, we are to be ready to penalise three-fourths of our trade to benefit one-fourth; we are to raise the price of the necessaries of life to our forty million people at home, in order to benefit the comparatively small number of our people in the Colonies. Thus, for the purposes of "consolidating the Empire," we are to place a fresh burden upon its heart.

Time fails at this moment to discuss Mr. Chamberlain's proposal upon its merits: there will be plenty of time for this later. The point to which we desire to draw attention now is in connection with the doctrine of "collective responsibility." Does Mr. Chamberlain speak for the Government? Or is he forcing their hand? Or is he, as he did in Mr. Gladstone's Government of the early eighties, beginning a process of disintegrating his own party by presenting an "unauthorised programme"? This is a question of the utmost importance. If Mr. Chamberlain is speaking for himself, that is one thing. If he is speaking for Mr. Balfour and the Government, that is another, and a vastly different thing. If Mr. Balfour proposes to throw over Free Trade, the country is entitled to know

it. Of course, Mr. Chamberlain took great care to announce himself a Free Trader. His hearers knew better. We take this from the *Times'* report of his speech:

"We are all free traders. (Cries of 'No, no,' and laughter.) Well, I am. (Loud laughter.)"

The loud laughter of Birmingham expresses the view of the country. A preferential trader and a free trader are different people. Mr. Chamberlain tried to defend himself on this point by a reference to Cobden and Bright. He said:

"This I can say. Mr. Cobden did not hesitate to make a treaty of preference and reciprocity with France, and Mr. Bright did not hesitate to approve his action; and I cannot believe if they had been present among us now and known what this new situation was, I cannot believe that they would have hesitated to make a treaty of preference and reciprocity with our own children."

He is, as so often on matters of historical fact, hopelessly inaccurate. As Mr. Leonard Courtney has pointed out, the French treaty was not one of preference and reciprocity. The reduction of duties we made under the treaty was made to all the world, and this extension of the reduction to all nations was stipulated for in the making of the treaty. Indeed, Mr. Gladstone said, "Our treaty with France was, in fact, a treaty with the world."

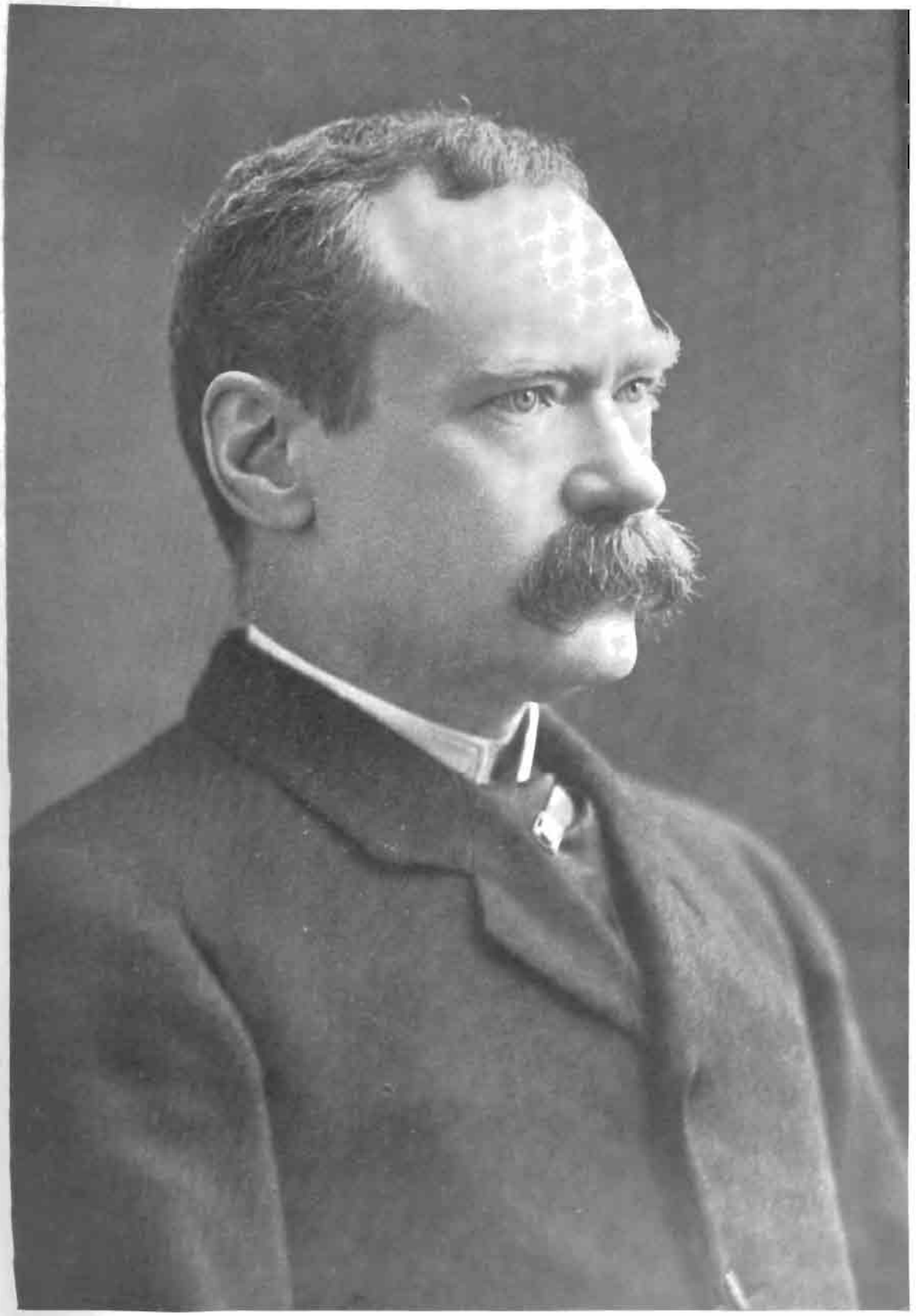
We do not desire here, however, to discuss the rights or wrongs of the new departure. What we desire to emphasise is the absolute right of the people, under our system of Government, to know whether Mr. Chamberlain spoke for himself, a few self-styled "fair traders," and a little group of noisy protectionists, or whether he was authorised to announce a tremendous change of national policy on the part of Mr. Balfour and the Unionist Government. For the present position contains one serious and pressing danger to the Empire, to mention only one. The Colonial Secretary has raised in the Colonies hopes of a vital change of British policy in their interests. These hopes will grow from day to day. If, at last, they prove to have been delusions, the reaction will not be against Mr. Chamberlain, but against the mother country. Thus the Birmingham speech, unless it is promptly repudiated, may deal a dangerous blow against Imperial unity.

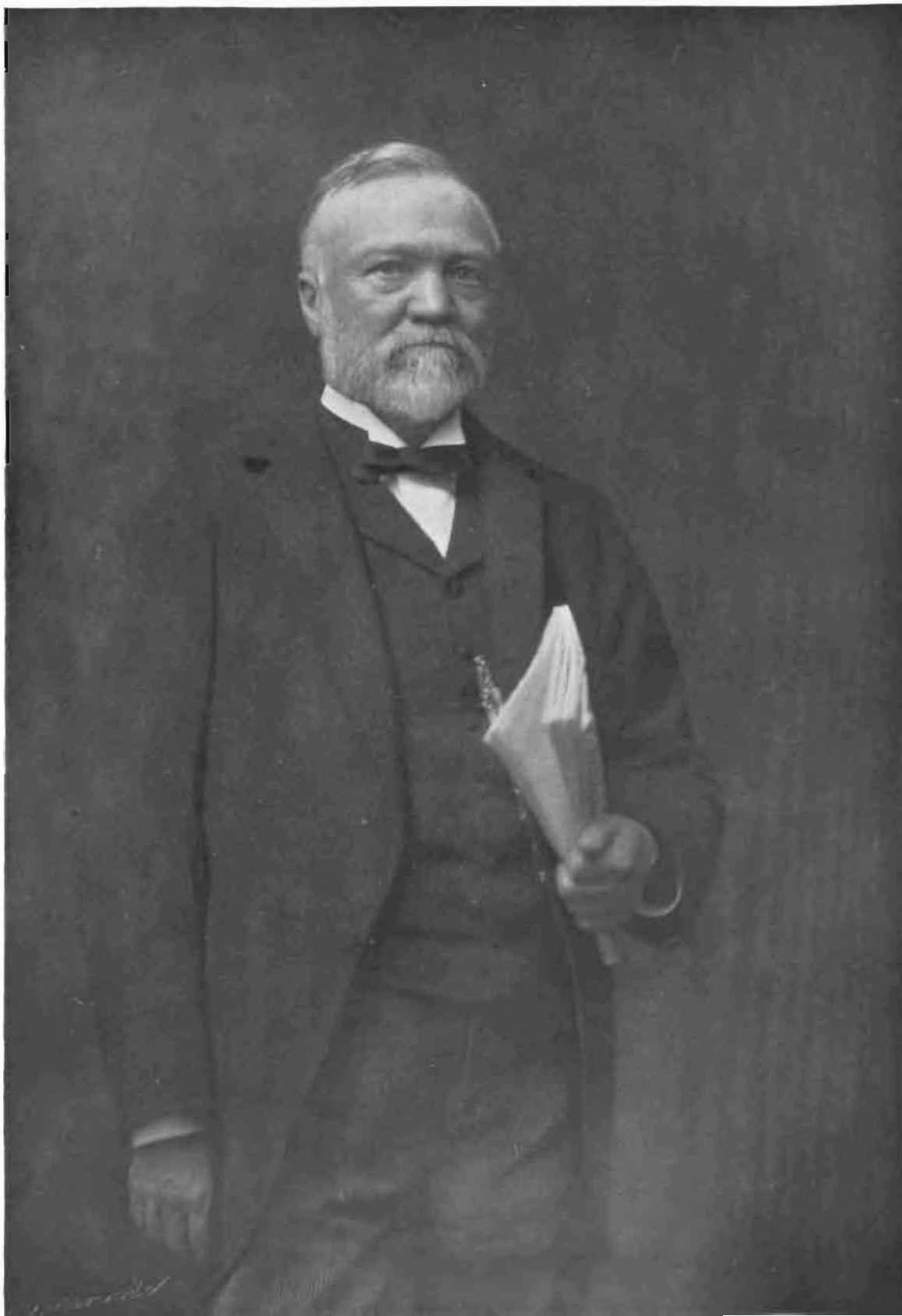
## THE BUDGET AND FINANCE

EXCEPT in one respect Mr. Ritchie's Budget had nothing exciting about it. By having borrowed £159,000,000; by increased returns from certain taxes; by a sanguine estimate of the prospects of the next financial year (Customs returns fell three-quarters of a million, but are estimated to bring in two millions more next year, and Excise, which fell £600,000, is estimated at the same figure as before), Mr. Ritchie found himself in the happy position of having the enormous surplus of £10,816,000. He disposed of £8,500,000 by taking fourpence off the Income Tax, a penny more than anybody had ventured to hope. The surprise in the packet was the other item of relief, namely, the remission of the corn duty, which absorbed the remaining two millions.

Certain other figures should be borne in mind by every taxpayer and voter. The total cost of the South African War has been just under £202,000,000, to which must be added £6,000,000 for the cost of the military operations in China. The total net debt left by war, after deducting £34,000,000 to be received from the Transvaal, is £125,000,000. In four years the national debt has increased from £635,000,000 to nearly £800,000,000. In nine years our peace expenditure has increased by over £40,000,000—that is, an increase of £1 a head for every man, woman, and child in the United Kingdom. The amount raised from taxes alone last year reached the record figure of £139,700,000. The revenue was also record, namely, £201,000,000, but these colossal figures of expenditure and debt are calculated to alarm alike the fiscal expert and the man in the street. They emphasise once more the urgent necessity of reducing our expenditure upon the Army, since this is the only point at which considerable economy is possible, and since economy can here be practised with a positive increase of national efficiency.

The remission of the corn duty was, of course, received by Liberals with deep satisfaction. Every argument they employed last year in opposing it was reproduced by Mr. Ritchie in abandoning it. It "lent itself to misrepresentation," he rather weakly said. "You cannot settle these questions," said Mr. Balfour to the great protesting deputation which waited upon him, "apart from sentiments and feelings which are of historic origin." Such arguments are wholly beside the point. They were just as obvious, and had just as much or as little validity, last year as this. The remission of the corn duty is nothing else whatever but an electioneering move. The duty has been remitted, as one Liberal speaker said, to "stop a rot." The Government had discovered that the country would not stand it. Therefore,





all Sir Michael Hicks-Beach's fine phrases about broadening the basis of taxation and adding a new permanent source of income, were flung to the winds. Even as a piece of politics, however, it is doubtful if the Government have scored. They suffered greatly from imposing the corn duty; now they are suffering from a great section of their supporters from remitting it. And indeed it must be admitted that the millers, who have during the year erected great mills in the confidence that the tax was permanent, have been mercilessly tricked. "If that is to be the practice of the Conservative Party," said Mr. Chaplin, "or of Conservative Governments in the future, I can only say, although I have fought and done my best for them throughout the whole of a very long career, that it is a party to which I begin to think I shall be ashamed to belong." The simple fact is, that the Government yielded to pressure in imposing the tax, and have yielded to another pressure in remitting it. And they have naturally done themselves all the harm possible in the minds both of opponents and supporters of the tax. It is the latest example of the want of backbone which characterises them.

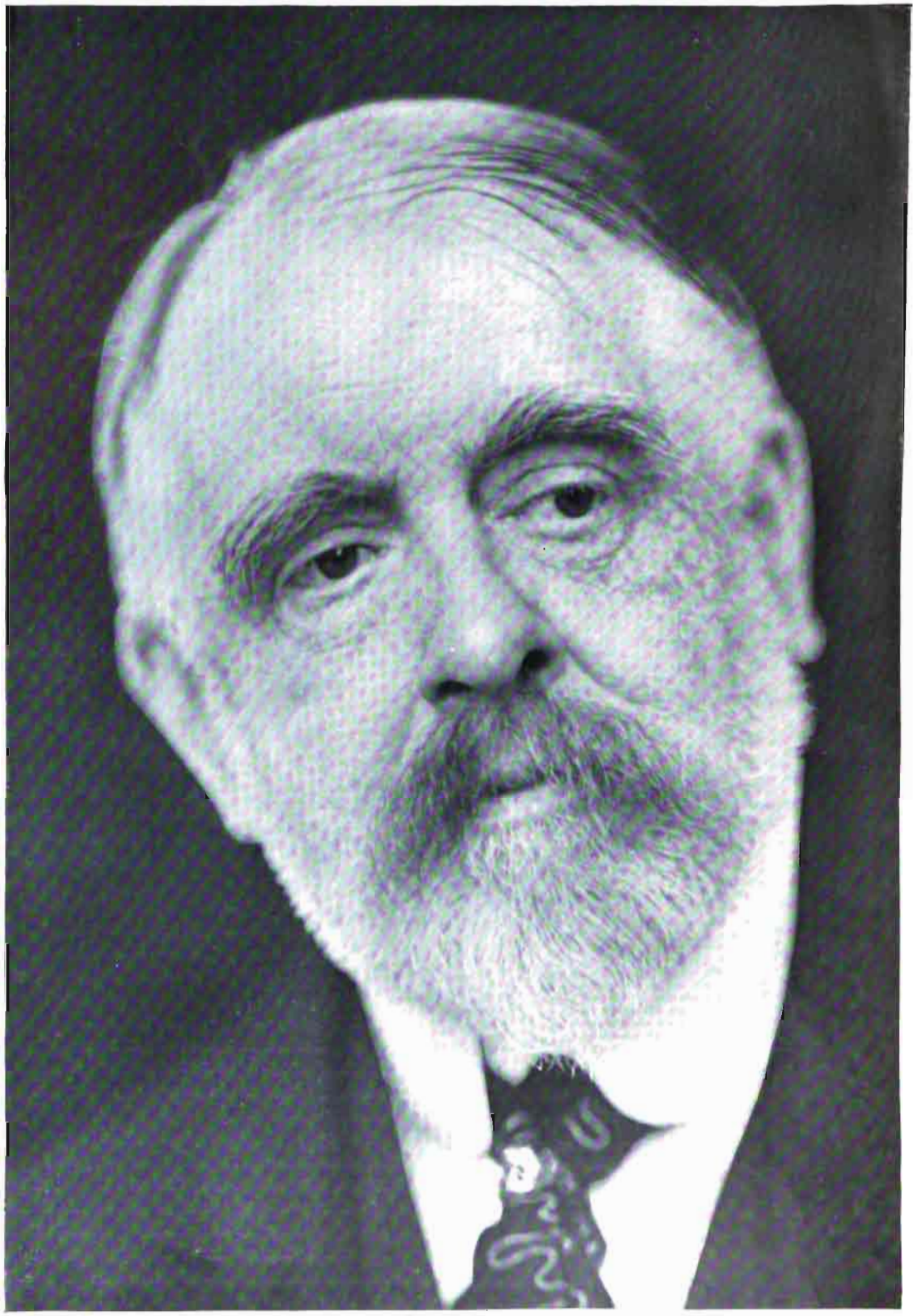
The other financial sensation of the month has been the colossal success of the Transvaal Guaranteed Loan of £35,000,000, which was applied for nearly forty times over; the exact amount of applications being for £1,174,000,000, applicants receiving only 2.6 per cent. of the amounts applied for. No fewer than one hundred and forty-five applications were made for an allotment of one million, and eighty-nine for allotments between one and five millions; four applicants applied for between twenty and thirty millions each; and one applied for thirty millions. Needless to say a large majority of applicants applied in order to sell at the profit of about 1½ per cent., which attached at once to a British guaranteed 3 per cent. loan, therefore these inflated figures are very far from representing a desire for the genuine investment of so much capital. One serious fact in this connection is that British credit is in such a position that it is necessary to guarantee 3 per cent. in order to float a loan at par; and second, that for the sake of the Transvaal, the Government should adopt a course which, with trifling exceptions, it has invariably refused to take for other parts of the Empire. We have never guaranteed an Indian loan, an Australian loan, or (with the unimportant exceptions referred to) a Canadian loan. The first result of the war which was to add to the Empire a country of vast resources, has been that we have had to do for that country what we have always refused to do for our great dependencies and the Colonies of our own race and blood.

## JOHN BULL'S HUNDRED MILLIONS

MR. WYNDHAM duly introduced his Irish Land Bill, and it was read a second time in the House of Commons by the almost unparalleled majority of 417. Everybody has naturally jumped to the conclusion that it has no enemies to fear, that it is destined to be a brilliant success of statesmanship from the start, and that Unionists, Liberals, and Nationalists will unite to carry it to final victory. This happy ending is not quite so certain as all that. A few serious considerations have escaped general attention, and the situation is one of peculiar complexity and interest.

At first sight it might seem unthinkable that any part of the United Kingdom should decline a loan of £100,000,000 and a grant of £12,000,000. In reality, this is quite possible. The huge majority of the Government can do most things, but it will not venture to thrust this colossal sum into unwilling Irish pockets. But, it will be objected, the Irish will take what they can get, and then begin to agitate for more. Irish members, however, will not cast votes likely to rob them of the confidence of Irish tenants, and unless this Bill be greatly modified, this would be the effect of their support of it. All depends upon the retention or modification of the fixed maximum reduction of the rent, involving as this does a fixed minimum price to be paid for each holding. The average price of land under existing Acts has been about seventeen years' purchase—the lowest price having been six years' purchase and the highest forty-five years'. The Bill proposes to fix this at twenty-two years. This is a compulsory raising of price to the poorest tenants in favour of the landlords, preventing the class most in need of aid from receiving any benefit whatever under the Bill. That is, it will create immediately a large class of bitterly disappointed tenants—men irritated almost beyond endurance by discovering that the longed-for and confidently expected relief at last turns out to be wholly beyond their reach. It may now, perhaps, be realised that Irish members will hesitate before making themselves parties to this deception.

From the point of view of the British taxpayer, this artificial inflation of Irish land-



MR. F. CARRUTHERS GOULD

THE FAMOUS CARICATURIST OF THE "WESTMINSTER GAZETTE," WHO DESCRIBES HIS ART ON PAGE 18

*A photograph specially taken for* THE WORLD'S WORK

values is equally dangerous. There is but one security for the repayment of John Bull's millions—ability on the part of the borrowers to make ends meet. If any large number of Irish tenants buy at a price so high that they cannot get enough out of the land to pay the annual instalments, the hundred million sovereigns might as well be dropped into the Irish Channel. Therefore, when the Irish members are declaiming against this part of the Bill, they are in reality pleading for John Bull's pocket against the confiscatory legislation of the Prime Minister and Mr. Wyndham. This vital fact should not be lost sight of by the English taxpayer. At present it is understood that the Government have determined to stand fast for their minimum price. If they do not change their minds, Irish members may vote against the Bill. If the Irish members do so, Liberal members will follow suit, realising that it would be the height of folly to force through Parliament a land purchase Bill against which all political Ireland would at once take up arms. Then the Government would hardly be able to escape withdrawing their Bill, and if they do this, their political credit would suffer such a blow that they could hardly with decency retain office. If a Liberal Government came in, it would introduce an Irish Land Bill as Mr. Wyndham's Bill was before the Cabinet struck out of it the clauses entrusting the collection and retention of £20,000,000 to Irish local authorities—the only real basis of ultimate security. In view of all this, it must be admitted, as we said at first, that the situation possesses unusual interest. The real author of the details of the Irish Land Bill, *in its original form*, was Sir Antony MacDonnell, the distinguished Indian civil servant who is now Under-Secretary to the Lord-Lieutenant of Ireland. His views upon the Irish question may be inferred from the fact that his appointment coincided with the Government's change of Irish policy. His influence is destined to be even greater in the future than at present, and therefore our readers will doubtless be glad to see the portrait of him we present this month.

## THE AMERICAN AMBASSADOR

THE celebration of the completion of Mr. Choate's first term as Ambassador from the United States to the Court of St. James is noteworthy in several respects. The American Embassy in London has been so carefully disassociated from the conditions prevailing in American diplomacy elsewhere that we are apt to forget the peculiarities of that service. The United States is practically the only country which treats its diplomatists as it does its civil servants, and refuses them anything like a life-tenure of office. A minister or an ambassador is appointed for a term of four years, and must be reappointed at the end of that time if he is to remain in the service. Happily there is in this particular case every chance of the continuation in office of one who has worthily taken up a difficult succession. And, in the event of Mr. Roosevelt's very probable re-election, we are hopeful of having Mr. Choate with us for some time to come. For however little doubt there may be of acceptable representation for the future, judging it from the past, one is always inclined to cling to present good fortune.

When it was announced to Great Britain four years ago that the well-known American advocate, Joseph Hodges Choate, had been appointed to succeed John Hay, Englishmen who had the slightest knowledge of life in the United States saw at once that the continuity of fit selection, which has had no exception in this office, was still in force. For, with a natural pride, the United States has from the beginning of independent relations seemed determined to send the mother country the best it could produce in the way of statesmen and gentlemen. With no thought of offending a great democracy, one may perhaps be permitted to call attention to the fact that these credentials have more often than otherwise been held by men of the finest flower of American gentility, by men who were seldom or never their own grandfathers. The sons and grandsons of distinguished men have so often served their country here that it would require a strong man indeed to over-ride the traditions now surrounding this important post. And no one who knows the rough chance which prevails in American diplomatic representation at other capitals will fail to appreciate the strength of this unwritten law.

There is no office in the whole American Government which has so often been held by future presidents, their sons and grandsons. In the absence of these, the post has been filled by men of a third and fourth generation of families as great as American conditions permit. The mere names of Phelps, Lincoln, Bayard, and Choate make of themselves a sort of American "Debrett," even if one of them draws glory enough from his father to suffice for twenty generations of ancestry. The name of Rufus Choate is a household word in America, and

is scarcely less known wherever English law prevails. And it was a pleasing variation to the student of chance and circumstance to see the Law come in where lately Literature had held a major influence. Fortunately, the office has been almost wholly divorced from certain unworthy aspects of practical politics in the United States. Mr. Choate has always been the opponent of rings and bosses, and his chief connection with political life at home has been in contests, not always successful, for their destruction. He will, perhaps, always be best known for the share he had in the overthrow of Boss Tweed, who misruled the city of New York for so long. But Boss Platt, the autocrat of the State of New York and a member of Mr. Choate's own party, still flourishes in spite of all efforts which have been made to dethrone him. The men who have represented their country here have never shone as politicians. When one says rather that a man has reached the very foremost place among practitioners at the American Bar, one tells a life story of success which does not need much amplification. And further, when a man can look back upon a successful term as the representative of the sovereign strength and dignity of the United States of America in London, Fortune holds few favours in reserve.

The very intimacy between the two peoples, the fact that we look upon Americans as so nearly of us, makes the position like one of a family authority, notoriously more difficult than an intermediary between strangers. Aside from this, it is exacting enough ordinarily for an ambassador to meet the demands of foreign society. When to these is added, as always in London, a host of his own exigent country-people, the situation requires all the tact, the bravery, even, of high ability. Mr. Choate has risen higher than the hopes and desires alike of those who sent him, and of those who were so happy to receive. Greater praise than this is impossible.

## THE CONDITION OF INDUSTRIAL GERMANY

ACCORDING to the latest statistics available it seems that German trade and industry showed hopeful signs of recuperation and consolidation in 1902, after the disastrous year that preceded it. The shock given to credit by the failure in 1901 of the Leipziger Bank and many other banks and industrial institutions has in a sense passed away, and there were last year practically no failures of importance. With a good harvest and high prices for cattle, agricultural interests enjoyed a good year and their prosperity did much to raise the general average of conditions. On the other hand, however, only a few industries seem to have had a profitable year. The woollen branches of the textile trade seem to make the best balance-sheet, but curiously enough the cotton branch of the same industry was very much depressed. The building trade and its allied small manufacturers seem to have profited from a tendency to invest money in real estate and mortgages thereon. But mines and collieries were very dull, and this led to a similar depression in machine-making and allied work. By far the most unhappy showing is that made by the German electrical industry, only those works which were cautious during the boom of 1900 being able to keep going at all. Others had so enlarged their works and increased their expenses that only a volume of trade out of the question could have maintained them.

This is to us a not unsatisfactory "other side of the story," in so far as it has to do with supremacy in electrical industry. For the piper must be paid in the world of trade as elsewhere, and its much-vaunted electrical fame has cost the Fatherland dearly. Large numbers of employees in electrical industries remained out of employment last year, for there was little done in the construction of central distributing-stations or street railways. Even now there remains a want of proportion between production and demand, and as long as this continues there is little hope for a rise in prices. This industry is now moving on the usual lines of over-production, a general consolidation of big firms and extinction of little ones.

All these facts (but not these conclusions) are from a recent important report sent from Berlin by Mr. Consul-General Schwabach. Looking over the tables there given of the condition of various trading companies, the average dividends undoubtedly were lower by one or two per cent. than in 1901, but this is nothing like the decline following the abnormally successful year of 1900. Judged by dividends the porcelain and glass industry showed an appreciable advance, but a sharp retrogression was felt in the earning-power of mines and collieries, and a still greater diminution in the profits of the sugar industry. The dividends from breweries, distilleries,

and malting works fell off more than 1 per cent., but those from the textile trade went up nearly 2 per cent.; that is, they averaged a payment of 2.91 per cent. in 1901, and 4.69 per cent. in 1902. The metal trade showed a trifling rise in its profits (0.07 per cent.), but in machine-making, as in electrical works, the earnings have fallen about 2 per cent. The cement trade suffered from over-production and underselling, and earned nearly 2 per cent. less on the money invested. In the paper trade dividends sank more than 2 per cent., while the grinding-mills have steadily declined from 5.29 per cent. in 1900 to 1.47 per cent. in 1902. Money was easy during the whole of the year, the discount of the Reichsbank, running nearly parallel with that of the Bank of England, ranging between 3 and 4 per cent. But it is easy to see how general want of employment and lower wages in the larger number of industries have had their usual consequence in the lessened purchasing-power of the great mass of the population, and how this has worked unfavourably on the whole markets.

Several curious facts appear in the tables of exports and imports for the year in question. The marked increase in exports during a very bad year has the same striking significance often seen from a study of similar tables of trade from other countries. A general flatness of the market leads always to a big export trade, in many cases unremunerative, to say the least. This is seen particularly in the great increase in the export of German iron at a time when the trade at home was suffering heavily. German works have obviously been ready to sacrifice their profits, and to export much iron at an actual loss in order to limit as little as possible home production. America stood ready to reap all the benefit of this sacrifice. Another thing worth notice, in view of the recent threat of a tariff war, is that Canada led all British colonies in trade with Germany in 1902, while Australia, because of the drought, fell far behind.

## RACE SUICIDE

THE recent publication of official returns showing the surprising situation in regard to the population of Australia brings home to the British people the question of depopulation which has so often excited alarm in France, and which, for another reason, has recently attracted much attention in the United States. That a young British colony, of all places, should show a complete lack of increase in population is a matter worthy of the most serious inquiry. Then again the report of the statistical officer of the London County Council, published just as this magazine goes to press, shows that the London birth-rate for 1901 was the lowest on record. The most noticeable fact brought out in these returns is the great decrease in the proportion of children; at the periods 0 to 5, 5 to 10, and 10 to 15 years, the proportion in 1901 is less than in any census since 1861. That this is not caused by any epidemic is shown by the fact that the death-rate for 1901 shares with the birth-rate an unprecedented decrease. Therefore London too is concerned in the subject. In other countries similar situations have led to such diverse speculations as to cause, and such ridiculous suggestions as to remedies, that this side of the matter may be left to more competent judges. In France the proposals to make bachelors pay for the luxury of single blessedness, and to decrease a man's taxation in proportion to the number of children he has, are designed to stay the depopulation of the Republic. The next step along this line would be Governmental purses for bridegrooms, dowers for brides and prizes for babies. But when a State has thus to purchase its population, Statehood must in the end become an expensive luxury. It has always been supposed that the only general explanation possible of such a condition was the decline of a race, for races, like men, have their youth, their vigour, their old age; and the surest sign of the senility of a race has usually been thought to be lack of increase in the population.

There must be, therefore, some other and temporary explanation of the situation in Australia. In the United States it has been no question of non-increase in the population which has brought the question up, for the population in that country goes forward by leaps and bounds quite aside from what it gains by immigration. But it is said to be shown in recent census returns that immigrants, or the children of immigrants, were much more prolific than the people whose parents were American born. In fact, certain scientific men have deduced from the census reports of 1900 the fact that the American-born women are more sterile than those of any nation which publishes statistics, except France. This fact was further brought to notice by two American ladies, Van Vorst by name, who

took positions as factory girls in all parts of their country, and who in the book resulting, *The Woman who Toils*, laid particular stress on the sterility among factory women and working women generally. This book called forth a letter from the many-sided President Roosevelt, so characteristically virile, and advocating in such striking language virtues our common race must never lose sight of, as to deserve wide reading in this country. We therefore reproduce the greater part of it, as it has only been quoted here in brief extracts. President Roosevelt wrote as follows:

"What is fundamentally infinitely more important than any other question in this country is the question of race suicide, complete or partial. An easy good-natured kindliness and a desire to be 'independent'—that is, to live one's life purely according to one's own desires—are in no sense a substitute for the fundamental virtues, for the practice of the strong racial qualities without which there can be no strong races—the qualities of courage and resolution in both men and women, of scorn of what is mean and base and selfish, of eager desire to work or fight or suffer as the case may be, provided the end to be gained is great enough, and the contemptuous putting aside of mere ease, mere rapid pleasure, mere avoidance of toil and worry. I do not know whether I most pity or most despise the foolish and selfish man or woman who does not understand that the only things really worth having in life are those the acquirement of which normally means cost and effort. If a man or woman, through no fault of his or hers, goes through life denied the highest of all those joys which spring from home life, the having and bringing up of many healthy children, I feel for them a deep and respectful sympathy—the sympathy one extends to a gallant fellow killed at the beginning of a campaign, or the man who toils hard and is brought to ruin by the fault of others. But the man or woman who deliberately avoids marriage, and has a heart so cold as to know no passion and a brain so shallow and selfish as to dislike having children, is in effect a criminal against the race, and should be an object of contemptuous abhorrence by all healthy people.

"Of course no one quality makes a good citizen, and no one quality will save a nation. But there are certain great qualities for the lack of which no amount of intellectual brilliancy or of material prosperity or of easiness of life can atone, and which show decadence and corruption in the nation just as much if they are produced by selfishness and coldness and ease-loving laziness among comparatively poor people as if they are produced by vicious or frivolous luxury among the rich. If the men of the nation are not anxious to work in many different ways, with all their might and strength, and ready and able to fight at need, and anxious to be fathers of families, and if the women do not recognise that the greatest thing for any woman is to be a good wife and mother, why, that nation has cause to be alarmed about its future. There is no physical trouble among us Americans. The trouble is one of character, and therefore we can conquer it if we will."

## ONE IN SIX

THE time of year is now upon us when the infants of this country, especially in our large towns, will begin to die in their tens of thousands from what the public of Germany and America know perfectly well as acute milk poisoning. No one can guess how many years it will be before we adopt, in this country, the system of handling milk so as to ensure absolute scientific cleanliness that is carried on so successfully in Copenhagen. Already the nationality of our Queen has been instrumental in bringing the Finsen treatment of lupus from Copenhagen to Whitechapel. Sooner or later the Danish method of handling milk must follow, the method, that is, which aims at avoiding bacterial contamination. One child in every six born in this country dies in the first year of its life. Last year's statistics show no diminution in this appalling figure. It will remain as high so long as more care is taken over the supply of beer than of milk. The fact is that uncooked milk is an unsafe food. The Medical Officer of Health for Essex has declared that eight thousand children die every year in that county alone from this cause. In Berlin, where they have the best system of vital statistics in the world, it was proved some time ago that the death-rate was thirty times as high amongst children fed on cow's milk as amongst those breast-fed. This tremendous tax on the only true national asset is, in a word, preventable. The danger is at its maximum in the summer months, or from June till October. The warmth greatly aids the development in the milk of the bacteria which do the work. In this country we do not realise the significance of the fact that bacteriologists use milk, for choice, as the best medium on which to prepare their cultures of disease-producing germs. As it nourishes us, so it nourishes them. When the milk leaves the cow it is a pure and sterile fluid. So also is mother's milk. As a substitute for these our children are fed on a septic and decomposing fluid which contains, in warm weather, millions of active

germs to the cubic centimetre. These facts have been familiar for years. They are common knowledge in Germany, Denmark, and America. All these countries are acting on their knowledge and their infantile mortality is falling in consequence. Even the two best London dairies are far behind Copenhagen and New York. And with a falling birth-rate it behoves us to keep alive the infants that do see the light. It is a self-evident proposition that one child in six, born of a healthy race, should not die before the first anniversary of its birthday. Here, then, are some facts: unboiled milk is an unsafe food; condensed milk is a dangerous food; the patent infant foods kill their thousands yearly; the feeding-bottle with a long india-rubber tube is a septic abomination, which breeds death from the first day of its use and should be forbidden by law. The true remedy for all these evils is that infants should be fed by Nature's noble and beautiful method, which has made us what we are. But that custom is effete and obsolete. So we must learn to handle our substitute.

# MOTORS AND MEN

A CRITICAL MONTH FOR MOTORS—MR. LONG'S NEW BILL—MOTORISTS AND THE PUBLIC—THREE CLASSES OF OFFENDERS—A FORECAST OF FAIR REGULATIONS—AN INACCURATE CRITIC

BY

HENRY NORMAN, M.P.

THE present month will probably be a critical one for the pastime and the industry of motoring. Mr. Walter Long, President of the Local Government Board, will introduce in Parliament a Bill to alter the present law controlling the use of motor-cars, and upon this—when it has been passed by Parliament—will depend the safety and comfort of the public, the personal freedom of every motorist in the use of his car, and the future development of the manufacture of motor-cars in this country. The character of Mr. Long's Bill is not yet known, but he has spoken frankly upon the subject, and it is, therefore, safe to forecast its general provisions. At any rate, one can state what is desirable, if one cannot precisely prophesy what is inevitable.

It has long been obvious to every reasonable motorist, and, indeed, to every reasonable member of the public, that the present law must speedily be altered. In the first place, the speed limit of twelve miles an hour is ridiculous. It is broken by every motorist every time he drives out; the King himself does not obey it, and the Prime Minister has been fined no fewer than three times. There can be no such thing as a fixed limit of safe speed for a motor-car. What is safe and considerate in the Park is dangerous and selfish in Piccadilly; what is safe and reasonable on an open country road, would be preposterous speed in the Park. The most inconsiderate piece of driving I ever saw was committed by a motorist who drove across a main street in London at about five or six miles an hour. He went straight through the traffic without paying the slightest attention to either vehicles or pedestrians, scattering both in all directions, and coming within a hair's breadth of more than one serious accident. On the other hand, I have been driven by a friend at fifty miles an hour along the open roads of the New Forest, where one could see clearly that for half a mile ahead there neither was nor could be man or vehicle, and, therefore, this speed was both safe and fair. One rule and one only applies to the speed of motor-cars: they must not be driven so as to cause danger, alarm, or avoidable discomfort to other users of public roads. That is, the same rule must apply to them as applies to horse-driven vehicles—they must not be driven "furiously."

Unfortunately, motorists cannot pretend that

this rule is universally observed. Within the last few days I have seen in London three instances of furious driving of motor-cars, which, if the cars had been identifiable, I should have reported to the Committee of the Automobile Club. The Club has, of course, on a number of occasions taken very strong steps against drivers who have behaved in an ungentlemanly and dangerous manner. A few days ago a brutal motorist dashed through the Park on his car, bringing into perilous confusion the four horses of a private coach, and stampeding another horse, driving away before he could be stopped or identified. Even the Irish people living along the course of the Gordon Bennett Race, full of intelligent sympathy for motoring, as they have abundantly proved themselves to be, are complaining bitterly of the behaviour of motorists there. So far as I have been able to judge, offenders belong to three classes, of which the first is much the largest. The paid drivers of private owners, when in charge of cars without their employers, are undoubtedly the chief offenders. Being often very skilful, they take risks in turning corners, and " cutting it fine " in passing people and vehicles, which, while actually safe, are in the highest degree annoying and alarming to the public. These men know perfectly well that they run no risks; if they damage the car it is their employer's loss; if they do any injury to persons or property, it is their owners who are mulcted in damages; if they are fined by the magistrates, it is their owners who pay. Mr. Alfred Harmsworth, who has probably employed more drivers than any other owner in this country, tells me that when he engages a new man he tells him that he will be discharged instantly if he is fined by the police, either justly or unjustly. If all owners had adopted this wise rule from the beginning, public feeling against motorists would not be what it is to-day. It is absolutely necessary that the paid driver shall be made to suffer personally in some way when he misconducts himself in charge of a car.

The second class of offenders consists of traders in motor-cars. Several of these in London are well known for their inconsiderate driving. I must not be misunderstood to say that this is characteristic of those engaged in the trade as a class, for of course many of them are far too gentlemanly in feeling and far too appreciative of the real interests of motoring, ever to offend in this way. But there are among them some black sheep whose methods must be efficiently suppressed.

The third class consists of owners of motor-cars who have never driven horses, and therefore know nothing by experience of the problems of driving through traffic, and nothing of the management of horses, and who therefore have no idea of the extreme annoyance and alarm they inflict upon horse-owners. The vast majority of motorists are gentlemen. and therefore behave like gentlemen, whether on their cars or off. But the public naturally, if unjustly, classes them with the offenders I have mentioned. It is perfectly clear that the public will insist upon some means of protecting itself.

The speed of the motor-car renders the problem of the suppression of furious driving essentially different in the case of the car from that of the horse-driven vehicle. The latter can be identified in most cases by obvious signs, and it is comparatively easy to overtake or stop a horse. Against the motorist who behaves improperly and drives off at full speed, the pedestrian is helpless. Therefore, it is certain that motor-cars will be compelled to bear some mark by which they can be instantly and accurately identified. To me this conclusion seems both obvious and desirable, but whether desirable or not I am sure it is inevitable. The agitation against it in a part of the motor-press and by private individuals, is as unwise as it will assuredly prove to have been futile. To suggest that every motor-car should bear a distinguishing number, which can be read only when the car is at rest, is simply to misunderstand the whole question at issue. At present every car bears a number on its maker's nameplate, and besides, when the car is at rest, the driver is already in the hands of the police or of the public. It is further alleged with a great show of indignation that a " gentleman " cannot tolerate that his car should bear a conspicuous number. I cannot in the least see why not. I shall not feel myself in the least degraded or humiliated by knowing that my own car bears an identifying number on its back. I hope to drive always in a safe and considerate manner, and therefore I have not the slightest personal objection to being identified by anybody. If I fail so to drive, I shall deserve to be punished. I admit, of course, that probably in the course of a year a good many motorists will be put to great inconvenience by defending charges brought against them either maliciously or

in error. This, however, is one of the conditions attaching to the new practice of motoring, and as we inevitably put the public to a good deal of discomfort, I do not think we have any grave ground for complaint if we sometimes suffer a little discomfort ourselves. In the course of a year I shall throw clouds of dust over hundreds of people; I shall not complain if, on the other hand, I occasionally have to defend a charge of furious driving in one county when, as a matter of fact, I was at the time in another. Moreover, it would be easy for the costs of a malicious or careless prosecution to be imposed upon the person who brings the unjust charge, and this in itself would speedily have a deterrent effect. It will be no small advantage, too, to be free of the system of police traps which is alike costly to the rate-payer, degrading to the police, humiliating to the motorist, and calculated in time to do serious harm to the industry.

The law at the present time is ridiculous, not only in its provisions regarding speed, but equally so, as shown in the famous case of Sutton *v.* Mayhew, in other respects. In this case the judge laid it down that a car could be driven to the danger of the public when there was no public of any kind, either human or vehicular, present at all. Such a ruling needs only to be stated to be seen to be preposterous. The public cannot be endangered unless it is there.

My own view of ideal regulations for the control of motoring would be as follows:

(1) Every person receiving payment for driving a motor-vehicle, should be compelled to take out a licence of competency, and this licence should be endorsed by a magistrate when its owner was found guilty of furious driving. No driver whose certificate was thus endorsed several times would be able to get employment; it would therefore be to his imperative interest not to break the law.

(2) The limit of speed in towns to be, say, ten miles an hour.

(3) No limit of speed whatever to be imposed in country districts, but every motorist to be dealt with under the common law when charged with endangering the safety of the public.

(4) Furious driving to be officially defined in a way that would make it impossible in law to endanger the safety of people who were not present.

(5) Every car to bear by day and by night a mark of identification legible when the car is in motion.

Such a set of regulations appears to me to be perfectly fair to all parties. To make it complete, local authorities should be compelled to put at the entrance of every town or large village district, a signal post with the sides differently coloured. When the motorist was between the red side of the posts, he would be restricted to the speed limit. When he had passed beyond the green side of the post he would be free to drive as he liked, on the condition that he did not put anybody else's person or property in danger.

The public must realise, as it has not yet done, that the march of invention has brought an entirely new method of locomotion, and that this method has come to stay. To attempt to suppress it is as futile as it is immoral. The ancestors of the people who now denounce motor-cars so excitedly did their best to prevent the development of railways. Everybody can remember when bicyclists were looked upon with equal contempt, and when almost every horse shied at a bicycle. During the few years that motors have been used, horses have grown accustomed to them in an astonishing manner, and now in country districts not one horse in twenty pays the slightest attention to a properly driven motor. Motors do, of course, raise a most unpleasant and uncomfortable dust. This the public has got to bear until our roads are constructed in a more scientific fashion. The advantages that the motor has brought with it will be so many and so vast that mere inconveniences of this kind cannot be weighed against them for a moment. As I have tried to show in previous articles, our society will be essentially modified in many respects by the general use of motors, and our common life will gain enormously in scope and interest. Besides this, an enormous industry, probably in the end only inferior to the great industries connected with coal, iron, and shipping, will grow up, and the human bundle of nerves, the faddist, and the mere unintelligent reactionary, of whom we have so many among us, cannot be allowed to impede the march of progress and the development of national life. The President of the Local Government Board has always spoken wisely but strongly about motoring whenever he has approached the subject, and if his Bill is framed on some such lines as these here sketched, he will have acted fairly on behalf of all classes of the community, and will retain for ever the credit of having

foreseen and safeguarded those great and beneficent changes which, at present anticipated only by the few, will be the commonplace of generations to come.

. . . . .

Since I wrote the article called "Can I Afford a Motor-car?" in the April number of this magazine, the subject, of paramount importance to many motorists and would-be motorists, has become a prominent topic in all journals dealing with motoring. As I said would inevitably be the case, opinions differ upon almost all details of cost, but on the whole my figures have not been seriously challenged. Mr. Kennedy Jones, however, controverts them in the *New Liberal Review* for last month with a wealth of denunciatory adjectives which I shall not copy in replying to him, since I am sure we have both but one object in view, namely, to arrive at a correct estimate, for our own satisfaction and the information of our fellow motorists. That being so, I think we may adopt the vocabulary of controversy we should use across a dinner-table.

Last year I was driving a friend's nine horse-power car, with four on board, to Southampton to see the Naval Review. On a fairly steep hill, newly laid with deep sand, I tried to reach the top on too high a speed, stopped the engine, the car would not start again on the slope where the driving-wheels could not bite, so the mechanic had to get out and give the car a push. At that moment a powerful car came dashing by us and was over the hill in a moment. It was Mr. Kennedy Jones on his Panhard. He now gives us some figures of the cost of running this car. They are interesting, as all accurate figures of motor-expense are, but, as I shall show, they do not bear in any way upon my own calculations; while some of his statements are extremely inaccurate.

Mr. Kennedy Jones has not learned the first rule of printed controversy, which is, to quote your opponent accurately, before you proceed to criticise him. He represents me as saying that one is "able to maintain a motor-car capable of running 150 miles, day in and day out, for less than it takes to keep a carriage-horse in first-rate condition." Now, "150 miles, day in and day out," is 54,750 miles a year. What did I really say? Here it is:

"Cost of petrol depends upon the mileage. Probably 4000 miles a year—eighty miles a week—is a reasonable average. In many summer weeks this will be greatly exceeded; during many winter weeks, on the other hand, the car will hardly be taken out at all."

I said eighty miles a week; Mr. Kennedy Jones represents me as saying 150 miles a day! I might well claim to be excused from considering his statements further, but I will give one other example of his controversial methods. He says:

"Seven or eight horse-power cars there are—let the reader remember that the term 'horse-power' is loosely applied in its relation to motor-cars—made by firms of world-wide repute which can be driven anywhere and over everything at an average speed of sixteen to eighteen miles an hour; but these cost from £400 to £550, and the expense of running is proportionately as great as that of a larger car, and could not, under present conditions, by any stretch of economy or ingenuity be brought within £42 a year."

What I wrote was this:

"The total cost of this class of car, also running 4000 miles annually, thus comes to £75, without allowing anything for housing, and presuming that washing it will be one of the duties of the boy who cleans the knives and brushes the boots."

I wrote of "five or six horse-power"; Mr. Kennedy Jones represents me as saying "seven or eight horse-power." I stated the yearly cost at £75 (less £15 a year which I thought might fairly be saved in railway and cab fares by the owner and his family during the year, but which is, of course, independent of the cost of running the car itself); he represents me as stating the cost at £42. What can one say to such a controversialist? To argue with him is impossible.

Mr. Kennedy Jones' article contains other inaccuracies than his misquotations of my figures. For example, he says:

"If it is a medium car—say twelve horse-power—and built by a maker of reputation, it will cost at least £850 to buy: the best makes of this kind complete to-day figure at nearly £1000."

Nobody who knows the prices of modern cars could possibly have written this sentence. Here are some prices of cars of "say twelve horse-power"—I quote several from a list given a few months ago in *The Car*:

| Make | Horse-power | Price |
|---|---|---|
| Darracq (1903 pattern) | 12 | £390 |
| Duryea | 10 | 275 |
| Georges Richard | 10 | 295 |

| Make | Horse-power | Price |
|---|---|---|
| Boyer | 12 | £350 |
| Dennis | 10 | 336 |
| Boyer | 12 | 400 |
| Decauville | 10 | 400 |
| James and Browne | 9 | 400 |
| Clement | 9 | 335 |
| Star | 10 | 400 |
| Wolseley | 10 | 380 |
| Century | 12 | 420 |
| Argyll | 10 | 335 |

It would be absurd to say that there are no cars "by makers of reputation" in this list, yet not one of them costs half Mr. Kennedy Jones' figure. And there are no fewer than thirty-two other cars in *The Car* list, before his price of £850 is reached, and then we have reached twenty horse-power. The most expensive car of twelve horse-power in the whole list, "by a maker of reputation," costs £750. Moreover, the twelve horse-power four-cylinder Gladiator costs £550; the fourteen horse-power Cherrard and Walcker, £500: and the twelve horse-power four-cylinder De Dietrich, £650; while the new twenty-four horse-power four-cylinder Darracq of this season, a very powerful, quiet and fast car, with every up-to-date improvement—the car, in fact, which the King chose and purchased during his visit to Paris—costs only £660. We must, therefore, also dismiss Mr. Jones' statement of the initial cost of a car.

The fact is, I think, that Mr. Kennedy Jones regards the car from the rich man's point of view, stating from his "ledgers" what it actually cost him; I attempted (saying at the start that "nobody will agree with anybody else's calculation") to show what it ought to cost a man of moderate means, who would drive moderate distances, and would take the trouble to understand it. (I do not gather from Mr. Kennedy Jones' article that he does understand a car.) His car cost him £834. My calculations had nothing to do with such a car. He pays his driver £3 a week. In eight months he spent £7 4*s*. 6*d*. on "valves, sparking plugs, washers, &c.," and £17 14*s*. 8*d*. on "oil, grease, polish, carbide, petroleum, &c.," and £19 9*s*. 11*d*. for repairs and sundries—extraordinary sums—and in eight months his account contains two new sprocket wheels and three driving-chains, while the car cost £65 for over-hauling at the end of that time. I would suggest to him to buy a car of another make next time. These are rich men's figures, and they do not interest me personally at all.

Finally, to show how rashly Mr. Kennedy Jones writes, I place these two extracts side by side·

Mr. KENNEDY JONES: "There is hardly any journey, save a doctor's round either in town or country, and the cross-country visits of country society, that cannot be more quickly (*and certainly more cheaply*) negotiated by means other than a motor-car."

*Automobile Club Journal*, April 16: "Mr. Wallace and the Club Secretary have spent Easter in Ireland, making arrangements in connection with the Gordon Bennett Race and other events of the Irish Fortnight. They travelled to Holyhead by road, making, save for the night's stay at Lichfield, a non-stop run. The car used was a nine horse-power, James and Browne, and performed the journey in a speedy and satisfactory manner. The total consumption of petrol was eight gallons, costing 8*s*. The Club Secretary, in furnishing some notes of the journey, remarks truly that the cost of transporting three people and luggage 285 miles by means of motor-car is decidedly less than by train.

Mr. Jones writes about the expense of motoring in the familiar style of the man to whom cost does not much matter. I tried to show what the careful, observant man of moderate means could keep a moderate-priced car for, and I have seen no reason yet to modify my opinion.

# THE WORK OF A POLITICAL CARTOONIST

POLITICAL CARICATURE IS HARD WORK AND NOT PLAY—THE FICTION THAT CARTOONS ARE "DASHED OFF"—SUCCESSFUL CARICATURE IS BASED UPON CONVICTION—HOW SUBJECTS GROW FROM GERMS—THE CARICATURIST'S HUNTING-GROUNDS

BY

F. CARRUTHERS GOULD

("F.C.G." OF THE "WESTMINSTER GAZETTE")

*With eleven typical caricatures by the Author*

I REGARD it as a privilege to be asked to interview myself for the pages of THE WORLD'S WORK, not because that modern form of the Inquisition has any attraction for me, even when self inflicted, but rather because of the implication that caricature can be regarded as coming within the legitimate sphere of work. For by many the caricaturist is looked upon as a sort of pen-and-ink Dan Leno, effervescing with comicalities, bubbling over with irrepressible humour, looking ever at the whimsical side of things, and perpetually dashing off drolleries.

"Dashing off," according to popular idea, is the term applied to the methods by which the caricaturist amuses his friends, and earns his living in the rare intervals allowed him between embellishing the albums of those who know him, and likewise of those who don't.

A WONDERLAND GERM

The March Hare (Mr. Balfour)

A NATURAL HISTORY GERM

The bird that wouldn't say "Suzerain" (Mr. Krüger)

There are some humorists with pen and pencil to whom this description may apply more or less, men with overflowing animal spirits and energy, who see the comic side of all the details of the life around them, and who, like schoolboys with charcoal and a

A FEMININE GERM

The feathers in the hat (Mr. Chamberlain)

whitened wall, never tire of recording their quaint impressions. There are some like Frank Lockwood, whose memory is ever green, who in Court or in the Commons sketched on the back of brief or order paper droll illustrations of everything that tickled his fancy. But whatever I may have been in my younger and youthful days I can only claim now to be a caricaturist in the sense of the literal meaning of the word. That meaning is, "one who accentuates," and it represents just what I do in my work as a political cartoonist, which latter definition I prefer for the sake of accuracy. I accentuate the salient features of the political situation of the moment, but taking care to follow Dr. Johnson's traditional example in the matter of reporting, if indeed his descriptions of Parliamentary debates can be rightly called reports at all, by seeing that the political party which is other to my own "does not get the best of it." In this matter I have an easier conscience than the great Doctor might well have had, for it is not my business to draw attention to weak places in the harness of my own side; I leave that to accentuators on the other side.

Political caricature, when taken up seriously and *seriatim*, is pleasant, but it is hard work and not play. The mere drawing part of a cartoon may not be laborious, the more difficult part is the knowing what to draw. For this the cartoonist must qualify himself, and to do this he needs political knowledge, a power of concentration, and constant application. Without a fair equipment of the first qualification he will often either miss or mess his points, and the more interested and earnest he is in the political questions of the day, the more telling will be the morals he wants to convey. I do not, of course, lay it down as a *sine quâ non* that a political caricature, to be effective, must necessarily be done by one whose personal convictions are in harmony with the point of view illustrated, but I am convinced that for persistent propagandism of this kind, the elements of consistency and conscience are factors more important than may appear on the surface.

Somehow or another the pencil and pen seem, unconsciously to oneself, to catch something of the inspiration of the moral will over and above the mere mechanical connection between the brain and the hand.

It is too subtle to analyse or to demonstrate. It is impossible to prove it in any definite shape, but, nevertheless, it is a factor in the success of the cartoonist with a purpose. That a faculty of concentration is also needed goes

THE UNCLE REMUS GERM

Brer fox (Mr. Chamberlain)

without saying, for it is the very essence of the successful presentation of political situations in the most direct form of simple picture object-lessons. The greater the simplicity of the treatment the more quickly the eye sees the essence-meaning. The complex picture which requires explanatory labels and a little guide-book will not do for the present day. The situation must be boiled down into a pictorial extract.

I am often asked whether it is not difficult to do political cartoons in a daily paper, keeping up the supply for four or five days every week. That it involves a certain strain and a good deal of close application I admit, but I am not sure whether the sense of the responsibility of maintaining a constant output does not stimulate the facility of production.

"How can you possibly think of subjects for each day?" is another query often put to me. My reply is, that as an editor has on each and every working day to write a leading article on some

A ROBINSON CRUSOE GERM

The lonely furrow

AN HISTORICAL GERM

Napoleon (Lord Rosebery)

subject of interest or importance, the only difference in the difficulty of the cartoonist's task is that he has to comment in lines instead of letter-press. And the daily paper cartoonist has this advantage, that in the editor's room he collaborates with one whose knowledge of political matters is wide and deep, and whose mind is trained to unravel the most tangled threads of a situation, and to reduce what seems obscure to clear, concise demonstration. In my own case I cannot possibly exaggerate the value of a collaboration to which I owe a great portion of my success.

Now let me say something of the methods which a political cartoonist adopts for putting the ideas that he sets himself to propagate into shape. This comes certainly within the sphere of "work," and it is in this respect that the value of mind training for a particular purpose comes in. I will illustrate my meaning as simply as I can.

The caricaturist has chosen his subject; he has fixed upon the lesson, the moral, the criticism which he wants to enforce. What pictorial shape is it to take that will most simply and graphically appeal to the public?

A CLASSICAL GERM
Sir William Harcourt as Hector

He may in some cases have to content himself with representations, which must be palpable and easily recognisable, of the political personages involved, with explanatory, crisp, and humorous dialogue. But, as a rule, he must draw more largely upon his imagination for his pictorial renderings and adaptations, and not merely on his imagination but on his memory as well.

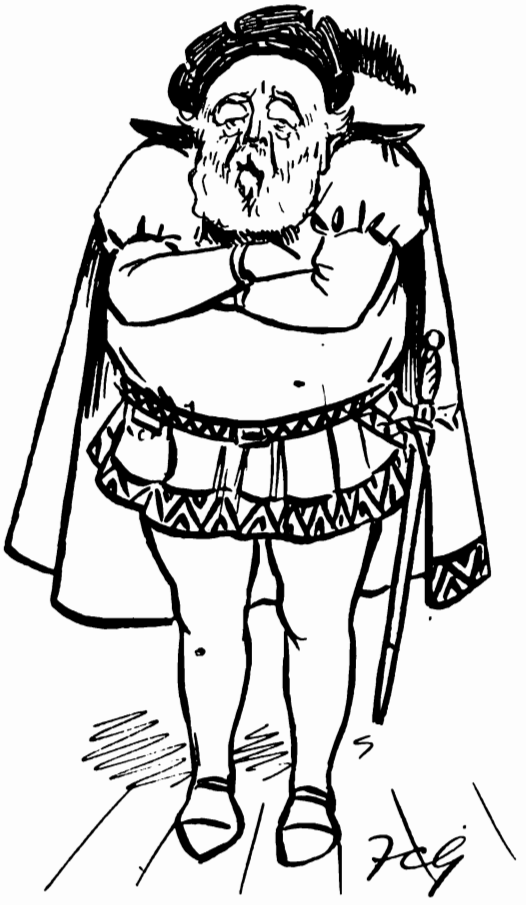
He must have stored up in the pigeon-holes of his brain a mass of material collected on the chance of each and every item coming in useful at some time or another. His memory is his "property" room where he can resort whenever he wishes to stage his idea. The readiness with which the mind, under the stress of the need of the moment, will go straight to the right compartment is almost uncanny. We may call it "unconscious cerebration," but it is simply the natural result of a long course of training the mind to work on certain lines. And it is not really strange after all, when we remember how the sporting dog, the "smell-dog," to use a delightful bit of American directness, knows exactly what his master wants and finds it for him, that memory


THE NEW LOVER AND THE SURPRISED MAIDEN
Mr. Chaplin wooing Miss Free Tea

should point and set for us when we are the quest for the game we have trained our minds to.

The situation itself generally gives a clue. Take, for instance, a recent cartoon in the *Westminster Gazette*. The basis was the fact that Mr. Henry Chaplin had expressed a desire for the remission of the tax on tea. This hitherto unsuspected attachment to the Free Teapot suggested a new lover; therefore, Mr. Chaplin as a sudden and ardent lover was an obvious feature. Tea, being the new object of his affections, fell into place naturally as the maiden who is being wooed. Next the Teapot assumed a human expression, and the fact that Mr. Chaplin is an old Protectionist suggested sartorial details of a period prior to Free Trade.

History, fiction, the wide world of literature generally, and even natural history, are the well-stocked hunting-grounds of the political cartoonist. That Shakespeare is a rich mine



**A SHAKESPEARE GERM**

Lord Salisbury as Hamlet

**A DICKENS GERM**

Mr. Gibson Bowles as Sim Tappertit

is a fact of which there are innumerable classic examples in the pages of *Punch*. Dickens, too, provides many useful models, and as for Lewis Carroll his Wonderland is inexhaustible. There are White Knights with wonderful things, all of their own invention, and who tumble off their horses every now and then, in real life. The Walrus and the Carpenter still take confiding oysters out for pleasant walks and pleasant talks; Tweedledum and Tweedledee are quarrelling almost every day in Parliament and in the papers. Humpty Dumpty is for ever balancing on the Wall, and the King's horses and the King's men are always marching in vain efforts to put him up again. As for Red Queens and White Queens the woods swarm with them, and there are sometimes some very Mad Tea-parties going on.

Joel Chandler Harris' *Uncle Remus* is another source of many adaptative inspirations, and Brer Rabbit "en de udders" are characters that can be represented on the cartoonist's stage by many actors.

# PROSPECTS OF INCOME-TAX REFORM

**WHAT WILL MR. RITCHIE'S COMMITTEE ACCOMPLISH?—HOW A QUARTER OF A MILLION MIGHT BE SAVED BY SIMPLIFYING THE MACHINERY OF COLLECTION**

A FEATURE of the national financial situation, deserving every attention at the present moment, is the prospect of a permanently high income tax. The whole history of this tax goes to prove that its perpetuance may be regarded as axiomatic; and such a continuance is essential so long as the tax is the first line of defence in national emergency, for any lapse would damage its resourcefulness by rusting the machinery of collection through disuse. But as an emergency tax pure and simple, the normal level should not rise far above the twopence in the pound which Sir Stafford Northcote advocated in 1875 (only to eat his words in the following year). The larger margin of increase which a low assessment allows is a point of great expediency in steering an emergency tax through untroubled times. The best justification for a high figure would be in building up a reserve fund for times of crisis or in steadily reducing the debt. But the tendency, kept in check only by the restiveness of the electorate, seems to be more and more to make the tax bear a solid part of the burden of our everyday needs, and to raise the normal level to somewhere about eightpence in the pound, the exact figure being adjusted to balance the fluctuations of the revenue from other sources. Even so, it may be argued that a considerable limit of elasticity remains if, as Professor C. F. Bastable believes, a European war would fix it at two shillings in the pound, while reinforcing it by an additional charge on property and high taxation on commodities in general use. The income tax gets at wealth and competency as no other tax ever could, and three-fourths of the yield are raised with far less social disturbance and friction than any indirect tax. In the last normal year, 1900, the income tax at eightpence realised £18,750,000, and the other great direct tax, the Death duty, £12,000,000. It may be taken for granted that few Chancellors will now care to raise much less than thirty millions a year from direct taxation. An attempt might conceivably be made to lighten the income tax at the expense of the Death duty, but the evasion of the latter tax by donations before death is so easy that its relative productivity is much curtailed.

Apart from graduation of the income tax, a step most correct in theory but presenting in practice so many administrative difficulties that only a Chancellor of exceptional enthusiasm and conviction could cause them to be overcome, what ground remains for the reforming zeal of the Committee Mr. Ritchie promises? A great deal more, it is to be feared, in recasting the details of administration than in offering the taxpayer any startling pecuniary relief. The great injustice of the tax has always been felt to be the burden placed upon personally earned incomes. The middle-class bread-winner has to save much of the personal revenue which the *rentier* can spend to the last penny. John Stuart Mill recommended a deduction of one fourth from the assessment of personal incomes—an allowance by no means extravagant. Exact delimitation of the two kinds of income might be a thorny task, but it cannot be pronounced impracticable, and the Chancellor who will risk the experiment of separating professional from invested or inherited incomes will not die unhonoured and unsung.

But the whole machinery of the Income Tax Acts needs revision, and the first essential improvement which the Committee may be expected to consider is the consolidation of the whole machinery of management in the hands of the covenanted Civil Service. The present wasteful and inefficient method of largely delegating the assessment and collection to local instead of Imperial officials is a relic of prehistoric suspicion of the taxgatherer. The Local Commissioners are men of substance and standing, who do some thankless work for nothing, but who have long ago given up all pretence of personally overtaking the business they are responsible for. The surveyor is in legal shackles, which do not prevent him doing the Commissioners' work, but which prevent him doing it well. But the Commissioners have a Clerk who is highly paid. He is usually a local solicitor, who has probably

been the agent for his political party. He receives £200, £500, or even in places (Warrington, for example) £1000 a year. These appointments are the last remnant of the spoils system in this country. The Clerks receive the taxpayers' returns from the local assessor (generally an outsider but sometimes a surveyor of taxes), and from them make out a complete list of the persons and amounts to pay. The work is merely mechanical transcription, and is usually done in a few weeks by a few temporary clerks at twenty-five shillings a week, who complete the job by issuing a notice to the taxpayer to pay the local collector. The local collector hands over the money to the Collector of Inland Revenue. The Commissioners are aiding in hearing appeals by the legal advice of their Clerk; but these appeals are not numerous, dissatisfied taxpayers usually coming to an agreement with the surveyor. In 1900–1901 the whole Inland Revenue Department collected £90,467,173, and received in salaries £1,268,000. But for a trifling part of the work in connection with the Income Tax and the Inhabited House Duty alone, £332,000 was paid away to outsiders. All these outsiders could be dispensed with. Assessors' duties could be performed by Officers of Inland Revenue; Clerks to the Commissioners' duties by Surveyors of Taxes; and if a final court of appeal were necessary, the County Court Judges in England and Ireland and Sheriffs in Scotland could easily undertake the extra work. Of the £332,000 paid away at present a quarter of a million could be saved to the country, the balance going to the covenanted officials for the increase in their duties—an augmentation which would be rapidly repaid by the increased revenue raised.

Not only could the Imperial officials bring to the task a less remittent attention and greater practical experience, but their position of independence leaves them less open to sinister influences. The taxgatherer should never take root. The eddy of change and promotion in the Imperial service prevents stagnation. But the most zealous local assessor or sub-collector soon comes to deprecate making a bugbear of himself to his friends and acquaintances. Large sums are lost to the revenue at present by the systematic under-assessment of small but progressive provincial towns.

This proposal adumbrates the most striking opportunity the Committee has for simplifying the machinery of collection. But the vested interests at stake have considerable political influence, and may succeed in strangling reform. It may be added that the money saved would be sufficient to carry out the step of placing on the permanent service the present temporary staff of clerks who do the routine work in surveyors' offices, if such a move were deemed advisable. At present much confidential business is transacted by cheaply paid clerks liable to arbitrary dismissal by the surveyor at a week's notice, and ineligible for pension. It is hardly possible to go here into the great mass of minute legal and administrative technicalities which have clustered like cobwebs round a century's growth of income-tax practice. The unfettered discretion allowed to the local Commissions has allowed discrepancies to spring up in different localities. The legal emancipation of the surveyors would allow them to settle matters directly with the taxpayer in a prompter and more satisfactory manner. Some rearrangement of areas might be desirable. Careful consideration should be given as to whether the present differences in assessing profits under Schedule D—mines being charged on a five years' average, trades and professions on a three years' average, and railway quarries and ironworks on the profits of the preceding year—might not be assimilated. This remark applies also to Schedule E, under which bank-clerks in one district may be allowed a three years' average, while in another they pay on their full present salary. The comedy of the successive notices to pay is unnecessarily tedious and wasteful of time and labour.

So far as the average taxpayer is concerned he may rest assured that the practical scope of Mr. Ritchie's inquiry is not, on the whole, likely to affect him more closely than, perhaps, to minimise slightly his chances of evasion. Sir Robert Giffen estimates that 20 per cent. of the income made in trades and professions escape from Schedule D, while no less than fifty millions of income from foreign investments escape from Schedules C and D. With regard to the former kind of evasion, something can be done by the formation of new tax districts and the appointment of additional surveyors, and it need cause no surprise if this is the main recommendation of Mr. Ritchie's Committee—only this and nothing more. Still, it is to be hoped that the Committee's courage will be equal to something more comprehensive.

THE ELECTRIC BRIDGES ON THE COVENT GARDEN STAGE

# THE MACHINERY OF GRAND OPERA

THE OPERA-GOER DOES NOT SEE THE IMMENSE AMOUNT OF WORK ENTAILED BY A PERFORMANCE—COVENT GARDEN PRODUCTIONS: A TRIUMPH FOR BRITISH SKILL—NOVELTIES INTRODUCED FOR STAGING "THE RING"—THE PATENT TRAP AND THE WONDERFUL SWIMMING-MACHINES FOR THE RHINE MAIDENS—A STAFF WHOSE CUE IS FOUND IN CO-OPERATION AND EFFICIENCY

BY

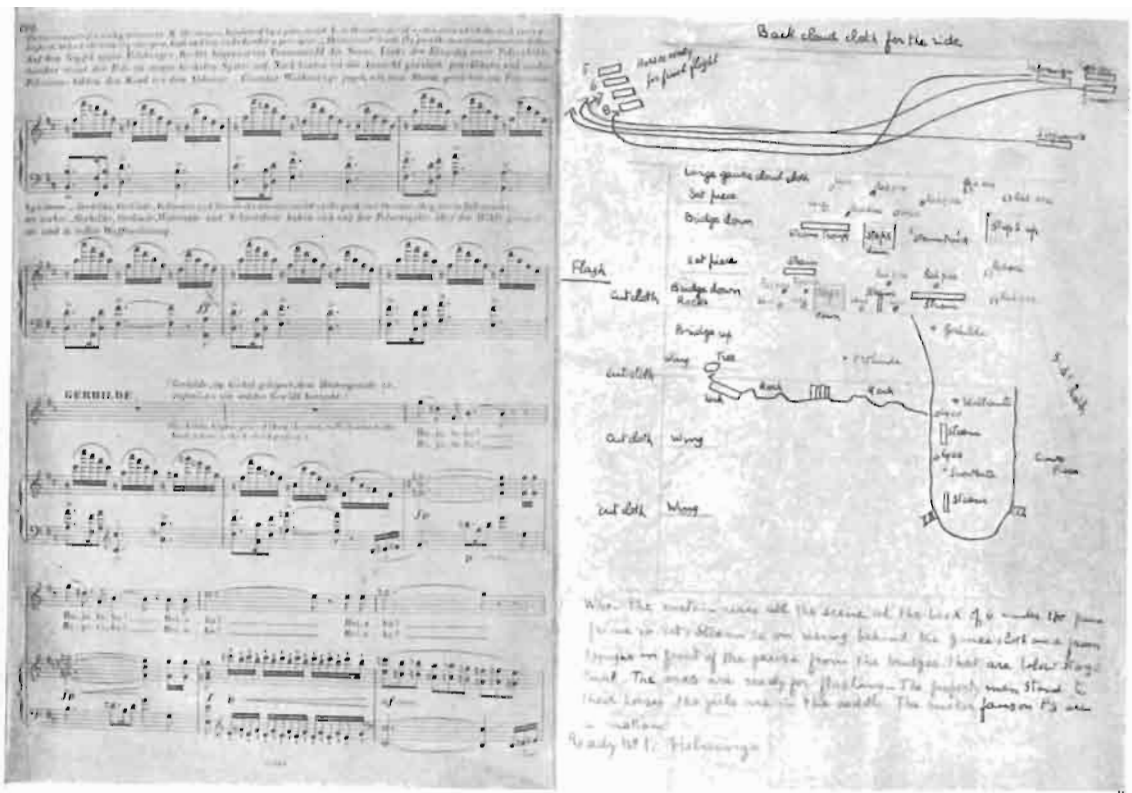
KATHLEEN SCHLESINGER

*Illustrated from Photographs taken specially at Covent Garden for* THE WORLD'S WORK

MECHANISM and opera may at first hearing seem a somewhat incongruous combination, but to the thoughtful spectator it must be evident, on witnessing a performance of one of Wagner's music dramas, for instance, that a vast amount of machinery has been called into requisition to produce so elaborate and harmonious a *mise-en-scène*.

The continued and growing artistic success of our Royal Opera House is due, in the first place, to the zeal and well-directed efforts of the acting management. Earl de Grey and Mr. H. V. Higgins as general directors are responsible for the company of *artistes* engaged, for the *repertoire*, and for the general high standard of the performances, while M. André Messager superintends the musical organisation and Mr. Niel Forsyth fills the post of business manager, no sinecure in a concern of such magnitude and complexity.

It is doubtful whether many of those who



A PAGE FROM THE PROMPT-BOOK

The faint pencilled (x) mark which the reader will observe on the above music indicates the cue or Helmviga, the duplicate Valkyrie, to be mounted in readiness to start

settle down comfortably in front of the curtain to enjoy or to criticise, realise in the slightest degree the immensity of the work which a single performance entails in an opera house, and more especially at Covent Garden.

The performances of "The Ring" at Covent Garden this year have shown a rare combination of excellence in every department, the result of brilliant initiative, strenuous work at high pressure, and of a highly successful selection by the management of the most suitable artists and workers in every field of action. Moreover, for the first time, the whole of the *mise-en-scène* is the product of British hand and brain.

The object of this article is to give a glimpse in all its complexity of the work carried on behind the scenes in those mysterious realms of stageland which are but vaguely known to the general public. The work entailed by the musical part of an opera is more generally understood and lies beyond the scope of this article.

The stage-manager is responsible for the entire work of the stage. The whole scheme of the *mise-en-scène*, moreover, emanates from his brain and artistic spirit. He is not a mere foreman employed to keep every worker up to the mark and to make the ponderous machinery of the stage move smoothly to the rhythm of the music. If there be any beauty in the conception and harmony of the *mise-en-scène*, any subtle and artistic link between the material and spiritual representation of the composer's meaning, it is to the stage-manager that the credit is due. His task is to interpret the composer of the opera with just that mixture of realistic and poetical art which creates the atmosphere demanded by the music and the dramatic spirit or soul of the work.

The value of conception and interpretation is just as frequently overlooked in the stage-manager as in the operatic singer, whose voice and method of singing often count for more in the appreciation of the hearer than his impersonation of the character he represents.

The work of the stage may be divided into two sections: preparation and performance.

The first step in staging an opera is to make the prompt-book—which, by the way, was first introduced at Covent Garden by Mr. Neilson. The drama is visualised by the stage-manager in its minutest details, and then the ground-plan of each scene is drawn up and elaborated by degrees. Complete and detailed instructions for producing the desired effects, as well as indications of the position and movements of the various personages and groups, are next inserted opposite the musical cues in an interleaved copy of the score. Each act is, in addition, prefaced by a ground-plan and by property and light plots.

An example is given from Mr. Neilson's prompt-book for *Die Walküre*, Act III., the well-known scene of the ride of the Valkyries. By comparing this illustration with the reproduction of the finished scene (p. 29), the reader will gain some idea of the value of a prompt-book, and will perhaps not be surprised to hear that Mr. Neilson spent six weeks before his season's work began at the Opera House preparing the prompt-book of *Das Rheingold* alone.

From this step work radiates in all directions, and every department is set going. The scenic artist is the first to take up the cue; with the detailed ground-plan as a basis and a knowledge of the stage-manager's scheme of colour and light, his art is allowed full scope, subject to the composer's instructions, for the observance of which the stage-manager is responsible. As soon as the little model of the scenery has been made to scale, accurate in every detail, so that its working may be tried on a miniature facsimile of the Covent Garden stage, the stage-carpenter takes up the ball and sets his staff to work, making the frames for set pieces, profiles, wings, &c. He has in addition to translate into mechanical practice the devices imagined by the stage-manager for carrying out the stage business.

The artistic designer, Mr. Comelli, drawing largely upon the resources of the British Museum, studies the local colour and the period, and prepares sketches for the costumes and the properties. Orders are sent out for the armour, wigs, musical instruments, and the artificial flowers, birds, and beasts required. Thus, weeks before the opening of the season scores of hands and brains are busy preparing the *mise-en-scène*.

The position of the stage-carpenter or chief machinist is a very responsible and arduous one. If his heart be in his work, as in the case of Mr. Affleck, the cleverest man of his craft in Great Britain, he is at work early and late

THE NEW PATENT TRAP

Showing how a singer is raised to the stage

superintending, rehearsing, making alterations and improvements: every performance creates fresh work. The stage-carpenter superintends the practical working of the stage itself, with its traps, bridges, cuts, &c., and its upper and lower machinery; he draws up the plan for the

SWIMMING-MACHINE FOR THE RHINE MAIDENS IN "DAS RHEINGOLD"

The first picture of it ever published

hanging of the cloths and their manipulation during the performance.

Several novelties, due to the combined ingenuity and technical skill of Mr. Neilson and Mr. Affleck, have been added to the equipment of Covent Garden this year; some for general use, others for "The Ring." The traps, so constantly needed in all stage business, have often proved a source of vexation; formerly five men were required to work each. Mr. Affleck's new patent trap, thanks to the application of the system of counter-weighting and to other ingenious mechanism, is easily operated by one man; the singer, in fact, could work it for himself as he stands in it; for obvious reasons this would be undesirable. This trap rises and falls as smoothly and noiselessly as the large electric bridges. Another of these traps is seen in one of the electric bridges raised above stage level; a horse stands on it ready to be taken off the stage when his turn comes.

The three electric bridges are used for many purposes; as lifts, for instance, to convey large properties, set pieces, rostrums, &c., from the store-rooms and scene docks on the cellar floor to the stage and back again when the scene is struck. As may be seen in the photograph, they run right across the stage floor from wing to wing, and can be either raised or lowered to the extent of nine feet each way by means of a switch on the mezzanine or under-stage. During the performance they are used for building up scenes which require elevations instead of using rostrums; they may thus be classed among the labour-saving appliances of the stage. These bridges are admirable when a down-hill effect is desired up stage, as in Act II. of *Die Walküre*, where now, for the first time, the scene is so designed as to afford a probability that Siegmund and Sieglinde have really "mounted from the valley." When fire effects are required, it is often proved convenient to lower one of the bridges and station the men there, out of sight of the audience, with their red-fire pans and lycopodium pipes, as shown in the prompt-book plan. The long tongues of flame blown out of the pipes and the reddened fumes from the steam troughs give a realistic and symbolic illusion of Loge's fire whose mission is to protect and not to destroy.

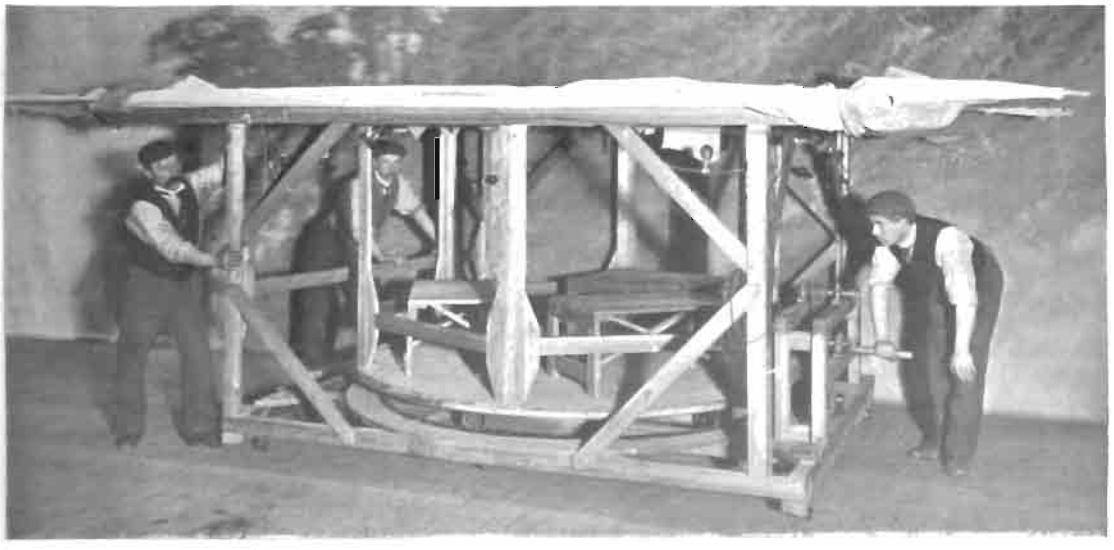
To return to the novelties. The most sensational of the season are unquestionably the swimming-machines. Mr. Neilson's new device, worked out and patented by Mr. Affleck, is simple but ingenious. In view of the great interest excited not only in England but in Germany by the extreme beauty of this effect, and of the ride of the Valkyries seen last year, I propose to lift the veil of mystery and by special permission to describe the working.

Three different kinds of machines are rendered necessary by the changing conditions of the scenery. In Scene I. of *Das Rheingold* the machines consist of a high trolley on specially made castors which allow of the most delicate

"DIE WALKÜRE," ACT III.

This is the finished scene of which the plan is shown on the page reproduced from the prompt-book (see p. 26)

evolutions being made by ponderous machines noiselessly and with perfect ease in any direction. The iron rod bearing the kind of saddle in which the Rhine Maiden reclines at a height of about fourteen feet above the stage, is counterweighted and works up and down in a slote cut in the rectangular post. A pretty hood of pale green chiffon ornamented with graceful weeds conceals the working pole during the performance, and passes unperceived in the depths of the water. For the first time it is now possible for the maidens to dive down and rise up again, to circle, frolic, and chase each other. Formerly the movements were so restricted that Wagner's directions could not be followed accurately. The evolutions of each



THE TURN-TABLE SWIMMING APPARATUS

Used in Act III. of *Die Götterdämmerung*

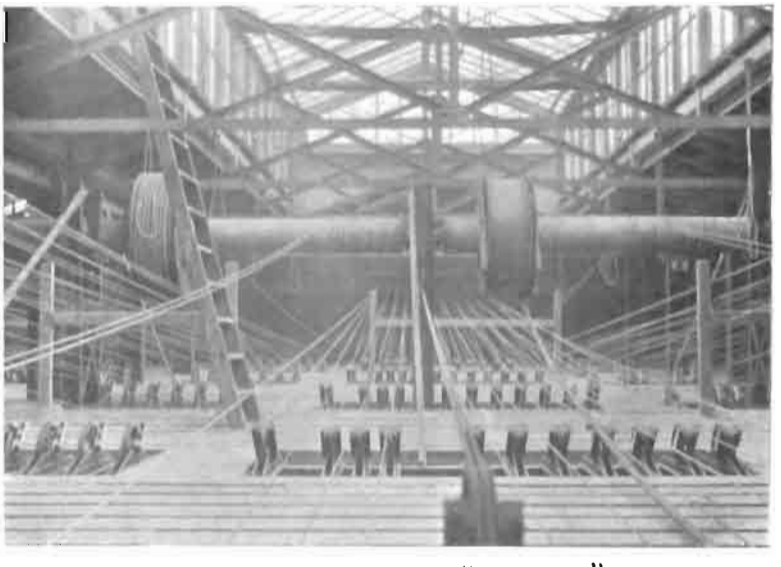
MR. FRANCIS NEILSON
Stage-manager at Covent Garden

machine are superintended by *co-répétiteurs*, each provided with a copy of the prompt-book, who direct the men if necessary and give them the musical cues. The men, after a few rehearsals, knew their parts by heart.

In Act III. of *Die Götter-dämmerung* the maidens are seen on the surface instead of in the depths of the Rhine. This second machine consists of a revolving railed-in disc, on which the maidens kneel or stand with their bodies passed through radiating slits in a rubber top painted to represent water. The machine stands on an electric bridge which rises and falls as desired to enable the maidens to appear and disappear in the river; the whole machine is, besides, wheeled about on the bridge from side to side, or made to revolve as the maidens circle in the dance. The third machine, used in the closing scene of the same drama, is also placed on an electric bridge, and here the maidens sit on seats suspended by strong rubber cords to give them elasticity of movement as they swim forward and drag Hagen down with them into the depths of the water.

To give the appearance ot the river rising and overflowing the banks in this scene, the water rows are made to work up and down by means of string and pulleys, with an undulating movement which helps to produce the illusion.

The scene of the ride of the Valkyries has proved the despair of stage-managers ever since "The Ring" was first produced. Many devices have been tried, such as the sciopticon which gives a magic-lantern effect and the switch-back, but none was either satisfactory or convincing. Mr. Neilson's ingenious solution of the difficulty produces an indescribably beautiful and poetical scene. Imagine a life-size and finely modelled horse spiked by the barrel to the top of a machine similar to the trolley swimming-machine but without the slote mechanism; a dummy warrior is slung over the saddle, and *extra ladies*, dressed in duplicate Valkyrie costumes, mount their steeds from the top of a high flight of steps; four men seize the machine, and at the cue, wheel it across in the direction indicated in the ground-plan of the prompt-book. As the Valkyrie rides past the gauze into view of the audience, a flash

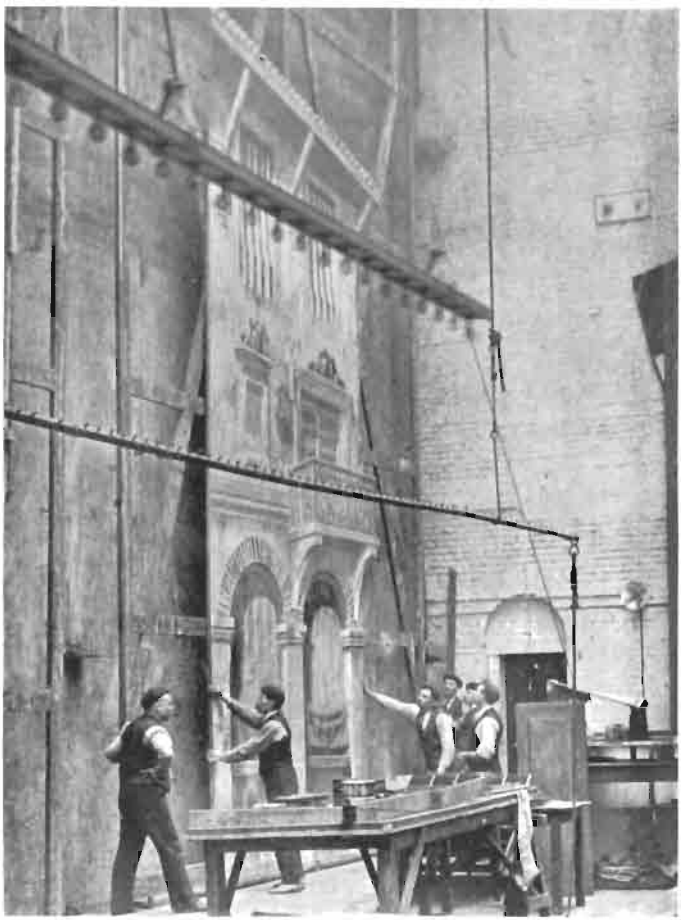


CENTRAL VIEW OF THE "GRIDIRON"
Showing the mechanism for hoisting and hanging scene-cloths, &c.

illumines the warrior-maiden, throwing fitful glints of light upon her corselet, shield, and spear. This simple contrivance, so simple that it is a wonder that it was not thought of years ago, enables the Valkyries to arrive from various points instead of all following the same straight course along a fixed track.

The final "breaking scene" in *Die Götterdämmerung*, which by the way is also introduced in Germany, although far less elaborately, is a masterpiece of stage craft. The walls are made in several sections on wooden backings; the suspended roof, weighing a ton, whose construction is also very complex, rests upon them. The whole is so ingeniously put together that on a lever being worked at the O.P. side, the backing falls into the wings dragging the rest of the structure down with it; the beams and stones of the walls and roof crash into the stage and the columns collapse. The ruin is only apparent, and when the stage is cleared the scene is found to be scarcely chipped or damaged. In the illustration (p. 33), the stage hands are shown wheeling up one of those walls across stage into its place for the performance.

The roof is slung up out of the way by means of several cable lines which had to be calculated within half an inch in order to clear all the cloths and battens which hang under the gridiron. This is the name given to the uppermost floor above the stage on which is installed the mechanism, on the Brandt system of counterweighting, of what is known as the "top work," that is, the hoisting and hanging gear for scene cloths, borders, &c. The boards of the floor, which run from front to back over the stage, are spaced in order to let the lines through. No hand labour is required in the gridiron. The six lines attached to each cloth batten run over the pulleys grouped on the gridiron floor, and the lead cable for each batten passes over to other pulley sets for hoisting. The actual raising and lowering of the cloths takes place from the flies or galleries running from front to back along the sides of the stage. The illustration shows the two men to the left at the ropes which are numbered. The counterweighting is so perfect that the heaviest batten (that bearing the roof) can be raised by one hand on the rope. The first two men to the right are working lime lights; the third is fastening one of Mr. Affleck's new triangular side-flaps, made to swing to any angle with its hanging cloth flaps and so mask the flies from the auditorium while continuing the scheme of the scenery. There are fifty cloths hanging at one time, that is enough for four or five operas. All that has to be done in the flies between the acts or for a change at sight, is to pull up one set of cloths, borders, &c., and to lower another, which can be done simultaneously, for half the cloths are worked from one of the flies and the second half from the other. The vast paint-room over the back stage is one of the most interesting spots in the building. Here the canvas is stretched



THE PAINT-ROOM AT COVENT GARDEN

IN THE FLIES DURING A PERFORMANCE

Raising the cloths and working the limelight

across a huge frame, and as the scene artist covers the ground the frame is raised or lowered through a cut between floor and wall by means of a windlass. Mr. H. Brookes is the resident scenic artist this year; in the beautiful Tristran and Rheingold scenery we have specimens of his work. The scenic artist and his assistants do not work exclusively in the paint-room; they are rarely absent for long from the stage when scenes are being set. The paint brush, in fact, is ubiquitous at Covent Garden—it is for ever roaming about touching up a tree here, renovating a rock there, painting in a few more shimmers of light on a water gauze cloth.

The armoury at Covent Garden, consisting of a suite of rooms, is the finest in the world; it contains over twelve thousand articles—chain mail armour, cuirasses, shields, spears, swords, rapiers, &c. &c. The men are shown at work polishing the armour required for the performance which the armourer will afterwards duly distribute in the various dressing-rooms or place in readiness in the wings.

The wardrobe department contains thousands of costumes, neatly stored and classified. Large baskets on wheels are run along to the various presses to collect the costumes for the performance in groups; for principals (most soloists bring their own), chorus, ballet, and supers, and the baskets are then taken down in lifts to the dressing-room floors.

All the properties used at Covent Garden with very few exceptions, such as artificial flowers, solid furniture, armour, are made in the department known as the property shop.

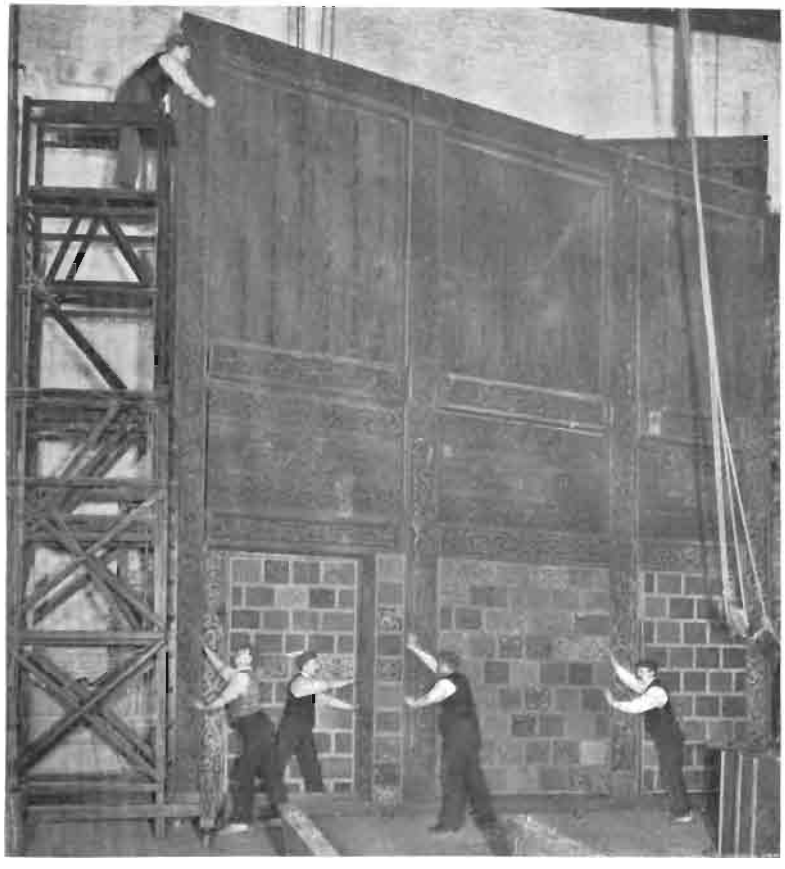
AT WORK IN THE ARMOURY

Covent Garden has the largest stage armoury of any opera house in the world

Here the various processes of modelling, moulding, casting in *papier-maché* of from three to seven layers, fitting together, drying, painting, and gilding are carried out by the property master and his staff; they are besides responsible for the timely appearance of every property on the stage during the performance.

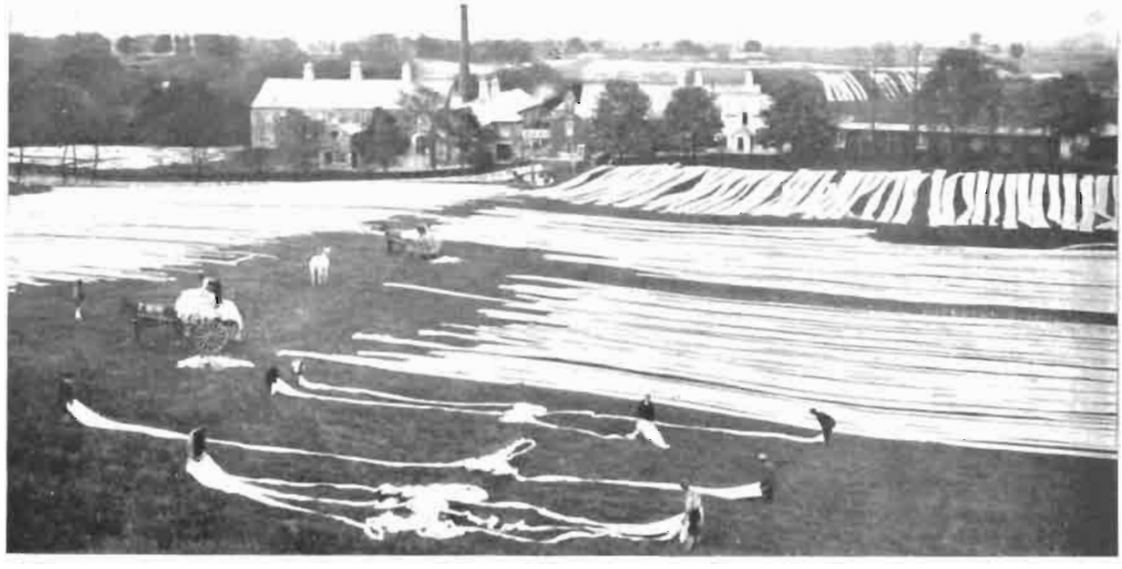
The electrician's department is as complete and thoroughly organised as all the others. From the switch-room under the orchestra is controlled all the lighting for the house and stage, the motive-power for the electric bridges, and for raising the scene cloths from the store-room in which they lie on many-armed racks, numbered and classified just under the back stage which they reach through a wide cut in the floor. The intensity of the light for stage effects is regulated to a nicety by means of fluid resistance.

It is impossible to have studied the mechanics of opera, even superficially, without being struck by the remarkable *esprit de corps* which reigns amongst the workers from chief to call-boy, from carpenter to lift-boy. Without any exception, the momentary failure of the one becomes the willing service of the other; what one lacks his companion invariably supplies. This delightful recognition of the dignity of labour by its partakers undoubtedly smooths away the many and tremendous difficulties to be encountered with our system of a short opera season which invariably includes the staging of one or two new operas, besides the ordinary work for which the day is always all too short.



ONE OF THE BREAKING WALLS IN "DIE GÖTTERDÄMMERUNG" BEING WHEELED INTO PLACE

CLOTH SPREAD TO BLEACH, GLENMORE



# THE REVIVAL OF IRISH LINEN

THE GROWTH OF INTEREST IN IRISH LINEN—THE IMPORTANCE TO IRELAND OF HOME-GROWN FLAX—A VISIT TO THE LARGEST LINEN MANUFACTORY IN THE WORLD—LINEN FOR LADIES' DRESS—THE NEW MOVEMENT FOR DEVELOPING THE INDUSTRY IN IRELAND

BY

ROBERT CROMIE

*Illustrated from Photographs by Robert Welch*

So much interest has recently been attracted to the Irish linen trade, a short review of its present position and prospects, together with a summary of the processes in linen manufacture, may not be out of place in this magazine. The first evidence of this revival was afforded by the paper on the linen industry read by Sir Robert Lloyd Patterson before the British Association at the meeting of last year in Belfast. Following this up, after a short lapse of time, a series of editorial and special articles, interviews with manufacturers and merchants, and a considerable body of expert correspondence appeared in the Belfast *Northern Whig*, urging upon the Board of Agriculture and Technical Instruction for Ireland a more serious effort to grapple with the problem presented by the deplorable falling off in Irish-grown flax; and, upon those interested in the trade, a more stringent enforcement of the provisions of the Merchandise Marks Act, in order to prevent the sale of unions or cottons as pure linen. Finally, a happy thought of some gentlemen in the linen business suggested the holding of an "all-linen" fancy-dress dance in Belfast on the lines of the old Manchester calico balls, for the purpose of popularising linen as a material for ladies' dress by displaying the advantages it possesses for this use. This function was held under distinguished patronage, and was supported financially and

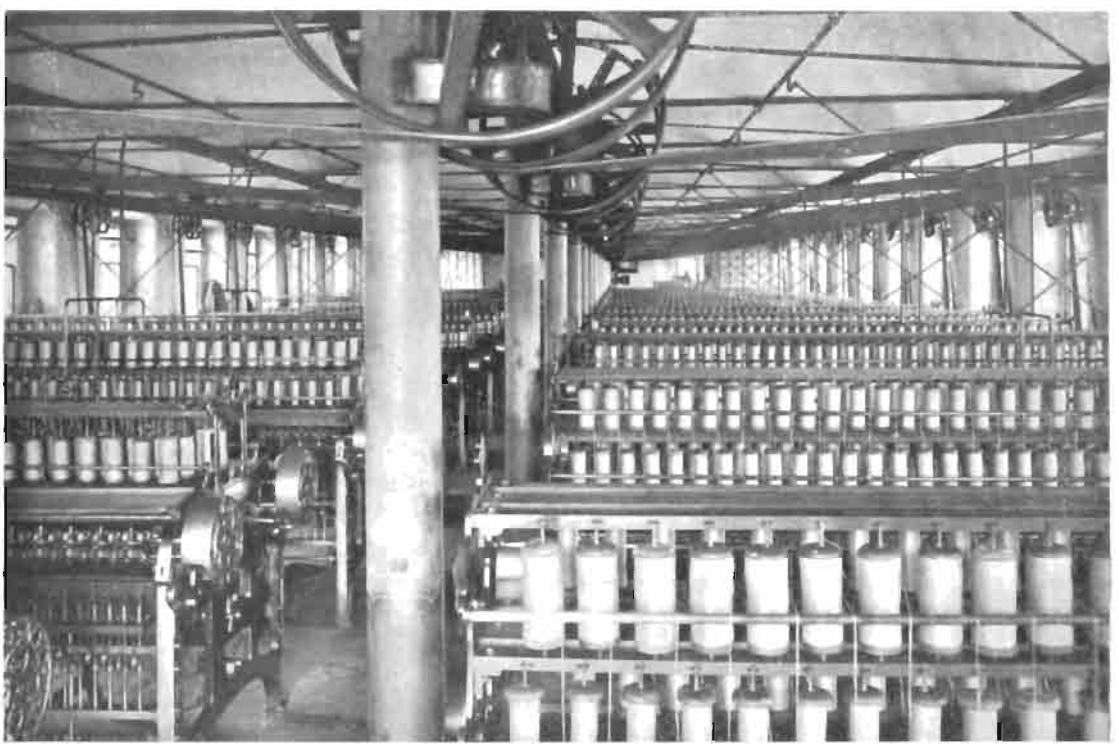
by the presence of the foremost men in the trade. It was also very successful socially: hence a wide range of Press notice at home and abroad, and a proportionate degree of fresh interest in the Irish linen trade.

If suitability of climate and consequent proximity of manufacture to raw material constitute an important element in the growth of an industry—as they most inevitably do—there is no country in the world better adapted for the production of linen in all its stages than Ulster, and, indeed, Ireland generally. The raw material, flax, can be grown, under proper conditions, to equal, if not excel, in quality that of any country in the world. Belfast linen has thus an initial and vitally important advantage over Manchester cotton and Dundee Hessian, inasmuch as these latter seats of manufacture must go so far afield as America, India, and Egypt for their supplies. Anything therefore which may serve to expand the area under flax in Ireland will make for the welfare of the linen trade. If the Irish farmer was assisted in a larger measure by Government, through the Agricultural Department, to procure the best seed, and to adopt the most advanced methods of cultivation, so that he could at least hold his own with the Russian and Dutch flax grower, the first step would be taken in the right direction. The simple policy of buying in the cheapest market and selling in the dearest, without ulterior considerations, may be inoffensive as a commercial ethic, but it is not the sum total of commercial wisdom, and the broad view, which includes in its range the prosperity of the whole country, is not only patriotic but is justified by the test of pecuniary results. It may be urged, with great propriety, that this argument is in direct violation of the principles of political economy as hitherto expounded. But it should be remembered that the economics of many of our illustrious and deceased political economists are as dead as themselves, and that some of their sacrosanct doctrines are now sacred only to the memory of the Manchester School.

DONEGAL EMBROIDERERS AT WORK ON THE QUEEN'S ORDER

DAMASK WEAVING AT ST. ELLEN WORKS (EDENDERRY)

Before reviewing in consecutive detail the complicated processes by which the fibre becomes fine linen, it is desirable to correct a serious mistake which was made some months ago in a section of the English Press. Under this misunderstanding, the lamentable decline in Irish flax cultivation was confounded with, or regarded as representing, a corresponding decline in the manufacture of linen. The figures expressing the relative acreage under flax in Ireland in 1870 and 1902, viz., 194,893 and 49,746 statute acres respectively, were 50 per cent., and the area under flax reached its maximum in 1864, viz., 301,693 acres. In 1868 the record price for flax was touched, £82 12s. per ton, about £24 above the normal. These artificial conditions gradually passed away as the effects of the great war subsided, and although the disappearance of the linen "boom" was by no means instantaneous, the leaping and bounding stage of progress was done with definitely. Nevertheless, while in twenty-five years Ireland showed a decrease of about 86,000 spindles, Austria and Germany



A SPINNING-ROOM AT THE YORK STREET MILL, BELFAST

taken as indicating the relative position of the trade at these periods, and its extinction was prophesied in the immediate future. Whereas, while linen manufacture is not only non-expansive, so far as the whole world is concerned, but actually declining, in Ireland its decline has been comparatively insignificant. Without going back into ancient history, it may be said here that, as is well known, our staple industry received its great world-impetus from the American Civil War, one of the effects of which was to shut down the output of cotton. Responding to that stimulus the Ulster linen trade advanced by leaps and bounds. From 1861 to 1868 the number of spindles went up decreased by 168,000, Belgium by 32,000, and France by a little over 300,000. That is, the Irish decrease was about 9 per cent., Germany and Austria 27 per cent., and France nearly 40 per cent. Thus, while the linen trade is one of the world's declining industries, in Ireland, compared with all other countries except Russia, it is hastening slowly in that process.

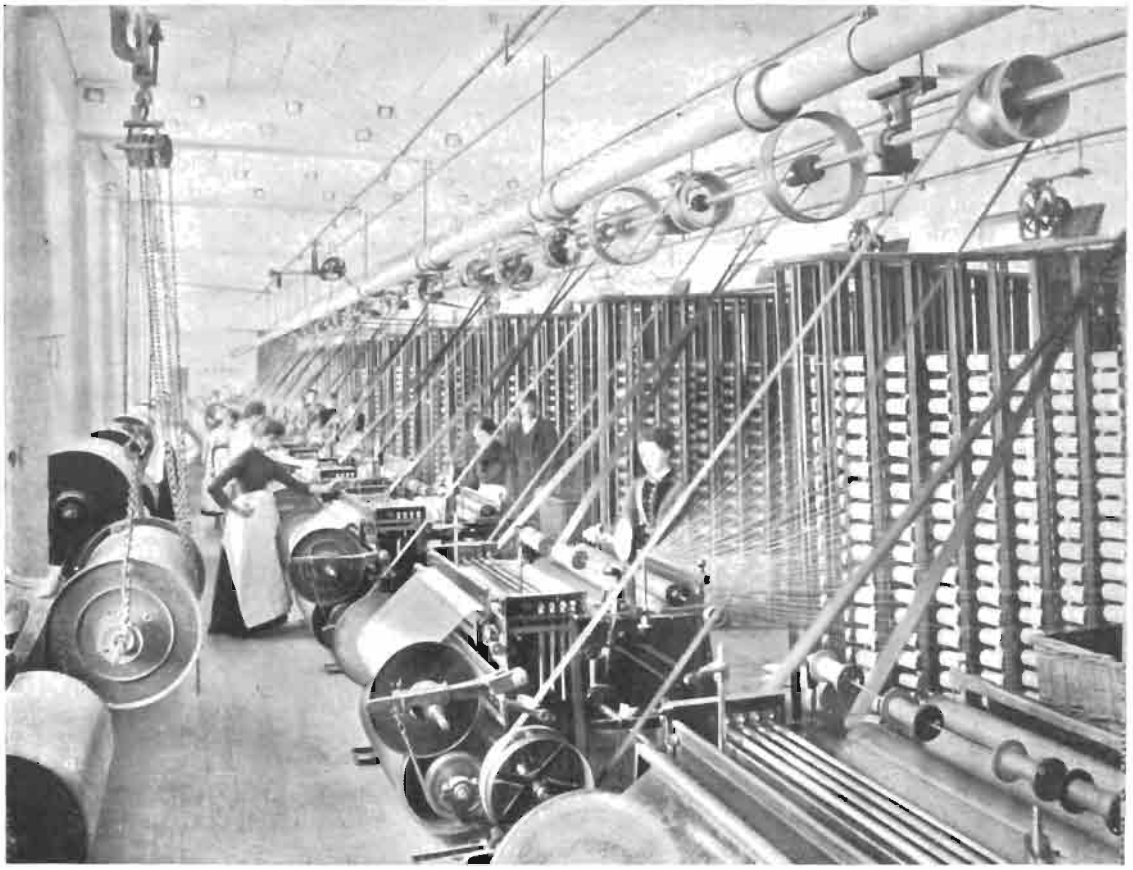
It must not be forgotten, however, that this decadence is only comparatively insignificant, and that some features in the trade are unsatisfactory to its well-wishers. In 1864 the United Kingdom exported 17,936 tons of linen yarn value for £2,991,969. In 1901 only

5791 tons value for £824,900 were exported, and in the latter year the imports exceeded the exports by 4685 tons. These figures speak for themselves. It is not surprising, however, that when the spinner has to import so much of his raw material from Russia he finds his market narrowed by competitors nearer the district where it grows. And Russia, with her vast areas, and labour costing next to nothing, has annexed the growth of coarse flax by placing it on the market at a price with which no other flax-growing country can compete.

INTERIOR OF A TEELIN FARM IN CARRICK, DONEGAL

To convey, however briefly, an intelligible idea of the complicated process by which flax fibre becomes fine linen, it is necessary to go back to the flax plant itself, *linum usitatissimum*, and work forward therefrom to the finished product. The encyclopædic description of flax sounds somewhat formidable: "As cultivated it is an annual with an erect stalk rising to a height of from twenty to forty inches, with alternate, sessile, linear-lanceolate leaves branching only at the top into a corymbose panicle of bright blue flowers." Our temperate and humid climate is exactly suited to the special requirements of this annual, and our soil yields it in excellent quality. A field of Irish flax in flower, the long, gracefully drooping stems tipped with delicate blue-bells, is as picturesque as a plot of poppy-speckled corn, although it has not yet been so well worked in either poetry or painting. When the crop

THE WHITE ORNAMENTING-ROOM, YORK STREET



THE WARPING PROCESS IN LINEN MANUFACTURE

is ripe it is pulled up by root, and by hand. In Australia, I believe, it is machine-mowed like grain. Then it is buried in natural bogs, or dug-out ponds, for retting, or rotting the stem in order that it may be easily separated later from the fibre. This may take ten days, or more, according to the weather and the water. It is at this stage our farmers are said to have much to learn. The process is certainly primitive, and there is good reason to hope that some more scientific method may be discovered, but it is only right to add that that hope is long deferred. Our method of retting meantime is the same as the inferior "blue" system of Belgium, and their double retting in a slow-running river, as practised at Courtrai with such admirable results, would not be legal in this country. As, however, the retting *bacterium* has been discovered, there seems no reason why some form of artificial retting should not be invented, to take the place of the present wasteful and unsatisfactory plan. When the stem or straw has been sufficiently decomposed, the flax is taken from the water and spread out on grass to dry. This stage of the crop is not æsthetic, either in appearance or perfume. The material is unsightly, and the odour overwhelming. When the atmosphere has done its share of the work, the flax is gathered up and either built into stacks or, owing to the exigencies of the farmers—another weak point—carried off forthwith to the scutch-mill, where the fibre is cleared of refuse, the finer portion being then in the first stage of "line," and the coarser "tow." Both of these are now ready for the flax-mill, and the farmer is done with them. The crop is said to be exhausting on the soil, but care as to proper rotation, and a fuller knowledge of recuperative manures, would obviate any permanent deterioration.

Passing to the next stage, the reader cannot do better than join me, in his imagination, in a tour round a great mill. It should be explained for the benefit of lay readers that "mill" in Ireland means specially a spinning-

mill, and "factory" means the establishment where the thread is manufactured into cloth. As it will be more convenient to inspect a concern which embraces all branches of the manufacture, spinning and weaving, we may make our visit to the York Street Mill, the largest linen manufactory in the world. Commencing with the great building in which the raw flax is stored, we find the three degrees of comparison illustrated by Russian, Irish, and Belgian fibre, the difference in quality being apparent to the least initiated. The better scutching and retting of the best Belgian flax probably accounts for most of its superiority over our own. By various stages of preparation, the last vestiges of bark left by the scutcher are removed, and all dirt cleared away, and when these are over the flax is ready for hackling. Here our attention is at once arrested by an automatic screwing-machine, which, for apparent sentiency, might be compared with the latest linotype. A boy feeds in the material and the machine does the rest, unscrewing bolts, shifting plates, re-screwing the bolt, and so on. The object and effect is similar to the action of holding the flax in the hand until one end was hackled, and then changing the grip so that the other end might

HAND-LOOM WEAVING AT ROBINSON AND CLEAVER'S, BELFAST

MR. R. H. S. READE, D.L.
Head of the York Street Flax Spinning Company

be treated. "It only differs from a human being," the courteous manager accompanying us remarks, "in not having sense enough to leave off when there is nothing else to be done." "Just as a human being differs from it," we venture to rejoin, "in a tendency to leave off while there is plenty to be done." Very interesting, too, is it to watch the "line" being gradually drawn into thread from its first stages when it comes out like a piece of tape ("sliver") until after "drawing" and "roving" it is ready to be spun.

The spinning-rooms of the York Street Mill are a great sight, which might occupy us longer only that there is so much to be done. Above the spinning-rooms are the reeling-machines, which take off the yarn on to reels, and last, and most impressive sight of all, are the great weaving-sheds where the cloth is woven in every variety, from the plain linen for ordinary use, to the beautiful designs produced by the Jacquard looms. The immense number of looms at work, the rattle of the shuttles which rises into a deafening roar, and the curious effect of such a mass of movement is almost overpowering. It is partly with relief that we leave this department for the quiet store-

THE LARGEST LINEN MANUFACTORY IN THE WORLD
The York Street Mill, Belfast

ooms, where damasks for Mayfair, or prints for the West Indies, can be inspected at leisure.

Having passed through all its processes save the last the cloth is now ready for its final stage, bleaching and finishing. Whether Ireland is the finest country in the world for growing flax it is beyond dispute the finest in the world for bleaching linen—an operation which requires from six to eight weeks, according to the nature and weight of the fabric. Nowhere else can the snow-white finished fabric be turned out to rival the Irish bleach; France, Belgium, Germany, and America have all entered into competition with us, and retired unsuccessful. At the time this article is written large quantities of foreign linen, principally Belgian, are being bleached and finished on various greens near Belfast, such as Richardson's at Glenmore, Whiteabbey Bleaching Co., or Smyth's at Banbridge. The quality of the water, the climate, and the inherited experience of the Irish bleachers must all contribute to the result, which has had abundant practical demonstration, that Ireland now occupies, and has always occupied, the first place in the whole world for bleaching and finishing linen. Our pushful American friends are working their way so rapidly up to or ahead of us in so many forms of industry, a little egotism may be pardoned regarding one in which we have no rival. Having thus arrived at the conclusion of this branch of the subject, and before passing to the next, the operations in linen manufacture may be recapitulated: the flax plant, retting, scutching, roughing, machining, sorting, spreading, drawing, roving, spinning, reeling, bundling, warp and pirn winding, weaving, bleaching, and finishing.

With reference to the distribution of the

various forms of linen among the larger firms in Ulster, it is natural that most of these have made a speciality of some particular line, while more or less fully occupied with all. The York Street Mill, as already mentioned, is the largest linen concern in the world, and it takes the lead in all branches of the business, spinning, weaving, finishing, and distributing. In this gigantic factory there are 60,000 spindles, and 1000 power-looms, while the total number of operatives employed is 4500. Branches of the company are established in every city of importance in Europe, America, and Australia, and every fabric obtainable from flax fibre is produced by it and sent to all parts of the world. The manufacture of the finest damask woven is claimed by Ulster, and in this branch the factories of Edenderry, Bessbrook, and Donacloney have a world-wide reputation. The table linens and superior household goods produced by Messrs. John S. Brown and Sons, and Messrs. J. N. Richardson, Sons, and Owden, Limited, at Edenderry and Bessbrook respectively, are of the highest standard, and in both houses enormous sums of money are spent on designs alone for the most elaborate and beautiful table cloths, napkins, &c. In these factories wonderfully fine towels, huckaback, sheeting, and shirting cloth are made for the select West-End trade of London, and the New York "four hundred." They also receive many orders for fine table-linens from our own and foreign Courts. Messrs. Richardson have one of the handsomest warehouses in Belfast, and at Bessbrook there has grown up under their ægis a well-known model village, which is an encouraging example of what can be done by public spirited employers, as well as a centre of a seat of industry.

It would be impossible to catalogue all the great linen firms in Ulster, and the foregoing are simply selected as representative and typical; there are many others whose names are honourably known in the trade, and influential in the markets of the world. It may be enough to say that the value of the linen exports of the United Kingdom amounts to about £5,000,000 annually, and the home consumption would probably come to something near the same figure. Of this total a very large proportion comes from Belfast and its district. In addition to this large share of the manufacture of linen there are in Belfast many manufacturers of textile machinery, and owing to the inventions and progressive spirit of these the machinery in Belfast mills is admitted to be superior to that in German or Belgian mills of the same class. Many orders for machinery for linen mills and factories come to us from the Continent and America, and as the United States is celebrated for the excellence of its inventions in looms and spindles this is creditable to Linenopolis. Messrs. James Mackie and Sons are now at work on a large order from the York Street Mill for completing its equipment of Crawford's patent automatic-screwing hackling-machines, reference to which has been made. One great advantage of this machine is that the boys who feed it are all stationed at one side only, and, in consequence, by strong ventilators the dust can be driven clear away from the operatives. As this dust is, in the smallest quantity, disagreeable, and when heavy deleterious, labour-saving is not the only advantage of this type of machine.

It may be thought surprising, after this cursory comment on the most modern side of the linen industry, that there are still some hand-looms used for fine table linen, and there is also the remnant of what was once an important branch of the trade carried on by the same means in the neighbourhood of Ballymena. These goods are used for shirtings, and are known in the trade and among shirtmakers as "Ballymenas." The hand-looms employed on "Ballymenas" are now chiefly operated by women and children in their own cottages, and the work is poorly paid, only coming to five or six shillings per week on the average—less than the wages earned by hand-loom weavers in Belgium. Another poorly paid branch is hand embroidery, of which a great deal is done in handkerchiefs, pillow-cases, sheets, &c. This work is given out through country agents, generally village grocers, and is distributed principally in counties Down and Donegal. The money earned is small, but in the country districts of Ireland the standard of living is low, and the wages thus distributed help to postpone the evil day of the emigrant ship.

The handkerchief trade is principally carried on in the towns of Lurgan and Portadown. Large factories in these towns are devoted entirely to this branch of the trade, such as Messrs. Johnston, Allen and Co., of Lurgan, and Spence, Bryson and Co., of Portadown. But there are some Belfast firms, Messrs. Robert McBride and Co., Limited, Lindsay, Thompson and Co., Limited, and others devoted almost entirely to the same manufacture, in which also the York Street Spinning Co., Messrs. Henry Matier and Co., Murphy and Stevenson, Limited, and Richardson, Sons, and Owden are largely

interested, producing every variety of the article, from the plain and cheap children's handkerchief to the most daintily embroidered and lace-bordered creation for the lady of fashion.

In the matter of dress, linen has always been used as a material, although not in the quantity its friends would wish. We are promised, however, by the fashion prophets a wider popularity for it in the near future, and, indeed, during the present year. In the West Indies and other warm countries the material is greatly used. The island of Cuba is a good customer of ours, and in the United States, for many years past, ladies' blouses and skirts have been made of brown and coloured linens, while men have found linen bicycle suits agreeable wear in the climate. For a long time linen was handicapped in its struggle with cotton, in this department, by its limitations in dyeing, but some nine years ago an advance was made in producing linens from dyed yarns in a great variety of colours and shades for ladies' dress. Within the past three or four years this has become an important part of the business, and of the 33,000 looms in Ireland my friend, Mr. E. J. Elliott—to whom I am indebted for valuable information on his end of the trade—thinks it is safe to say that 2000 are working at these coloured dress goods. At the time of writing the demand for plain white linen of a heavy make, and not too fine a quality, for ladies' blouses in the United States is so great that this kind of cloth can hardly be manufactured in sufficient quantity to meet it.

It has been calculated that the capital engaged in the trade amounts to £12,000,000; the wages are annually £3,000,000, and the workers 70,000. There is no necessity, therefore, to urge the importance of the new linen movement, which has before it three main problems: (*a*) the encouragement or re-establishment of home-grown flax by affording Irish flax farmers the best advice as to cultivation, retting, scutching, &c., and financial assistance in order to get a fair value for their crop, which at present must be dumped wholesale on the market as soon as it is ready, owing to straitened means; (*b*) the suppression, by the stringent enforcement of the Merchandise Marks Act, of the surreptitious trade in unions and cottons as pure linen, to the great detriment of the last, both as to its market and also as to its credit when the imitation proves disappointing in wear; and (*c*) the extension of the markets for pure linen by the widest publication of its special advantages. In the manufacture itself, the raising of the standard of the cloth by the employment of better material, greater attention to technical education, adoption of the newest labour-saving machinery, and, perhaps above all, the application of the highest expert intelligence to the artistic end of the trade—so that linen may get a larger share of the markets now exclusive to wool, silk, and other fabrics—these are looked to as the best means of turning Ireland, one of the least decadent linen-manufacturing nations, into a progressive linen-manufacturing nation.

Synchronising, therefore, with the new Ireland to be created by the Land Bill, and the transport scheme of Lord Iveagh and Mr. Pirrie, it is to be hoped the new linen movement will add its share to the general prosperity of the country, and maintain our great industry in its forward place in the markets of the world.

# THE SECRET OF BUSINESS IS THE MANAGEMENT OF MEN*

BY

ANDREW CARNEGIE

THE PRESIDENTIAL ADDRESS READ BEFORE THE IRON AND STEEL INSTITUTE, MAY 7, 1903

MY first desire is to thank you deeply for the honour conferred by electing me to the Presidency, which is for the man of iron and steel the blue ribbon of distinctions in the race of life. Beyond this he cannot go, for there is nothing higher, and he must perforce be content hereafter—from the sublime height—to survey the plains below.

More and more our Institute becomes cosmopolitan and confirms its sway over the world wherever iron or steel is produced. It marches forward with the times. Indeed, its mission has been to keep in advance of the times, only now and then following, but oftener making, precedents. He who stands before you to-day does so through one of those precedents, as the first president not a British subject. You have sought by his elevation to the highest office to emphasise the fact that this, the pioneer institution in iron and steel, knows no petty lines of separation among nations. Gentlemen, if international politics were only as harmonising a force as international education, industry, or science, what a wonderful and beneficent change would result! This alarming race between men divided into hostile nations, for increased weapons of destruction to be used not against outside foes but against each other, would promptly cease. It is gratifying to remember that there are many educational, industrial, and scientific societies like our own, in which Austrian, Belgian, Frenchman, German, Italian, Hungarian, Russian, Spaniard, Swede, American, Briton, and men of other lands meet as friends, co-operating in a common cause. If the parliaments of these countries would only remit to the Iron and Steel Institute the whole subject of international relations, including armies and navies, you could readily appoint a committee of distinguished citizens of each of these countries, members of this Institute, who would have little difficulty in laying the foundation of international peace and goodwill such as prevails among us in this cosmopolitan Institute, which knows no warring divisions, and whose members are engaged labouring in unison side by side, guiltless of hostile intent, and therefore free from ignoble suspicions of each other.

Looking over the list of your presidents, their successor is struck by the value of the services they have rendered. Great names are there, among them the chief inventors and pioneers in iron and steel—Bessemer, Siemens, Lowthian Bell, Percy, and others, whose names are household words. There is scarcely one who has filled the office who has not been able in his inaugural address to deal with a branch of the subject, as perhaps the recognised first living authority upon it. Several have announced and described in your proceedings the inventions to which they owed their fame. What a contrast the present occupant presents, who has no shadow of claim to rank either as inventor, chemist, investigator, or mechanician. None know so well as you, fellow members, that his attention has been centred upon the business department, and that it is experience in this alone which entitles him to address you. It is the department which differs most, perhaps, from any other; at least an American humorist gives it at his opinion that the business instinct can no more be instilled in men by teachers than the homing instinct could be developed by feeding them upon pigeon pie. I invite your attention, therefore, to the important question of the organisation and management of that most complicated of all pieces of machinery—Man—which has been my province.

* We desire to thank Mr. Carnegie for his permission to publish this striking and important discussion of the principles of successful business. It cannot fail to be read with deep interest by both employers and employed. —EDITOR.

Great as is the contrast between the pioneer and the modern manufacturing plant, it is scarcely less between the business methods of the past and the present. Both have changed, and changed for the better, in the unceasing march of improvement.

It is to Britain we must come for the starting-point, for here the iron industry began through the operation of the inventions of Darby, Huntsman, Smeaton, Cort, Watt, Stephenson, Neilson, and Nasmyth. Indeed, the eighteenth century began a new era in the iron industry, and Great Britain became the first manufacturing country. We note how individualistic the various organisations were who established the manufacture of iron. No trace of the corporation is seen, for that came later. The works at Colebrook Dale, Dowlais, Carron, Cyfarthfa, and Low Moor were the earliest started; and men such as Crawshay, Wilkinson, Dawson, William Dixon, Alexander Baird, John Brown and Charles Cammel were the first captains of the industry, chiefly of the mechanical rather than the commercial order, and most of them, I believe, had worked with their hands in youth. Bessemer, Siemens, Thomas, Whitworth, Samuelson, Windsor Richards, E. P. Martin, Daniel Adamson, J. D. Ellis, J. Riley, Lord Armstrong, Whitwell, Snelus, and others came later. It is not strange that the inventive and the mechanical should have taken precedence of the commercial element in the beginning, since upon these success primarily depended. When the joint stock form came, the business element in the United States naturally took first place.

### Taking Young Geniuses as Partners

It may be doubted whether the superintendent of any works under joint stock management there in these early days had a seat on the board or any reward beyond a fixed compensation, or was called to the main office for counsel upon any question not strictly mechanical. Probably there was not one foreman or important man recompensed in any form beyond fixed salary. The admission of young partners without capital was unheard of. The joint stock form does not lend itself readily to the substantial recognition of exceptional service from the exceptional man, or of payment based upon results in departments, yet it is in this direction that the most important changes have come in the business department.

Speaking from experience, we of the Carnegie Steel Company had not gone very far in manufacturing before discovering that perfect management in every department was needed, and that this depended upon the men in charge. Thus began the practice of interesting the young geniuses around us, as they proved their ability to achieve unusual results—the source of big dividends. These received small percentages in the firm, which were credited to them at the actual cash invested, no charge being made for good-will. Upon this they were charged interest, and the surplus earned each year beyond this was credited to their account. By the terms of the agreement, three-fourths of their colleagues had the right to cancel it, paying the party the sum then to his credit. This provision was meant to meet possible extreme cases of incompatibility of temper, or of the recipient proving incapable of development, or of enduring prosperity. At death, the interest reverted to the firm at its book value. The young men were not required to assume any financial obligation, and not until their share was fully paid up by the profits, and there was no further liability upon it, was it transferred to them. Thus thoughts of possible loss never prevented concentration upon their daily duties. They were not absorbed in the daily quotations, for the shares were not upon the Stock Exchange or transferable. This policy resulted in making some forty odd young partners, a number which was increased at the beginning of each year.

By this plan they were rapidly paying for their interests and promising to become the millionaires of the then seemingly somewhat distant future, which, however, proved not so very distant. They are now rich men. You will not fail, however, to note that the plan kept them all in excellent training, as poor men still living upon their salaries, millionaires in *posse*, indeed, but not in *esse*—quite a difference, for millionaires seem liable to develop when still very young so many hitherto unsuspected weak spots in their constitutions requiring careful nursing, and many absences and short hours, and a dozen other impediments to hard continuous exertion, that it does not seem good for their robust health that they should be unduly burdened before reaching middle age. The zest of the chase is over too soon. It will be found the exception when a millionaire employee strains himself unduly by over-exertion in the mill or office, nor should he be expected to do so. He has earned the right to some leisure for self-improvement. When a man has achieved a competence, new duties to his family and to himself arise. Money is properly only the means to an end.

### From 8s. to "a Thundering Salary"

We did not fail to see, as the works enlarged, how much success depended upon the mechanical men, the superintendents and foremen, yet not one of these had up to that time been admitted as partner. The business and the mechanical men—office and mill—were still widely separated. Well do I remember the first attempt to bring these two departments into closer relations. It was made with our Captain Jones, one of your members, well known and appreciated by many of you as in the foremost rank of managers, perhaps the foremost of his day in America. He came to us as a working mechanic at eight shillings per day. I explained to the Captain how several of the younger men in the business department had been made partners and were actually receiving much greater rewards than he, while his services were at least equally valuable, and informed him that we wished to make him a partner. I shall never forget his reply:

"Mr. Carnegie, I am much obliged, but I know nothing about business, and never wish to be troubled with it—I have plenty to trouble me here in these works. Leave me as I am, and just give me a thundering salary."

"Hereafter," I said, "the salary of the President of the United States is yours, Captain," and so it remained till the sad day of his death.

My seniors, the presidents of the other manufacturing concerns, did not fail to take me to task for ruining the steel business by paying a mechanic more salary than any of them received. Being much the youngest of these great dignitaries, I humbly confessed my wrong-doing, not, however, failing to inquire if they knew where we could find two or three more Captain Jones' at double the price. We did not overpay the Captain; he was worth several ordinary salaried presidents. The Captain's refusal of partnership was the only one which ever came within my experience. None of the other mechanics ever preferred salary to partnership, and they were wise. Nothing can compare with that form. Let me impress that upon the younger members here who may soon have, or should have some day, the choice laid before them. From that time forward the union of the mechanical and business partners went steadily forward until no manager of a mill was without his interest in the business, as pertaining to the position, and no board of management, or important committee, was without a mechanical representative. Thereafter, mill and office conferred upon all important sales or contracts. The mechanic and the man of affairs were in constant consultation and fellow partners—one of the most profitable changes that we ever made.

There was another step taken in the same direction. Men having others under their charge were given an interest in the proceeds, or savings in cost, in their department. Where it was impossible to decide the limits of a department, the managers were rewarded by handsome bonuses beyond their salary, based upon the general profits of the year. Thus, as a rule, every man in authority became more than a wage-earner. He felt himself on the first step of the ladder which led to partnership sooner or later, and was worth any two mere employees paid only a daily or monthly wage and denied special recognition.

This plan of reward according to results, for heads of departments, has already become so general and is spreading so fast that we may be sure it has proved its efficiency. There are few large department stores or important houses in retail trade which have not been forced to adopt it.

This plan is probably bound to prevail to greater or less degree in manufacturing concerns, and the sooner the better, for the greater number of the workers capital can compensate, and in one sense reward, by sharing its gains, the more harmonious and therefore more profitable for both must the relation become.

### The Business Ideal

I never see a fishing fleet set sail without pleasure, thinking this is based upon the form which is probably to prevail generally. Not a man in the boats is paid fixed wages. Each gets his share of the profits. That seems to me the ideal. It would be most interesting if we could compare the results of a fleet so manned and operated with one in which men were paid fixed wages; but I question whether such a fleet as the latter exists. From my experience, I should say a crew of employees *versus* a crew of partners would not be in the race.

The great secret of success in business of all kinds, and especially in manufacturing, where a small saving in each process means fortune, is a liberal division of profits among the men who help to make them, and the wider distribution the better. Unsuspected powers lie latent in willing men around us which only need appreciation and development to produce surprising results. Money rewards alone will not, however, ensure these, for to the most sensitive

and ambitious natures there must be the note of sympathy, appreciation, friendship. Genius is sensitive in all its forms, and it is unusual, not ordinary, ability that tells even in practical affairs. You must capture and keep the heart of the original and supremely able man before his brain can do its best. Indeed, this law has no limits. Even the mere labourer becomes more efficient as regard for his employer grows. Hand service or head service, it is heart service that counts.

One of the chief sources of whatever success may have attended the Carnegie Steel Company was undoubtedly its policy of making numerous partners from among the ablest of its men, and interesting so many others of ability in results. I strongly recommend this plan to the members of the Institute engaged in business, believing that in these days of ever-increasing competition it will be the concerns which adopt this plan, other things being equal, which will survive and flourish.

In no field is the wise proverb more amply verified than in manufacturing: "There is that scattereth and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty."

Disputes of some kind between Capital and Labour are always in evidence, but it must never be forgotten that in the wide fields of domestic service and in that of the few employees with a working master which combined embrace by far the greater number of wage earners, all is, upon the whole, satisfactory; there reigns peace, with the inevitable individual exceptions.

We see in this encouraging fact the potent and salutary influence of the personal element. The employer knows his men and the men know their employer; there is mutual respect, sympathy, kindly interest and good feeling, hence peace. In the extensive field of domestic service we best see how true it is, "Like master, like man; like mistress, like Nan." Here we have the relation of employer and employed in its closest form, and innumerable households testify to the harmonising effect of personal relations. The trusty servant becomes practically a member of the family, deeply attached to it, and the family reciprocates the feeling. Few householders are without old retainers and pensioners, and to the end of their days and even to that of their children of the household the relation remains unbroken. The friendship of the employers and their children for the old servants, and the affection of these for their masters and mistresses and their children, is one of the most delightful features of life.

What has produced this reciprocal affection? Not the mere payment of stipulated wages on the one part and the bare performance of stipulated duties on the other—far from this. It is the something more done upon both sides, and the knowledge each has had opportunity to gather of the other, their virtues, kindness—in short, their characters. The strict terms of the contract are drowned in the deep well of mutual regard. Labour is never fully paid by money alone.

If the managing owners and officials of great corporations could only be known to their men, and equally important, their men known to their employers, and the hearts of each exposed to the other, as well as their difficulties, we should have in that troublesome field such harmony as delights us in the domestic. It is mainly the ignorance of contending parties of each other's virtues that breeds quarrels everywhere throughout the world, between Individuals, between Corporations, and their Men—and between Nations. "We only hate those we do not know" is a sound maxim which we do well ever to bear in mind.

In the progress toward more harmonious conditions between employer and employed we see that the system of payment by fixed wage has been largely supplanted by payment according to value of service rendered by workmen in positions of authority over others, and by recognition not only in money, but in position, which often counts quite as much as coin, and not seldom much more with the ablest. There remains still receiving the fixed wage the great mass of ordinary workmen; but we see in the history of the relations of employer and employed that these have not failed to rise greatly also. The movement tending to improve the position of the worker has not passed over even the humblest, but has reached and benefited all.

Passing over the day when the employer of capital owned and managed his workmen as slaves, it is surprising to note that even as late as 1799 villeinage still lingered in Scotland. Miners and labourers were practically transferred with the mine when it was sold. Speaking recently to a most intelligent miner in Fife (and the Fife miners deserve their extraordinary reputation for intelligence, sobriety, and all the elements of good citizenship), I mentioned the fact that our forefathers were thus transferred, and contrasted the position now, when their committee was at that moment meeting the property-owners in discussion

as equal parties to a contract, both merchants —one buying, the other selling, labour. To the inquiry what would be thought now if the employer desired to transfer the men with the mines, he replied: "Aw, there would be twa at that bargain, I'm thinkin'." You have to be Scotch fully to appreciate the reply, for much lies in the accent, the twinkle of the eye, and significant nod.

### The Sliding Scale

The payment in merchandise in whole or part, and the obligation to perform certain duties to the employer, lingered after villeinage passed away, but to-day we have reached the stage of perfect equality between the two contracting parties. Each is free to demand terms or to terminate agreements. Labour is worthy of its hire and is now paid this in coin, the law in many lands going so far as to make its claim a first charge upon the employer's property—a great advance. But the irresistible pressure which has forced change after change in the relations of capital and labour still operates unchecked—a sure indication that the final stage has not yet been reached. We have evidence of this in another important advance, the Sliding Scale, which provides not a fixed wage but in some degree a settlement by results. Increased demands brings higher prices and profits to the employer, which in turn bring workmen higher returns, so that as the employer's profits rise and fall, so do the workman's rewards. If I were asked what was the best service the Carnegie Company was ever able to render the wage-earner, next to giving steady employment at wages equal to any, I should answer, by persuading them to adopt the sliding scale, with a mimimum ensuring living wages, at its works, at Braddock, fourteen years ago, which has given perfect satisfaction from that day to this and is still in force, and has produced undisturbed harmony between capital and labour. The sliding scale is a great advance over the fixed wage, not only by securing the workman a prompter and more certain share of the profits, but also because it raises his status. He is something akin to a proprietor when he shares varying profits instead of having merely a fixed wage. He has risen in the scale, and is more of a man, and the more of a man the better and more valuable the workman.

Gentlemen, while, as you have seen, the Carnegie Company interested its young men as partners and was always anxious to reward exceptional service, and carried the bonus system to an extent, perhaps unknown in any similar organisation, the masses of the ordinary workmen could not be embraced under the Limited Partnership form, even if it had been thought desirable that their savings should be so invested. The objection to this from the point of view of the workman, which always arose in our minds and which we were never able to surmount, was the sad and instructive history of the largest manufacturing concerns, especially those of iron and steel.

### The Financial Troubles of Large Concerns

It is an instructive fact that the majority of the largest manufacturing concerns in the United States have, at some period in their career, either been in the hands of receivers, been mortgaged, reorganised, or sold by the sheriff to the great loss of their original owners. Indeed, those which have escaped financial trouble are the exceptions. More than once in the history of the Carnegie Company, leading partners have been so doubtful of its future as to beg their more optimistic senior to buy large amounts of their interests at actual cost. The great Cambria Iron Company was twice in trouble, and once sold by the sheriff; Joliet Works were also so sold; the Bethlehem Company has twice been mortgaged; the 6 per cent. first mortgage bonds of the immense Chicago Works have sold for as low as 70 per cent., and its shares at less than one-half of their par value. The Troy Iron and Steel Company has lost heavily and undergone several reorganisations. It may be said that these disasters are of the distant past, but history has a way of repeating itself which we do well to remember. The Pennsylvania Steel Company has in recent years been in the receiver's hands. Its shares, in demand at $300 in 1881, sold in 1893 as low as $20. There was no over-capitalisation in any of these companies. Only actual cash counted. Even to-day, as I write, we hear of the Superior Iron Company being embarrassed—after investing of cash capital $34,000,000 (£7,000,000). Its preferred shares, which recently sold for $80 per share, are to-day quoted on the exchange at $15.50 (£3 4s.). The common stock, last year at $36 (£7 6s.) per share, sells to-day for $4 (16s.). It is just announced that our oldest and largest shipbuilding company must be reorganised, for which seven and a half million dollars (one and a half million sterling) are needed. Its shares, which have sold above $85, are now at $38. The vicissitudes of the leading iron and steel concerns of Tennessee and Colorado are still in evidence. Our friends in Canada have similar experiences. Shares of

their large Dominion Iron Company, which sold at $60 last month, are quoted to-day at $25.

Our experience in America has not been peculiar. The year before last the iron and steel works of Germany were generally in depressed conditions, and their shares suffered heavily. I read a list of these losses at the time which impressed me deeply. If I remember rightly, many declined one-half or more. Several important works were reported in financial trouble. Your own experience in Britain is similar. Not a few concerns, after vibrating between seasons of loss and gain, have, from time to time, had to be reorganised, entailing heavy losses upon shareholders. Uncertainty of results pertain not only to iron and steel, but to all forms of business operations, and are inherent in them.

Had the employees of leading American railway systems invested in their shares last year, they would already have lost nearly a quarter of their savings, Pennsylvania Railroad shares having fallen $38; New York Central, $40; Chicago, Milwaukee, and St. Paul, $41; Illinois Central, $42 per share. It will be said that these losses may be recovered. Quite true, but also true that they may be doubled. No man can tell.

It is this ever present danger of loss to the investing workman in all fields of investment which makes the Government savings-banks of Britain so great a boon, although only 2½ per cent. interest be allowed. The principal is absolutely safe, and this is the vital point without which little genuine good to the workers can result.

It is said that of every hundred individuals who embark in business, ninety-five fail. This seems incredible, but one has only to recall the number he has known, who have attempted and failed, to find that the percentage of failures is great indeed.

You know too well, gentlemen, how the path of iron and steel is strewn with financial loss in all countries, and that all forms of business must encounter grave risks. Scarcely a week passes without news of embarrassment or failure in the industrial world. Thus it has ever been, and ever must be, while human nature remains unchanged.

Bearing all this in mind, the thought of asking the working-man to risk his precious savings in the manufacturing or any form of business was always discarded by us as too dangerous for him. He was advised to buy a home instead and save his rent. To facilitate this, money to build a home was lent to any employee who had the ground clear of debt. Their savings up to $2000 each were taken by the company and placed in a special trust fund, entirely separate from the business. Interest at 6 per cent. was allowed, to encourage the workman to save part of his earnings for old age. The funds received were lent upon mortgage on real property, generally to such workmen as wished to build homes. It was believed that this was the safest, and therefore the wisest, use of their savings which workmen could make.

The most convincing proof of the steady march of labour towards a recompense based more and more upon profits or dispersed in forms drawing capital and labour into the peaceful bonds of mutual obligation, is to be credited to the United Steel Company, the largest of all industrial corporations. For this it deserves unstinted praise, as proving a genuine consideration for the interest of the workmen and sagacious thought for its own.

### "Every Workman a Shareholder"

To this step I invite your earnest attention, for it may well prove of surpassing importance and mark an epoch in the history of the relations of capital and labour. It may even be looked back to as having furnished the solid foundation for the solution of most of the troublesome questions between them.

It is in this form: Twenty-five thousand of the $100 shares of preferred 7 per cent. stock were offered to its 168,000 employees at $82.50 per $100 (£16.12 per £20) share, in different amounts according to their earnings. These were subscribed for twice over; nearly one-sixth of the men subscribed—one-half being salaried men. Twenty thousand more shares of stock were afterwards provided, making 45,000 in all, worth about $4,500,000 (£900,000); monthly payments being received. Another distribution of shares is intended next year.

One valuable and praiseworthy feature is that for five years those holding their shares and still in the service are given a yearly bonus of $5 upon their shares, and during a second five-year term a bonus, amount not yet fixed, is promised. The third feature, equally praiseworthy, is the resolve to set apart yearly from earnings, should these exceed $80,000,000 (say £16,000,000), 1 per cent. of the earnings, and for each $10,000,000 (£2,000,000) of earnings an additional one-fifth of 1 per cent., for a fund to be awarded to such of their officials and men as have in the opinion of the Finance Committee best deserved it, as a reward of merit and not *pro rata*. Such is the scope of this perhaps epoch-making advance which is rendered

possible by the joint-stock form with shares in small amounts, easily distributable among many thousands of workmen.

It will be noted that the investment is at the risk of the men. This seems a feature which we may, however, expect the corporation to change as experience is gained, as the plan is most wisely stated to be subject to future changes. In most of the States of the Union, labour's precious earnings, surely the most precious of all capital, are a first charge upon property, and this is, I believe, the only safe policy to follow. "Every workman a shareholder" would end most of the conflicts which sadden us, between capital and labour. To effect this, every corporation could well afford to offer to distribute part of its shares among the saving workmen, and in case of disaster give preference to repayment of principal as a first charge. Any desired legislation, with proper safeguards, could be readily obtained, authorising corporations to make savings of employees up to a certain sum for each a preferred claim, ranking before mortgage or ordinary debts or the claims of shareholders akin to the Mechanics' Lien and the Homestead exemption laws now in force in most if not all of the States. This seems due to the working man, who, necessarily unacquainted with business, buys his shares upon trust, and becomes the beneficiary or the victim of his employers. He should be considered as an inexperienced youth in the affair; besides, he is asked to invest, not solely for his own advantage, but at least equally for that of his employer. His adviser is not a disinterested party, and therefore cannot be absolved from responsibility, which would, I am confident, lead the owners of the United States Steel Company to save their trusting workmen from loss through following their advice, this advice being intended to promote the mutual advantage of the company and the workers. The responsibility is not small, since the circular assures the workmen they are offered "a safer and more profitable investment than the workman could possibly find for his savings elsewhere." How much better, therefore, that legal form should be given to the moral claim.

There is another consideration, the influence upon the prudent workman of distracting anxiety in regard to the absolute safety of what may be his sole provision for old age. He will see every morning the Stock Exchange quotations, for the American workman reads the papers. Only recently he would have seen the preferred stock of the United States Steel Company temporarily quoted lower than the price charged for it to him. This may mean little to the man of affairs familiar with the ups and downs of the mercurial Stock Exchange. But what must be the effect upon the uninformed workman? Of this I am well assured: the workman whose thoughts are upon the speculative surprises of the Exchange will not prove desirable. Speculation is the parasite of business, feeding upon values, creating none, and is wholly incompatible with the satisfactory performance of other regular work requiring constant care and caution. The workman's investment should never be in jeopardy, for if his thoughts are upon the Stock Exchange they cannot be upon the machinery, and machinery, like art, is a jealous mistress, brooking no rival claimant to her absorbing demands. In the interest of the employer, therefore, as well as that of the workman, the savings of the latter should be secure—here, as in other respects, their interest is mutual, and hence I believe the needed change will be made by the Steel Company in the near future. I cannot speak too highly of this experiment nor give the Steel Company too much credit for making it, since it declared to be in the experimental stage, and subject to future improvement, as all new schemes should be. Its able and progressive author, Mr. George W. Perkins, is to be heartily congratulated.

### Capital and Labour—A Forecast

Thus we see, gentlemen, that the world moves on step by step toward better conditions. Just as the mechanical world has changed and improved, so the world of labour has advanced from the slavery of the labourer to the day of his absolute independence, and now to this day when he begins to take his proper place as the capitalist-partner of his employer. We may look forward with hope to the day when it shall be the rule that the workman is partner with capital, the man of affairs giving his business experience, the working man in the mill giving his mechanical skill, to the company, both owners in the shares and so far equally interested in the success of their joint efforts, each indispensable, without whose co-operation success were impossible. It is a splendid vista along which we are permitted to gaze.

Perhaps I may be considered much too sanguine in this forecast, which no doubt will take time to realise, but as the result of my experience I am convinced that the huge combination, and even the moderate corporation, has no chance in competition with the partner-

ship which embraces the principal officials and has adopted the system of payment by bonus or reward throughout its works. The latter may be relied upon, as a rule, to earn handsome dividends in times of depression, during which the former, conducted upon the old plan, will incur actual loss and perhaps land in financial embarrassment. In speaking of corporations we must not forget, however, that there are many which are corporations in name only, their management being the life work of their few owners. These rank with partnerships, having all the advantages of this form. The true corporation is that whose shares are upon the Stock Exchange and whose real owners change constantly and are often unknown even to the president and directors, while to the workmen they are mere abstractions. It is impossible to infuse through their ranks the sentiment of personal regard and loyalty in all its wonderful power. The step taken by the United States Steel Corporation is therefore no surprise to me, for I have long believed that such corporations would be compelled to adopt the best attainable substitutes for the personal factor of the older system, or suffer. In the sagacious policy of the United States Steel Corporation I see proof of that opinion, nor can I suggest a better form than that it has adopted, always provided the working-man shareholder be secured against loss.

In the percentage allotted by the plan to reward exceptional officials we have for the huge corporation perhaps the best substitute attainable for the magic of partnership, which nothing however can approach. The reward of departmental officials may readily be secured under this provision. In the bonus granted yearly upon shares held by employees we have proof of regard for them which cannot but tell, and the distribution of shares in the concern among them has an advantage which so far no partnership even has enjoyed. The latter will no doubt adopt the plan, or find some equivalent, for the workman owning shares in absolute security will prove much more valuable than he without such interest, and many incidental advantages will accrue to the company possessed of numerous shareholding employees who may some day see their representative welcomed to the board of directors. This would prove most conducive to harmony, knowledge of each other on the part of owners and workmen being the best preventive of dissatisfaction. If the investment of the workman's savings be made secure, the rapid extension of the plan seems certain, and can be hailed with unalloyed satisfaction; but in its present form it is obviously incapable of general application, since the officials of few corporations could or would incur the responsibility of inducing their workmen to invest in their shares as a security, and few corporations could or should inspire the needed confidence of labour that these are to enjoy an unbroken career of prosperity, for such has not been the history of manufacturing concerns generally, especially in our field, to which we may well apply the well-known lines of Hudibras:

> "Ay me! what perils do environ
> The man that meddles with Cold Iron."

The idea of making of every workman a capitalist and of sharing large percentages of the profits among those rendering exceptional service will probably encounter the opposition of the extremists on both sides, the violent revolutionist of capitalistic conditions, and, the narrow, grasping employer whose creed is to purchase his labour as he does his materials, paying the price agreed upon and ending there. But this opposition will, we believe, amount to little. It will even speak well for the new idea if scouted by the extremists and commended by the mass of men who are on neither dangerous edge, but in the middle, where usually lies wisdom.

Meanwhile, here is the germ of a promising plan offered as a solution for one of the pressing problems of our age, which may prove capable of development. As members of the Institute let us receive, study, and discuss it with open mind. That the problem will be solved, and that the two factors are some day to live in friendly co-operation, let no one doubt. Human society bears a charmed life. It is immortal, and was born with the inherent power or instinct, as a law of its being, to solve all problems finally in the best form, and among these none more surely than that vexed question of our day, the relations between these Siamese Twins, which must mutually prosper or mutually decay—Employer and Employed—Capital and Labour.

# THE GROWTH OF GREECE

ECONOMIC PROBLEMS OF MODERN GREECE—THE RAILWAY TO CONNECT ATHENS WITH "EUROPE"—THE SCARCITY OF AGRICULTURAL LABOUR—PROPOSED SYNDICATES OF LONDON CAPITALISTS TO SUPPLY GREECE WITH STEAMERS AND TO PURCHASE HER CURRANTS—GREEK POLICY IN MACEDONIA

*From the Correspondent of* THE WORLD'S WORK

ATHENS, *May 2*

MOST Englishmen regard Greek life as entirely composed of archæology and politics. But, since the conclusion of the Greco-Turkish war, Hellenic politics have been largely concerned with economic questions, and all the political chiefs, who were seeking popular support at the last General Election of November 30, included social and fiscal questions in the speeches they made up and down the country. The fact is, that under the auspices of the International Control the Greek kingdom has made steady progress. The rate of exchange, owing to the paper currency, is still very high, in fact, over 40 *dr.* to the £; but the customs receipts have greatly increased, and would be still larger if the Government would sell one of its men-of-war and purchase a flotilla of swift revenue cutters, so as to diminish the extensive smuggling still prevailing in the less-frequented of the Cyclades, in the long island of Eubœa, and in the classic home of wily Odysseus, rocky Ithaka. Such a policy is not likely, for there is an agitation in favour of strengthening the fleet, and the London Greeks have subscribed £1400 for that purpose.

Railway development has been also a feature of the last few months. A new line has at last been opened, uniting Kalamata and Pyrgos, the second and third largest towns of the Peloponnesos, and for the first time tapping the fertile district round the quaint old mediæval stronghold of Kyparissia, hitherto only accessible by sea from Katakolo. The iron girder bridge over the Alpheios, which is one of the works of this line, and which was made in Switzerland, struck me when I saw it as one of the finest in the country. The railway net of the Peloponnesos, begun by the late M. Tricoúpes, is now practically complete, for there is no immediate prospect of the Eurotas valley line connecting Sparta with her ancient haven at Gytheion; and the engineering expenses of uniting the beautiful but unimportant little town, which Otho built on the site of the Lacedæmonian capital, with lofty Tripolis would scarcely be covered by the traffic returns. At last, however, after repeated miscarriages, the greatest of all Greek railways, the famous Piræus-Larissa line, is being seriously undertaken by the Batignolles Company. The importance of direct railway communication between Greece and "Europe" can scarcely be exaggerated. Greece and Montenegro are now the only Balkan states unconnected with the "European" system, and the steamers from Italy to Corfù and Patras are a poor substitute for a through service from Calais to the Piræus. But Mr. Lambrós Koromelâs, the highest Greek authority on economic questions, has pointed out that a penny-wise and pound-foolish policy is being pursued in the construction of this line. What Greece wants is a fast train service which will make the Piræus the port of embarcation for India and the centre of the trade of the Levant. Such a line would cost some sixty millions of francs, whereas the present scheme is calculated to involve an expenditure of no more than thirty-five or forty millions. He therefore fears that the much-discussed Larissa railway will prove, after all, to be unsuitable for heavy "European" expresses. Much time must, in any case, elapse, before the junction with the Turkish line near Salonica can be effected. Olympos will have to be tunnelled, the consent of the Sultan will have to be obtained, much *bakshish* will have to be expended in Constantinople, and the possible objections of Germany, no friend to French or Greek enterprises, and anxious to keep Turkey under her commercial tutelage, will have to be overcome. Meanwhile the line will probably be open as far as Thebes or Livadia this year, and the British

company which has drained, and now farms, the basin of the Copaic lake, will then be able to bring its produce down easily into the Athenian market, where such articles of consumption are now dear.

A small local line is also in process of construction between Lechonia, the delightful suburb of Volo, where rich Thessalians, who have made their "pile" in Egypt, come to spend the evening of their days, to a neighbouring town on the long arm which shelters the Pagasæan Gulf. The automobile is also utilised in Greece for passenger traffic, and two enterprising deputies started an *autokineton*—as the Greeks call it—between Athens and Livadia. The roads are, however, not always suitable for automobiles; but there has been talk of establishing a similar service on the great plain of Thessaly, that *Larissæ campus opimæ*, which has witnessed so many battles, and is now almost wholly in Greek hands, for the Turkish Beys have almost all emigrated since 1898. Patras, a very progressive place, last year opened an electric tram, which is very popular, and a French company is negotiating for the construction of another from Athens to Mount Skarmanga, which overlooks "sea-borne Salamis," and which it is proposed to convert into an Athenian Richmond.

But the most pressing question for dusty, thirsty Athens, as for Thessaly, is that of water. Borings have been made in the Thriasian plain near Eleusis, but the contractors want more money to complete their operations. Closely connected with this subject is that of planting the bare hills and plains of Attica. The Crown-Princess Sophia, following in the footsteps of the late Queen Amalia, is deeply interested in the re-afforesting of the country, rendered all the more necessary by the great forest fires on her husband's fine estate at Manolada, at Kalamata, and at Pikermi, between Athens and Marathon, the scene of Lord Muncaster's capture by brigands thirty years ago. The Princess is the President of the Forest Protection Society (φιλοδασικὴ ἑταιρία) which has founded a nursery near Athens, somewhat on the lines of the *pépenière* outside Sofia.

But the Greek people, as Plato would have said, is "the great sophist." You may plant as much as you like; but you cannot prevent the peasant from burning the trees. British experiences in Cephalonia during the Ionian protectorate are conclusive on that point. The Austrians, by muzzling the goats and by severe penalties, are slowly replanting the bare Istrian and Dalmatian coasts. But the Italians and Slavs of the Austrian Riviera are not Greeks.

Greek agriculture, never very popular with the younger generation, which prefers the learned professions to the care of the paternal acres, has latterly received a fresh blow from the increase of emigration to America. Mr. Leondarítti, the energetic British Vice-Consul at Kalamata, tells me that in the fertile plain of Messenia agricultural labourers are scarcely to be had; Mr. Phikióres, the deputy for Sparta, makes the same complaint from the other side of Mount Taÿgetos. It is a comparatively rare thing to see a young man at work in the fields, while the emigration offices at Patras are crowded with applicants for tickets. This question of emigration is becoming very serious indeed. Even Elis, one of the wealthiest districts of the Peloponnesos, is beginning to suffer from this drain upon its population. In Corfù, where poverty is greater than in most parts of Greece, the problem is different. That beautiful island is now left entirely to its own resources, save when, as last year, a British fleet anchors off Vido and sends up prices in the market. The poverty of the Corfiote peasant is no new thing; I have heard it ascribed to the evil of absenteeism, encouraged by the British, who attracted the landlords into the town. But exactly the same phenomena that one sees there to-day are described by the French Consul, Saint-Sauveur, long before the British flag ever waved over the Seven Islands. The Corfiotes regard their case as so desperate, that the flattering proposals of a foreign syndicate to make their delightful island a second Monte Carlo were regarded by most of them as the future salvation of the place. The golden age of Alkinöos and his Phœakians were to return, and the Corfiotes, protected by law, like the Monégasques, from the temptations of the tables, were to grow rich and prosper on the losses of strangers. But the Greek Press raised a tremendous storm against the conversion of the "first star in the regeneration of the east" into a Levantine gambling-hell; the Austrian Emperor let it be known that he would never sell the poetic villa of his hapless wife, the noble "Achilleion," for such a purpose, and the British Government would not allow the old British cemetery, which is specially protected by the Act of 1863, to be leased for 30 years as the site of a casino, according to the terms of the proposed contract.

In spite of the seven hundred miles of railway which she now possesses, Greece still relies mainly upon coasting-steamers for both

passenger and goods traffic. This suggested to Mr. L. Messenézes, Greek Consul-General in London, the idea of forming a syndicate of London capitalists for the purpose of selling steamers to Greek steamship companies on favourable terms. Mr. Messenézes visited Greece with this object, and has since then made known the terms upon which the syndicate will be willing to do business—one-fourth of the purchase-money to be paid on ordering, and the remainder to be payable within five years time, interest meanwhile accruing at 6½ per cent. It remains to be seen whether this proposal will find favour with his fellow countrymen. Cut-throat competition is the great difficulty against which steamers have to contend. Freights are ridiculously low; it is possible to go from Volo to the Piræus for a few *drachmai*, and the agents accost the passenger in the street and bid against one another for his patronage. When the Piræus-Larissa line connects Thessaly with Attica, there will be a further element of competition.

A more important economic question, that of the currant-trade, is greatly interesting the currant-growing districts. An English syndicate, of which Mr. Backhouse is a prominent member, has applied for a monopoly of the trade and, in spite of some opposition, the proposal has found general favour. The syndicate is pressing the Government for a decision, and Mr. Delyánnes has promised to deal with the question during the present session.

It is pleasant to record the existence of a women's movement even in a country where the Oriental conception of the weaker sex so long prevailed. I was much struck by the Exhibition of Women's Work at Chalcis last summer, the worthy successor of the first of these shows, that at Agrinion. Lady Egerton, the wife of the British Minister, has done much to bring the beautiful embroideries and the lace of some of the provinces before the Athenian public by means of a *dépôt* which she has established in one of the chief streets of the capital; and during her *villégiature* in the island of Ægina she has also encouraged technical training there. No country would be more benefited than Greece by a system of education which offered an alternative to the literary and professional curriculum now in vogue. As things are, the pursuit of Government employment cannot fail to be the career of the graduate who fails to obtain briefs or patients.

At the last election, which threw the whole country into a ferment, the issues were rather personal than political. Mr. Theodore Delyánnes was the protagonist of the drama. No one can help admiring the indomitable energy, the fire, and the physical endurance of this octogenarian statesman, "the grand old man" of Greece, who has been sixty years in public life, and is now for the fourth time Prime Minister. But Mr. Theotókes, the able Corfiote who was the late Mr. Trikoúpes' lieutenant, and held the Premiership for the exceptionally long term of two years and a half, till the Gospel riots of November year caused his fall, is the King's favourite statesman. Mr. Delyánnes has not improved his position at the Palace by the tactless, and, some say, unconstitutional act of his War Minister, Mr. Lyniprítes, who, without the previous knowledge of either the King or the Crown Prince, introduced a measure of army reform, abolishing the office of Administrator-General of the Army, held by the Crown Prince for the last three years. Mr. Lyniprítes has since resigned, under most theatrical circumstances; but the incident, while it has subjected the future King of the Hellenes to criticism, has shown how insecure is the influence of the Premier at Court, and how little consideration he has for Royal susceptibilities. Greek opinion, now strongly anti-Bulgarian, as it was in 1885, has been much agitated by the recent disturbances in Macedonia; and the policy of Greece has become very friendly to Turkey. The recent bestowal of Turkish decorations by a special mission from the Sultan on the King, the Crown Prince, and the Prime Minister; the signature of the Greco-Turkish commercial treaty; and the eulogy of the Turks in both Press and Parliament, all indicate the "sharp curve" which Greek foreign policy has taken since 1897. All parties in Greece are at present pro-Turkish and anti-Bulgarian. All desire the maintenance of the *status quo* in Macedonia—for the present, in fact, till Greece is stronger and better organised. All would rather see Macedonia Turkish than Bulgarian, because it is felt that the latter element is a greater danger to Greek aspirations than the former. The progress of the Bulgarians in Macedonia and the Italian propaganda in South Epiros, especially at Joannina, a century ago the most famous seat of Hellenic culture, are being jealously watched, and the friendship with the non-Slavonic kingdom of Roumania, sedulously fostered since the two kings met at Abbazia, has been shaken by the more recent meeting of the rulers of Bulgaria and Roumania. But no responsible Greek politician wishes to translate "the grand idea" into action at present.

# REFORM IN OUR PRISONS

REMARKABLE PROGRESS IN THE INTELLIGENT TREATMENT OF CRIME—WORKSHOPS TAKE THE PLACE OF TREADMILLS—LECTURES, MISSIONS, AND LIBRARIES—£105,986 EARNED BY PRISONERS' LABOUR LAST YEAR, BUT OUTSIDE LABOUR NEED NOT FEAR COMPETITION—WHAT THE GOVERNORS THINK OF ASSOCIATED LABOUR

BY

TIGHE HOPKINS

AUTHOR OF "DUNGEONS OF OLD PARIS," "A VOYAGE INTO PRISON," ETC.

*Illustrated from photographs specially taken at Wormwood Scrubbs for* THE WORLD'S WORK

THE last few years have been years of rather remarkable activity in everything that concerns the administration of prisons in this country. The whole system has been searchingly looked into; much has been cast out, much brought in; much has been modified and much re-modelled. Prison Congresses (the last of which was held in Brussels three years ago) have evidently effected something; in our own case, the formal adherence of Great Britain, in 1895, to the International Prison Commission, has been of real benefit to us. To be brought into touch with foreign systems, and with the men who have to do with them, is stimulative; and we have been forced to take note that some of the first nations of Europe have given to questions of penology and the treatment of crime an amount of thought and intelligence and learning, which—to put it as mildly as possible—compares very favourably indeed with the interest which the same questions have evoked in this country. As far as theory and hardy speculation go, America, France, and Italy are leagues ahead of us; but in the practical business of the management of prisons we have made sensible advance.

The year in which we joined the International Prison Commission was marked by the issue of the Report of a Departmental Committee, which had been appointed by Mr. Asquith, and which was presided over by Mr. Herbert Gladstone. It is not extravagant to describe this Report as an epoch-making document. We may trace to it in the most direct manner every reform of the past eight years. It set the ball rolling. Other Departmental Committees followed: a Committee to inquire into the best means of identifying habitual criminals, out of whose recommendations we got the Bertillon system and the finger-print system; a Committee on prisoners' education; a Committee on the dietaries of prison. Finally we had the new Prison Act of 1898, which was certainly inspired by the Asquith Committee's Report, and which introduced great and far-reaching changes into the whole prison system of this country. Some of the more important of these changes may be indicated.

Among the toughest problems of prison—a problem of which there is no ideal solution—is the classification of prisoners. This has been tackled once again, with results as satisfactory as may at present be looked for. The Star Class, for first offenders, has worked well from the first. Next, the short-sentence prisoner has been put on an equality with the convict in the matter of earning remission of sentence. A man condemned to three years' penal servitude can, by securing the highest possible number of marks (not, as is often supposed, for good conduct, but for industry), obtain his release in about two years and three months. The man sentenced to two years' hard labour (technically, a "convicted prisoner," as distinguished from a "convict," and serving his time in a "local" not a "convict" prison) had to fulfil that sentence to a day; but he too can now earn remission of about a quarter. Most forms of unproductive and purely penal labour are in the way to disappear from English prisons, and that foolish old instrument of torture, the treadwheel, has been abolished. This has lead to a revision of the Standing

Orders relating to the employment of prisoners sentenced to hard labour in the first stage, *i.e.*, for the first twenty-eight days of the sentence. The difference between sentences with and without hard labour is that in the latter case a prisoner may be placed, from the beginning of his term, on associated labour; he is not locked in his cell. Strict cellular confinement for twenty-eight days, with task-work of a more or less disagreeable kind, has been adopted as the specific method of giving effect to that difference in the form of sentence implied in the distinction between imprisonment with and imprisonment without hard labour.

The convict's probationary term of nine months' separate, cellular confinement, with one hour's exercise in the day, has been reduced to six. At one time it was eighteen months, it fell gradually to nine, and Lord William Nevill considers that even the six months' limit is too long. It is much a matter of temperament. Some prisoners suffer greatly in separate confinement, others prefer their cells, and detest the society of their fellow prisoners.

The school system has been much improved; more hours are given to the teaching of young prisoners, and the course is more intelligent, varied, and interesting. Young prisoners often take the keenest delight in their lessons, and will bolt their food and hurry their work to get to their books or slate. The stupid, lazy, or indifferent ones are, however, quite numerous enough. The prison libraries have been overhauled, and added to, and the best of them are now stocked in a really splendid manner. Lectures are not unknown, missions are held from time to time, and a new face appears now and then in the pulpit on Sundays, to the huge delight of the congregation.

There are now also schools for the training of prison officers of both sexes. The work of a warder or wardress requires a good deal of knowing, and no one is nowadays pitched in a state of ignorance into this very difficult and exacting service. Hospital orderlies and nurses are beginning to be put through a proper course of instruction. There is a cookery school at Wormwood Scrubbs for warder-cooks and bakers, and in a short time none but certificated officers will be admitted into any prison kitchen. The dietaries have been greatly changed both in convict and local prisons; food is more abundant, more varied, and of better quality; it is more scientifically cooked, and more decently served; and where the regulations laid down are duly enforced prisoners have probably not very much to complain of on the score of diet—a grievance of very ancient standing in all our prisons. Apparently, however, the rules are not always carried out. The latest complainant is Lord William Nevill, whose book, *Penal Servitude*, is written in so fair and moderate a spirit throughout, that his occasional criticisms deserve attention.

Not so long since, male prisoners, whether in local or convict prisons, were liable to be severely flogged for a variety of offences, some of which were trivial. Corporal punishment, with "cat" or birch, is now restricted to three offences —mutiny, inciting to mutiny, and serious assault—and no prisoner can be flogged until the sentence of the Visiting Justices has been confirmed by the Secretary of State.

A recently completed scheme has enabled the authorities to effect (what they were long desirous of doing) the absolute separation of the sexes in the metropolitan prisons. Male and female prisoners were not, of course, in communication in these prisons, but it was possible for them in some places to be lodged under the same roof. Holloway has now become the London prison for women only, both for those who have been convicted and those who are awaiting trial.

On the whole, however, it is in the industrial department that the hand of reform has been most appreciably felt. This needs to be emphasised for the especial reason that in English prisons—and above all in English local prisons—useful and profitable work is very difficult to provide. The difficulties are of many kinds. A local prison is a place consisting chiefly of cells, and a cellular building, indifferently provided with workshops, and containing little in the way of machinery, makes a very poor sort of factory. Some of the larger American prisons (my knowledge of them is only second-hand) seem to be as much manufactories as gaols; but ours are not and were never meant to be anything of the sort. Some industries are well suited to urban prisons, others are better adapted to prisons situated in the country. Given any particular industry at which hundreds of prisoners can be employed, and out of which a fair profit can be made—mat-making at once suggests itself—sooner or later the cry will be raised that prison labour is spoiling the free market. This is almost always a very unfair cry (though I believe it was to some extent justified in the case of the prison-made mat), the fact being that the percentage of interference by prison labour with outside labour is about .04 per cent.

For although one hundred and fifty thousand

persons pass in and out of prison every year, the number who can be relied upon for really good work is surprisingly small. Some do not work at all. They are sick and go straight to hospital, and must there be waited on by other prisoners; these therefore are very expensive felons to the State. Others, a degree less wretched in health, are still unfit for work; they sit in their cells, or crawl about in the sun; these also are always under the doctor's eye. Others again, a very numerous body, whose sentence includes hard labour, are placed by the doctor's orders on light labour, which is often if not usually of a very low degree of productiveness. Many other prisoners are employed directly upon the necessary work of the prison; building, repairing, cleaning, cooking, tailoring, shoemaking, washing, and so forth. This, of course, is useful enough, but it is not the kind of work that can figure in an annual statement of profits. Many prisoners again, not actually insane, are congenitally weak-minded, and sometimes so near to idiocy that the sorting of peas is for them too high an occupation. Many are merely stupid, but *so* stupid that it is scarcely possible to teach them. The cripples are another class, for whom, if they are fit to work at anything, some special task must usually be found. Some prisoners have no knowledge of any trade, others have followed one which is not found in prison. Yet again, the habitual criminal, male or female, seems naturally to detest—indeed to be more or less incapable of—any kind of regular work; and he or she will often sacrifice marks day after day, and even submit to punishment, rather than finish an allotted task. Lastly, when I had enumerated every other hindrance and drawback, I should have to present the exceedingly important question of the length of sentence.

By far the greater number of sentences are short. You will sometimes see or hear statements concerning prison labour, and what should be done to enable prisoners to become honestly self-supporting on their return to the world, which seem to be based on the notion that the majority of convicted criminals are sentenced to five years' penal servitude. But five years' penal servitude is, comparatively speaking, a very uncommon sentence. Seven, fourteen, twenty-one, and twenty-eight days' "hard"—*these* are common, if you like. Not quite so common, but common enough, of course, is the sentence of three months; and sentences of six months are numerically speaking a still smaller class.

The reader now perceives what an immense, perpetual, and all-pervading difficulty exists here, when prison labour is the problem to be solved. If the average criminal were twice as willing and ten times as capable as he is found to be, little could be done with him or for him in the course of even a six months' sentence; and there are far more sentences of one month than of six.

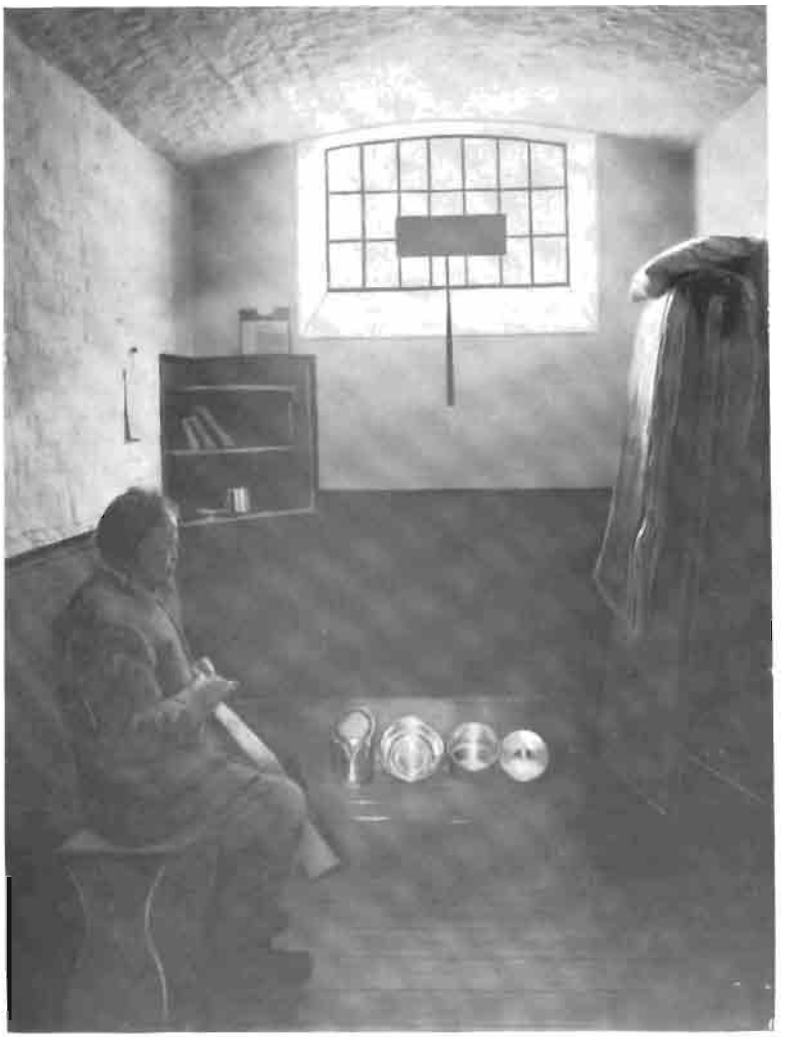
Mr. Asquith's Committee bestowed on this question the intelligent pains which they gave to every other, and herein also they achieved much. The situation was a dismal one. Up to the year 1877 the local prisons had been under the control of the local justices. Prison trades were in a very flourishing state; one gaol at least was selling £40,000 worth of mats a year. Everybody in prison had a more or less direct interest in the industries that were followed. The governor looked for a bonus at the end of a good year; trade warders received allowances or extra pay; and prisoners got little gratuities, and an occasional mutton chop. The Prison Act of 1877 knocked to pieces the existing system, and in a single day the local prisons were transferred from the local justices to the Government. To be very brief, the period of the eighteen years embraced in the investigations of the Asquith Committee, had witnessed the almost total collapse of the industrial system. Discipline had taken the place of lucrative labour. Under the 1877 Act, the governor got no bonus on the profits of the prisoners' work, the trade warders' allowances ceased, the prisoner doing a turn above his penal task had no reward in money or in mutton chops. The incentive being withdrawn from everybody, the labour that had for practical result a beautiful balance-sheet at the end of the year, dwindled almost to nothing. The prisoners were being splendidly drilled and terribly disciplined, but (and crime, by the way, was not diminishing under this process) their labour, year by year, was making little for the State, which had to feed and clothe and house them as before.* The Committee took in the situation, made their recommendations, and the situation was changed. A new office was created, that of Comptroller of Prison Industries; and the first Comptroller, the late Mr. James Duncan, was an ideal man for the post. Mr. Duncan, who died in 1901, had a

* The question arising here, how far a person condemned to imprisonment, and supported during his imprisonment by the State which has condemned him, should be compelled or expected to contribute to his maintenance, could not very well be discussed in such an article as this.

passion for his work, and had studied on the spot the penal systems of America, Canada, and the principal countries of Europe. "It is a fascinating subject," he wrote me, only a month or two before his death. Under Mr. Duncan the industries of prison began once again to be profitable. Departments of Government which, owing to the difficulty of getting orders fulfilled, had almost ceased their custom, renewed it; and in the first year of the new scheme the labour returns showed an increase of 30 per cent. in the average earnings per prisoner.

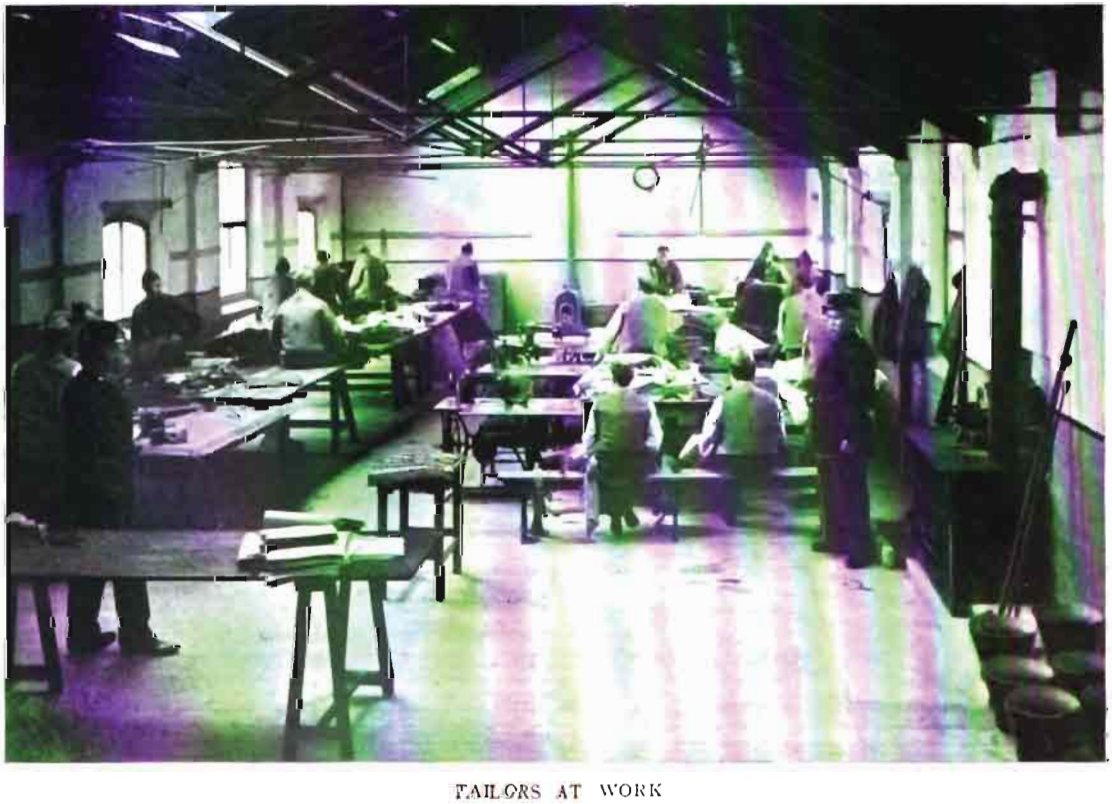
Such health did Mr. Duncan restore to the shattered industrial system that his removal has not impaired it. Mr. J. Duncan's spirit, indeed, seems to have passed to his successor, Mr. H. Hatfield Cribb, for I note that the year ended March 31 last, established a record in the value of the labour performed, even when compared with the very successful years which had immediately preceded it. The amount earned by the manufacturing department reached the sum of £105,986, an increase of 3 per cent. on the figures for 1900–1901, which stood at £102,776. When compared with 1896–1897, the date at which the new scheme commenced, the earnings show a remarkable increase of 45 per cent.

The latest advance of all is in the direction of associated labour in local prisons. Until the appearance of the revolutionary report of the Asquith Committee, the balance of opinion had inclined in favour of the cellular system for prisoners on short sentences. That system, which meant the continuous separate confinement of prisoners by night and by day in a narrow cell for any period up to two years, did no doubt get rid of the evil of unregulated association and consequent contamination. But the Committee pointed out that all cells should be untenanted for a certain number of hours every day, and in their contention that associated labour (which is the rule in convict prisons) might be so controlled in local prisons as to minimise the risks of evil communications, they were supported by governors and other officials of wide experience. It was resolved when the opportunity should come that the experiment be tried. It came with the Prison Act of 1898, and by the rules made under Section 4, the principle of associated labour in local prisons was for the first time introduced. The cellular system still remains the law of the land, subject now, however, to this modification, "that, under the new rule, prisoners whose industry and conduct are good *may* be associated *if practicable*, *i.e.*, where adequate means



A PRISONER IN HIS CELL

BOOTMAKING IN WORMWOOD SCRUBBS PRISON



TAILORS AT WORK

MAKING SHIPS' FENDERS FOR THE ADMIRALTY

exist for the strict and close supervision which will effectually prevent any form of association likely to become deleterious or contaminating." As a matter of fact, some six thousand local prisoners are now allowed to work outside their cells.

The new rule is in the nature of a compromise between two opposing theories as to the comparative advantages of cellular and associated labour. It can be carried out only where the prison affords opportunities in the way of workrooms, suitable corridors, &c., and where means exist for continual superintendence. But the system is spreading through the local prisons; workshops are being established in the spaces hitherto occupied by the old treadmills; and the new Comptroller anticipates "a striking improvement in the quality and output of the more technical descriptions of work, which will fully justify any expenditure that may be involved in providing the necessary accommodation."

The Governor of Winchester prison writes: "Associated labour is much prized by the prisoners, and considerably modifies the severity of a sentence. Far better work can be done with a larger output."

The Governor of Worcester Prison: "The associated workshop, in which there are ten mat and matting-looms, affords accommodation for thirty prisoners, with excellent arrangements for supervision. The value of the labour of the prisoners employed on looms is nearly double what it was the previous year. I attribute this chiefly to working in association."

The Governor of Swansea Prison: "Associated labour continues to work satisfactorily, and it is much appreciated as a relief to the monotony of cellular tasks. It takes a man out of himself for a short time daily, and tends to brighten him and make him more cheerful. Criminals are often morose and ill-conditioned, and I welcome this ameliorating influence."

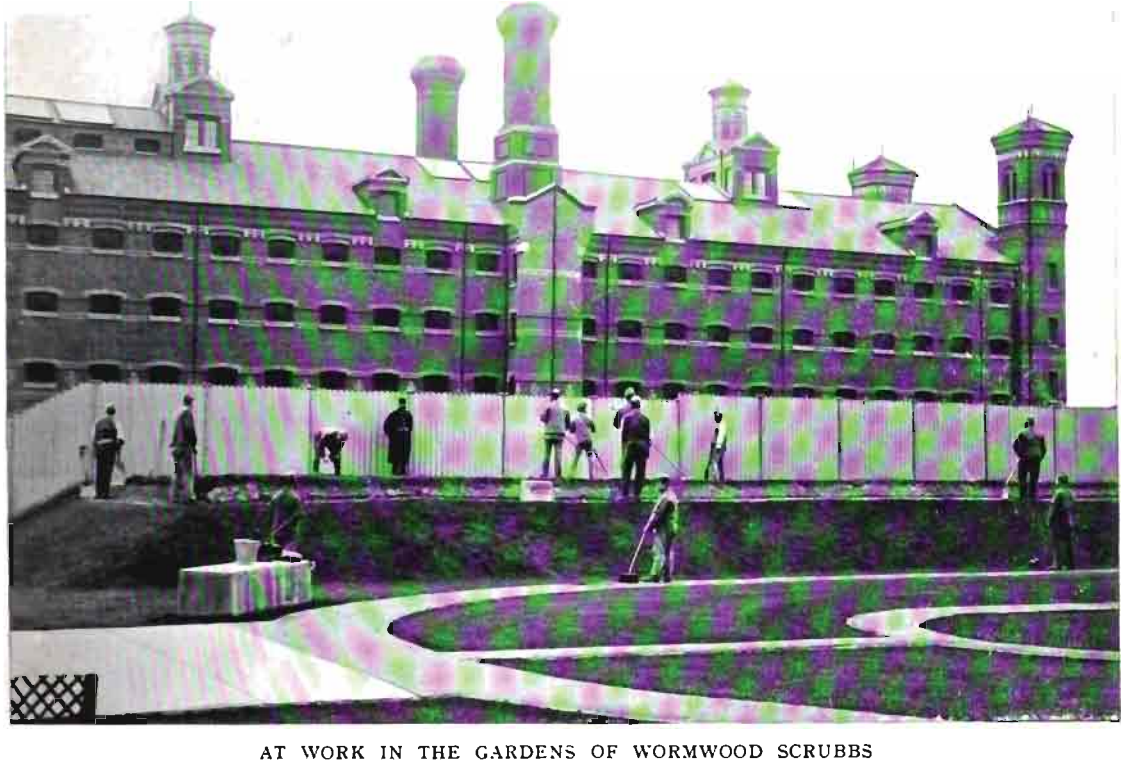
What kinds of work, it may be asked, are carried on? Here are a few among the industries of the great prison at Wormwood Scrubbs: Carpentry, tin-smithing, bed-making—including paillasse cases, barrack and hospital cases, and bolster cases for the War Department. Mail-bag making for the General Post Office

PRISONERS MAKING MAIL-BAGS FOR THE POST OFFICE

which takes in bags of every description, plain and with painted addresses, Irish and Scotch wallets, and leather and waterproof bags, aprons for bag openers and canvas labels. Rug and mat-making of every description for the Office of Works and the War Department; ship-fender making, sack and hammock making, seamen's bags, signal cones, and hammocks for wounded men for the Admiralty; pads for india-rubber stamps, oak clips, packing-boards, umbrella boards, roller dampers. Shoe-making, officers' belts, and pouches, basil slippers for the Admiralty. Tailoring and needlework, including male and female officers' uniforms, despatch bags for the Admiralty and the Foreign Office; tammy bags for the Stationery Office, and sea-kit bags for the War Office.

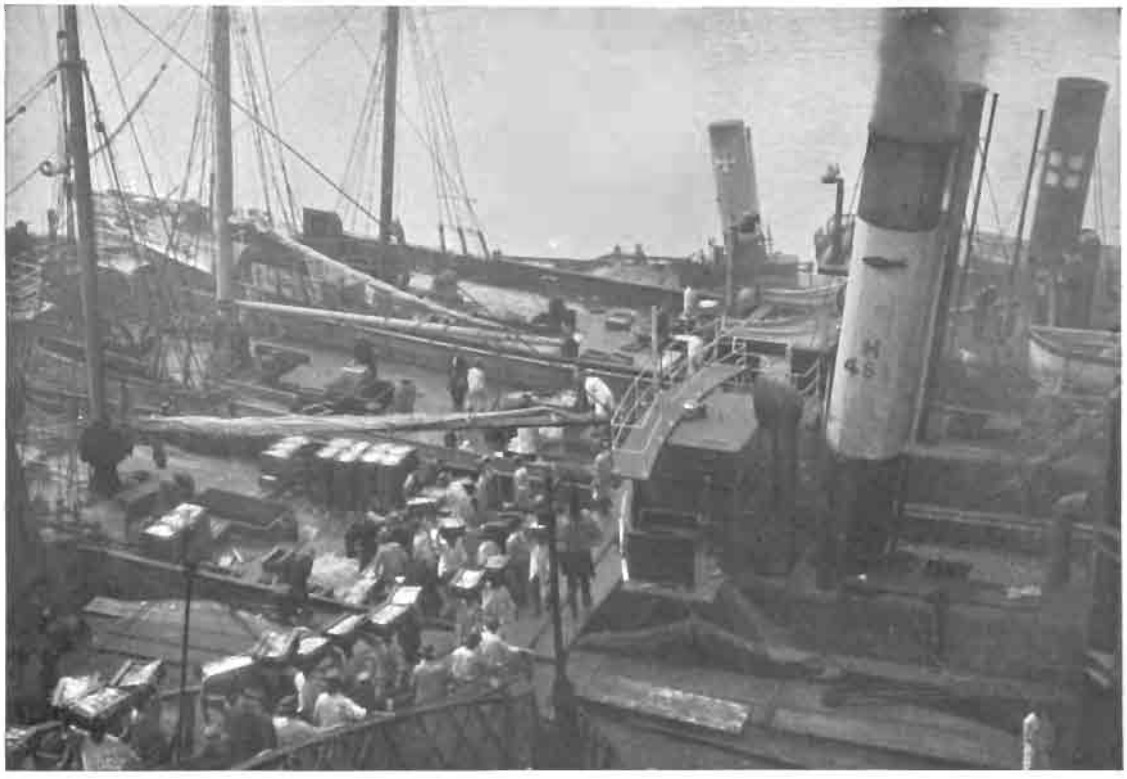
ANOTHER VIEW OF THE TAILORS' SHOP

An objection often raised, and one which ex-prisoners have discussed in books on prison life, is that the prison-taught craftsman is very liable to betray himself when he seeks a living at his trade. I am afraid this is frequently the case, and I am afraid also that the difficulty is not easily got over. The truth is that trades are not and cannot be taught in prison precisely as they are taught elsewhere. The plant is neither so extensive nor so fine in prison as it is in workshops outside, and many things are not done quite as the trade does them. The true slang or argot of the workshop—which is a part of the freemasonry of any trade—is probably seldom heard in the prison cell or workshop; and so, from one cause and another, the ex-lag who tries on his discharge to profit by the lessons he has had in prison is very apt, as the phrase is, to give himself away. He is cold-shouldered, sent to Coventry, or the virtuous British workman who has never tasted prison flatly declines to have him in the shop. These are bitter, hard cases, and it is an undoubted and most humiliating fact that very many men do return to crime and prison for no reason but that they simply cannot rid themselves of the taint and stigma of the first conviction. I think this is a very important consideration. It is very well, from one point of view, to make what profit you can out of the man in the prison cage, but it is a matter of infinitely greater concern to teach him, while you have him there (as far as it can possibly be done), in such a manner as to give him the utmost chance of rehabilitating himself on his return to freedom.



AT WORK IN THE GARDENS OF WORMWOOD SCRUBBS

STEAM CARRIERS FROM THE TRAWLERS UNLOADING FISH AT BILLINGSGATE MARKET



# HOW OUR FISH ARE CAUGHT AND SOLD

THE VAST ORGANISATION OF THE FISHING INDUSTRY—STEAM HAS WROUGHT A REVOLUTION—THE DECLINE OF YARMOUTH AND THE RISE OF LOWESTOFT—HOW FISH ARE HANDLED FROM SEA TO SAUCEPAN—BILLINGSGATE MARKET AND ITS WORKERS

BY

CHALMERS ROBERTS

*Illustrated from Photographs taken specially for* THE WORLD'S WORK

FEW people give a thought to the processes by which even the humble whiting reaches the breakfast-table. If, when the cover is lifted and you see him with his tail carefully tucked up out of danger of Alice's fast-treading porpoise, he could tell you of all the scenes he has passed, of all the interests involved in his brief career, your morning paper would surely go unread. His long journey from the fish-net to the frying-pan touches at one or another point a radiating maze of work and wealth. And as he has been the subject of a vast portion of the world's activities since time began, even so is he still affected by all the stress of modern inventions and influences. At the very genesis of his career out of water he meets all the tendencies of the progress of to-day. For years he has been an object of competition between steam and sail, the great steam-trawler with its mechanically handled nets, and the little smack with its biblically simple fishers of the sea and their primitive methods. Over and above this, the contest of capital and labours of

combination and individualism, rage. For even the strike or the inactivity of the actual fishermen is of small importance when compared to the unceasing triumph of great fishing companies over small owners. And, sad as is the decline of the skipper who owns his boat, and, indeed, his little ship's company, it is inevitable in the face of consolidated and organised effort.

The co-relation of all of these conflicting influences is obvious to the slightest investigation. In the days when the small sailing-smack went to sea dependent upon the winds for its outgoings and incomings, and, therefore, more dependent upon the luck of the cast in restricted localities, there was little question of the scientific or legal protection of the fishing areas. These small agents with all their simple implements were able to make but slight impression upon the teeming millions of the deep. The situation was of greater importance on land than on sea, for undoubtedly it gave to various sea-board countries a hardy, thriving, industrious people, well worthy the best awards of good citizenship. Now when the seas are scoured by great steam-vessels, able to follow the schools of fish from one end of the area to another, not only is there an enormous and harmful destruction of fish life, but the character of the labour involved has undoubtedly deteriorated—degenerated even—from a civic standpoint. The protest of the fishermen of old is as pathetic as it is hopeless. For men progress no less than mechanism. And it is a pathetic plaint along the sea-shore that the young people like the steam which their elders deplore.

When once the small fish is entangled in the net and hauled on board, he finds thousands, even millions of men concerned in his subsequent career. While yet in the water his goings and comings from this to that breeding- and feeding-ground hold the hopes of whole communities of people. Villages and towns and provinces are dependent upon the caprices, the unfathomable meaning of his migrations. And after that whole villages and towns hang upon his journey from the boat to the kitchen. Great railways find in his carriage an important source of revenue, modifying and rearranging their schedules and marshalling their great labour-forces to suit his necessities. How much his career means, after he has severed his association with the agency of steam, can only be realised by those who are acquainted with the multitudinous activities of the fish-markets of a great city.

A BILLINGSGATE PORTER

But even this is little of the whole story told by the small fish in a fried brown coat on the breakfast-table. The parliaments of the world pass laws for his protection in life and his progress after death. Great kings and rulers of the earth assemble tribunals, and sign treaties regarding the rights of his capture. Associations of leading men are formed in every country to promote his growth and protection, to solicit legal aid on his behalf. Even that latest and most universal of the occupations of man, organised charity, concerns itself greatly with those who suffer the hardships of fishing life, and those who starve for want of food in the face of the rich harvest of the sea. Governments send plenipotentiary delegates to sit in international conferences, and with all the aid of recent science, to look after and protect his birth and young life, to map out the areas of his hatching and breeding, and protect them from depredation, to keep a constant campaign of discovery in his life-history.

A recent visit which the writer made to the

easternmost point of England brought many of these interesting facts to notice. Lowestoft, which reaches farthest out towards the North Sea, and Yarmouth, its near-by neighbour, furnish ample evidence of the contrasts between old-time and recent fishing methods, and the results which both obtain. Placid Yarmouth seems destined to remain associated with the fishing of yesterday, and to give evidence of its gradual decline in importance as a factor in this particular industry. Of course, it is a thriving centre in many other respects, but the day when its mere name was redolent of as any in the kingdom, cannot take away the tragedy of its deserted fish-market, and its decreasing population of those who cast nets upon the waters. If one asks the causes of this decline many answers are given. First of all, it is said that the great companies have decided against its harbour and its use as a distributing-centre; that fish from the big steam-trawlers go elsewhere, either to Lowestoft or more southern centres, or, more often than all, direct to London by water. Therefore, only in the flush of the autumn fishing season does the Yarmouth market present anything like its former appearance, and this because there is opportunity in the great herring shoals for the work of the small fisherman in his simply handled smack. At other times of the year, as now, the season when the markets are teeming with constantly increasing tons of fish, the Yarmouth fishing-dock shows only a meagre dozen or so of boats against the hundreds which used to crowd its water. After the manner of the conquered, the Yarmouth fisherman shakes his head and makes doleful predictions as to the future of steam-fishing. Even in the presence of many boats in his own harbour only awaiting the installation of engines which cannot be made fast enough, he tells you that steam-fishing can never be profitable, and is rapidly ruining those who have invested in it. The uncertainty of the result of any voyage cannot, in the long run, he says, pay for the up-keep of these expensive craft. The percentage of gain is less and the chance of loss is greater than in the days when a skipper, with but few men, could afford to wait upon the uncertainty of sea fortunes, could afford to come in shore with a small haul in place of the expected hold-full.

PACKING FISH IN ICE AT LOWESTOFT MARKET

the hook and the net is rapidly passing. With the canal-like Yare flowing through its main streets, bordered by green trees and overlooked by charming old houses, it is for all the world like its over-sea neighbour Holland. The windmills, the barges scudding over green meadows where the Broads mix land and sea indiscriminately, the queer gabled fronts of many houses, and the flaxen-haired, red-cheeked people who pass, need only wooden sabots and a foreign tongue to be fit subjects of Queen Wilhelmina. To a stranger unacquainted with their dialect, I am not so sure but that the foreign tongue is there. Yet great ships in the docks, clanging electric tramways, and a sea-front as gorgeous in pavilions and piers

Ten miles away, Lowestoft presents all the appearance of recent progress and prosperity, even while it lacks much of the charm of its less fortunate sister. For the gods of commerce who make or mar cities, as well as men, have decided that Lowestoft shall be the great


TYPES OF OUR FISHERMEN: SMACKS UNLOADING AT YARMOUTH

OUTWARD BOUND

A type of the old-fashioned fishing-smack

distributing-centre of the central eastern fishing-shore. Harbour and wharf and market-room have to be constantly enlarged, and it is said that frequently, in spite of all improvements, incoming fishermen cannot find berths for their boats. Under the great covered markets which line the docks, where fish are piled by the hundred or packed in boxes of ice, the active scene is a marked contrast to the former home of the famous bloater. Boats naturally arrive with the incoming tide, and even the greatest catches are soon spread upon the docks ready for sale to market-buyers. Often the whole dock floor is covered with shining heaps of silver herring or mackerel, or flat-carpeted with the white bellies of great skate and small sole and plaice. Further on, rosy pink heaps containing thousands of shrimp lend a new touch of colour to the busy scene. Grey-green crabs and lobsters, not having yet acquired what ignorant city people would call their natural colour, wriggle and squirm and worry in the pangs of unexpected captivity. Over and above all, at the busiest hours of the day one hears the unceasing cry of the auctioneer who stands at the head of each boat's load spread out upon the dock, and knocks it down in lots to the highest bidder. When he has finished his rounds there comes still yet another busy time of packing in boxes and barrels, under ice and canvas, the separate purchases from each cargo. Lowestoft Harbour is practically the property of the Great Eastern Railway Co., and the trains on all sides have not disappeared with the last load of one batch before the horizon is darkened with the incoming brown sails of a new day's harvest at sea.

Nothing is more attractive to those who love the salt breath of the shore, who find unceasing romance in the sea, than to watch the arrival of a fishing-fleet. The very stake of fortune involved, the gamble of it all, becomes as exciting as any sport could be. You long to join your voice to that of the crier on the furthermost point, who greets each incoming boat with the query, "What luck?" And as the boats come nearer there is a keen delight even in the first reading of their names. Such names! Flowers, and girls, and children, and goddesses, and history, and latter-day heroes all figure in the baptismal record of fishing-boats. I saw the *Tempus Fugit* arrive with the *Never Can Tell*, the *Nil*

AN AUCTION SALE OF FISH AT YARMOUTH

*Desperandum* entered with the *New Boy*, and shining scales on the *Cedo Deo* were matched by a splendid catch aboard *My Maggie*. Slowly and alone, the last of the fleet I saw enter, came *Fighting Hector*.

All down the Great Eastern, from the coast to London, one never loses the all-pervading odour which tells that vans and crates and barrels of sea-food are on their way to the

in the early morning an ignorant visitor might take this ancient memorial of one element as a shrine of yet another. It would be easy to imagine the gold ball of bursting flame on high to be some curious design of tangled fish out of water, as often seen in the neighbouring traffic.

The streets as far as one can see are blocked with fish-carts and fish-carriers. In appearance

LONDON'S FISH-TRAFFIC: BILLINGSGATE MARKET, 5 A.M.

London market, to the Park Lane dinner-table, to the fried-fish shop of the East End. And if you have any doubt of the important story which the fish upon the table could tell, rise industriously some early morning and take the short journey to Billingsgate Market. This is a veritable kingdom ruled over by the inhabitants of the deep. If there are yet visitors to London who, like our provinical grandfathers, ascended the Monument as inevitably as they visited the Tower, they look down upon an area which seems wholly devoted to the sale and exchange of sea-food. In fact,

these latter are a race apart, like the *hamals* of Constantinople or the women of the West Indies. Their heads are capped by a curious construction of well-oiled, well-soiled leather called "the hat," but which looks more like some inverted iron kettle. Upon its flat top, rests a great box of fish going from the market to the carts in an endless procession which claims everywhere the right of way. Within the market there is even a greater tangle of men and fish. Against the white-linen coats of dealers and carriers presses a crowd of black-clothed purchasers. Great steam fish-carriers

UNLOADING A FINE CATCH AT LOWESTOFT

lie at the wharves having come straight from the trawlers at sea, and from their holds the same procession of head-burdened men makes its unending way to the stands of the auctioneer. Each box of fish in turn is placed upon a high desk, its character and quantity called out, bids made and accepted from the neighbouring crowd, and, the bargain concluded, sent sliding down a chute which lands it supposedly into the hands of the buyer. But at this point it is really taken in charge by a porter with a leather hat and carried to the cart of the purchaser waiting somewhere in the neighbouring street. The streets are filled with cries of porters carrying on their heads the property of some purchaser whose cart cannot be found. Only the famous fish-wife is curiously absent, and she seems to have taken her language with her.

If you ascend to one of the galleries, and look down upon this yelling, pushing, seething multitude, you will see laid out before you all the products of the deep. The catalogue would be as interminable as the scene is indescribable; from great cod to tiny white-bait, from shrimp to turtle, from winkles to big American oysters; all sorts and sizes and species are there. At one side there are water-tanks filled with fish, for the most part eels, where one may go, as in a Russian restaurant, and pick out a live fish for immediate appearance upon the table. Another line of porters comes up from great steam ovens underground, bearing on their heads high wire baskets of smoking shell-fish. Although live lobsters and crabs may be seen in quantities, lying on grey-green moss, so near their natural colour, they are only allowed to live a few hours in the market. For in captivity they rapidly worry themselves into a decline both of flavour and of weight, so the wise dealer soon transports them through a moment's agony into the peace of a rosy-coloured death.

Billingsgate Market is woefully overcrowded, and shows an unceasing progress in the amount of fish handled and sold. Various municipal efforts have been made to divide the fish-distributing-centres, but it has been found almost impossible to maintain the market at Shadwell in anything like its former importance. The total number of tons of fish of all kinds brought to Billingsgate overland in 1901 amounted to 104,127 tons; in 1902 the amount reached 108,277 tons. A similar growth is shown in the weight of the water-borne fish reaching the market. For in 1901 there were of these 44,230 tons, as against 48,080 in 1902. This brings the total weight of fish passing through Billingsgate Market in 1902 to 156,357 tons. These figures, of course, give only a small idea of the quantity and value of fish landed in the kingdom. According to the Board of Trade statistics the total value of all fish landed in England in 1902 was £6,776,560, in Scotland £2,580,778, and in Ireland £309,360.

Appropriately located near at hand is the fine old hall of the Fishmongers' Company at the northern end of London Bridge. Here centre all the many and varied efforts for the protection and regulation of the fishing industry. For many years there has been a movement in the trade, even among the owners of the steam-trawlers themselves, for regulations which would prevent the capture of fish too young and small. It is a very difficult question to deal with, however, and Parliament has been

correspondingly slow in keeping pace with the demand for new laws. Here, too, are many records of recent meetings of the owners and dealers in shell-fish and fisheries consequent upon the great scandal last winter concerning contaminated oyster-beds. Their demands are even more difficult of satisfaction than those for the protection of young fish, for they involve an absolute exclusion of all sewage and refuse from streams and inlets. So many conflicting interests are involved in this demand that it is not likely to meet with any speedy fulfilment.

The Government has not been at all slow in responding to invitations from the Continent to take part in conferences for carrying on fishery and marine hydrographical investigations. British delegates have been sent by the Government to International meetings at Stockholm in 1899, at Christiana in 1901, and at Copenhagen in 1902. Appropriations have also been made for carrying out, conjointly with the Governments bordering on the North Sea, this scientific work. Aside from hydrographical explorations, these conferences are inquiring into the distribution of fish eggs in the sea; the stages of the youth of fishes up to maturity, with special regard to locality, conditions of life, and processes of development; into the conditions of life, food, perils, and wanderings of those kinds of fish which have a market value; into the periodic fluctuations in the appearance of food-fishes. These investigations are to be followed by all kinds of practical work carried out under the head of a central bureau. Neither money nor pains will be spared to protect the interests of those whose livelihood or food depend upon the fisheries of the North Sea.

The people for whom all this work is being done are nearly as unconscious and ignorant of it as the very fish themselves. For with all their virtues, and perhaps this is one of them, these fisher folk are a dumb race. They cannot express their troubles glibly. I talked with an old sea-dog, who was passing one of the days of his leisured age, sunning himself against a wall on the dock at Lowestoft. He did not confess that the burden of years had turned him into a landsman. Rather, he said, it was the big companies and the death of what he called a proper fishing life.

"The steam have killed the sea, sir. There be no real fishing these days. The big coompanies have turned the sea into a sort of factory. The fish have no more chance for a honest life nor the sailor. But the young men are as big fools as the coompanies themselves. The young folk do love steam, sir. They be too lazy for proper fishermen. And if they keep a-going on like now, before long, there won't be no fishermen on the sea, nor no fish in it."

A REST IN THE SUN

On the dock at Lowestoft

THE COMPOSING-ROOM WHERE ALL THE MOST LEARNED BOOKS ARE "SET"

# THE MOST FAMOUS PRESS IN THE WORLD

A PRINTING CONCERN FOUR CENTURIES OLD—WHERE OVER TWO MILLION BIBLES AND PRAYER-BOOKS ARE PRODUCED EVERY YEAR—A GUINEA FOR A MISPRINT IN THE BIBLE—AN OBJECT-LESSON IN EFFICIENCY

BY

ROBERT DONALD

THE Oxford University Press is one of those institutions which would have to be created if they did not already exist. It sets an example of efficiency in paper-making, in printing, and in book-binding, and renders still greater service by the encouragement it gives to research and learning. It sinks capital in publishing valuable works of reference, and in producing learned books, treasured by scholars in every part of the world, which would never see the light but for its helpful subsidies. Old—it is the oldest printing concern with a continuous history in the country, or, perhaps, in the world—yet it is equal to, or better than, the youngest in the same field for the beauty and finish of its work. A conservative institution under the management of academic men, it is ready to adopt the latest improvements. Without the stimulus of shareholders demanding dividends, or of competitors, it is yet keenly enterprising, and knows no standard but the highest. The certainty that it has an assured and profitable business, giving it scope for new enterprises accompanied with risks which cause no anxiety, enables it to maintain its high standard of efficiency.

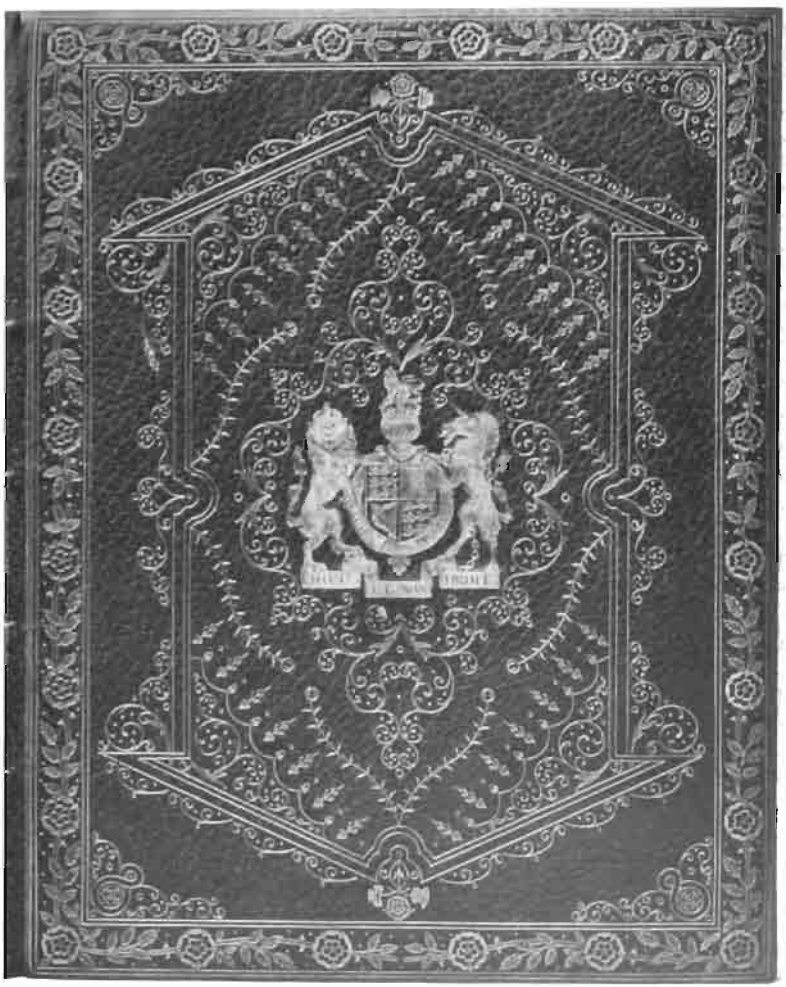
As I wish to deal with the Oxford University Press as an object-lesson in efficiency, I will not linger over its interesting history. It dates from the year 1478. Printing was first carried on in hired premises, then in a church, and next in the Sheldonian Theatre. The Earl of Leicester, as Chancellor of the University, about the year 1580, reorganised the Press, and had the first "Printer for the University" appointed. One of the first works the printer issued was a book in Latin devoted to "Moral Questions upon

Aristotle's Ethics." In 1631 the Press lent to Cambridge, for the production of a Greek Testament, Greek type, presented to it by Sir Henry Savile, originally cut for his books on Saint Chrysostom. Some of the earlier books of the Press, including Ussher's text of the Epistle of St. Barnabas (printed with the Epistles of Polycarp and Ignatius in 1642), were destroyed by fire in 1644—a fire which began with the attempt to roast a pig, anticipating the events described in Lamb's "Essay," and ended by destroying a quarter of the city. It was not until the University had been presented with the copyright of the Earl of Clarendon's *History of the Rebellion* that it was able to provide itself, from the profits of the book, with a special printing house, opened in 1713.

The Press has been fortunate in receiving benefactions in the form of types and funds. Archbishop Sheldon, after whom the Sheldonian Theatre was named, gave instructions that the surpluses of the fund he left for that institution should be employed to the best advantage and the encouragement of the Learned Press. In 1785 Francis, the second and last Godolphin of Helston, left the University £5000, the interest to be applied for the benefit of printing and the encouragement of learning. Dr. Fell left it a fine set of type in 1667. Lord Stanhope, at the beginning of the nineteenth century, presented it with compositors' frames and printing-presses so substantial and well made that they are still in use.

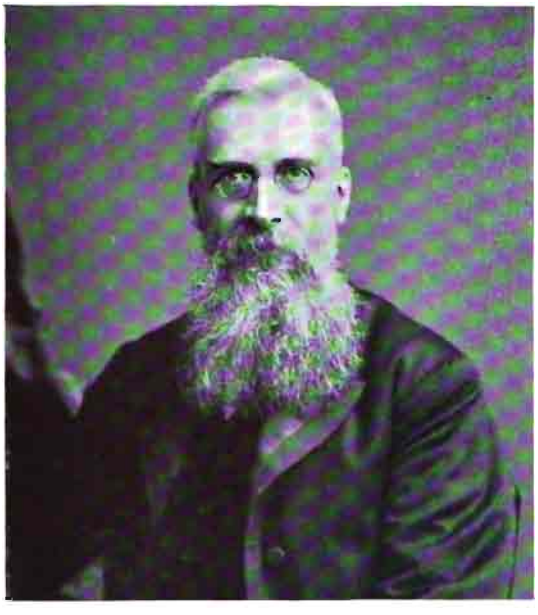
The output of the Oxford University Press has varied greatly. The fluctuations were dealt with some time ago by Mr. Falconer Madan, who showed, at a meeting of the Bibliographical Society, that up to the year 1600 the Press had produced 125 books, during the next half-century 1170 works, in the next fifty years the number rose to 1520, in the first half of the eighteenth century it dropped to 1000, and in the second half only increased to 1100. The nineteenth century was much more productive, and during the first fifty years 3200 works issued from the Press, and during the last fifty years 8000.

The above number of publications does not include the Bibles, which are now issued from the Press at the rate of over a million a year. Along with the King's Printers (Messrs. Eyre and Spottiswoode) and the Cambridge University, the Oxford University Press enjoys a monopoly of printing the Bible. The monopoly dates from the year 1632, and its objects were to prevent bad printing and perversion of the text. The Bible has become the cheapest-printed, as well as the best-printed, book in the world. The Oxford Bible is produced in seventy-one editions, ranging from mighty folios



THE BIBLE USED AT THE CORONATION

Printed at Oxford, and bound at the University binding-house in London, where the skins of more than 100,000 animals are used every year to cover Oxford bibles



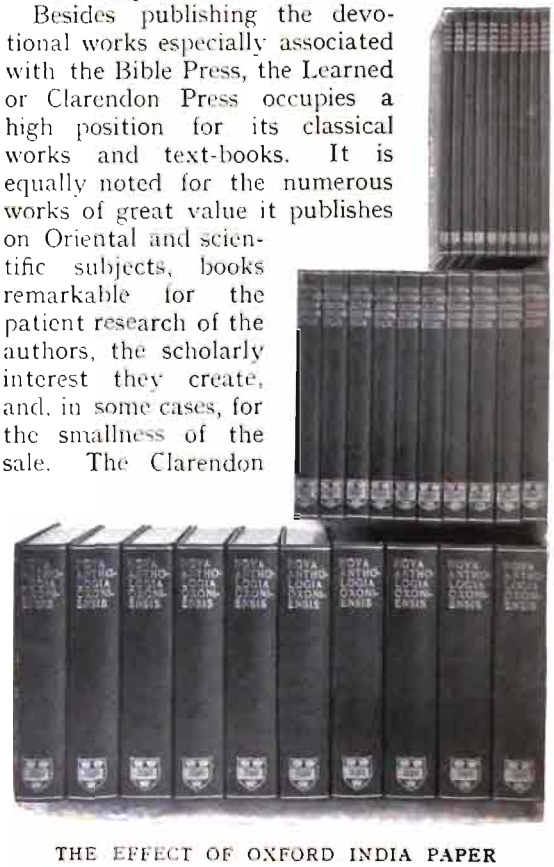
MR. HENRY FROWDE
Publisher of the Oxford University Press

for pulpit use, and huge volumes luxuriating in levant morocco and yappcovers, to slender India-paper Bibles and tiny little squares in "brilliant." The monopoly does not extend to Scotland, nor, of course, to America, yet the Oxford Bible is the standard book in these countries. The duty on the books exported to America, prior to the incorporation of the Oxford Press American branch, amounted to £12,500 a year, with a weekly shipment of five and a half tons. The American sales are now very much larger, but most of the Bibles are now machined in America.

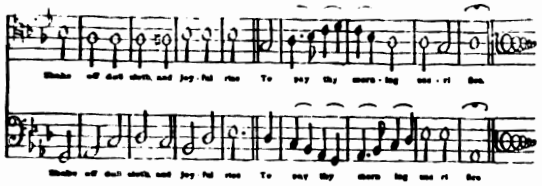
The production of the Bible, therefore, is really a great work in itself, and the number of copies sold increases every year. The Oxford Bible is, perhaps, the only book which costs more to "read" than it does to "set." Every new edition is read no fewer than twenty times, and any one who first discovers an error—a dropped or misplaced letter, or a misspelt word—receives a guinea for each one. With such efficiency is the work done that the Press had not paid more than five guineas for these minor errors for several years.

The production of prayer-books also equals about a million a year, while service books, hymnals, psalters, and devotional works run into several million copies every year. The demand for the new prayer-books introduced after the death of Queen Victoria was at the rate of hundreds of thousands for the first few months, and, up to now, 3,000,000 have been sold. Apart from its official publications the book produced by the Press which has had the greatest sale in the shortest time is the *Presbyterian Hymnary*; one million copies were sold in three months. The Press performed a still greater feat, however, when it produced the revised version of the New Testament in 1881, for one million copies were issued on the same day, and not a single copy reached the public or the newspapers before publication. The Press has, on occasion, performed some smart work in executing official orders. Take, for instance, the alterations in the text for the new prayer-book required by the change in the title of the present Prince of Wales from Duke of York, and the introduction of the new Accession Service. It received the alterations in London at twelve o'clock noon on the King's birthday, and four complete copies, printed and bound in morocco, were delivered at Sandringham to the King as he went in to dinner that evening, while the Archbishop of Canterbury received a copy at Canterbury at the same hour. Within a week 300,000 copies of the new prayer-book were published and sold.

Besides publishing the devotional works especially associated with the Bible Press, the Learned or Clarendon Press occupies a high position for its classical works and text-books. It is equally noted for the numerous works of great value it publishes on Oriental and scientific subjects, books remarkable for the patient research of the authors, the scholarly interest they create, and, in some cases, for the smallness of the sale. The Clarendon



THE EFFECT OF OXFORD INDIA PAPER
The top row is the same set of volumes printed on the thin paper



ANCIENT "SPADE-HEAD" MUSIC-TYPE
(WALPERGEN)
Given by Bishop Fell, 1667

Press is just now issuing several books which deserve special mention. One is Professor Joseph Wright's *English Dialect Dictionary*, a work involving many years' labour by a large staff of helpers. The aim is no less than to include a complete vocabulary of all the dialect words in the English language, adding detailed accounts of customs, superstitions, games, pastimes, &c. The work will consist of six volumes of 5000 pages, 100,000 words, and 500,000 quotations and references. The staff engaged on it have consulted 6000 books and 400 glossaries and manuscripts. Professor Wright undertook the financial responsibility for this work. It is different, however, with the *New English Dictionary* edited by Dr. Murray, upon which a still larger staff has long been engaged. The outlay on this great work has been already over £100,000, and it will still take several years to complete.

Another notable book recently issued is a facsimile of the First Folio edition of Shakespeare. The photographic department of the Press, which was established at the instance of the late Professor Max Müller, to reproduce ancient manuscripts, has already produced many books by photographic or lithographic methods, including the Yasna Manuscript—a quarto of 700 pages—and a facsimile of Sir M. Monier-Williams' Sanscrit Dictionary, a quarto of 1200 pages. The original folio edition of Shakespeare has been produced more or less imperfectly on four occasions during the last hundred years. The present edition is facsimiled by the collographic process, which gives an exact reproduction of the original, including all the spots, stains, and age effects. The Oxford University Press has used paper made entirely of linen rags. Only 1000 copies were reproduced, and all were sold as soon as the edition was announced. Number 1 copy was presented to the King, No. 2 to the German Emperor, and No. 3 to the President of the United States.

If we turn to the productive side of this great institution we find that no printer in the country owns such an inexhaustible treasure of types, both ancient and foreign, as the Oxford University Press. It can set up the Bible in all civilised, and in most uncivilised, languages, and the Learned Press, while not so cosmopolitan, is equal to turning out books in such languages as Armenian, Bengali, Coptic, Ethiopic, Finnish, Hindustani, Icelandic, Runic, Pahlavi, Syriac, Tamil, Tibetan, Burmese, Zend, and other strange tongues, not to mention languages more generally used, such as Sclavonic, Sanscrit, Persian, Hebrew, Chinese, Danish, Greek, Swedish, and other European languages. Nearly all these languages require special type, and in some there are hundreds of types for the alphabet. The Press has just finished a Thesaurus in Peshito Syriac, a reference book for scholars studying ancient manuscripts, begun in 1862; sometimes ten separate pieces of metal are required to make up one letter in the Syriac language. The compositors in the service of the Oxford Press, one would think, must all have some expert knowledge of languages, the copy-holders be capable of pronouncing all languages, and the

A
SPECIMEN
OF THE
SEVERAL SORTS
OF
*LETTER*
GIVEN TO THE
UNIVERSITY
BY
Dr. JOHN FELL
LATE
*LORD BISHOP of OXFORD.*

To which is Added
The LETTER Given by Mr. *F. Junius.*

*OXFORD,*
Printed at the THEATER *A.D.* 1693.

proof-readers learned men. The compositors quickly recognise the letters by sight after long experience. The Press has a number of founts of each principal oriental language.

There are other peculiarities about the types besides their great value. They differ in height from types used elsewhere. Even the Bible and the Learned Press types do not range. While it makes new type the Press still uses old founts, which are, indeed, among the finest. In 1666 Bishop Fell, the hero of the lines beginning, "I do not love thee, Doctor Fell," presented to the Press a beautiful set of types. It was used in printing the Thanksgiving Service last year. So rich is the Press in type that Dr. Fell's lay unused for over a hundred years, and was only reintroduced recently. A curious spade-head music-type was also presented by Dr. Fell, and is still in use. The best of the new American types resemble closely the oldest Oxford Press founts, and, so far as typography goes, it would seem that in beauty of work, and economy of space occupied on the printed page, little progress has been made. The Oxford University Press is really the oldest type-founder in the country, and it was also one of the first stereotypers, having bought up the invention in 1804 for £4000.

While the Press has few equals as a printer, as a paper manufacturer it is supreme. The paper for printing Bibles, which is manufactured at Wolvercote, two miles from Oxford, is of very superior quality. Of this mill Herne wrote in 1728: "John Beckford and his wife are now living at Wolvercote Paper Mill. He is famous for making paper. Some of the best paper made in England is made at Wolvercote Mill." A statement which still holds good. The well-known India paper, for which the Press is famous, is often imitated, but is never equalled. This paper is remarkable for its thinness and toughness. It is peculiarly opaque, and wear and tear do not destroy it. Thirty years' patience and experience were required on the part of the Press to match the original piece of paper, brought by an Oxford graduate from India; and, strange to say, the utmost research has failed to find another bit of paper in India like it. This paper is also made at Wolvercote Mills, and the secret of its manufacture is well kept. The Press has a great demand for its India paper from other publishers, but only disposes of it under friendly arrangements. The paper is so tough that a little strip, three inches wide, will support a weight of twenty pounds without breaking. One can rub, crush, and twist it without destroying it. The advantages of such wonderful paper, on which the type shows up well, are obvious. Besides its durability and its pleasantness to the eye, it is the means of effecting a great saving in space. A book printed on this paper occupies about a third of the space required if printed on the best ordinary thin paper. A volume of 800 pages is compressed into a page 4 × 2 inches, with a thickness of half an inch. The Oxford India-paper Dickens issued by the Press takes up only twelve inches on a shelf, instead of fifty-nine inches required by the old standard edition. The use of the paper enabled the Press to publish such novelties as the finger and the thumb prayer-books, or a still smaller edition—the "brilliant" Bible, which measures only $3\frac{3}{4} \times 2\frac{1}{8} \times \frac{3}{4}$ inches, and weighs under three ounces, yet is clearly printed and easily read. The Press supplies all Shakespeare in a dainty *édition de luxe*, compressed into a little box containing four or five tiny volumes. The use of the paper also enables the magnificent folio editions of the Bible to be more easily handled. A Bible on India paper, measuring 10 × 6 × 2 inches, and containing 2690 pages of pica type, with large margins, only weighs four and a quarter pounds.

The Press occupies a leading position as a book-binder, and secured the *Grand Prix* for binding as well as the *Grand Prix* for its paper at the Paris Exhibition of 1900. At its London works, in Aldersgate Street, it produces some most beautiful examples of book-binding. It employs a large staff of artists for designing, and highly skilled craftsmen. The skins of upwards of 100,000 animals are used every year to cover Oxford Bibles in yapp and other styles, and 400,000 sheets of gold are required to letter the backs, and still more for gilding the edges. Most of the ordinary binding for the Press is done by other binders. On the other hand, it receives more orders for binding from other firms than it can execute.

Thus it will be seen that the Press is largely self-contained. It has anticipated one of the tendencies of the time, the concentration of industries by the elimination of middlemen. It can carry through all the processes in the production of a book except the supply and tanning of the leather, without going outside its own works. It makes its ink from soot which it creates by burning creosote in furnaces for the purpose. It supplies the paper, makes the type, does its own book-binding, and acts as its

**Anglo-Saxon.**

ꝺᵉ ꝓoꝛꝺẏꝛꝺaꝺ mannū hẏꝛa ꝛẏn

**Arabic.**

لانهُ هكذا احبَّ اللهُ العالم حتى

**Armenian.**

*Ո՛յ այնպէս սիրեաց Աստուած զաշխարհս*

**Bengali.**

যেহেতু ঈশ্বর জগতের প্রতি এমত প্রেম করিলেন

**Burmese.**

ဘုရားသခင်ဤသော ၊ တော်တိရုံကြဉ်သေ

**Chinese.**

生獨以帝上蓋

**Coptic.**

Ⲛⲁⲓⲣⲏϯ ⲇⲁⲣ ⲁ̀ϕϯ ⲛⲛⲉⲛⲣⲉ ⲡⲓⲕⲟⲥⲙⲟⲥ

**Ethiopic.**

እስመ: ከመዝ: አፍቀሮ: እግዚአብሔር:

**Etruscan.**

ƚ∀8∀Ↄ ⅄I∀ƳИ⅁ſ ЩΛƚ⅄ ſΓΜ⅄Θ ƚ⊟

**Gothic.**

ᛘᛞ· ᚢᚾᛏᛖᚷᛊᚨᛒ ᚨᛁ ᚨᚠᛈᚨᛚ

**Gurumukhi.**

ਇਲਨਿਜ਼ਾਲਮੁਨਿ ਖਾਂ ਪੋਇ ਖਿਮੁਅਦਰੀ

**Hebrew.**

כי ככה אהב האלהי

כִּי כָכָה אָהַב הָאֱלֹהִים אֶת־הָעוֹלָם עַד־נָתַן

כי ככה אהב האלהים את העולם עד נתן

**Hieroglyphics.**

**Pahlavi.**

ꐧꐪꐫꐬꐭ ꐮꐫꐪꐭꐯ ꐧꐫꐬꐧ ꐫꐫꐪꐫ ꐪꐪꐧ

**Runic.**

ᚠᛦᚱᚼ ᚢᚾᚼ ᚺᚾᚠ ᛦᚺᛋ ᚼᛁᚠᚴᚢᚠ ᚼᛦᚴᚱᚱ

**Russian.**

Ибо такъ возлюбилъ Богъ міръ, что отдалъ Сына сво

*Ибо такъ возлюбилъ Богъ міръ, что отдалъ Сына свое*

**Samaritan.**

ⱷ ⱬ ⱶ ⱺ ⱴ ⱪ ⱹ ⱦ ⱬ ⱨ ⱪ ⱶ ⱶ

**Sanskrit.**

ईश्वर इत्थं जगददयत यत् स्वमद्वितीयं

**Sclavonian.**

АБВГДЄЄЖЅЗИЇКЛМНОПРСТѲ

**Syriac.**

ܟܡܐ ܕܐܠܗܐ ܐܝܟ ܗܟܢ ܐܚܒ

ܗܘ ܕܝܢ ܐܠܗܐ ܠܥܠܡܐ ܕܝܢ ܕܝܗܒ ܠܒܪܗ

**Tamil.**

தேவன், தம் முடைய ஒரேபேறான சு

**Tibetan.**

དགོན་ མཆོག་ གྱིས་ ཅིའི་ ཕྱིར་ སྡུག་ གསྔག་ པོ་

**Zend.**

. ꬱꬹ . ꬱꬹꬵꬱꬹꬵ . ꬱꬹꬵꬱꬹꬵꬱ . ꬱꬹꬵꬱ . ꬱꬹꬵꬱꬹ .

A FEW OF THE STRANGE TYPES IN USE AT THE OXFORD UNIVERSITY PRESS

own publisher. And to complete the process, the book may be written by a Delegate on the governing board. Besides this the Press makes varnish, it has engineering works, makes gas at Wolvercote for supplying light and power to its paper-mills, and carries on other operations such as collotype printing, electroplating, and lithography. The Press does not inquire whether the execution of all these works by itself makes for economy—although probably it does; it is enough that it promotes efficiency and ensures independence.

This object-lesson in efficiency would not be complete unless the Press were served by contented employees. Rightly enough it is a model employer. The printery is a stately building, without any of the discomforts usually associated with a factory. The compositors' scale of pay is the highest in the provinces—and rightly so again, as the work demands more care and ability than ordinary type-setting. The minimum wages for compositors is 36*s*. The working hours are 52½ to 54½ a week. There are several special benefits conferred on the workpeople. They receive old-age pensions and sick pay; and an institute has been provided for their enjoyment and recreation.

The management of the Press is invested in a number of distinguished members of the University, appointed by Convocation, and headed by the Vice-Chancellor. They give their services free. The Secretary of the Press receives applications from authors and editors, makes all literary arrangements, and administers the property of the Press. The various departments are under capable heads, and the businesses are kept more or less distinct. The head of the publishing and bookbinding departments is Mr. Henry Frowde, who has occupied his present position for twenty-nine years. Mr. Frowde most ably sustains the exalted business responsibilities placed upon him. To his initiative and organising ability much of the recent progress of the Press is due. He is a born publisher—one who not only loves books, but has the knowledge to appreciate them for their own sake, and desires to see them come forth into the world in the finest dress the most expert craftsmanship can produce. Many books printed at the Press are published by Mr. Frowde in his own name. These are books which the Press wants to see published, but does not care to give its own imprint. The printer of the Press is Mr. Horace Hart, whose duties are much greater than those of an ordinary printer. He is not only the head of a very large staff of compositors, printing books in all languages, but he is also responsible for the type-casting and the other various works carried on at Oxford. Altogether the Oxford University Press is well managed and well served, and is, as I have said, an object-lesson in efficiency.

# THE BATTLE OF THE TRAMWAYS

THE PROGRESS OF ELECTRIC TRANSIT UNDER MUNICIPAL CONTROL—OVERHEAD *V.* CONDUIT SYSTEM: WHICH IS BETTER?—LONDON'S GREAT TRAMWAY VENTURE AND ITS COST—A BOLD EXPERIMENT

BY

F. A. McKENZIE

ENGLAND is at the beginning of the electric transit age. Seven years ago, there were nine electric street railways in Great Britain; to-day there are above 160 in actual operation. Glasgow has 103 miles of track, Liverpool 101 miles, and Manchester eighty-two miles. With extensions now planned, at least four cities will each have 150 miles of electric railway in the immediate future. The first railway line to abandon steam for electricity was opened in May, and last month the Prince of Wales rode on the first car of the London County Council electric system.

The number of passengers on eleetric lines in this country is now counted by the thousand million. Every week witnesses the inception of new systems, and the extension of old ones. Railways are imitating the tramways. The electrification of the London underground lines

is proceeding apace. The Brighton and South Coast, the Great Eastern, the Great Western and others are considering changes in this direction, and the progressive North-Eastern is pushing forward the transformation of its urban traffic around Newcastle. The Lancashire and Yorkshire line between Liverpool and Southport is to be electrified. New electric railways, maintaining their own tracks and obtaining speeds impossible now, are inevitably coming. London to Brighton in forty minutes and London to Dover in an hour by electric express are among the probabilities of the day after to-morrow.

The most experienced street-traffic manager in England, Mr. Yerkes, has committed himself to the statement that our railways can reduce the cost of much of their haulage by one half by substituting electricity for steam. "Everyone is mad on electricity," says Mr. J. Staats Forbes; "we are all going to be electrified." And it is madness with method.

The steam-railway age was almost entirely an era of private enterprise; the electric age is mainly one of municipal control, at all events so far as the traffic in towns is concerned. The electric tramway has placed within the reach of our municipalities the most profitable and secure of all common monopolies. With economic management, a moderate-sized borough can pay the entire cost of its electric-tramway system, including sinking-fund and gradual repayment of capital, for 7½*d.* per car mile run. Its average income should be quite 10½*d.* per car mile. On a busy system two hundred thousand car miles will be run in a year for each mile of track. The wealth of Golconda pales before this vision of municipal riches.

Nor are these public profits wholly on paper. Manchester at the beginning of its administration and before its lines are nearly completed, has secured £50,000 for the relief of rates in the past year. Glasgow, having paid the capital cost of its horse tramways out of profits in eight years, is going to beat that record with its trolley cars. Liverpool, prevented by law from paying more than a little of its profits to the city funds, is expending its surplus on improving and extending its lines. Leeds has a net balance of close on £50,000 a year. These are but a few.

No change comes without conflict, and over electric traction the controversy is to-day as acute and is waged as bitterly as any mediæval theological dispute. The opening of the London County Council tramways last month has brought the matter prominently before the public, and still more will be heard of it in the immediate future.

When the London County Council resolved on the electrification of its lines it determined to adopt the conduit, or underground, rather than the overhead or trolley system of electric transmission. Up to then, only two places in England had tried the conduit, Blackpool and Gravesend, and both had after a time abandoned it as a failure. But peculiar local conditions and the early stage of development when the lines were laid, were held to account for this. Even now, however, London is the only part of the United Kingdom working the conduit, save Bournemouth. In the latter place, there is a short section in the centre of the town.

Much, of course, may be said for both overhead and conduit. The conduit is costly, and the overhead is ugly. The one breaks up the surface of the streets, while the other tends to obstruct the sky line. The conduit is working successfully on the Continent and in America, while the overhead is doing the same in all parts of the world. Let us state the clear facts on both sides, facts on which any sound conclusions must be based.

*Initial cost.*—Estimates of the comparative cost of overhead and conduit vary according to the bias of the calculator. It is universally admitted that the conduit is dearer, but while some place the extra expense at £6000 a double mile, others put it as high as £60,000. Happily it is now possible to obtain verifiable figures that can be applied to British practice. For any fair comparison, we must take two cities where rates of wages and general conditions are similar. London and Manchester, by the admission of all parties, fulfil these requirements. In making a comparison, it is unnecessary to deal with the outlay on power stations, cars, car sheds or workshops, as these are alike for both systems. The one point of difference is in the expenditure on road-work, including in the case of the overhead the poles and wires. In the figures that follow I therefore omit all other items.

*Overhead.*—In Manchester the cost of road-work has been £6870 per single mile, in Liverpool £6100, in Sheffield £6746, and in Glasgow £6713.

*Conduit.*—On the Tooting section of the London tramways, the cost has been £13,600. This amount, however, is likely to be exceeded, for the remainder of the work, according to official statements by the Council's engineers, as the Tooting roadway was unusually favourable. On the Greenwich section, the cost is estimated

at £14,041. This latter figure is now put forward by the Council's officials as an approximate estimate for all London.

The London County Council aims at 200 miles as the length of its electric lines. With this length, the extra cost of the conduit above the overhead would be £1,434,200—£2,808,200 for the conduit as against £1,374,000 for the trolley, worked out on the Manchester and London official figures. I am bound to add, however, my strong conviction, shared by others beside myself, that it will be impossible to lay down a general system of conduit lines in London, covering 200 miles, unless running almost wholly in outer areas, for less than four millions. It will probably be higher even than that.

The items in estimating for the conduit that make forecasts of cost uncertain are the removal of drains or sewers and the reconstruction of bridges. The very position of most underground pipes in Central London is unknown. But enough is known to make certain that any attempt to run straight conduits through our old streets will necessitate either the raising of the streets some height above their present levels, or the removal of main drains at a cost impossible to foretell.

*Cost of operation.*—The cost of installing a system, however, is comparatively trivial compared with the expense of operation and maintenance. How do the conduit and overhead work out here? In Washington and New York conduit lines are being operated at very low cost. In Paris and Brussels, where both systems are in operation, under common control, the overhead is found to be cheaper. But this is a point where further experience is necessary. Arguing theoretically, the overhead should prove much cheaper than the conduit. It is less likely to have so great a leakage of current, it escapes the heavy cost of cleaning the channel and pits, and does not necessitate the constant repairs of road crossings which will be a feature of the new London system.

The London United Tramways operate their cars for a cost of 5.40*d.* per car mile. In most cities the cost works out at between 6*d.* and 7*d.* In London, the authorities estimate that they can meet all expenses save interest on capital charges and sinking fund, for 6*d.* a mile. They will be very fortunate if they do. The cost will probably be nearer 8*d.*, although this extra outlay may well be balanced by higher receipts than the Council figures allow for.

My friends who believe in the conduit calculate that the system will work smoothly, that there will be little difficulty from slots closing or ploughs breaking, that the unceasing vigilance of the motor-men will prevent fusing at crossings, and that expenses will be so low and profits so great that they will have a little present of £200,000 a year for the London ratepayers. Those of us who are perhaps pessimistically inclined consider that trouble with the rigid ploughs is almost bound to come, owing to the complicated points necessary in London streets, that the service will be frequently interrupted, that the leakage of electricity will be somewhat high, and that the cost of cleaning will be a heavy burden; we fear that what ought to be a veritable gold mine for London ratepayers will have much of its revenue absorbed by high costs, despite the ability and strenuous work of the men at the head. Time will decide who are right.

From the point of view of appearance, the consensus of opinion is that the conduit comes far and away first. While it disturbs the roadway more than the overhead, there are no poles or wires above it. For public safety, the balance also probably lies in favour of the conduit. But I cannot recall more than one fatal accident from the falling of trolley wires during the past year. With the automatic cut-off, both systems are safe.

From the sanitary aspect, the overhead scores heavily. Street refuse naturally finds its way into the open conduit, and this makes elaborate drainage necessary. On the London lines there are untrapped pits at every sixty or forty yards, in which the solid refuse settles. The accumulation of solids in these pits is likely to cause harm in summer. The cleaning work is offensive.

Overhead and underground are not the only two methods before the public. Surface contact is regarded by many as the system of the future. One method of surface contact, the Lorain, has been given experimental trial at Wolverhampton, and as I write, this enterprising borough is convulsed with controversy about the success or otherwise of the trial. Under the Lorain system, the cars take up their electricity from projecting studs in iron plates on the roadway, which are supposed to be only "alive," or charged with electricity, while the cars come in contact with them. The Lorain system has admittedly proved more expensive than the overhead, and a number of cases have occurred of the studs remaining "alive" after the cars have passed over them, although accidents from this cause

have been insignificant. Whatever decision Wolverhampton may come to, it is unlikely that the Lorain system will be largely installed elsewhere, until it has given much greater proof of its durability and economy. For the moment the overhead holds the field. It is far from an ideal way, but it is a cheap form of bridging the interval until the ideal is found. Paris has shown the way to other cities by giving permission for temporary overhead lines in certain parts. The ideal of the future is the car containing its own power. In country parts the motor-bus, propelled from overhead wires, will be heard more of in the immediate future. A Bill sanctioning the establishment of one line run by this method is this session passing through Parliament. We are now at a stage where we have advanced enough to make further rapid progress certain, and where any week may bring fresh developments that will greatly expedite our onward march. Meanwhile, the London County Council has made a bold experiment, and the result will be watched with keen attention.

# CAPITAL AND LABOUR IN THE UNITED STATES

SIGNS OF A DECLINE OF PROSPERITY — THE WESTERN VIEW OF EASTERN INVESTMENTS—HARD TIMES AND LABOUR TROUBLES—LEGAL INJUNCTIONS AGAINST STRIKES—PRESIDENT AND EX-PRESIDENT IN THE WEST

*From the Correspondent, an American, of* "THE WORLD'S WORK"

WASHINGTON, *May* 1, 1903.

IF surface signs mean anything, we in the United States have reached the crest of the high hill of prosperity and are now dropping down into the valley. There are unmistakable indications that in the course of the next twelve months, probably in less time even, the country once again will be in its periodic grapple with hard times. Despite the general prosperity, the amazing statistics of bank transactions, constantly increasing exports and a home consumption seemingly inexhaustible, careful observers know that financial and commercial conditions are not sound, and fear for the future. What increases their anxiety is the knowledge that in every part of the country working men are growing daily more dissatisfied and are girding up their loins for another great struggle with capital.

The United States of America is really two countries. The East, that dominion between the Mississippi River and the Atlantic Ocean, is one country, and the empire stretching West from the Mississippi to the Pacific Ocean is another. Politically one, and for national purposes united, the West and the East are only connected by the most slender threads, and their political no less than their economic interests are often antagonistic and frequently clash. The Western view of Eastern financial and commercial conditions is thus explained by a prominent Western man, Mr. W. D. Washburn, of Minneapolis, a son of a former distinguished United States Senator, himself a well-known and wealthy business man, and prominent in the Republican party.

Mr. Washburn finds, after a personal investigation, that the New York financial market is nervous. The slightest shock is sufficient to produce a panic, which is only averted by the concerted and gigantic efforts of the banks and the great financial operators. These symptoms are caused by the reluctance of the West to send its surplus money to New York, partly because the West can now profitably employ its own funds in the places from which they are derived, and also because the West is distrustful of investing in the securities of the great industrial Trusts which have flooded the market during the last few years. Underlying the surface are deep-seated and radical reasons for the present unsatisfactory state of affairs. These involve the tariff and the Trusts which have developed under it. The protective system, which has enabled the Trusts to multiply and make large fortunes for their promoters, has driven the small manufacturer out of business and elimin-

ated competition. He has been crowded aside by gigantic aggregations of capital, and is now really or practically only a clerk. The tariff prohibits all foreign competition, and the consolidations have prevented the fear of home competitions, so that the Trust has been enabled to raise prices far above fair and normal profit and, to quote Mr. Washburn, "not content with this, it capitalises its enormous profits in billions of inflated securities, which hang as a constant menace over the financial and industrial markets."

Mr. Washburn makes a statement that appears almost incredible, and yet it has been so often made before in various forms that its accuracy cannot be doubted. "To-day," he says, "many staple articles manufactured in the United States are sold as cheaply in England, Japan, or India as they are supplied to our people. Steel rails have been shipped to England, returned to the United States, paid the duty, and been placed on the market at two dollars less than rails which have never left the country. An iron manufacturer informs me that he sells his surplus abroad at cost, so that the price may not be reduced by the competition of these articles in the home market. By a fair price at home he means a price that will pay 30 per cent. on his real capital or 10 per cent. on his stocks and bonds, whose face value is three times what the property is worth. Competition under the protective system is a dead letter."

These figures illuminate the situation at a glance. They show clearer than anything else how the Trusts hold the country in their grasp, and how everybody, every consumer, every man who buys a dollar's worth of anything, must pay his tribute to these grasping and avaricious capitalistic cormorants. The protective system was supposed to be for the benefit of the American working man and for the consumer as well as the producer; but, as a matter of fact, it has simply resulted, as Mr. Washburn says, in making the country pay tribute to the manufacturer. Furthermore, the American working man is either being driven out by the immigrant or else he is forced to meet his competition. Puritan New England, Mr. Washburn says, is no longer American. "It swarms with Italians, Bohemians, Poles, and miscellaneous mixed races, whose inheritance of bad morals and bad government is a menace to democracy. In Massachusetts one hears all the languages spoken from the Po to the Bosphorus. In Maine one may ride through miles of deserted farms to reach small manufacturing villages whose inhabitants are chiefly French Canadians. Nearly every manufacturing town within a hundred miles of the Atlantic is overrun with low-class European labour, most of which has been introduced within the last ten years. The manufacturer has secured the double advantage of cheap labour and exorbitant prices for his products. It is apparent, therefore, that Hamilton's dream of high-paid labour and high-minded labourers has not been realised under the protective system."

Turning to the North-West, Mr. Washburn finds that his people are made to pay extravagant prices for manufactured articles, but are forced to sell their staples at prices made in the cheapest markets of the world, which compels them to compete with the cheapest labour in the world. The North-Western people have always been staunch protectionists, but now they are beginning to realise that protection is of little benefit to them. They see foreign markets closed against them in retaliation for a tariff which shuts European manufacturers out of the American market, and naturally they are beginning to ask themselves whether they are not being milked by the Eastern manufacturer simply for his own advantage.

"In a nutshell," Mr. Washburn concludes, "the Mississippi Valley gives everything and gets nothing under the existing system. It sells cheap and buys high. It produces the wealth without which the East could not sustain itself for a single day. But for its colossal railroad earnings and its increasing development of natural wealth, the Wall Street operators would have to put up their shutters. The Mississippi Valley will not submit indefinitely while its riches are poured into the coffers of Eastern speculators."

The London *Times* rendered a service not only to its own readers but to the American public by calling attention to the way in which the country has disregarded sound business principles, and pointing out that this contemptuous indifference must bring its inevitable day of reckoning. Some of the newspapers on this side, especially those which are the spokesmen of the great capitalists, make light of the warning of the *Times* and attempt to show that danger is not to be feared from inflation. Other papers, however, that are not tied to the chariot of Mammon, take a more sensible view and are fully alive to the dangers. The country is now going through the same experience that it had in the past, but those lessons are all too soon forgotten. We have

before had our great periods of prosperity, due to or followed by excessive inflation, with the natural sequence of panic and slow recovery. It is not the first time we have had booms in the United States, not the first time that the booms collapsed and years were required to restore commercial stability. Always the conservative element has been laughed at and told that what the country needed was not more prudence but more money, and more money could always be obtained by the reckless use of credit. We are witnessing to-day exactly the same disregard of prudence. The inflationists are demanding that the banks be permitted to issue notes based on no other security than their own credit, and the newspapers which speak for Wall Street contend that if the banks were to be permitted to issue an additional hundred millions the country would be to that extent the more prosperous. They may be right, but the chances are that they are wrong.

Even greater, perhaps, than the fear that the bubble of credit will be pricked and that the balloon now charged to the point of bursting will explode, is the menace of a labour revolt and a war with capital that will bring business practically to a standstill. The first shots have been fired by labour, and capital has again resorted to its favourite weapon of "government by injunction," and by that process sought to prohibit the men from striking. A few weeks ago the employees of the Wabash Railroad demanded an increase of wages, and the company met this demand by applying for an injunction to restrain the men from striking.

The issue of this writ has been discussed by leading men and papers throughout the country. Senator Depew, formerly President of the New York Central Railroad, and now the Chairman of the Boards of Directors of that company, the Lake Shore and the Michigan Central Railroads, gives it as his opinion that the injunction cannot hold. Judge M. F. Tuley of the Appellate Court of Illinois denounces the issue of such writs as tending to bring "the administration of justice into contempt. It breeds discontent, and we shall reap the whirlwind some day from the seed we sow." Ex-Congressman Springer, of Illinois, formerly chief Justice of the United States Court of Appeals in the Indian Territory, says that the judge who granted the writ clearly exceeded his authority. The Chicago *Evening Post* maintains that the freedom of labour implies the right to strike, and that as involuntary servitude does not exist in the United States, what legislation has not done, courts of equity will hardly be permitted to accomplish by indirection. The injunction will not stand, it says, because it is arbitrary and unwarranted. Interesting as showing the Eastern view, the comments of the New York *Sun* and the New York *Evening Post* are typical. Both papers regard the injunction as entirely proper and legal, and support the action taken on the ground that by prohibiting the men from striking the public is protected. The Wabash Railroad finds excuse for its action under the law that makes it the duty of a railroad to receive and transport traffic, and that any conspiracy or action on the part of any persons prohibiting the railroad from engaging in that business is illegal and therefore is properly prohibited by the courts.

An even more drastic writ of injunction has been issued in Waterbury, Connecticut, where a difficulty arose between the trolley company and its employees, which led to serious rioting and finally the murder of a policeman. The trolley company obtained a writ of injunction enjoining the strikers and attaching the funds in the hands of the unions. This injunction is more sweeping than any that has hitherto ever been granted in any labour dispute, and is, according to many good authorities, of doubtful validity. Leaving aside for the moment the question of its legality, it is generally admitted that its effect will be to make the men more determined than ever to win their strike, and probably will lead to other and more serious conflicts with the police.

The restlessness of labour becomes more ominous, and careful observers are growing more anxious as the storm approaches, fearing that unless the demands of labour for increased wages and shorter hours are conceded, the general business of the country will be paralysed by strikes. Here in a nutshell is the position of labour. For the last few years the prices of commodities have been steadily climbing higher and the prices of manufactured products have correspondingly advanced, but while there have been some increases in the wages scale they have not been commensurate with the cost of the necessities of life; so that while it is true that the mill operative and the skilled mechanic generally is better off in the amount of actual money he receives than he has been for several years, he is worse off in the net result, because his money buys less than formerly. Furthermore, labour has been stimulated to make these demands by the action of the trusts in increasing prices, and as one newspaper, the representative of labour,

says, "the Trusts began the work of fixing high prices. They should not complain if the labour unions follow the example thus set by their employers."

It is to be noted that technical and trade journals, which are, as a rule, closer to the situation, and speak with greater knowledge and authority than the daily newspapers, frankly admit their apprehension and fear that we are about to witness a mighty struggle between capital and labour. Labour in this country is so well organised and is so conscious of its political power that in some respects it is more formidable than labour in any other country. The Republicans generally count upon the support of organised labour for their successes in the presidential campaign next year, but a series of long and bitter strikes would do the Republicans incalculable harm, and might result in a very large proportion of labouring men voting the Democratic ticket in revenge. If Mr. Roosevelt should find both ends of the social scale allied against him, capital at one extreme and labour at the other, his chances for election would be absolutely hopeless.

The ratification of the treaty of reciprocity with Cuba, with the amendment making the treaty inoperative until Congress enacts the necessary legislation, postpones putting the treaty into effect until at the earliest next December. For this delay British and German merchants will feel grateful, as the American preferential tariff will practically ruin English trade with Cuba. Both the British and German ambassadors have lodged protests with the State Department, but no attention has been paid to them because of the undoubted right of the United States to make its own trade arrangements without regard to the damage inflicted on rivals.

As there is no fear of tariff retaliation, the United States feels perfectly safe in making a treaty with Cuba that primarily is for the common advantage of both countries, but which operates to the detriment of Great Britain. No one, of course, can blame the United States for doing this or accuse it of showing an unfriendly spirit, but it is nevertheless unfortunate for England.

President Roosevelt on his western tour has met with a reception that every president and distinguished man has a right to expect. He has been enthusiastically acclaimed by hundreds of thousands of people, and at every place where he has spoken his audiences have been large and enthusiastic, which is not surprising considering that a president is a rare object, and only very few persons have the opportunity once in their lives to see and hear their chief magistrate. Ostensibly the President's tour is one of relaxation and to enable him to see the country and come in contact with the people, and to carry out that idea the President has made few political speeches, and has contented himself with talking about the virtues of good government and good citizenship. Although this is not a "stumping tour," the President's friends believe that it will help his political prospects and make his path to a second term in the White House all the easier. He has always been popular in the West, and his presence and his personal magnetism are relied upon to increase that popularity. Mr. Roosevelt must have the support of the West to be nominated and elected.

His most ambitious rivals, and there are several in the Republican party, are forced to disavow any attempt to secure the nomination next year. They admit that the President will be nominated, but they are not so sure that he will be elected. I may repeat what I have already said in this correspondence. If Mr. Roosevelt is defeated it will be because of plutocratic opposition, because of the animosity of bankers and business men who have always been suspicious and distrustful of him and who still fear him. He has the confidence of the people, who respect and admire him, but the masses are as wax in the hands of the moneyed *coterie* on whom reliance must be placed to furnish the funds to carry on the campaign. The outcome will hinge to a large extent upon industrial conditions. If "prosperity" is a remembrance and not a fact next year, and if times are hard and workmen are out of employment, Mr. Roosevelt will be held responsible and offered up as a sacrifice.

Ex-President Grover Cleveland, whom some people call "the greatest living American," and whose name is never mentioned by some other persons without being coupled with an abusive adjective, was sixty-six years old last month, mentally and physically sound and keenly interested in all the leading questions of the day. Mr. Cleveland was one of the central figures at the dedication of the St. Louis Exposition, and the reception accorded to him there has made the politicians do some very serious thinking. The spontaneous enthusiasm

with which he was greeted showed that he commands the respect of the masses as no other public man in America does, and makes it clear that thousands of Democrats would be only too delighted to be again given the opportunity of voting for him for the Presidency. Whether Mr. Cleveland cherishes this ambition no one can tell. He has publicly said that he is out of politics and only interested in politics to the extent that every other good citizen ought to be, and as a Democrat he naturally hopes that the day is near when democracy will once more reign triumphant. Despite these denials those Democrats who have always regarded Mr. Cleveland as a great man, talk about him as the strongest candidate their party can nominate next year; and those Democrats who detest him, especially the Bryanites, show their fear of him by continually attacking and abusing him. Bryan himself never neglects an opportunity to inflame his followers against Mr. Cleveland, and his mongrel pack imitate their leader's example and yelp on every occasion.

Mr. Cleveland would be both the strongest and weakest candidate the Democrats could nominate. He would be strong with the men among whom Mr. Roosevelt is weak, and he would also have the support of independent Republicans who are dissatisfied with many things Mr. Roosevelt has done, or rather things he has left undone. His failure to secure adequate Trust and tariff legislation is the main reason for this dissatisfaction. On the other hand radical Democrats, the Bryanites, would bitterly oppose Mr. Cleveland and in all probability vote against him. Whether this defection would be greater than the Republican support he would undoubtedly receive no one can tell. One thing, however, is quite certain. Friends of President Roosevelt are more afraid of Mr. Cleveland than any other Democrat, and are frank enough to say that should he be nominated next year's campaign will be titanic, which perhaps ought to convince the Democrats that Cleveland is the natural nominee. Should he be nominated, although I confess I regard his nomination as improbable, the election would be the most interesting this country has ever known.

# THE RELIGION OF THE LONDONER

## A REVIEW OF MR. CHARLES BOOTH'S REMARKABLE BOOK

EVERY attentive student of London life is familiar with the view that London is a pagan city. This is an easy as well as a gloomy assumption, and its holders are usually either intelligent pessimists who hold aloof, or observers who fall below the mark in social activity, if not in average vitality. One may understand the view, but one may not admit its accuracy. "A hot and dangerous place," wrote Maurice, after a pleasant visit to London sixty-three years ago—in a passage that reminds us irresistibly of Newman, when, during a visit to Frascati as a young man, he was moved to hope for the time when he should no longer "feel a secret joy that hell is near." Hot and dangerous, London remains, but to realise that it is not pagan one need only put the contrary position: Is London a Christian city? The response to this question in the consciousness of any well-balanced mind will, we think, be a qualified "Yes." The qualification, too, has strictly nothing to do with the question of Christian and pagan (and there is nothing between these two attitudes that calls for consideration here), but rather concerns another problem. That problem, the reader of Mr. Charles Booth's seven volumes on *Religious Influences* (Macmillan)—which, but for a final volume still to come, complete this author's great work on the *Life and Labour of the People in London*—is inevitably confronted by. Where London is actively religious it is mainly Christian; where it is not actively religious it is indifferent. The problem for religion is, how to add to the methods of the religious agencies such an innovating power as will enable them to win the acquiescence and the co-operation of that mass which, for convenience, we describe as "the people" of

London. "Amongst all the reasons for abstaining from public worship," says Mr. Booth, "genuine, conscientious, reasoned unbelief takes a very small place"; while one of his witnesses, who is only saying what hundreds of others engaged in religious work say in their own way, declares, "You may write indifference across it all."

Mr. Booth's volumes contain the result of personal investigation in every parish in London. They form the third series of a monumental and magnificently executed work, and will be of inestimable value to social workers everywhere. Mr. Booth (assisted by Jesse Argyle, Ernest Aves, Geo. E. Arkell, Arthur L. Baxter, George H. Duckworth) describes organised religious effort in all its forms.

And wherever we go the cry of indifference meets us. There is the intellectual as well as the non-intellectual indifference. In Marylebone and in the still more fashionable districts it is said that the rich have money but lack souls—or the Church fails to touch either. "Heart-breaking work" were the words used in Mayfair. A Methodist minister who visited from house to house among the working-class people reports that pure indifference is the characteristic, and nowhere else, neither among the colliers of Stafford nor the dockers of Hull, has he found its equal. Visiting is met in the "We-don't-want-anything-thank-you" spirit. "Not one in a thousand cares about God," is the cry of one who has given her life to missionary work in Lisson Grove. In the Isle of Dogs, virtually isolated from the rest of London, there is a fringe of population surrounding a central mass of docks, and in this population is found an approach almost to village life:

"Amongst such a population there would seem to be special room for religion, but religion appears to play a very small part in its life. Effort on the side of the teachers is not wanting; it is the response that fails. On this all the authorities consulted are in accord. The clergy admit and deplore the fact. 'The people,' says one, 'though their attitude has improved, are essentially irreligious.' Another, who has just come, reports that he found his parishioners 'genial and friendly, but not willing to come to church.' In a third parish, where the services are High, there are, indeed, tolerable congregations, but those who come are characterised as 'fickle'; which may be as much as to say that they are influenced by novelty; attracted, but not held; attending the services so far as they do attend partly from curiosity."

A poor and rough area in Limehouse, known as the "Fenian Barracks," we are told, sends more police to hospital than any other block in London. In Bethnal Green, although the roughness is said to be decreasing slowly, the standard of life is thus described:

"In all ways we have a picture of extraordinarily rough and low life. Weddings, we are told, are the occasion of a drunken orgy, the disorder extending even to the church, and reaching such a pass that the clergy frequently have to refuse to go on with the service till it ceases. Marriages are contracted at an early age, and in many cases for pressing reasons. The ceremony is often postponed to the very last moment at which it is possible to save the situation, but 'is always intended'; the girls count on it, for the local ethical standard is strong on the necessity of marriage under such circumstances. On the other hand, if difficulties between the couple arise later on, to leave wife and home and live with another woman is not regarded as a serious offence, if the circumstances are felt to justify this course. In all these matters there are, however, strict rules of propriety, which cannot be violated with impunity by those who wish to live on pleasant terms with their neighbours, though they may not follow the ordinary lines either of legal or religious morality."

One of the saddest features is the prevalence of drinking habits among women (Mr. Booth's point of view is sometimes novel):

"With women of all classes here represented (Outer East London), there is far less shame at being seen to enter a public-house than used to be the case. This change is not altogether bad. It may even be a forward step in the march to better things. It is, at any rate, one of the results of the emancipation of woman and of her increasing financial independence. In this connection it is to be noted that among men, drinking, or at any rate drunkenness, is stated on all hands to be decreasing."

In Paddington also we hear of "the curse of drink and the shamelessness of women in that respect." For children the sweet-shop takes the place of the public-house. Though the parents do not go to church, however, they seem to send the children to Sunday-school with fair regularity. It is when school age is past that all denominations alike find their difficulty.

Of the work of missions, Mr. Booth says a certain degree of success is almost universal, though "it is admittedly a 'heathen' world in which they are at work, and in spite of all their efforts a heathen world it remains."

Mr. Booth quotes the opinion of the minister of a small Christian sect in the North-west :

" The Church of Christ has been a great deal too eager to use doubtful means to get hold of the people. They have been pandered to, and fed with sops and doles. They don't understand that you are concerned with their souls, and do not want to see you unless you have something to give them ; and children get the same ideas."

It would be a mistake, however, to suppose that the picture is altogether a black one. In Westminster the area of poverty is more circumscribed than it was ; there is less violence and less brutality. In Whitechapel and St. George's the success lies deeper than the failure ; and there, as in Bethnal Green, crimes of violence have become more rare. Hoxton, the leading criminal quarter in all England, is more orderly ; drunken brawling in the streets is less common than it used to be. In Woolwich also there is less drunkenness. In the North-east the general tone of the clergy and ministers of all denominations is confident and happy ; while in North-west London there has been a marked increase in the vigour of religious effort of every kind. And there is, perhaps, comfort as well as undeniable truth in Mr. Booth's statement that " the form of reserve that hates to display feeling is a national quality " with us.

" What the classes above seek in religion is its support, what the working man fights shy of is its discipline. Working men have a far more exacting conception of its ethical obligations. They expect a religious man to make his life square with his opinions. They like their club with its pot of beer, its entertainments, its game of cards or billiards, or the ' pub ' and its associates, and a bet on to-morrow's race, but they look on these things as inconsistent with all religious profession, and every form of religious association thus becomes (if they think seriously of the matter at all) something from which, in honesty, they must hold themselves aloof."

Mr. Booth recognises the potential good of the combined efforts that have been made by so many different religious forces under one flag, but he is under no delusion on the subject of unity. The great variety of doctrines taught within the Church of England (for whose clergymen, by the way, Mr. Booth suggests some better system of compulsory retirement) must go far, he says, to undermine the importance that can be attached to any one of them in particular as a necessary foundation of religious influence. " Nowhere in London can such devout behaviour and such apparent intensity of religious feeling be seen as in the congregations which gather in the High Churches." This enthusiasm—and not only the High Church enthusiasm, but the success of Moody and Sankey, and other evangelists, and perhaps also the rise of the Salvation Army—Mr. Booth attributes to the patent failure of the heavy stereotyped methods of the old-fashioned Evangelical churches, which continue to offer a worn-out presentment of the Gospel, lacking the power to move any one.

Mr. Booth's chief criticism of the Nonconformist Churches is contained in the following :

" I have said that the hard work and self-confidence of Congregationalists led to self-sufficiency, and the deep religious convictions of the Baptists to an obtrusiveness of piety which favoured cant ; so the enthusiasm and overwrought emotions of the Wesleyans produce a false atmosphere of exaggerated language. . . . Yet the scope of that work is great, and for perfection of organisation it is unrivalled."

To the abstemiousness and self-restraint of the Roman Catholic priests Mr. Booth pays high tribute. Mr. Booth's consideration of this Church is summed up in the sentence : " As a nation we are not likely to become Catholic." Another of his valuable comments is on the subject of thrift. It is to be regretted, he says, that no form of co-operative buying, with its contingent facilities for the accumulation of savings, has yet been found suited to the ordinary circumstances of London life :

" In organising collecting-banks, however, wherever that has been done, the Churches break new and useful ground, alike as regards religious influence, the encouragement of thrift, and the control of charity. The development is recent and may have its limitations in local conditions, but I am more disposed to think that its applicability turns mainly on the way in which religious or philanthropic people regard the persons they seek to help. It is found in practice that unless they collect, those who visit among the poor can hardly avoid giving ; but that if collecting is their business they may go to the very same houses without being expected to give. This, by placing visitation on a business footing, reacts on the entire system. To make the visit acceptable, class superiority in the visitor is no longer necessary; all trace of patronage vanishes, or if any remains it is the depositor who becomes the patron and would receive the acknowledgment of thanks."

In reviewing the City churches, Mr. Booth offers an interesting suggestion for making use of these almost empty buildings.

" Additional week-day uses for the buildings must be found, and might, by mutual agreement,

be apportioned among the churches in accordance with the character of each building and of its surroundings. . . . For the social and educational purposes I have in mind, which would include music and lectures and conferences, the evening hours would be the natural time. Minor and detached examples of what is suggested are already found in the choral and literary societies which may be connected with any church, and are not unknown even in the city itself; but as adopted for the city as a whole, they would have to be arranged on a more thoughtful, a more carefully co-ordinated, and a nobler plan. The object would be to offer to the great community which meets daily in the City of London something which, without being definitely religion or exactly education, would be an awakening and refining influence good in itself, and a stimulus to mind and spirit, from which both religion and education would profit."

The reader of this work will see in the Churches themselves much austerity, great sincerity, manifold activities, abundant offering of the helping hand; while outside are masses of men and women whose intellectual life is stagnant, whose artistic impulses remain dead, and whose imaginations are never stirred. In his conclusion, Mr. Booth writes:

"The general attitude of the religious bodies towards the people does much to create that of the people towards them. There is on both sides a lack of respect. On both sides the terms of approach seem to be wrong. If the churches, instead of demanding of the people, 'how can we help you?' were to ask, even of the poorest and the worst, 'how can you help us?' a road might open out; and the battle would be won if it were found, as perhaps it would be, that the people, even the poorest and the worst, would claim their right to share the work on equal terms, asking for their part, not, 'how can you help me?' but, 'how can I help you?'"

We live in the day of "other things"—and the gentle invitation and attack of the churches—an attack backed up, perhaps, too much by the idea of humility, too little by the conception of courage, of the life of Christ—meets too often only a wall of indifference and is repulsed, though never defeated. Mr. Booth is no enthusiast—if we have read his volumes in the proper spirit. These, however, are his closing words:

"There are those who look for a great revival in response to prayer, or 'in God's good time'; their faith demands it; and none can say from what quarter such a movement might come, or to what class it might appeal, or what shape it might take. But at present there is no sign of it, and we are left to trace the Spirit of God working among many minds in many seemingly divergent ways."

# THE WORLD'S PLAY

## VII.—ROWING

THE CAPTAIN OF BOATS—ROWING FRIENDSHIPS—AMERICAN OARSMEN AND PROFESSIONAL COACHES—THE PENNSYLVANIA CREW—THE DIAMOND SCULLS—DOGGETT'S COAT AND BADGE: THE OLDEST SPORTING WAGER—BOAT-BUILDING—THEORY AND PRACTICE—THE WAY TO ROW—THE RIGHT SPIRIT

BY

AN OLD BLUE

AS almost the only pastime which is practically continuous from January 1 to December 31, and as the best and purest amateur sport now in existence, rowing has much deeper claims upon the popular affection and regard than are provided merely by the University Boat-Race in the spring, or Henley Regatta next month. To the latter of these two events the minds of all young "wet-bobs" are now turning, seriously or lightly, according to their various positions in the Rowing hierarchy.

Until I had myself held office of a modest kind, the majesty of a Captain of Boats had always been invested, in my boyish imagination, with a splendid and awe-inspiring responsibility, which only the favoured of the earth might face and bear. But even in my third year at Oxford I can still remember being much surprised at the exhortations of

an Eton Freshman—now Governor of Bombay, and then the first peer who ever rowed in the Boat-Race—to the effect that we "must do our best to lighten the burden on the shoulders of the President." No doubt Claude Holland had a burden of a kind, for that year's Eight was beaten by Muttlebury's "second edition"; but I trust it does not still disturb his sleep o'nights. For we all did our best behind him, from bow, who will never hold an oar again, to seven, one of the strongest scullers ever seen upon the Thames; and we were most extremely tired when it was all over, for we saw almost as little of Cambridge as Oxford did a few weeks ago. It is curious how much effect the mind can have, in such a case, upon the body. In two crews, racing fairly level, if one can only take the lead and keep it all the way, it will finish only half as fatigued as the rival who has had a stern chase, though the difference in work may have been very little; and the difference in distance, none. But I must not talk too much about the University Races, for they form only a small part—though it is a most important part—of English rowing. So I will leave them with the words the late Lord Esher gave us, when he presided in 1889: "Fifty years ago," said he, "I rowed in this race. I only hope that in fifty years' time you may all be as happy as I am to-night." He is gone now, with Chitty, and with A. L. Smith, those other legal oarsmen of the prime, for whose examples every "wet-bob" is the better to this day. Much has been said about the bonds that bind men in the comradeship of various sports. Yet I question whether any single tie is so closely knit, so deeply interwoven, as that which keeps the members of a crew "together," not for their space of practice only, but for the memory of many years. There is a trust in that companionship, a mutual confidence of willing labour, a common share in virile hardship, or well-merited abuse, all of which gives a character to a boat from stem to stern that is not easily put off again. This is a quality different to any other manifestation of sporting activity I can call to mind; and it is primarily to this that rowing owes a purity far greater than that of racing, a tradition as noble as that of cricket, an ideal immeasurably superior to the money-bags of football.

It was when that ideal seemed, for some reasons they knew best, assailed, that a few of the older spirits rose up and announced that our hands were so clean, that we could not run the risk of coming to grips with any foreigner at Henley. Entries, in fact, were to be confined to the British Empire, if not the British Isles. The very names of the gentlemen responsible for this proposal were a guarantee that the good of their favourite sport was their only motive. The trouble was that they chose the wrong remedy to secure it. One chief reason for their proposal was the arrival, and the proceedings, of the Pennsylvania Crew in 1901. My personal dealings with that crew are not important except in so far as they are typical. I had predicted, some time before their arrival, that they would not win unless American rowing had entirely changed since I was last in the United States. I was therefore very interested to see their first performances at Henley, and I was there to welcome them when they arrived. I found eight or nine highly strung young men, under the orders of a keen but uneducated professional, named Ellis Ward, a perfectly unobjectionable old person, as far as I could see, but not the kind you expect to see ordering eight University men about. However, here he was, most anxious to take out "his boys" and get the stiffness of the voyage off them. He could ride neither a horse nor a bicycle, and he could not run along the tow-path. In this dilemma I got the ever-generous Mr. Labat to come to the rescue. Never should it be said, I thought—and he most heartily agreed—that an American Eight came over all this way and lost its race for lack of coaching. So he put Ward into the good launch, *Hibernia*. The boys did their work below the island, and in a few days Mr. Labat and I were once more in full agreement, that the more such coaching they got, the better—for the English crews.

"No, thank you," said Ward one day, when I carelessly asked him to bring the Pennsylvanians into tea at the Leander Boathouse; "I feed my boys myself." He said it without a trace of discourtesy, and as the natural response to any such unthinking invitation. And he had his reward. While every other crew was enjoying Henley, chaffing their various friends, walking up and down the bank beneath the trees, and getting along capitally, the poor Americans were rushed out of their boat into a waggonette, driven a mile up-hill out of the town, and left to think for the rest of the day on the movements of their pulses and the red corpuscles in their blood. They were taught to row a kind of stroke which was only possible to highly strung, tensely nervous men, in perfect health, and with untiring strength.

A very fair exemplification of such a style I once showed to the Editor of this Magazine, when we were enjoying Henley together, and both saw the Yale boys beaten. Pennsylvania had developed the doctrine of the anatomical machine just a little further; her cogs and wheels and levers, had they been all of steel instead of human tissue, would have worked wonders. But Ellis Ward, remembering everything else, forgot that his boys were just human after all; and he put a strain on them to which even President Roosevelt has not yet educated his innumerable American admirers. The result was that they were "killed" in three minutes and a half. I admit that it took a first-rate Leander Crew (indeed nothing else would serve) to do the slaughtering; but those eight Englishmen had only rowed for eight days in the order of the race, and had only been in training for about three weeks. Pennsylvania made so good a race of it, not because of, but in spite of, at least six months of severe preparation.

At the time I am writing another American entry, Titus, has already been practising for next July's Diamond Sculls for about two months. He was squarely beaten last year after an excellent and well-rowed race. The final winner, Kelly of Balliol, is one of the prettiest natural scullers ever seen on that historic course. He owed none of his pace to professional assistance, and his form—more especially his finish—was about as good as it is possible to get. The class of men he beat may be easily estimated from the fact that no fewer than three competitors for that year's Diamonds had beaten record over the course. One of his rivals was coached by Tom Sullivan, an Australian professional of the best type, as honest as they make them, and much more intelligent than you might expect, as may be seen from the successful modifications he has introduced here in sculling-boats. In the summer of 1902 he also gave his services to the Toronto Eight, which came over for the Grand, and is to make another try next July. With the best intentions in the world, he did not do them much good. No professional sculler now alive can coach an Eight as the best judges say an Eight ought to be coached. So strongly do I believe this that I would bet against the Leander Crew of 1901 if it had learnt all its rowing from Ellis Ward, and had to meet the Pennsylvania Eight of that year coached by Lehmann or Dudley Ward or Harcourt Gold. Some criticisms that were passed on the race for the Wingfields of 1902 gave the final impetus to a feeling that had been gathering weight for some time; and the Henley Stewards eventually passed a rule that no crew should race in the Regatta which had been coached by a professional within some weeks of the contest. The rule was in no sense whatever a discrimination against such individuals as Ellis Ward, Bill East, or Tom Sullivan; for no one had a word of blame against their personal character. But it was felt, and rightly felt, that no amateur pastime is benefited by that preponderance of professional interests which is sure to occur when any professionals at all are allowed to take a share in it. What happened to American rowing has already been hinted at. From a recreation it had been turned into a drudgery, and considerations had become prominent which should never have entered into it at all. In England, both Oxford and Cambridge stopped the professional coaching of crews a long while ago, and it had never been popular in the last few decades outside the Cam and Isis; so that the new rule bore mainly upon foreign crews. This, also, had been foreseen by those who advocated it long before it was passed, among the first of whom was the humble writer of these lines. He realised that while nobody wanted to stop the foreigner coming over, everybody wanted to stop various practices which the foreigner imported into Henley with his professional coach; and though there was at first an outcry against what seemed the unfair distinction against American crews, it has now been recognised that the rule holds good for all without exception, and that Americans will, in the long run, benefit by a regulation which will compel all crews, who consider Henley good enough for a visit, to comply with what has for many years been the unwritten custom of the place.

Captious critics, however, who are never content unless everything is done at once, now clamour as loudly for the exclusion of professionals from sculling as they previously did for their retention in other forms of the sport. This will come, and must come; but all in good time. For the present, it is sufficient that the Diamonds have been won without professional assistance. The majority of amateurs cannot get along without expensive pace-makers; and many old hands are of opinion that their practice would be positively dangerous without the steering assistance given (for a consideration) by their mentors. This last argument ought not, I think, to weigh too seriously while half a dozen young apprentices

HENLEY REGATTA

Showing the finish of the fifth heat of the Grand Challenge Cup (1902)—Third Trinity (Cambridge) Leating Toronto

"GET ON TO THE BEGINNING!"
Coaching an eight from Mr. Labat's *Hibernia*

can scull through all the traffic from London Bridge to Chelsea every first of August. If amateurs cannot do as well on the infinitely calmer reaches they affect, it may well be said that they are not quite class enough for the Diamonds.

I cannot leave the subject of the fascinating race for Doggett's Coat and Badge without a word about what is almost the oldest sporting wager with a continuous history in existence. Early on August 1, 1716, the following announcement was placed on London Bridge:

"This being the day of his Majesty's happy accession to the throne, there will be given by Mr. Doggett an orange colour livery with a badge representing Liberty, to be rowed for by six watermen that are out of their time within the year past. They are to row from London Bridge to Chelsea. It will be continued annually on the same day for ever"

The curious thing is that it has continued; and it is, therefore, older than the first regatta ever held on the Thames near Ranelagh in 1775, older than the Derby, the Oaks, or the St. Leger, older than the University Boat Race, or Henley Regatta, or the Wingfields.

The "trimbuilt wherry" in which the young waterman of the eighteenth century sculled for Doggett's Coat and Badge, though considered "shallow and tickle" by contemporary authorities, was very different to the modern craft in which a man sculls down to the starting-post for the Diamonds; and the evolution of the racing eight is still more extraordinary since

THE AMERICAN SCULLER, TITUS
Practising at Henley, 1902

the days when men rowed in streaked boats not far removed from the craft a whaler now carries slung at her davits in the Polar seas. It was Matt Taylor, a Tynesider, who built the first keelless cedar boat for a Chester crew in 1856. Harry Clasper, another Tyneside man, had brought outriggers down south twelve years before; but it was Taylor's hull, smooth and swift, and rounded like the belly of a trout, which really revolutionised the racing-boat. His favourite length was about fifty-five feet; but after sliding-seats had been introduced (again by Tynesiders in 1871) the length of boats increased to accommodate the displacement of the weight by the swing fore and aft, until boats of sixty-three feet and even more became fashionable. Dr. Warre, of Eton, produced a harmonious theorem in 1901 that a boat should be seven octaves, and a short, snubnosed craft of fifty-six feet was the result. Nobody knows whether he was right or not. Indeed, the only thing more fascinating to the wet-bob than rowing itself is the search after the most elementary of the mechanical principles on which that curious art is based. They have not yet been even stated; though I am glad to hear that more attention is being given to them now. But the most acute mathematician might well be bothered to enunciate the exact equation which describes a stroke in an eight-oar during a hard race. She moves in one direction and the stream moves in another. There is skin-friction, and there is surface-friction. The men have just completed the long bodyswing, right forward over their stretchers, so far forward that *unless the boat is moving* they cannot get there at all. The hands have just risen sharply, and, as the blades plunge in together they are driven through the water with a heave from legs and back and shoulders, and a sound like the tearing of a mighty newspaper. What happens? Nobody knows. But there is no feeling like it in the world.

THE TORONTO EIGHT AT HENLEY, 1902

Starting from the crews' boathouse above the bridge

Fortunately, in England we are not pestered with a dozen different ideals of oarsmanship. We all aim at one style, and the nearer we get the "better" we are called. The hard work is done with the legs, by means of that strong drive from the stretcher which grinds

the slide back at the bidding of the strongest muscles in the body. The arms are no more than strings between the lever of the oar-handle and the weight of the oarsman. When they are straight they transmit that weight best ; when they bend it is not to do any work of their own, but only to shorten the string at that moment at the stroke's end when the oar-handle must come close to the chest, and the shoulders have swung back as far as they should go. In the " recovery " the hands come off the chest again like a billiard ball off a cushion, and so straighten out the arms again before the swing forward is done, in time to be quite ready to catch hold of the beginning at the exactly right moment over the stretcher. Rowing well is an art that consists of a number of unconscious and simultaneous movements which have become natural from long practice ; and the more in conformity with nature those movements are, the better they will serve a man in the stress of a hard-fought race.

Of pleasure-boating this is not the place to speak, for it will be dealt with in another article ; and if I seem to have said too much of the Universities in speaking of English oarsmanship, it must be remembered that without them Henley would hardly exist, and our greatest event in the Rowing Calendar would not be brought off. But, fortunately for the best interests of the sport, rowing is far from being confined to the Universities. The Thames Rowing Club have built a tank to teach their tyros how to row through the dark afternoons of winter. London and the other clubs have united into a Rowing Council which shall forward and establish the principles of the A.R.A., and regulate the details of regattas. A Burton four has won a Henley race, and every " provincial " crew is full of ambition to go and do likewise in the coming years. And so the generous rivalry continues, in the spirit of Dr. Johnson's favourite quotation, the line that is the motto of the Boat-race, " Ever to excel, and to surpass others." Unless I am much mistaken, you will see the boys from Cambridge " surpassing others " to a considerable extent at this year's Henley. But all the others will be making efforts " to excel." And it is in that sporting spirit of lighthearted endeavour that the strength of Rowing, and of English oarsmanship, is firmly founded.

THE CAMBRIDGE EIGHT OF 1903 AT HENLEY

Just leaving their raft

# WIND MOTORS

THEIR USES FOR PUMPING WATER, DRIVING MACHINERY, GRINDING CORN, ETC.—COST AND DURABILITY—A PORTABLE WIND MOTOR

THE value of wind as a motive power has not yet been sufficiently recognised in this country. There is usually plenty of wind running to waste, so to speak. Even when it is comparatively calm in that region of atmosphere through which we walk, at fifty or sixty feet above the ground the pressure of the wind may be considerable.

There are several purposes for which the modern Wind Motor has proved itself to be of utility, such as pumping water on the farm or on the estate, supplying water to village communities, grinding corn, cutting chaff, pulping, sawing wood, and such like. It is safe to say that there are few farmers in this country who would not find the money expended upon a Wind Motor a really good investment. Indisputable evidence could be presented in support of that statement.

A well-known agricultural expert, speaking of the work done by a Wind Motor, says: "It has ground either into fine meal, or 'grittled,' the corn required for the stock and horses on 800 acres, besides breaking all the cake and pulping roots. With regard to the latter (although it is a job requiring sufficient wind at a particular time every day), it is very seldom that it has to be done by hand; in fact we generally both grind and pulp at the same time."

He adds that no repairs had been necessary during three years' working, and that he would not be without it had he to pay three times its cost.

MOTOR HEAD

A WIND MOTOR ON WHEELS

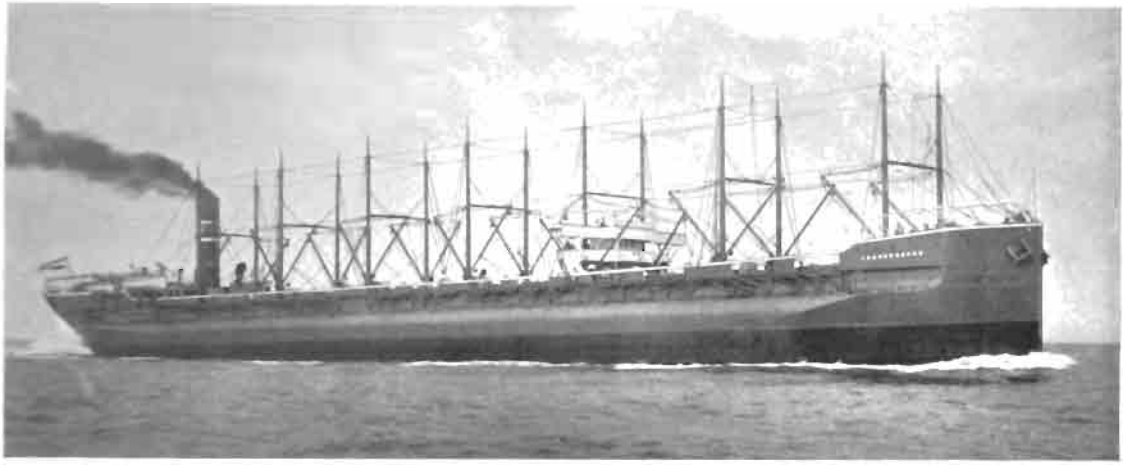
As to the utility of the Wind Motor for pumping purposes, conclusive evidence is available. In one instance, a motor pumps the water required for the supply of a village of 250 inhabitants, into a reservoir situated at a vertical height of 290 feet above, and a distance of 1000 yards from the source of supply. Beyond the necessary oiling, it requires very little attention.

A WIND MOTOR FOR PUMPING

A Wind Motor will cost anything from £20 upwards, depending, of course, on the size and the power developed. You can get a very useful Wind Motor for £50, developing about four horse-power. The larger sizes cost £200 or more. The power developed ranges from a fraction of a horse-power to twenty, the diameter of the wind wheel varying accordingly —from eight feet to twenty-six feet, and above—while the steel tower which supports the wind wheel and motor, ranges from fifteen feet to seventy feet. The whole structure occupies little ground space. The "life" of a Wind Motor may be put at about fifteen years. With reasonable repair it would last considerably longer.

A certain firm of makers have carried out a large number of experiments with artificial wind of known velocity to ascertain the best angle and width of the steel sail to obtain the full power of the wind. They claim to have proved that there is a correct angle and width of sail required to secure that result. And in their Wind Motor the wind wheel is made to cant. There are also other special features; the head of the Motor has been simplified without any loss of strength. All Motors larger than ten feet are supplied with ball-bearing heads. It is claimed that a good Wind Motor is self-governing and self-regulating, and practically noiseless. These Motors are made in two distinct types, one for pumping water only, and one for pumping, grinding, and driving machinery. A portable Wind Motor is also made, as shown in the illustration, but though so far there has not been a great demand for this type, there can be little doubt that the Wind Motor altogether has a considerable future of general use.

THE S.S. "GRANGESBERG"



W. Parry, South Shields

# EFFICIENCY IN CARGO-CARRYING

THE s.s. *Grangesberg* is a remarkable vessel recently built at Sunderland to the order of Messrs. W. H. Muller and Co., of Rotterdam, and is intended for carrying iron-ore from the Swedish mines of Grangesberg to Rotterdam, the ore being put on board at Oxelösund, in the Baltic. "A stranger looking ship," says the *Newcastle Daily Leader* in describing her, "was never seen on the Wear." Built by W. Doxford and Sons, Limited, Sunderland, it is needless to say that she is a turret deck ship. She is single decked, and her hold is divided into twenty-four compartments, which, together with a powerful longitudinal girder running from the fore peak to the engine-room bulkhead, makes her an exceptionally strong ship. Her long sweep of turret deck, broken amidships only by the bridge and charthouse, is fitted with fourteen masts—stump masts placed in pairs abreast of each other, each bearing two derricks, and the whole being bound together by thwartship steel girders and longitudinal steel rope stays. For the rest, it may be said that she carries her 10,300 tons on a draught of 22 ft. 3 in., has her engines and boilers aft, possesses no stern post, but in its place an ingeniously balanced rudder, while along the sides of her turret there range twenty-four specially designed collapsible platforms, capable of being run out over the side of the ship or being snugly folded up and secured on the turret. In loading, the ore is simply poured from chutes into the twenty-four compartments into which the hull is divided, and so automatically stevedored. In discharging, the wonderful gear above described comes into operation. The platforms are run out, four derricks to each hatchway work in conjunction with the twelve double-ended winches and sling the ore out of the hold over the platforms and into lighters with inconceivable rapidity, the whole 10,300 tons, in fact, being discharged in thirty-four hours. To unload her in the ordinary way would take a fortnight. And while discharging forward, she can take in her bunkers aft, fill her double bottom with water, and be ready for sea as the last ton of ore is overside.

The *Grangesberg* was designed by Mr. Charles Doxford and Mr. John Gravell of the Bureau Veritas, with which corporation she is classed, her building being supervised by Mr. R. H. Harkness, of the Bureau Veritas. Her engines, which developed a speed of 10½ light, are of the usual triple expansion type, built by Messrs. Doxford, with cylinders 26 in., 43 in., and 72 in. diameter respectively, by 51 in. stroke, supplied with steam from three large boilers working up to 180 lbs. pressure. She is 440 ft. long by 62 ft. beam by 29 ft. depth of hold, and is at once the biggest ship that has so far been built by Messrs. Doxford, and the only ship of her size built with a single deck.

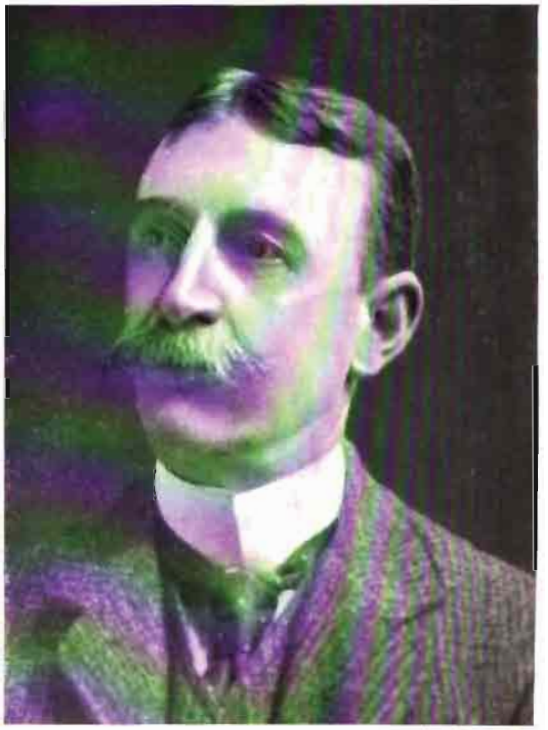
E. Goldensky, Philadelphia

MR. ISRAEL ZANGWILL
("Blind Children")

Beresford

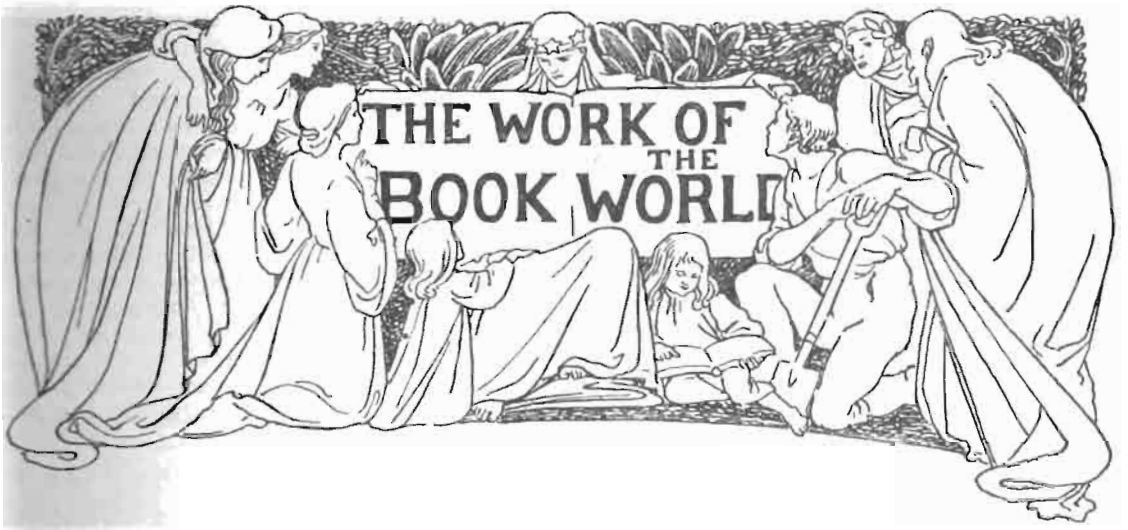
FRANK DANBY (MRS. JULIA FRANKAU)
("Pigs in Clover")

MR. A. T. QUILLER-COUCH ("Q")



Kate Prugnell

MR. PERCY WHITE




LONDON, *May* 11.

IF the length and the number of the reviews be any criterion of the popularity of a book, then the *New Letters and Memorials of Jane Welsh Carlyle* (Lane) was the most popular book of last month. It is in two volumes, includes eighty-seven pages of introduction by Sir James Crichton-Browne, and upwards of two hundred and fifty hitherto unpublished letters by Mrs. Carlyle, and annotations by Mr. Alexander Carlyle, the editor. These letters, which had already passed under Froude's eyes, have been published with the intention of "vindicating" Carlyle from the aspersions which Froude is supposed to have cast upon his memory, at the expense of Mrs. Carlyle, who, we are told by the eminent physician in his introduction, suffered from "cerebral neurasthenia." This introduction is, I consider, intemperate and ill-judged. Nothing was to be gained by stirring up the ancient controversy that has raged about the domestic relations of the Carlyles, or casting newly made blunt darts at Froude. Carlyle was a genius and "gey ill to deal wi'," and the same may be said of Mrs. Carlyle. It needs no eminent physician to tell the average man or woman of the world why marriage between two such richly endowed characters—ardent, uncertain, ill, ironic—did not run as smoothly as a summer stream. Eleven semi-official volumes have been written about the pair since Carlyle died. Let them now rest. But these volumes were very well worth publishing for the sake of Mrs. Carlyle's letters, and Carlyle's grim comments—sob, cry, and groan—interspersed between them. She was a born letter-writer; a gossip who felt, a wit, an ironical observer who let herself go. A non-imaginative mind could so easily misunderstand these letters. "Jane," said Mrs. Montague to her, "everybody is born with a vocation, and yours is to write little notes." She had the power of sarcasm, a bitter gift for a woman. "You would be a vast deal more amiable," said the elder Stirling to her, "if you were not so damnably clever." Her pen was equally nimble in her diary. Here is an extract from the year 1856:

"Our dinner at the Rennies' was, like *everything looked forward to with pleasure*, an entire failure! The Past stood aloof, looking mournfully down on me; whilst the clatter of knives and forks, the babble of the guests, and the tramping of waters confused my soul and senses. It was a London dinner Party, *voilà tout!* And the recollection, which I could not rid myself of, that the gentlemanly 'iron-grey' man who as landlord offered me 'roast duck' and other 'delicacies of the season,' had been my lover—my *fiancé*—once on a time, served only to make me *shy*, and in consequence stupid. And it was a *relief* when Ruskin called for us to go to a great *soirée* at Bath House. *There* I found my tongue, and used it 'not wisely but too well.' *There*, too, I felt myself remarkably well-dressed. At the Rennies' I was always pulling my scarf to my throat, with a painful consciousness of being over-smart."

That was Jane Welsh Carlyle, feminine, introspective, and amused, in a way, even at her own suffering. Suffering tragic and insistent is the note of the *Letters of Mlle. de Lespinasse* (Heinemann), of which a translation

has just been published. The name of this brilliant, eighteenth-century Frenchwoman has become familiar through Mrs. Humphry Ward's novel, *Lady Rose's Daughter*, which was founded on the career of Mlle. de Lespinasse. These letters, which were written between the years 1773–1776 to Colonel de Guibert, the prototype of Captain Warkworth in the story, are so compounded of the heart's blood of hopeless passion, so intimate a revelation of the depths of this woman's emotional life, that in reading them one has the feeling of a rough intrusion upon privacy. But there they are for the world to read, a human document, the outpourings of a gifted woman; but wisdom was not among the gifts.

### Biography and History

Calm, dispassionate, balanced, are the essays in Mr. James Bryce's *Studies in Contemporary Biography* (Macmillan), a volume which has rivalled Mrs. Carlyle's Letters in the length and number of its reviews. The book is not only statesmanlike and profound, but eminently tactful and cautious, without a trace of those qualities which have endeared Froude to many, and alienated a few. The first essay is on Beaconsfield, the last on Gladstone, but about those luminaries there is little that is new to be said. The reader will be more attracted by Mr. Bryce's analysis of the character and powers of the lesser lights, of Freeman, for example, and his strange lack of interest in subjects outside his province. "Among the writers whom he most disliked were Plato, Carlyle, and Ruskin, in no one of whom could he see any merit. Plato, he said, was the only author he had ever thrown to the other end of the room." Mr. Bryce ranks J. R. Green very high, indeed compares him with Gibbon, and in dealing with that vivid personality, his pen catches some of Green's vivacity:

"Such talk has rarely been heard in our time, so gay was it, so vivid, so various, so full of anecdote and illustration, so acute in criticism, so candid in consideration, so graphic in description, so abundant in sympathy, so flashing of insight, so full of colour and emotion as well as of knowledge and thought. One had to forbid oneself to visit him in the evening, because it was impossible to get away before two o'clock in the morning. . . . His appreciation of whatever had any worth in it, his comments and replies, so stimulated the interlocutor's mind, that it moved faster and could hit upon apter expressions than at any other time.

"When he went out to dinner, he noted every person present whom he had not known before, and could tell you afterwards something about them. He had a theory, so to speak, about each of them, and indeed about every one with whom he exchanged a dozen words. When he read the newspaper, he seemed to squeeze all the juice out of it in a few minutes. . . . His imagination vitalised the small things, and found a place for them in the pictures he was always sketching out. To give literary form to everything was a necessity of his intellect. He could not tell an anecdote or repeat a conversation without unconsciously dramatising it, putting into people's mouths better phrases than they would have themselves employed, and giving a finer point to the moral which the incident expressed. Verbal accuracy suffered, but what he thought the inner truth came out the more fully."

The advantages and disadvantages of a son writing the life of his father are about equal. If the criticism is mild, the biographical details are many, and proceed from the fountain head. Mr. Arthur Westcott required two volumes for the Life and Letters of his father, the late Bishop of Durham (Macmillan). From these well-stored pages shine out that combination of a saintly character and an accomplished scholar, in a word, Dr. Westcott. Indeed, no more was needed to imprint on the reader's mind a picture showing the interior as well as the exterior man, than this reminiscence contributed by Canon Scott Holland. Dr. Westcott was then Canon of Peterborough:

"My first sight of him had been in Peterborough Cathedral, all but thirty years ago. I had gone with a friend to read with him for deacon's orders. He was giving lectures on St. John in a side chapel; and all through the first lecture we could hardly believe our eyes. This tiny form, with the thin small voice, delivering itself, with passionate intensity, of the deepest teaching on the mystery of the Incarnation, to two timid ladies of the Close, under the haughty contempt of the solitary verger, who had been forced to lend the authority of his 'poker' to those undignified and new-fangled efforts—was this really Dr. Westcott? We had to reassure ourselves of the fact, as we emerged, by repeated asseverations that it certainly must be.

"Then, the first interview revealed where the secret of his power lay. We had never before seen such an identification of study with prayer. He read and worked in the very mind with which he prayed; and his prayer was of singular intensity. It might be only the elements of textual criticism with which he was dealing; but still it was all steeped in the atmosphere of awe, and devotion, and mystery, and consecration. He taught us as one who ministered at an altar; and the

details of the Sacred Text were to him as the ritual of some Sacramental Action."

To the end of his life his character showed in his face; to the end he was scholar and saint, a Christian living to the full the Christian life.

The thick, brown volume called *Index and Epitome* (Smith Elder), a book that should be added to every library, is a bovrilised presentation of that great literary undertaking, the *Dictionary of National Biography*. Every name about which substantive information is given in the sixty-six volumes of the Dictionary is here, the entries consisting of about one-fourteenth of the number of words which appear in the text of the original memoir. It is a book of facts, handy and indispensable.

### Foreign Pens

M. Hanotaux's *Contemporary France* (Constable) is a book for publicists and men of affairs. It is well to have it in English, but the wise will read it in the original, as the translation is often clumsy, and looks as if it had been hurried. M. Hanotaux is a little inclined to rhetoric, but he is not without psychological insight. His is the philosophic mind; he saw and shared France's agony in 1870 and he looks forward to the gradual unfolding of her true destiny. This volume is the first of four in which the ex-French Minister of Foreign Affairs proposes to relate the history of France within his personal remembrance. It deals with the years 1870–1873, and is mainly a vindication of the policy of M. Thiers, who argued that the Republic must be adopted because "it is the form of Government which divides us the least." Thiers lives in these pages:

"One day a young *chargé d'affaires* is summoned to the Presidency to hear from the mouth of M. Thiers the instructions which he needs for a mission which he is to fulfil at Rome to Pius IX. The hour of audience is seven in the morning. After a moment's waiting the young diplomat is introduced; he expected a solemn interview; he finds the Head of the Executive coming from his matutinal visit to his stables, dressed in trousers with feet to them, a plaid, and wearing a round hat. M. Thiers remains standing, walks up and down, gets animated, excited, then quiets down, takes a seat, and at last dictates instructions full of wisdom, precision, and sagacity.

"Of all his whimsies, there was none which had a stronger hold upon him than his desire to get his universal competence recognised by everybody. He said of an applicant who asked for the post of Director at the Sèvres manufactory:

"'He is no more made for that post than I am for——' and then he stopped.

"'Ah, ah! Monsieur Thiers,' said his interlocutor, 'you find it very hard to say what you could not do.'

"'That's the truth, that's the truth,' said he gaily.

"And the author of this story recalls another anecdote on the same subject. M. Thiers was saying one day, in speaking of a man raised to a high function:

"'He is no more suited for that office than I am to be a druggist; and yet,' he added, catching himself up, 'I do know chemistry.'"

Some of the best passages are descriptive of the dreadful hours of suspense in 1870 when the invasion was "creeping on like an oil-stain."

By the very nature of their subject, books describing attempts to reach the Poles are apt to be monotonous, but *On the Polar Star in the Arctic Sea*, by Luigi Amedeo, of Savoy, Duke of the Abruzzi (Hutchinson), has this distinction: the sledge expedition led by Captain Cagni got nearer to the Pole than any previous expedition. The Duke could not participate in the sledge forlorn hope as he had lost the tops of two of his fingers from frostbite, and was disabled by their amputation from joining his intrepid companions. What a picture of suffering is contained in that bald statement! A snow-storm, a minor incident, such as the Duke describes, would have satisfied the Polar adventure desires of most people.

"It raged without ceasing for eight days. Our hut was not as yet covered with snow, and so had to stand the full force of the wind, which penetrated into the space between the first and second huts through the holes made at the seams in the canvas, and shook the entire framework, making a noise like that made by the sails of a frigate of former days. We could hardly hear each other speak, and, considering that this entertainment lasted without interruption for eight days, it is easy to imagine how we rejoiced when we saw by the rising of the barometer that the end of the tempest was approaching."

The crew of the *Polar Star* consisted of Norwegians, Italians, and four Alpine guides from the Val d'Aosta.

A book about Turkey by a Turk has the attraction of novelty. Halil Hamid, the author of *The Diary of a Turk* (Black), has lived for several years in England. He has no love for Abdul Hamid. It is an honest book, giving information at first hand, and written with a *naïveté* that commends it to the general reader. Halil Hamid describes it as a "small and light book," which it is.

## Fiction

The novels of the month have been voluminous and various. Chief among them I should place Mr. Conrad's *Typhoon* (Heinemann). It contains four stories told in that leisurely, winding way that Mr. Conrad has adopted. The stories are psychological studies, crowded with vivid dramatic moments in the lives of men of action who face and battle with the forces of nature. "Typhoon" describes a terrible storm at sea and its effect on a couple of hundred Chinese coolies battened down below. Here is a picture:

"The hatches had been taken off already, and they were all on deck after a night and a day down below. It made you feel queer to see so many gaunt, wild faces together. The beggars stared about at the sky, at the sea, at the ship, as though they had expected the whole thing to have been blown to pieces. And no wonder! They had had a doing that would have shaken the soul out of a white man. But then they say a Chinaman has no soul. He has, though, something about him that is deuced tough. There was a fellow (amongst others of the badly hurt) who had had his eye all but knocked out. It stood out of his head the size of half a hen's egg. This would have laid out a white man on his back for a month: and yet there was that chap elbowing here and there in the crowd, and talking to the others as if nothing had been the matter. They made a great hubbub amongst themselves, and whenever the old man showed his bald head on the foreside of the bridge, they would all leave off jawing and look at him from below."

Another of the stories, "Falk," eddies and circles around this startling statement. "Imagine to yourselves," he said, "that I have eaten a man." The four tales need careful reading; it is an intellectual pleasure to follow the windings of Mr. Conrad's mind.

Mr. Quiller-Couch has the gift of true romance. No other living writer can hit off a minor character with such bright, realistic touches, but I doubt if "Q" will ever make a writer of long novels. As a series of episodes the *Adventures of Harry Revel* (Cassell) is delightful, but a story should march, this rambles. The hero is a boy who begins life as a sweep in the early days of the nineteenth century, and ends as a soldier in the Peninsular War.

Mr. Percy White does not trouble himself with problems. Modern society, its foibles and follies, described with a touch of cynicism and touches of humour, is his province. His latest experiment, *Park Lane* (Constable), is a story of a feud between a lord and a financier, narrated by an elderly bachelor, the victim of a love-affair which does not seriously disturb him. Mr. White's manner is as quiet and unemotional as the modern style of acting. Belonging to the same school but livelier and more epigrammatic is Mr. Frank Richardson's *Semi-Society* (Chatto). The opening sentence typifies the manner of the story: "Sir Archibald Horton was walking slowly along Bond Street with his *mésalliance*."

E. Œ. Somerville and Martin Ross, the authors of *All on the Irish Shore* (Longmans) belong to no school. Their witty and vivid stories of Irish life stand alone. The present volume contains eleven sketches packed with racial humour, and delightful character studies. One of the sketches, "An Irish Problem," goes to the heart of the Irish nature—"in Ireland two and two are just as likely to make five, or three, and are still more likely to make nothing at all." The picture of the defendant Sweeny lingers in the memory, "a tall elderly man, with a long, composed, shaven face, and an all-observant grey eye: Irish in type, Irish in expression, intensely Irish in the self-possession in which he stood, playing to perfection the part of calm rectitude and unassailable integrity." Touched with poetry, and the melancholy of retrospection, are the stories in Mr. George Moore's *The Untilled Field* (Unwin). He is intensely sympathetic to the Irish, but he is not of them like the authors of *All on the Irish Shore*. Ireland chills and saddens him. He sees always the finger of America beckoning to the country, and his attitude is that of one of his characters who says, "Ireland has always struck me as a place that God has intended to do something with; but He changed His mind, and that change of mind happened about a thousand years ago. Since then the Gael has been wasting." *The Hebrew*, by Mr. John A. Steuart (Hodder & Stoughton), is a capable novel dealing with slum life, and the methods of Mr. Israel Herstein, who prospered by squeezing the last penny from his wretched tenants. It is a story with a purpose, pathetic at times, and relieved by some clever character-drawing. *Pigs in Clover* by Frank Danby (Heinemann) is a topical, lively, loosely constructed story dealing with the situation in South Africa, and the various forces and personalities—Jews and Gentiles—that are moulding the new colony. The author shows plenty of ability and little reticence.

## Poetry

The poetry of prose-writers has always a peculiar interest, and often it is so good, as in

the case of Mr. Meredith and Mr. Hardy, that one wonders how they decided which field to cultivate. In the prose of many novelists not in the first flight, there is much of the poet—Mr. Quiller-Couch for example; it is also present in Mr. Zangwill's more serious work. In *Blind Children* (Heinemann) we are given a selection of the verse Mr. Zangwill has written. It has thought, humour, irony, and pride in his race:

"O witching night when Earth was near to Heaven,
O blessedness to be a little Jew!
Where lay the magic in not eating leaven?
And how was Noah aped on raisin-brew?"

He is a dreamer who has thrown off the yoke of authority, to catch glimmers of a faith drawn from his own emotions and experience.

"Though Hell and Heaven were a dream forgot,
And unregarded sacrifice our lot,
We serve God better, deeming He is not.

"Perchance, O ye that toil on though forlorn,
By your soul's travail, your own noble scorn,
The very God ye crave is being born."

It is a volume of varying moods, and when Mr. Zangwill is most himself he is very near to Heine. The sweep of Miss Alma Tadema's muse is wide, the scheme of her book *Songs of Womanhood* (Richards) embracing childhood, girlhood and womanhood. She is sincere, and behind her verses is a real lyrical impulse. Her poems of childhood and girlhood are the most distinctive; those dealing with more complex themes have the note of modernity which runs through so much present-day verse.

Mr. Bliss Carman is a poet of joy in the world, of a Pantheism which reconciles Paganism and Christianity and proclaims the spiritual realities that lie behind the wonder and the beauty of nature. *The Pipes of Pan* (Murray) contains several poems in this manner, prefaced by his creed of six stanzas.

"I who am dust and air
Blown through the halls of death
Like a pale ghost of prayer—
I am thy breath . . .

"I shall put off this girth—
Go glad and free,
Earth to my mother earth,
Spirit to thee."

Finally for those who are not able to read the Odyssey in the original, there is a translation of the first eight books by Mr. J. W. Mackail (Murray), done in the form of the FitzGerald Omar quatrain, thus:

"And the sun left the lovely lake and clomb
Upward across the sky's brass-paven dome,
To light the deathless gods, and mortal men
That have the acres of the corn for home."

## Serious Reading

*Studies in Theology* (Dent), an eloquent and scholarly work, every page imbued with things of the spirit, is a statement of the present ethical position of Unitarianism by two thinkers who, since the death of Dr. Martineau, are the foremost exponents of modern Unitarianism. Professor J. Estlin Carpenter contributes seven essays, Mr. P. H. Wicksteed six. All have appeared before, either as separate publications or in periodicals or collections, and there is not one essay, from Mr. Wicksteed's *The Religion of Time and the Religion of Eternity*, to Professor Carpenter's *The Place of Immortality in Religious Belief*, but is optimistic and fervently hopeful of the higher destiny of man. Says Professor Carpenter:

"Our transits through successive spheres of being are but the stages on a path that may sometimes, like the planetary motions, appear retrograde, yet only because it circles higher and higher towards a central holiness and love. In this continuous ascension some fly with sorrowing wing, some plod with slow and halting step. The moral conditions of the life immediately after death cannot be altogether unlike the present, if there be any truth in that maxim of Indian wisdom which affirms that 'a man is born into the world which he has made.' In any life of spiritual progress there must be inequalities of capacity and achievement, and consequent ministries of helpfulness; and it may well be our cherished trust that those who have been for us guides, teachers, revealers here—parent, or wife, or child, or friend—will fulfil the same divine function for us otherwhere."

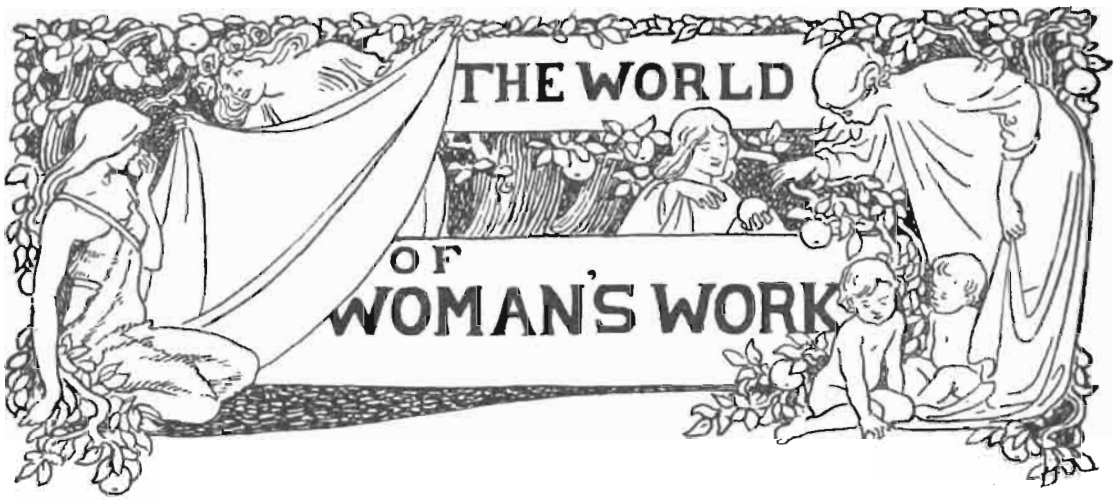
This high and consolatory extract may fittingly close our record of the important books of the month.

## Miscellaneous

A work of great usefulness to the legal profession is the annual volume of the *Statutes of Public Utility*, by Mr. J. M. Lely (Sweet and Maxwell, and Stevens and Sons). In the latest volume Mr. Lely has selected and arranged in alphabetical order, with notes, incorporated enactments, and selected statutory rules, twenty-one out of the forty-two public general statutes

passed last year. The appearance of *The Railway Year Book for* 1903 (office of the *Railway Magazine*), full of information, and so competently edited by Mr. G. A. Sekon, gives us the opportunity of welcoming the valuable series of railway maps which it contains.

*Players of the Day* (Newnes) contains forty-eight heliochrome portraits of celebrated actors and actresses, each accompanied by a record of success on the stage. It is a charming half-guinea present for any devoted playgoer. *The Handy Shilling Atlas* (Newnes) is as convenient as this firm knows how to make such pithy little books.




## THE CHOICE OF A DAUGHTER'S PROFESSION

THE choice of a profession for a daughter is too much a matter of chance. In choosing a profession for a son, the parents consider carefully the *pros* and *cons* of the matter; they weigh the question of the ease of its acquirement with the probable results for the future, taking into account such matters as social standing, health, probable length of professional life, and so forth. These prudent considerations are not so often taken into account in the matter of the future of the girls, however, and this is often an error of very grave consequence.

The first question to be taken into account should be, "Is the proposed occupation healthy?" The second, "Is it an occupation at which a girl, if competent, may reasonably hope to make a living—a living in the present and a living for old age?" The third question is, "Does it mean a life which is interesting, and which will enable a girl to develop her faculties to the fullest extent of which she is capable?" There is a further question which parents should very properly take into consideration also, and that is whether the occupation is likely to condemn a girl to celibacy, or whether she is likely in the course of her work, to meet young men among whom may be one suitable for a husband, should a mutual attachment arise.

I will take the last question first, as it is the one most easily disposed of. Girls away from home, working among other women solely, have no chance of marrying, unless through outside friends in the place of their employment, or unless they have long holiday periods which also include opportunities for making friendships which may ripen into matrimonial engagements. Thus, governesses in private schools, and governesses in girls' and women's colleges rarely marry, and governesses in private families are in the same position in many instances, especially when they are employed by people who, for want of a better term, are called "society people." Domestic servants, in places where only women servants are employed, and where they are far from their own homes and are living in the country, do not easily marry either. Still, making acquaintances is more easily done in that rank of life than in the higher ranks, and so they can often create a social circle for themselves. On the other hand, it is well known that marriages between post-office employees are frequent,

and school teachers often marry school teachers; doctors not infrequently marry doctors, and doctors of the male sex often marry nurses. I should think it probable that shop-assistants marry shop-assistants, while I know that sometimes, at any rate, typists marry clerks in the offices where they are engaged. Fundamentally, all marriages are a question of propinquity and opportunity, so it is only to be expected that girls who have no opportunities of meeting the opposite sex should not marry, however pretty, agreeable, and good they may be. If you live in a small country town or a health resort, where there are no manufactures, and send your daughter to teach in a private school for girls, you probably condemn her to celibacy. This, I think, is a question that parents should take into consideration in deciding upon a profession for a daughter. There are many women who have no vocation for marriage, women who in Catholic countries go by preference into a convent, but then again there are others who are not so constituted and to whom a life with no possible chance of marriage means a disappointed life. Parents should not ignore the question of their daughter's marriage, but on the other hand, they should not in any way count upon it. It is wisest for the parent to take no risks and to fit his daughter to earn her living present and future, without reference to marriage.

I will now return to my first proposition. It is, first, absolutely necessary for success in any chosen walk of life that a girl should be healthy, and, having good health, she should not risk losing it if that can possibly be avoided. If health be risked, it should be only for adequate pay, calculated on the basis of a short working life. This is a truth which men have realised, but which women have not realised fully as yet. You can get any number of women willing to go and nurse fever, for instance, for rather less than what they could earn as children's nurses. Now the children's nurse has one of the healthiest possible occupations, while the hospital nurse's working life, whether in a hospital for general cases, or in a fever hospital, is not more than twenty to twenty-five years. Further, a hospital nurse has heavier wear and tear of clothes, and more expenses in every way, yet notwithstanding all these drawbacks, even a staff nurse in a hospital is not able to provide for her old age. £30 to £40 is the average pay for such a post. By dint of strict economy and having friends to visit during holidays, she *might* be able to save £5 out of the £30 she gets for the first period of her staffship, and, possibly, £15 out of the £40. But suppose she can do this, and has no family claims upon her, and suppose she can work all the twenty years, which is the usual highest limit after reaching staffship, it means a very slender provision indeed, at the best. Considering that sick-nursing is an occupation, dangerous, and limited in the time a woman can follow it, it should be remunerated at at least double its present rates, to entitle it to be called an advantageous occupation for women.

Teaching is another short-lived occupation, on the whole, but especially so in private families. Periodically, of course, the children, grown up, no longer require a governess, and she has to seek another sphere for her energies. By the time she is forty or so she finds it increasingly difficult to get a new place when she wants one, because people prefer a governess "with the newest methods," whatever that may mean. A children's nurse is more valued the longer experience she has, on the contrary. Now the prizes are few, and the places many where the governess gets no more than enough salary to pay her expenses, which are heavy, and consequently for the most part private teaching is not an economically sound occupation, inasmuch as the governess, even under the best conditions, finds it very difficult to provide for old age out of her short working life. Teaching, moreover, is very trying, and music teaching especially so. A nervous, sensitive girl should not become a music teacher, if she take up teaching at all.

The next thing to be taken into account is what will be the cost of training the girl for her profession. This, of course, is entirely for the parent to decide. There is no calling open to women, which is worth while, from the money point of view, that is not more or less expensive in the training necessary, except that of domestic service, where, on the contrary, the girl is self-supporting while she learns her trade. If the parent cannot afford a good, but expensive training, then he should not resort to a cheap training in the same line of work. Cheap training means usually inefficient training, and cheap training means cheap service, and cheap service is always cheap and poor in its final results. If you want to be a really self-respecting member of society, never allow yourself to be second or third rate. If you cannot afford the training necessary to make you first-rate in the line you desire to take up, then take another. Half-trained work is always non-self-supporting (with the one exception of domestic service) and no non-self-supporting work can be regarded as self-respecting work. It is vastly better to be a well-trained and good children's nurse than a second-rate governess, for instance. Far better

to be a first-class and artistic milliner than to be a fourth-rate artist.

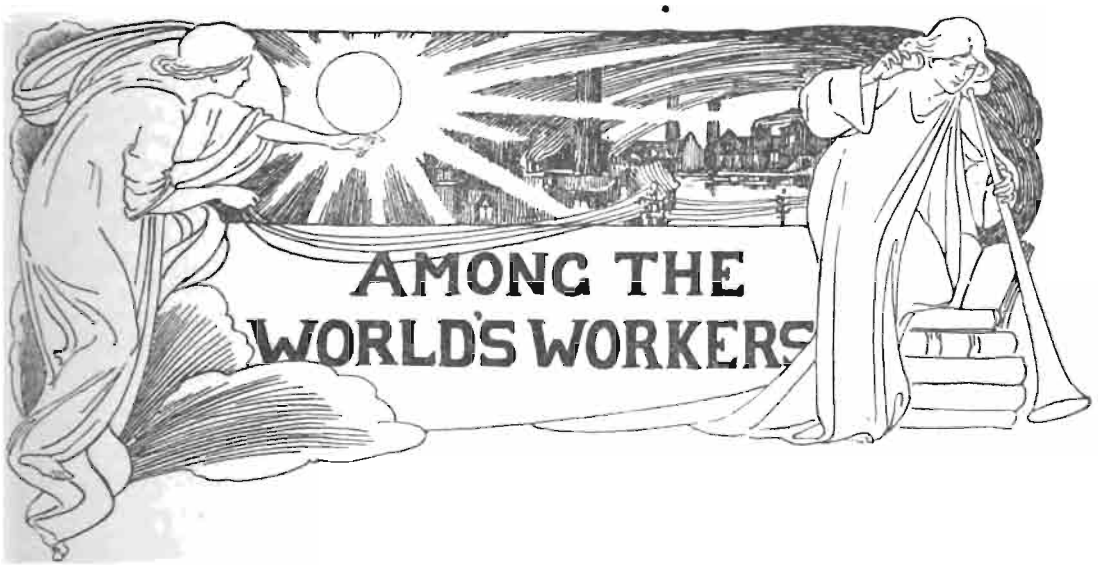
What invariably astonishes me is the way in which parents allow their daughters to go and work for half charity to a stranger, because they think the occupation is more genteel than one which is less run after and consequently better paid. Daily governesses can be had for £1 a month, which means £10 per annum, but you can hardly get a scullery-maid for such a wage now, while the scullery-maid gets board and lodging over and above her wages. Now no one can possibly live on 5s. per week and be respectably dressed, yet I know that there are numbers of girls, third-rate typists, daily governesses, and others, who are not earning more. That is all very well for apprenticeship pay, but in a case that came under my own observation where a girl was doing skilled work, embroidery, for which the employer got good prices, skilled work at which she had been working as a competent hand for four years, she was earning no more than 7s. per week. I said to her father, "Has it ever occurred to you that that means merely doing charity to the employer?" "No," he said, "it has not." "But," said I, "what else can you call it? Your daughter cannot live on that and dress as he expects her to dress." "Oh no," says the father, "it only provides her with clothes and pocket money." "Then," said I, "you cannot deny that you are keeping your daughter in food and lodging for the benefit of that man, who takes a full day's work from her." He had to admit that that was really the state of the case, and the result was that the daughter changed her occupation for one where she could at least earn a maintenance. I consider that for parents to be willing to keep their daughters that they may spend their labour for the benefit of a stranger, is an economic sin, because every girl doing this makes it more difficult for the girls who have no fathers to provide them with food and lodging, to live honestly and maintain themselves. I cannot understand how it happens that there is so much benevolence to strangers on the part of parents, but it is to be found in all ranks of society.

Now in order that girls may have the fairest and fullest chance of making themselves thoroughly efficient in their work they should be trained early. Parents have no right to go on calmly keeping their daughters at home, doing nothing to qualify them for earning a living, when they know that they are not in a position to leave them funds which will support them at the father's death. A father is bound to do one of two things, either he should leave his daughters money enough to enable them to go on living in much the same way as when he was alive, or he must qualify them to earn their living by training them for this, while he is alive. To show how much this matter is still neglected, I have only to mention the miserable plight in which thousands of clergymen's daughters, and daughters of other professional people, have found themselves on the death of their fathers, when they are perhaps forty or even older, and utterly unable to take up any occupation which will provide them with a decent living. It is far too often found when the father dies, that there is not enough to enable his family to go on living at the rate of even £200 a year, though they had been living at the rate of £1000, and the daughters have to go to work at something then. I should say to such a father, "If by living at the rate of £1000 a year, Mr. Professional man, you can only leave £200 a year for your family to live on, then you have never had any right to live at the rate of a £1000 a year, but should never spend more than £500, and then your family will be able to go on living in similar comfort after your death. Then instead of every one commiserating the family, and saying hard things of you, you will have people saying of your family in admiring tones. 'They are very well left, he must have been a prudent man.' If you know what happens on the earth after your departure, which will be the more gratifying verdict to you? If, on the other hand, you have not been able to lay by much, in spite of all prudent economy, but have educated your daughters so that they are all independent, earning a comfortable living, then people will praise you for that, and say how wise you were." There are so many occupations open to women now that there is really no excuse for not finding one which is self-supporting.

Then again, a parent should consider, with regard to the life he is planning for his daughter, whether it is one which will be more or less mechanical, or one which will utilise all her abilities. Much of civil-service work, though fairly well-paid, is soul-deadening. That is not a happy life for an intelligent woman. Women feel the monotony of business life more than men do, and to avoid periodic nervous breakdown and similar unpleasant things it is well, if at all possible, to provide a woman with some work which may call out all her faculties and which will develop her abilities to their fullest extent. I admit at once that business life is not the most natural life for a woman, and therefore one should choose as far as possible that which will yield the greatest variety and will be the least

strain upon her nervous system. Girls should be encouraged to take the fullest possible interest in their work; they should be encouraged to read books relating to it, if such may be found, and to obtain all information regarding it, in the same way that boys would be encouraged. The more you can interest a girl in her work, the less strain that work will be upon her, and the more successful she will be. Girls are too apt to do their work mechanically, and to forget all about it the instant they have done the task set them. This makes the work more irksome, and themselves of less value to the employer.

I cannot too forcibly insist that girls should be taught to aim at being completely self-supporting if they work at all. The conditions of modern life are changing greatly, more and more girls are obliged to work, and it will be a great disaster for the community if the women working are not doing so in a manner economically sound. There are at present numberless working women not earning as much as will keep them properly alive; those who have parents to help them are of course saved from danger in the meantime, but those who have no parents or friends are in a position of grave danger, and they will inevitably become dependent on the community for a maintenance when they are old and no longer able to work, unless they die early from want of proper means to live a healthy life. The most important matter in the present position of women is that parents should realise that the obtaining of a living wage is very largely a matter under their control. If they would insist that their daughters should take up an occupation which is not overcrowded, which they can be thoroughly trained in, and then see that they ask a fair wage, they will succeed in getting it. I have always found that the lowest wages are not those offered by the employer, but those at which the employee has offered to work.




## LARGE ELECTRICAL INSTALLATIONS

BEFORE the Departmental Committee on electricity in mines, sitting recently at the Home Office, Mr. Cunynghame in the chair, Mr. Selby Bigge, a contractor and electrical engineer, made some notable statements in regard to the use of electric power in this country. He said that he had now under consideration a number of very large schemes for the centralising of groups of collieries and doing all the work of the colliery by electrical machinery. He found that whenever he wanted electrical machinery for work on a large scale he had to get it from America or Germany or Belgium, and we were at least four or five years behind those countries in the application of electrical machinery. In Germany they were using 700 volts in practical mining work, but in this country there was next to nothing being done in that way. If severe restrictions were put into force in this country incalculable harm would be done to enterprise on the part of the mine-owners and the electrical world generally, schemes which would be of immense value to the mine-owners and the public at large would be knocked

on the head, and England would be left still further behind other countries in electrical matters and enterprise.

When on the Continent, he was very much surprised to see the enormous machines in course of construction at Berlin and Frankfort for two large electric lighting companies in London, and for Manchester, Belfast, and other places in England. Even Glasgow had to go to America for electric machinery; and whenever it was a question of machines of very special design or large size they had invariably to go to America or the Continent. A great number of installations had been placed for underground work in the mines in Germany, and, owing to the good quality of material and the regulations made for safety, not a single life had been lost. In this country, when they had attempted to introduce electricity into the mines, they were continually reading of fatal accidents, but that was owing to the ignorance of the people who used the electricity; in fact, it was treated as a plaything, whereas on the Continent such precautions were taken, everything being enclosed in boxes, that unless a man wanted to commit suicide no accident could happen. The restrictions on enterprise by the Electric Lighting Acts, and the want of scientific training on the part of the managers, had kept us back, but we were now beginning to wake up to the situation.

## THE MIDDLEMAN IN NIGERIA

IN connection with a recent report to the Colonial Office upon trade in Southern Nigeria, Sir R. Moor, High Commissioner, makes some interesting comments upon that much discussed factor in West African trade, the middleman. He says that there are or rather were two classes of middleman in this Protectorate. One is the native who stopped the waterways or roads and insisted on all traffic, whether in trade, goods, or produce, being done through the people of his town. This class of middleman has been done away with in the opening up and freeing of the waterways and roads. The other class of middleman is a necessity in the conduct of commerce, being the carrier who takes the trade goods to the producer's markets and exchanges them for produce which he brings down to the European factories for shipment. The profit on this transaction represents merely the cost of carriage. The middleman carrier, now that the country is freely opened up, is not nearly equal to dealing with the large volume of produce which can be got out of the country. He cannot transport the trade goods to all areas from which produce is obtainable, and so cannot provide the necessary inducement to the natives to collect the produce in those places. In fact he really only deals with the fringe of the principal producing areas and does not in any sense fully exploit them. Recent changes in the social conditions of the natives, particularly with regard to slavery, render it certain that the capacity of these native carriers for their transport work is not likely to increase, at all events for some years to come, until a good native labour market is established, and there is a possibility of a direct falling off in this means of transport. Under these circumstances some other form of transport must be devised. A very large increase in the output of produce will result when the necessary inducements are offered in the localities where such produce exists, to encourage the natives to gather it and to provide them with a means of sending it to market. To do this there is room for the employment of considerably more capital if those engaged in trade will take steps to get into direct touch with the producers and provide their own transport from and to the ocean-going steamers in the various ports. There are excellent waterways in the Protectorate providing every facility for steam transport, and if the output of the volume of produce is to increase, the merchants will have to provide a system of transport on the larger and most suitable waterways, leaving the smaller ones unsuitable for steam transport to be dealt with by the existing native carriers. Such action on the part of the Europeans will not actually damage the native middleman carrier, but merely drive him farther afield to open up fresh produce markets. In providing a system of steam transport the European traders will of course have to make depôts on the larger waterways so that in effect the middleman carriers will not have any farther to travel and carry the trade goods and produce than they now have. The country requires transport to open it up beyond that which can be provided by the natives, and to provide this European capital is required, Nature having provided the necessary waterways.

## WHAT A PATENT DID FOR A MAN

MORE than ten years ago a man obtained a patent on a very simple improvement in the making of window pulleys by which they could be made more cheaply. He lacked the capital to manufacture it, and he tried to sell it. He went from one large manufacturer to another, and each thanked him and refused the patent at any price. One day he interested a man who, in the end, put nearly all the ready money he had into the project and bought the invention at a very low price. The man was not a manufacturer.

He made a contract with a large manufacturing concern to make the goods for him and to ship them by the barrel on order to the purchasers. He interested a number of commercial travellers who were able to sell the pulleys on commission. Then he rented a little office and began his business. The other day he sold the tools which made

the pulley for a sum only slightly less than the original amount he paid for the patent and tools together—the patent right has recently expired. In these few years he has made from his little office a considerable fortune from this simple invention at which many wise manufacturers shook their heads. It is only a single bit of evidence of the way in which pluck, energy, and common sense obtain results.

## A COMPANY FOR EXPERIMENTAL MANUFACTURE

A COMMERCIAL organisation formed to do nothing but experiment is a novelty, but it is one of the results of the chemical work done with the help of power from Niagara Falls. The Ampère Electro-Chemical Company, at Niagara, has nothing to sell or to manufacture. Its business is to discover methods by which electro-chemistry can do present tasks more easily than they are being done, and to invent new processes of manufacture. Most of the important discoveries made with chemicals in the last few years have been happened upon in an electric furnace or bath, and well-equipped scientists working with this single end in view, should make rapid progress in reducing to practical terms the chemistry already known. The financial return to the company for its labour will come in royalties upon its discoveries and inventions.

## THE EXTENSION OF BOARD SCHOOL INFLUENCE

THERE is an idea worthy of notice, perhaps of imitation, in the policy which the municipal free schools of New York have adapted for the education of adults, chiefly by offering free lecture courses, many of which would do credit to the halls of universities, or the platforms of the old-time lyceum. Boston, Newark, and other American cities, are copying the example of New York ; and the plan is applicable to villages and to towns large or little. Everywhere the school building may become a new social centre for the people of its district, in summer and winter, by night as well as by day. A lantern with a sheet twenty feet square, and a hundred carbon pencils for electric illumination, can be had for £20. Slides ready made, or made to order, may be had at moderate prices in all cities. A school equipped with a lantern and rightly chosen pictures can give a new meaning to many subjects ; it can continue beyond girlhood and boyhood the instruction of the people, and, not less important, their worthy entertainment as well. Everywhere there are men and women able and willing to carry out programmes that can add a new interest and joy to the community's life. The staff of the nearest academy or college may be enlisted, then lawyers and journalists, clergymen and physicians of the neighbourhood, and anybody else who deserves to be heard. An inventor may tell how he came to perfect an ingenious machine. An amateur astronomer may show how much of the heavens declare themselves to a common opera-glass. An old resident may recall distant days of hardship, and their contrasts with the age of the wireless telegraph and the steam turbine. Those who travel may take their neighbours with them after they come home. Men and women worth knowing would be better known than they are, and would contribute more to the community's information and pleasure. Their experience, talent, culture, would pass into the common treasury for a currency that would enrich others and themselves. And there would be measureless relief from the vacuity and dulness which oppress millions of people, especially in lonely villages in the dreary nights of winter.

## FARTHEST NORTH IN A MOTOR

MR. CHARLES J. GLIDDEN, a wealthy American gentleman, who attracted some attention by a successful tour of over 5000 miles on the Continent last summer, has now planned a motor trip across the Arctic circle. This is to be purely a vacation journey, and in no way an effort at Arctic exploration. His tour last summer, as a result of careful preparation in the way of maps and advance booking of accommodations, was, as he has said, a keenly delightful experience, but wholly devoid of a single thrilling adventure. It was "disgustingly successful," as he hopes his northern trip will be.

The 16-horse-power Napier car, in which this trip was made, will be replaced by a new and larger car specially built with seats for four tourists and a chauffeur, and room for a steamer-trunk. Perfecting the plans for this tour has been a more difficult task than to prepare the route across the Continent, but Mr. Glidden marshalled his system, refilled his pigeon-holes, and took success for granted. Sweden, Denmark, and Norway have not been explored and chronicled by motorists, and for the far northern regions no road maps were to be obtained. Mr. Glidden opened an extensive correspondence with consuls, government departments, foreign tourist clubs, and other sources, and the information rapidly accumulated, to be sifted and compiled for service. Highways, hotels, towns, and the most attractive scenic routes are already so well dovetailed in the scheme of travel that Mr. Glidden expects to make easy and comfortable progress up into the land of the Midnight Sun.

"I have been able to make sure of good roads only as far north as sixty-four degrees of latitude," said Mr. Glidden, "but I shall, of course, push

on as far as motor travel is found possible, and I expect, with good fortune, to cross the Arctic circle. I shall leave this country in June, tour through England, witness the Gordon Bennett Cup race in Ireland, drive through that country and Scotland, and go by steamer to Christiania in Norway. The route north will then lead to Bergen, and from that city to Trondhjem, which is sixty-four degrees north. Beyond that point there is a possible run of 125 miles to carry my car inside the Arctic circle. The Norwegian Government is opening new roads in that direction, and I can rest in the comfortable assurance that wherever my way is finally blocked my car will have made the longest continuous run in high latitudes that has been attempted. I will pass through Denmark on the return trip, then by steamer to Kiel, and through Holland, and Germany. When England is reached, the tour will have covered 4500 miles in forty-five days."

## A PASSENGER AIRSHIP

THE airship prize which has been offered by the St. Louis Exposition will surely bring together a marvellous collection of plans for future travellers. But in no case is the Stanley airship now building apt to be out-distanced in size or carrying capacity. It is said that a model which has been built works satisfactorily, and the giant frame of the ship is well under way. According to a description in the *Scientific American*, the contrivance will have a total length of 228 ft., and will consist of a cylinder 116 ft. long, tapering at either end in a cone 56 ft. long. The diameter of the cylinder is likewise 56 ft. The entire machine will weigh 13,000 pounds, but the lifting capacity of the hydrogen gas with which it will be filled will be 21,000 pounds. Accommodations for thirty passengers with their luggage have been provided. Besides passengers, allowance has also been made for mail matter weighing 1000 pounds, and 1000 pounds of ballast. The inventor hopes to attain rather fabulous speeds. His best time he thinks will be 130 miles an hour; his worst he places at 70 miles an hour. These speeds are to be obtained with propellers 10 ft. in diameter, moving at the rate of 800 revolutions per minute. Besides rudders, side-planes are to be used for the purpose of keeping the ship in proper longitudinal trim.

The novel features of the airship, according to its inventor, are the manner of propulsion, control over elevation, ability to descend at will, and adjustable propeller-blades.

The airship is divided longitudinally into two parts by a partition running the full length of the ship 12 ft. above the keel. The lower of the two parts thus formed will contain the motive-power, machinery, passengers, and freight. The upper part is to be divided into six compartments to contain the hydrogen gas. Each compartment will be provided with an inner skin of silk to prevent leakage of the gas.

The propellers are placed at the apex of each cone. A rudder beneath each cone will guide the ship horizontally; while a series of side-planes or side-rudders will control the vertical movement. Top propellers are provided for the purpose of controlling the ship in rising and for the purpose of forcing it down when a landing is to be made.

## CHEERFUL PROSPECTS IN MANITOBA

MRS. RANSOM, of Bedford, who is paying an extended visit to her six sons on various farms in Canada, has been writing home some interesting letters; these have been published in the Bedford Women's Total Abstinence Union *Magazine*, of which she is the local president. In her last letter, written from Ontario in April, she says: "Manitoba is still a struggling province, only just emerging from the depression and burden of successively disastrous harvests and mortgaged farms; its children are uneducated, spite of educational facilities, the homes are rough and their surroundings uncared for, the people go in debt from harvest to harvest, the men of the prairie and town (happily the bush is exempt) drink and gamble to an alarming extent; yet one sees no real poverty, all are well warmed, fed, and clothed, and a cheery contentment reigns. With the breaking up of the country the winters moderate, people with capital are slowly but surely coming in, the too cheap land is going up in price, and that means more careful cultivation, more mixed farming, more money in hand, and less credit to be demanded of the longsuffering store-keeper. I think there is scarcely a doubt that Manitoba has entered upon its time of prosperity; may it be the best of its kind, and may it be long continued!"

## CIDER-MAKING IN NORMANDY

IN a recent report on Agriculture for the Consular District of Havre, Mr. Consul-General Hertslet calls attention to the marked shortage in the apple crop last year, and to the material advance in the prices of green fruit for cider-making. As cider remains the staple beverage of the farmers throughout Normandy and Brittany, as well as of the poorer classes in the towns, this is a matter of great concern to the whole population. Prices have been so high as to permit a large business in American chopped apples for cider-making. The Consul-General suggests that there would be an opening at Havre for Canadian chopped

apples for cider-making, and for dried apples for cooking purposes, if it were possible to ship the fruit direct to France, and thus secure its entry at the minimum tariff, but there is at present no direct service of steamers between Canada and France.

During the past year wines of the lower qualities, naturally those that chiefly compete with cider, have doubled in value, so that there is less inducement for the poorer classes, who are the chief consumers of cider, to abandon the use of the latter article.

The average amount of cider produced in France during the years 1892 to 1901 was 388,168,000 gallons a year. The cider produced in 1902 only amounted to 202,731,000 gallons, or a little more than half the average production. Under the present fiscal regulations, farmers who grow apples or grapes are allowed to distil a certain quantity of fruit, and to convert into alcohol free of excise duties sufficient for the use of their families and their farm hands. This privilege, known as the "Privilège des Bouilleurs de Crû," has been much abused during past years, for, although the farmer is not allowed to sell any spirits, there is no doubt that large quantities do find their way into the market. It is estimated that the annual loss to the treasury, through this clandestine trade, amounts to nearly £4,000,000, and the French Government intends to introduce measures which will considerably curtail the existing privilege.

## THE ART OF CASTING BRONZES

THE duplication in bronze of the plaster figure which the sculptor has wrought is one of the most interesting of art processes. It is, in fact, something of an art itself, so delicately perfect must be the reproduction. The founder begins by laying the sculptor's plaster pattern face down, and burying it about half way in dirt enclosed in a shallow iron box or tray. On the back of the figure left exposed, the moulders lay a firm close coating of the reddish-brown earth—earth dug out of a certain red-brown hill near Paris.

As the process of fitting on the earthen armour proceeds, each piece becomes a thick block neatly joined to its neighbours and each having a wire skeleton or core run through it for greater strength, and a loop to lift it by. The front must be covered piece by piece like the back, but the parts are much more numerous and irregular. A single eye is often a matter of two or three tiny blocks neatly internotched. Two men will work on opposite sides to the same face, shaking their white powder bags over it that the earth may draw away from it freely, shaping the parts with slender spatulas, lifting the tiny pieces on sharp, two-pronged forks, spraying them with water.

The figure is completely blocked in. The first half of the iron box is laid upon the second, filled snugly with sand, and all is bound firmly together. Then the figure itself comes out, leaving a hollow in the centre. Now, if the bronze were poured into this hollow it would make a solid bronze figure, very heavy and very costly. So they fill the cavity with soft earth until it forms an earthen image instead of a bronze one. This they also lift out bodily, and with their sharp little tools cut off a layer from its entire surface about a quarter of an inch thick, so that when it is returned to the cavity, there remains this narrow space all round it to be filled by the molten bronze.

But if they were to "pour off" the figure immediately, the moisture in this earthen sepulchre would turn to steam when the metal struck it, and blow it back out of the mould in a spouting white-hot geyser, burning the men and wrecking the mould. To prevent this the mould must be dried. Into the great oven it goes and stays for many consecutive hours, kept hot day and night until it is almost as hard and dry as a brick.

Then this many-jointed sarcophagus, bound and clamped within its iron frame (which is technically spoken of as a "flask"), appears tilted up on one corner so that the metal will run from the entrance at the top down through the many little channels cut for it to the several parts of the statue. The men stand ready with sacks tied about their feet and legs to protect them from the splashing, overflowing metal. The livid crucibles are drawn forth, the metals are poured like many-tinted quicksilver into the great ladle—often a full ton at once—and mixed in the proportion of ninety parts copper, ten parts tin, and three of zinc, or thereabouts, according to the judgment of the taster. The crane swings round, slowly lifts the heavy mass over the opening in the mould, and the men take their positions at the ladle handles with skimming rods. The signal is given, the ladle tips slowly on its trunions, and, with a shower of fine sparks, the molten stream descends.

If in all the weeks of work any little thing has been forgotten, any precaution shirked, now is the moment when it will be found out. Once, at the pouring of a very large statue, the little foreman who had watched its progress carefully for more than a hundred days, when the mould was safely full, fell unconscious from his stand. It was the culmination of his long anxiety over this greatest piece he had ever cast that overcame him.

After the pouring, and the metal has hardened, the mould is broken open, the neat patiently fitted blocks, now crumbling and blackened, are shovelled aside in a confusion of their tangled wire skeletons, and water is thrown hissing upon the still hot metal to anneal it.

When finally the statue stands, swept clean of its earthen chrysalis, many days' work are yet

to be done on it. It is filed smooth and bright, it is gone over patiently with hammer and chisel to bring out sharply its fine details, which the earth mould may have obliterated, and if it has been cast in several pieces, the pieces are to be neatly riveted together. The finishing touch is the colouring. The real colour of statuary bronze is yellow, like that of brass. The rich brown tint of the statues we see is made by treating the metal with acids. In course of time, the weather would accomplish the same thing, but in a more streaked, irregular way. The even tinge of the acids is not only a more artistic coating, but a protection against corrosion as well.

Then all that remains is for the drays to carry it away, for the derricks to lift it to its high pedestal, for the veil to be drawn from it, and it becomes an established statue.

## PHYSICAL TRAINING

IN its recent interesting report upon the state of physical training in Scotland, the Royal Commission, appointed to look into the situation, recommends to the Education Department for Scotland the appointment of a committee, which shall include persons specially conversant with educational questions as well as others acquainted with the various systems of physical training (including some who have studied what is most suitable in the case of girls), and medical experts, who shall, under the auspices of the Education Department, prepare a model course containing exercises adapted to the requirements of the differently situated schools, and the different ages and conditions of health of the school children in Scotland.

The Commission defines what should be the groundwork of a national system, viz., (1) Physical training should be regarded as of equal importance with mental training; (2) During school life physical training is quite as important for girls as for boys; (3) Systematic physical training is necessary both for country and town children.

The daily walk to school is exercise, but not exercise which develops the body as a whole, or counteracts the liability to stoop, to be round-shouldered, or to be slovenly in gait. Moreover, all children during school life must spend many hours with little change of position, the effects of which can only be corrected by systematic physical exercise. It should aim at the healthy development of the body as well as of the mind, by the regular development of all the muscles, the quickening of intelligence and activity, and the formation of habits of prompt obedience, precision, smartness, and discipline. The exercises should not be for mere display or entertainment, but each should have its particular purpose and value to develop duly all parts of the body. A certain amount of physical exercise once a day or oftener is preferable to an even greater amount at longer or irregular intervals. Music should be introduced, but it should be clearly understood that, except in the infant classes, no music is to be used until the scholars have fully mastered the exercise without it. Waving the arms about in good time may look well enough, but without precision the real value of the exercise is lost. This is sure to be the result, unless each exercise be learned without music.

The Commissioners deprecate the use of rifles or carbines for boys under fourteen. Many boys can use the latter without ill effects, but the advantages of exercising boys with such weapons do not outweigh the risk of injury to some. Besides the use of the usual light dumb-bells and clubs, sufficiently good results can be obtained with light staves or dummy guns. Applied Gymnastics, *i.e.*, gymnastics with fixed apparatus, may be considered as outside the necessary curriculum of physical training in elementary schools, but they need not be excluded from schools where the teacher desires to introduce them, and where efficient supervision is assured. For older boys they form a good safety-valve for working off superfluous energy, and, if made popular, are attractive to many who might not otherwise be induced to take sufficient healthy exercise. Games are very useful, and certainly ought to be encouraged, but they cannot be played by all children, and usually the weaker go to the wall; in other words, those most in need of systematic development are excluded. It is unnecessary to enumerate the games that are suitable for boys, but it may be noted that, in addition to regular games, country runs, leaping, and dancing the Highland fling have been recommended; and for girls, skipping and hockey. For both boys and girls swimming is strongly advocated. The attention of parents and all who are responsible for the care of children is directed to evidence dealing with the following, viz.: (1) Clothing which fits too tightly is obviously detrimental to chest expansion; (2) Tobacco smoking before maturity is reached has a most prejudicial effect on physical development, and this evil and increasing practice cannot be too strongly denounced.

## TOURING TRADE INVESTIGATORS

BRITISH commercial magnates and even smaller men go now so often to the United States to investigate trade conditions there, that it is interesting to hear from a British Consul, who must meet with most of them, an opinion upon their conduct and its rewards. Mr. Consul Wyndham at Chicago in an important report just issued by the Foreign Office, says that during the last year a large number of persons from the

United Kingdom and the colonies have visited Chicago to investigate the systems of business, education, railroads, &c. The short visits deemed sufficient for Chicago, often only forty-eight hours, are not sufficient to see both sides of any of the questions which require attention.

Mr. Wyndham goes on to say that the reasons for the progress would appear to be the opportunity both in business and employment in a large young country, the encouragement given to and the merit rewarded of workmen, the intimate acquaintance with the work of subordinates on the part of the heads of firms, the keen enthusiasm shown by workmen in the interests of their employer, and absolute fearlessness on the part of the business man in venturing on experiments or improvements either in machinery or system that may be brought before him. When possible the higher places are filled from subordinate positions. Promotion is always by merit, and no one has a claim to a position through favouritism or duration of service unless he is recommended by the progressiveness he has displayed. In the large business houses of America there are one or two well-paid positions where a man, who has a financial right to a lucrative position and who has not the ability to fill an executive post, can be shelved and do no harm. No man can get on and hold even a subordinate position unless he shows an interest in the work and welfare of the house, and no man is retained who only tries to do enough to keep his place, but every man, even the high-priced manager, earns all he is paid.

The study of the American methods is being investigated most carefully for manufacturers of Continental Europe. France is sending young men to study here, and it is said that some countries are considering the plan of starting branches of their manufacturing businesses in the United States and sending a number of men from Europe to work in them with American workmen and machinery and under American superintendents, and when they have grasped the methods to place them in Europe in the works, and send another batch of men to America to learn.

## AMERICAN ADVERTISING METHODS

IN a recent report to the Foreign Office Mr. Consul Wyndham, writing from Chicago, describes the rise and widespread growth of a new commercial science. He says that the enormous amount of money now being expended in advertising in all branches of trade has created a new profession, and the study of advertising as a science is now being taught in advertising schools. The amount of money spent without any return has been and still is very great, but by a careful study of the art those styles of advertising which prove unremunerative may be dropped. A medium which proves most successful in one trade has no results in another. All large wholesale, manufacturing and retail houses, as well as railroads and other companies, have an advertising department, and men with a knowledge of and an aptitude for the business receive large salaries, some men drawing as much as £1500 a year. There are many openings for good men in this business, as new enterprises are continually being started which can only succeed by judicious advertising, and business men are rapidly learning that advertising must be done with understanding to draw attention, and changed frequently to keep it. Great care is taken to make advertisements concise, and in the advertising classes students are taught not only how to word the advertisements, but how to direct the artist in illustrating, to check the circulation of the papers advertised in, to lay out the money allowed and to watch the returns from each medium used, and the way in which advertising agencies carry out business entrusted to them. In some cases jingling verse has been used to great advantage. Some wholesale houses claimed to have doubled their business in two years through the employment of a clever advertising man. Newspapers have a man, not only to solicit advertisements, but also to assist in drawing them up, and to advise the advertiser.

THE WORLD'S WORK has since its first number made a speciality of well-phrased, well-displayed advertisements, and has made a feature, novel in England, of beautifully illustrated and carefully written industrial supplements. It has also always offered to have the advertisements of its patrons written and designed by its advertising specialist.

## ORE-FINDING BY ELECTRICITY

THE finding of water and ore beneath the ground has been an unfailing object with mankind since the earliest ages. It has been the subject of more fraud and superstition than anything else common to daily industrial life. That science is now gradually taking the place of witchcraft is only characteristic of the times. Recent experiments at Prestatyn in North Wales seem to confirm the claim that lodes of ore may be found by an electrical apparatus. According to a recent account in the *Scientific American*, the inventors, Mr. Leo Draft and Mr. Alfred Williams, claim to be able to detect the presence of certain mineral ores invisible to the eye, and during the course of the last few months to have located, traced, and mapped out metalliferous deposits of various natures which were quite invisible to the prospector and undiscoverable by mining engineering.

In many cases mine prospectors have made borings and opened up lodes solely on the strength of the inventors' predictions, and have discovered new and unsuspected sources of mineral ores, which are now being worked at a profit.

It is claimed that by the Draft-Williams method not only can deposits be located, but that the extent and depth of the lode can be determined with an accuracy that is quite impossible with any existing system of prospecting.

Prospecting is, of course, a very inexact science, and the mining world, it need hardly be stated, would welcome with open arms a system of ore-finding which could be depended upon and which would do something toward lessening the yearly loss entailed in making borings which prove unsuccessful, and in opening up lodes which turn out to be not sufficiently promising to encourage the mine proprietors to continue their working.

In 1899 the inventors commenced experimenting with electrical methods of ore-finding, and in 1899 Mr. Williams, in place of a galvanometer or potentiometer, used his body by passing quickly pulsated induced currents from a dry cell and a small coil in series with the earth. By this method the slightest increased intensity in the current flowing by virtue of the decreased resistance of the earth was instantly noticed. He, however, soon abandoned this method as useless, for reasons characteristic of all earth measurements.

Messrs. Draft and Williams made their first practical experiment with their present system in Seattle, Wash., and San Francisco, Cal. These met with success, and the next trials were made in the south-eastern Alaskan archipelago. Coming to England, they have achieved considerable success in prospecting for lead and zinc ores in Wales and for nemalite in Cumberland. The following is an instance of successful prospecting with this method.

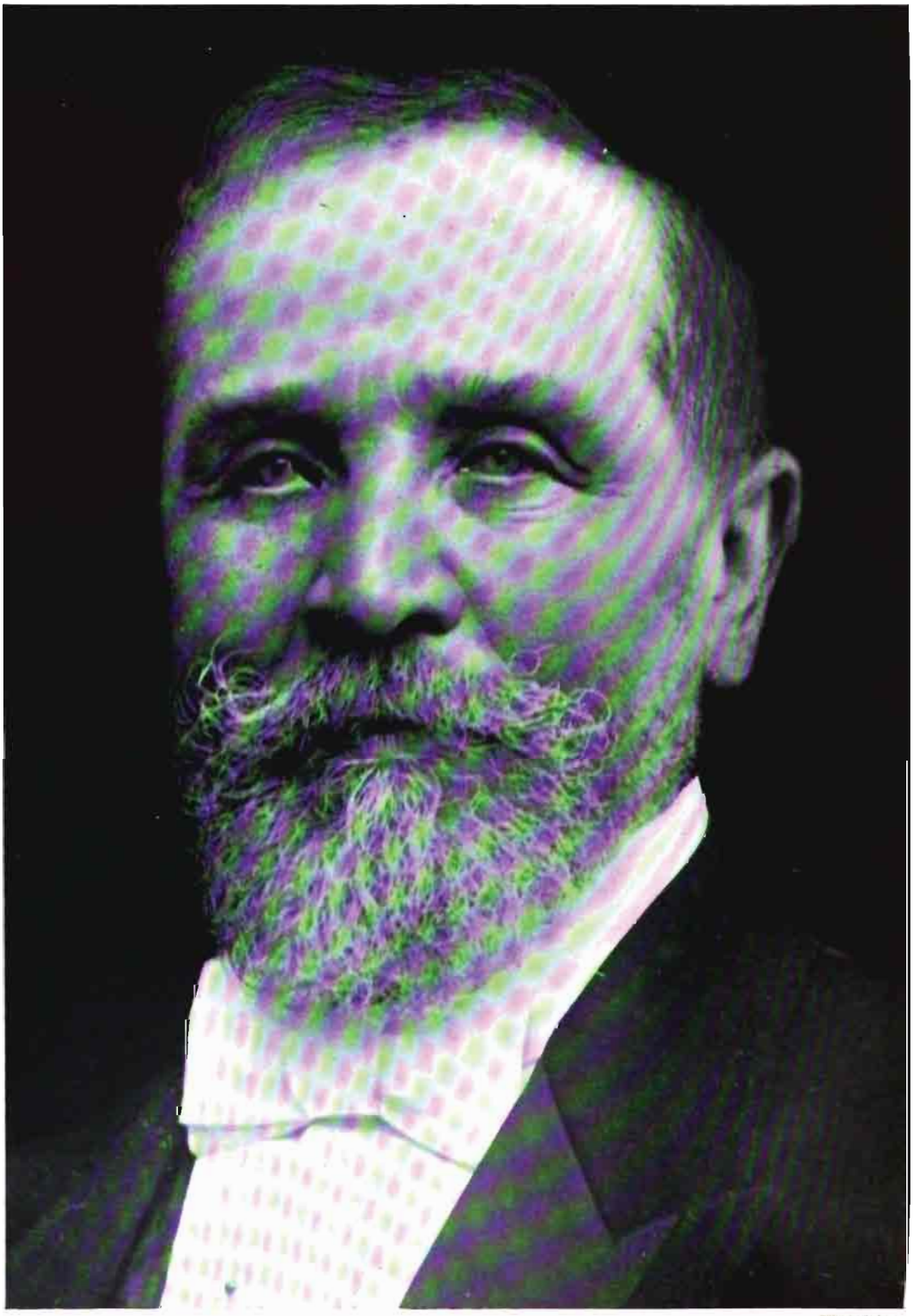
The lead and zinc mines at Cwmstwth, Devil's Bridge, Cardiganshire, Wales, owned by Mr. H. Gamman, have been worked for the past 1700 years, and a good-paying lode was found to cease suddenly in one direction. After costly and numerous attempts to discover this lode beyond this fault, the attempt was abandoned.

Mr. Williams being called in, placed the two electrodes at a considerable distance from the broken lode on unmined ground, and in such a position that a perpendicular through the centre of the line joining the two electrodes would coincide with the run of the lode as worked out. The current streams from the one electrode to the other would thus, under normal conditions of homogeneity, pass at right angles through the extension of the lode if it existed beyond the fault. Exploring with the resonators, Mr. Williams found on the hillside that the line of normal current flow was in several places rotated through a very considerable angle. After careful mapping out of the results obtained, the direction of the lode was finally predicted.

A tunnel was at once commenced by Mr. Gamman's instructions, with the result that a good lode of lead and blend was discovered after a drivage of less than three fathoms. Mr. Gamman told Mr. Williams that in proof of his belief in his *modus operandi*, he had ordered a third drivage to be started, to reach the rich ore detected by the instruments at a lower level.

## CEYLON PEARL-FISHERIES

THE constant rise in vogue and value of fine pearls had probably something to do with the large number of ladies in the audience at the Royal Institute where Professor Herdman recently lectured on Colonial Pearl-Fisheries. Then, too, it is known that great success is expected from the great fishing for pearls on the coast of Ceylon which began on February 22 last. The Government only permits this to be held at long intervals. Professor Herdman was himself requested last year by the Colonial Office to investigate the conditions of the fisheries generally, and a well-found steamer was placed at his disposal for this purpose. Alike under earliest native rule and the successive occupation of the island by the Portuguese, Dutch, and British, the pearl-fisheries have been regarded as of immense importance, their chief centre being in the Gulf of Manaar, north of Colombo, towards Adam's Bridge. Their prosperity has fluctuated extremely, and while there may have been three or four good years, there have been long intervals, even to thirty years, when the reverse has been the case Last March, before the monsoon, he was able to estimate that on the Perya Paar there were a hundred thousand million young oysters, which were all swept away in less than a month. Illustrated by beautiful slides, Professor Herdman first showed the young, free, swimming spat, its attachment to seaweed or other objects, its distribution when this decayed, and its settlement upon old shells. The mother-of-pearl of the pearl oyster is exquisitely glistening and iridescent, but has little commercial value. Townships spring up along the coast when a fishing is in progress, and at one of these as many as 26,000 natives will assemble. He had met a diver as old as eighty years, and found no signs that it is a pursuit generally injurious to those following it. The diver entered the water feet first with a stone of about 40lb. weight attached to one foot and his basket to the other. He remained under water from one to two minutes, this latter time being exceptional, and, if lucky, he might gather as many as a hundred oysters. Another series of slides showed the growth and position of the pearl, as well as the difference between those produced by the irritation of a foreign substance, and the true and natural pearl. This is due to a parasitic worm of the tabes order, and its development was traced through the balistes order of fish, which in turn are eaten by the shark.



Pierre Petit

M. EMILE LOUBET, PRESIDENT OF THE FRENCH REPUBLIC

The
# World's Work

AN ILLUSTRATED MAGAZINE OF
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## The March of Events

### THE GOVERNMENT AND THE COUNTRY

THE question put in this place last month, namely, where was the collective responsibility of the Cabinet, in the new fiscal proposals, has since been pressed upon the Prime Minister from all quarters. But the public knows the answer no more than it did a month ago. Mr. Balfour's speeches have been the most vague and empty ever made by a Prime Minister at a time of crisis. He gives lip-service to Mr. Chamberlain, and escapes always behind the plea of "inquiry" being necessary—a plea which the Colonial Secretary treats in Parliament with open sarcasm. But the facts all point the other way. The Government is hopelessly divided against itself. The Colonial Secretary is whipping up the country and the Colonies on behalf of Protection and Preferential Tariffs. The Chancellor of the Exchequer has declared himself against both. The Secretary for Scotland supports him. The Under Secretary of the Board of Trade is with Mr. Chamberlain; the Financial Secretary to the Treasury is with the Chancellor of the Exchequer. Outside the Government, the Unionist party is rent asunder. Sir Michael Hicks-Beach has stated that he resigned the Chancellorship of the Exchequer because the Cabinet would not heed his plea for economy, and has denounced Mr. Chamberlain's schemes—indeed, he called them "blowing off steam"! Lord Goschen, in a speech of immense power and influence, has ranged himself with the Free Traders. The rank and file of the party is equally split, the more intellectual of the younger members, like Lord Hugh Cecil and Mr. Winston Churchill, expressing the deepest dislike, and indeed fear, of Mr. Chamberlain's line. The Unionist Press is in the same case. The *Birmingham Daily Post*, the most influential newspaper in the Midlands, is against Mr. Chamberlain. The *Morning Post*, the best edited newspaper on the Conservative side, comments upon "the chaotic condition of the Cabinet," and describes the Prime Minister as "relying, as usual, upon his ingenuity to extemporise a weak explanation," and declares that—

> "Mr. Balfour's statements and explanations help no one, not even himself, for it is idle to talk, as he did last night, of the continuity of the policy of a Government which is divided. Mr. Balfour is sitting on a fence."

The *Spectator* is publishing a series of weighty free-trade articles, and addressing to the Prime Minister, whose strong admirer and supporter it has always been, appeals like this:

> "We confess that to ourselves it is not a little painful to see Mr. Balfour attempting to take the *via media* on this question. . . . Is it, we wonder, too late . . . to ask him even now to review his attitude and to remember that his business is to

lead, not to follow—to decide, not to halt and balance between two conflicting views?"

The simple truth is that the Cabinet is at sixes and sevens, that the Prime Minister, having, as he has said, "no settled convictions" on the subject, can exercise no authority, and that under these circumstances Mr. Chamberlain who knows neither doubt nor hesitation, is trying to sweep the Cabinet, the country, and the Colonies before him. It is an unprecedented situation, and demands that without delay the issue should be submitted to the country. A General Election is as imperative as it is inevitable. Already commercial circles are deeply perturbed; the City is seriously feeling the effect of the fiscal uncertainty; the Colonies are growing excited over an issue which they misunderstand, and hopes which in all human probability will not be realised; while the Colonial Secretary has begun once more to deliver inflammatory speeches upon foreign politics. There is not, it may safely be said, a serious politician in the country who is not alarmed when Mr. Chamberlain encroaches on the sphere of the Foreign Minister. It is impossible—it would be even dangerous—for the present situation to continue.

The excitement of the Parliamentary debates tends to obscure other political issues. The fate of the Irish Land Bill has followed precisely the lines discussed here last month. The Government have sternly adhered to the minimum rate of purchase in the Bill, and they only defeated the Irish amendment by forty-one votes—their normal majority being 128. If they remain firm, the Irish tenants will ultimately turn on their Parliamentary leaders for procuring them, after so many golden promises, a Bill of no use to a very large number of them, while the security of the British taxpayer for the £112,000,000 will be worthless. The fate of the Bill is uncertain, but whether it is dropped, or carried through in its present form, the temporary alliance of the Unionist and Nationalist parties will shortly be at an end, and a new era of Irish land-agitation will commence. The importance of these considerations is shown by the fact that if the Irish members had not supported the Government in giving representation to the Borough Councils in the scheme of London education, the Ministry would have been defeated by five votes.

A Cabinet hopelessly divided; a Unionist Government saved from defeat by Nationalist votes; a new issue of vital importance to the whole Empire suddenly raised by one powerful Minister; the uncertainty thus caused inflicting serious injuries upon every class—such a situation, as we say, demands an appeal to the country. To delay this, on the childish pretext of an "inquiry" which nobody believes to be seriously or sincerely meant, would be both cowardly and unconstitutional.

## PREFERENCE, PROTECTION, AND PENSIONS

No profitable discussion of the vast questions raised by Mr. Chamberlain is possible without the clearest distinction, never to be lost sight of for a moment, among the three different fiscal systems involved. Mr. Chamberlain himself, who, with all his ability, cannot be described as an exact thinker, skips from one to another of these in a manner wholly confusing to the man who has not the differences clearly in mind. At one moment in his first speech in the House of Commons he was talking about cementing the Empire by a tax upon imported foreign food, and immediately afterwards, by way of further argument, he was pointing to the necessity of fighting the American trusts. The first of these is, of course, a preferential system, the second is protection, and the two are entirely distinct in objects and methods. The encouragement of Canadian wheat-growing and the exclusion of American surplus production involve two totally distinct principles of national economics.

Let every one, therefore, who approaches this subject keep tight hold of the following elementary principles. Protection is the imposition of customs duties, if necessary prohibitive duties, upon imported articles of foreign production or manufacture, in order to protect the home producers or manufacturers of those articles. *Zollverein* is German for Customs Union, and means that within a certain group of communities or States free interchange prevails, while goods from outside that group are only admitted upon payment of customs duty. Preferential tariffs form the system under which the products of the various members of a group of communities or States are admitted into the territories of the other members on more favourable terms than the products of countries outside the group. Retaliation is a part of Protection.

One other complication has been most unwisely and improperly introduced into this discussion, namely, the connection of preferential trade and old-age pensions. In the first place, whatever may have been Mr. Chamberlain's intention, it was inevitable that this should be regarded as a bribe to

catch working-class votes. Nothing could be more deplorable, or more injurious to the purity of political controversy, than that one class of the community should be offered a direct personal profit in return for their support of a particular statesman or party. This view is strongly felt, and privately expressed with much feeling, by many even of Mr. Chamberlain's supporters. Moreover, the connection is as illogical as it is deplorable. Under Mr. Chamberlain's scheme, colonial wheat-growing is to be encouraged by taxing foreign wheat, and the product of this tax is to pay old-age pensions. But the more the tax succeeds in its object—the more colonial wheat displaces foreign wheat—the less will be the sum available for pensions. If the preference scheme succeeded altogether, there would be no money for pensions at all!

The whole vast issue must now be thoroughly threshed out. This month we deal at length (on page 157) with the question of Preferential Trade and the Empire. We do not think any impartial reader can consider the facts and figures we give, without becoming convinced that the truth is stated in the following remarkable collection of opinions, all expressed since Mr. Chamberlain raised this issue:

MR. RITCHIE (Chancellor of the Exchequer): "I cannot be a party to a policy which, in my opinion, would be detrimental both to the country and to the Colonies."

LORD GOSCHEN (Chancellor of the Exchequer, 1887–1892): "Forward this Empire must go, not as a dying Empire, but as a living Empire in the world, and our statesmen must endeavour to realise the fair dream of a cemented Empire without the nightmare of tampering with the people's food."

SIR MICHAEL HICKS-BEACH (Chancellor of the Exchequer, 1895–1902): "I am opposed to the policy, to the principles of the policy, of my Right Hon. friend the Colonial Secretary. I believe they will be deeply injurious to this country, and do more to disunite than to unite the Empire."

LORD SPENCER: "It is almost beyond the pale of argument to propose to tax the food of a country like the British Isles which, under no conceivable circumstances, can feed its population from the produce of its own soil, and which must always be dependent for the bulk of its food in peace and war on the produce of other countries."

SIR HENRY CAMPBELL-BANNERMAN: "It is the very food and life of the mass of the people of this country that we are to give for some problematical advantage at the other end of the world. I do not think the people of this country are likely to join in that mad scheme."

LORD ROSEBERY: "I have come deliberately to the conclusion that, so far as I understand these proposals, I can conceive nothing so detrimental to the Empire, nothing so detrimental to the union of the Empire, nothing so detrimental to the prosperity of the Empire as these proposals are in their nature and in the manner in which they have been raised."

MR. ASQUITH: "I say this is a change which is not desired by the great majority of the people of the Empire. I say that its benefits to the Colonies or any of them are in the highest degree problematical and uncertain. I say further that it involves as a logical necessity the imposition of taxes upon the great bulk of the food and raw material which we import from abroad, and which form the subsistence of our people and the foundation of our national prosperity. I say again that it would still further handicap us in our already severe competition with our commercial rivals in the markets of the world. I say, lastly, that from the largest and widest point of view of Imperial policy it would tend to brew ill-feeling at home against our fellow subjects in the Colonies, to foment jealousies and misunderstandings between the Colonies themselves, and to lead to a new and more embittered war of tariffs all round the world."

SIR EDWARD GREY: "In my opinion the practical consequences of applying Mr. Chamberlain's policy would be the ruin of the prosperity of Great Britain, and eventually the break-up of the British Empire."

Finally, the Co-operative Congress and the Trade Unionist leaders have declared themselves absolutely opposed, in the interests of those they represent, to Mr. Chamberlain's proposals.

We venture to say that not much more will be heard of preferential tariffs alone. Protection is a "slippery slope," and once started on it, there is no stopping. Day by day Mr. Chamberlain and his followers will become more and more protectionist, till preferential trade with the Colonies will be wholly swallowed up in the greater issue. THE WORLD'S WORK next month will, therefore, be a complete guide to the study of Protection, in theory and practice, at home and abroad.

## A SPECIMEN OF BALKAN CIVILISATION

STUDENTS of Balkan politics have always known that the word "civilisation" as applied to the condition of Servia was but a figure of speech. The series of deliberate and savage murders by which the Obrenovitch family and its chief political supporters have been wiped out, has brought this truth home to the most fervent admirer of "little nationalities." Even yet the exact

facts are not known, and perhaps never will be, but enough is certain to place the slaughter at Belgrad high in the list of the crimes of history. At about one o'clock in the morning of June 12, a large body of military conspirators marched several companies of troops to what is known as the palace, but is really an old stucco building of commonplace appearance, placed troops at each of the gates, were admitted by traitors on guard, were opposed only by General Petrovitch (who represented Servia at the King's coronation in London), blew open with dynamite an iron door leading to the King's private apartments, savagely slaughtered King Alexander and Queen Draga in each other's arms, and flung their bodies out of the window into the courtyard below. At about the same time the principal Ministers of State were murdered in their own houses, and Queen Draga's two brothers were summoned to the barracks, ordered to take a farewell of each other, and shot. In all some fifty-four persons perished. The King and Queen were buried secretly at midnight. Belgrad put on a "festive aspect," and the new ministry, the tools of course of the military conspirators, promptly and confidently appealed for the sympathy of Europe.

King Alexander was not a man to evoke admiration. He was a little, very short-sighted, intellectually eccentric and morally obtuse man, whose only marked quality was the obstinacy so often associated with weakness of character. In his youth he was tossed hither and thither between the passions and quarrels of his parents, and he came to the throne, when his father abdicated in abject fear of assassination, without a single quality to fit him for so trying a position. Nor had he manners to make up for his lack of intellect and morals. He failed egregiously to secure a wife among the reigning families of Europe. A royal princess for whose hand he once went wooing, said to the present writer, "You would have laughed to see him kiss mama's hand with his hat on." He fell an easy victim, therefore, to the great physical charms of his mother's attendant, Madame Draga Maschin, the widow of a civil engineer. Her personal ambition, her complete control of the King and through him of the army and the government, had been rousing Servia to such a pitch that observers have wondered an outbreak was so long delayed. The last straw came with the King's intention to proclaim one of her brothers as his successor to the throne. Clan feeling runs high in Servia, and the rival dynasties of Obrenovitch and Karageorgevitch have alternated on the throne, the changes being usually accomplished by assassination. That they should both be thrown aside for a plebeian outsider was more than Servian nature could tolerate. Hence the outbreak, and this is all that can possibly be said in its defence.

That the Servians should glory in their crime is but natural. They have done so, however, with an effrontery which takes the breath away. The officer who blew open the King's chamber door with dynamite, and was himself killed by the explosion, is officially described as "dying upon the field of honour." The only officer who gave his life for his sovereign was buried like a criminal, and the Christianity which makes so fervent an appeal for our sympathies in the Balkans is shown in a lurid light by the action of the Metropolitan of Servia, the highest ecclesiastical authority. He had baptized King Alexander, anointed him King, and solemnised his marriage. Now while the damp pool of blood in the King's chamber is being proudly exhibited to the reporters, this peculiar head of the Servian Church conducts a Mass of rejoicing, and bestows his blessing upon the revolution and the men who have only just washed that blood from their hands. It is satisfactory that the British Government has instructed its Minister to leave Belgrad, but there is still room for astonishment that the upholders of the principle of royal legitimacy should have acquiesced so tamely in the wiping out of an entire dynasty.

The one thing that the wise student of the Balkans avoids is prophecy. One may be tempted, however, on this occasion to foretell with some confidence that the reign of King Peter, of the famous family of Black George, and brother-in-law of the King of Italy, is unlikely to be a happy one. From its geographical situation Servia is under the thumb of Austria, yet King Peter will be politically under the thumb of Russia, as is sufficiently indicated by the high-flown greeting of Prince Nicholas of Montenegro, the closest representative of the Tsar in the Balkans. On the whole, therefore, the change does not make for peace, as it will prove to be a great increase of the influence of Russia, and therefore antagonistic to the military alliance of Austria-Hungary and Roumania, while placing fresh difficulties in the path of Germany, through her informal but constant support of Turkey.

## THE REPROACH OF RUSSIA

RECENT events in Russia will have been followed with satisfaction by her prejudiced critics, unhappily only too numerous, in this country. To all those who wish her well, who know the difficulties of her task, who are aware of the progress she is making in many directions, who have seen her wise administrators at work, and who hold that a good understanding with her should be one of the chief aims of British foreign policy, these events will have caused profound sorrow. There is no explanation of them at the same time truthful and creditable to Russia. And the more one is convinced, as the present writer certainly is, that the Tsar himself is a man of high motives, looking to objects which can only be criticised as ideals far in advance of the international possibilities of his time and people, the more difficult it is to understand how certain acts, which have offended the civilised world, can have been either committed or permitted.

Foremost among these acts is the anti-Jewish outbreak at Kishineff. This is a town of some 120,000 inhabitants, the capital of Bessarabia, on the main line of railway from Vienna to the Black Sea, close to the Roumanian frontier, a busy agricultural and commercial community. With the usual preparatory report of a ritual murder by Jews of a Christian child—the most cruel and unscrupulous lie ever invented for the persecution of an unhappy people—and with a preliminary scuffle on some local issue, the populace of Kishineff attacked *en masse* the Jewish quarter, and for nearly two days burnt, slaughtered, tortured, and outraged with indescribable ferocity and perfect impunity. The number of victims will never be known, but amounts probably to hundreds, and the tale of their sufferings is one of sickening horror. A long official explanation and defence has been issued by the Minister of the Interior, of so inconclusive a nature that the kindest thing one can do is to ignore it. The conscience of the world has been affronted alike by the massacre and by the attitude of the Russian authorities towards it, and an unbroken chorus of denunciation has arisen in the Press, shared in for the first time by the journals of France and of the United States. In fact, the punishment which Russia has received in the grief and indignation of all her friends is almost proportionate to the crime committed within her borders. A Jewish newspaper claims to know that the Tsar himself was heartbroken at the terrible event, and this will readily be believed by all who have any personal knowledge of his Majesty's character and views. So long, however, as he does not, or cannot, exert his authority to prevent and punish, it is inevitable that the opinion of the civilised world shall remain hostile to Russia.

A second event, full of significance, though, of course, of minor importance, is the expulsion of the *Times* correspondent. It should be explained at once that this correspondent was not Mr. George Dobson, who for many years ably represented the great journal at St. Petersburg, but Mr. D. D. Braham, formerly one of its Berlin staff. No charge whatever was made against him personally, but he was arrested practically like a criminal, ordered to leave Russia for ever within a few hours, failing which, he was to be conducted to the frontier as a common prisoner. For a time he was even prevented from communicating with his wife or the British Ambassador. When he got into communication with Sir Charles Scott, all the latter could do was to secure for him three days' grace in which to wind up his personal affairs. The British Ambassador informed Mr. Braham that the measure was directed not against him personally, but against the *Times*, which, the authorities alleged, had made repeated attacks upon the Russian Government and Russian policy.

Two comments are obvious. First, the procedure is a childish one and wholly unworthy of a great country. Moreover, it might have been foreseen that the conclusion would be drawn, rightly or wrongly, that Russia expels a correspondent because it is inconvenient to her to have her condition made known. It need not be said that the expulsion of Mr. Braham cannot have the slightest effect in preventing the *Times*, or any other newspaper, getting all the news it wants from Russia. The second comment is that the British Ambassador has shown in this matter a supineness incomprehensible in a diplomatist of his position. A similar but less flagrant act of expulsion was attempted against a British subject when Sir Robert Morier was our Ambassador in Russia, but he promptly declared that he "could not allow a British subject to be thrust out like a dog," and protested so energetically that the order was cancelled. But the action of the British Government has for some time past been so inconsiderate of Russian feelings that it may well have desired to avoid any further friction. The unjust humiliation of a single Englishman abroad is, however, not his own alone, but the humiliation of his Government and his country.

# THE MOTOR WORLD

BY

HENRY NORMAN, M.P.

## I.—MOTORISTS AND THE PUBLIC

AN OUTBREAK OF MOTORPHOBIA—RACING IN FRANCE HAS NOTHING TO DO WITH TOURING IN ENGLAND—EXCITED CORRESPONDENTS—MOTORS IN PARLIAMENT—WHAT WE CAN ALL AGREE UPON—THE "TIMES" ON LEGISLATION

THE first stage of the great race planned by the Automobile Club de France to take place from Paris to Madrid was marked by a number of such terrible accidents that after the arrival of the cars at Bordeaux further racing was wisely prohibited by the French and Spanish Governments. The conditions under which it was held were dangerous in the extreme, and fatal accidents were anticipated by everybody, except apparently those responsible for these conditions. It is happily certain that no such contest will ever be held again. With the race itself I shall deal fully later.

The news of the accidents caused a species of hysteria to break out in England. In vain those of us who knew the facts explained the results. In vain we showed that the Gordon Bennett Race would be run under wholly different conditions. In vain we argued the simple proposition that an insane speed-contest on crowded roads, on a Sunday, with 223 vehicles competing, at a distance of a minute apart, with utterly inadequate protection either for contestants or spectators, had absolutely nothing to do with the question of the control of touring-cars in England. The *Daily Telegraph* started a "silly season" correspondence under the title of "The Social Juggernaut," the newspapers blazed with "scare-heads," and many of them vied with one another in providing their readers with every horror they could find or invent.

It used to be said that we English are a people of calm temperament, little apt to hysterical outbursts. If so, the past fortnight has been an exception. No exaggeration has been too foolish, no charge too reckless, no ignorance too profound, to fail to be printed in the papers from correspondents hostile to the motor. In fact, the language and the proposals reserved in calmer moments for the anarchist have been employed toward the motorist.

Any one who is old enough to remember that precisely similar outbursts took place against cycling in its early stage, will not be greatly disturbed by the present phenomenon. Indeed, the same reception was accorded to railways when they first began to run. As the writer of the article upon the Story of Travel on a subsequent page reminds us, the *Quarterly Review* deemed "those persons who speculate on making railroads general throughout the kingdom," and "their visionary schemes," "unworthy of notice," and the sapient reviewer declared we "should as soon expect the people of Woolwich to be fired off upon one of Congreve's *ricochet* rockets as to put themselves to the mercy of a machine going at eighteen miles an hour."

But certain aspects of it must be regarded with particular regret—including a debate which has just taken place in the House of Commons. Mr. Cathcart Wason, who represents the constituency of Orkney and Shetland, in the whole of which there is not a single motor-car, led off by the remark that the children of the poor could no longer play in the streets in Scotland. A reply seems sufficiently obvious. The middle of the street is not the place for children to play. It is the duty of municipalities to provide other playgrounds for them, and where the locality is too poor to do this, either there are almost deserted lanes for them, or the districts are so remote that but few cars will ever visit them. Moreover, motorists are not in the habit of driving over children, even when they play on the roads. I have passed, I suppose, thousands of children on the roads, but I have not harmed any of them yet, though they do throw their caps under my car, and take universal delight in standing in the middle of the road with outstretched arms, to jump aside at what they imagine to be the last possible moment. And it can hardly be contended that the development of locomotion and industry and invention is to stand still that a few children in Scotland may play in the middle of the road. Mr. Wason continued:

"A few people claim the right to drive the public off the roads. Harmless men, women and children, dogs and cattle, have all got to fly for their lives at the bidding of one of these slaughtering, stinking engines of iniquity . . . I do not complain that these persons seek to amuse themselves and to gratify a satiated and vitiated palate by trying to come into as close contact with death as possible," &c.

Now, I have the pleasure of knowing Mr. Cathcart Wason, and of acting with him in politics. He is a cultivated gentleman, of sober judgment in ordinary affairs, with much experience of men and life, and possesses the kindliest of dispositions. Is it not curious that some microbe has infected his judgment and his disposition on this one subject? From what experience does he speak? I do not think he has ever been in a motor-car. How many of these "slaughtering, stinking engines of iniquity" can he possibly have seen upon country roads? A hundred, perhaps. None, at any rate, in Orkney and Shetland. Can he not be persuaded to believe, on the word of men infinitely more experienced than himself, and equally well-disposed to their fellow creatures, that his statements are ludicrous and cruel exaggerations? I shall now renew my request to him to permit me to take him out in my car and convince him that motoring, even at occasional high speeds, can be conducted with perfect consideration for all other users of the public roads—even of poor children at play in the middle of them.

A similar comment may be made upon the remarks of a genial and much-respected Member of Parliament, Mr. Harwood, "A man cannot take his family for a walk within a distance of thirty or forty miles of London with either comfort or safety." Such statements are their own refutation. I shall be proud to have him for a passenger and show him dozens of happy families walking with ease and comfort in the home counties. He added: "It is not a matter of wild shrieking, but it must be remembered that, after all, a motor is the luxury of the few." That is precisely what must *not* be remembered, for it is not the fact. For one costly car there are fifty on the roads belonging to men of moderate means. And will Mr. Harwood be surprised to learn that certain cars, costing about £175 each, are to-day selling like hot cakes, that two firms are about to put on the market cars priced at 120 guineas, and that each firm is constructing a thousand for sale this season? Is it fair—is it right, to speak thus of these matters without knowledge? Of course, other Members discussed the subject in a totally different matter, and Mr. John Scott Montagu spoke with his accustomed knowledge and moderation, pointing out amongst other things, that "a few years hence the motor-car will be the best friend of the poor man." It is fortunate for the future of an industry that is destined to become in a very few years one of the greatest in the country, to make our cities vastly cleaner and healthier and quieter, to render our beautiful country more accessible, to improve greatly the lot of the poorer classes of the community, and to add enormously to the scope and interest of the life of every one of us (I have gone into all these aspects of motoring in previous articles in detail), that in Mr. Walter Long, the President of the Local Government Board, we have a Minister who, while keenly alive to the urgent necessity of protecting the public against outrageous motorists, really understands the subject and keeps a cool and calm mind on this and other controversial topics.

For one class of hysterical anti-motorists, however, no language of condemnation can be too strong. A correspondent of the *Daily Telegraph*, who boasts that in the early days of bicycles he smashed twenty of them himself, says that on receiving what he regarded as provocation from a motorist he cut him across the face with a double-thonged whip, and hopes that it "smarts yet." A correspondent of the *Yorkshire Post* writes to express his conviction that if the law is not made to suit him the horse-driver will take the law into his own hands and "will empty his revolver at the retreating motor-car demon." It is astounding that respectable newspapers should publish such ravings as these. The result of such publication is likely to be that some day a weak-brained creature will really shoot a motorist and be hung for it. It is very well for sensible men like Sir Ralph Payne-Gallwey, the veteran sportsman, and humorists like Mr. W. S. Gilbert, to try to cast ridicule upon mischievous rubbish—the former by giving detailed technical instructions how to shoot motorists with No. 8 (or 9) shot and a cylinder gun, and the latter to cap the instructions by suggesting that "motor-shooting for one gun" would be an attractive advertisement; but the responsibility of editors who open their columns to such correspondents as the two I have quoted is very heavy indeed. And one letter has appeared worse than either of these. The well-known military writer, "Linesman," who is understood to be Captain Grant, of the Devon Regiment, published in the *Times* of July 9, a letter beginning as follows:

"SIR,—On Sunday last, at 5.25 P.M., a motor-car, containing four ruffians, two male and two female, passed Burnham Beeches Station, on the Bath Road, at the rate of forty miles an hour. The car was of a light green colour, and was driven by a creature who, it is fervently to be hoped, was as foreign as, under his dirt and disguise, he appeared to be. If any one can give information leading to the identification of the occupants of that car he will be rendering a service to humanity, at present defiled by their hideous presence and disgraced by their impunity.

"Nearly opposite the station the car ran over a little dachshund bitch, which, bewildered by its terrific approach, blundered on to the roadway in front of the monster. If the terrible shriek of the little shattered creature did not wring the hearts of those cowards, the voice of innocent agony has become as impotent as many other voices that Britons used to boast were never raised in vain. At any rate, the car was not stopped, and as I looked down on the burst intestines of the suffering mite, upon whose beauty God Almighty had expended at least as much care as on that of her murderers, it seemed to me that, if the law be impotent, the time has come when something stronger than the law must be invoked to repress such savagery."

Upon the facts here alleged several comments may be made. First, it is in the highest degree improbable that the car in question was going at forty miles an hour. Only very experienced motorists, and rural policemen, can correctly estimate speed. Second, a driver who kills a dog, and, knowing that he has done so, does not stop, is a heartless wretch, deserving exposure and punishment. It is precisely to identify such persons that we advocate the numbering of all cars. Third, it is not at all certain that the driver of this car did know he had killed the dog. Fourth, horse-drawn vehicles kill dogs occasionally. Fifth, dog-owners are under a moral obligation to keep their dogs, especially such deformed slow-moving creatures as the modern misbred dachshund, near them in safety. Sixth, what is the right term to apply to a man who calls lady passengers in a car, who cannot have been in the least degree responsible for the occurrence, "female ruffians," and describes them as "defiling humanity by their hideous presence"?

This writer proceeds as follows:

"If the mutterings I hear daily along the country roadsides mean anything at all, there may shortly be expected traps of a much more concrete and painful nature than the egregious ambushes of the police, attended by a mulct of something which owners of heavy cars cannot spare so easily as gold. Popular vengeance has a way of being even more unreasonable than the crime or folly which arouses it; two eyes and a whole set of teeth for an eye and a tooth constitute the preferential tariff of an angry mob. In my humble opinion the corpse of a scorching chauffeur for even every poor dog that has been slain on the road will be a trifling price to pay for the restoration of that civilisation which is at present banished from the highways of Great Britain. The duty of attending their funerals will be a pleasure, only dashed, unfortunately, by the thought of their victims."

Now if this is to be regarded as anything beyond mere raving, it surely constitutes a most serious offence. It reads like an incitement to violence, indeed, to murder, or an anticipatory condonation of them. What would have been said—and done!—to the writer and publisher of such sentiments in Ireland two years ago? Mr. Wyndham could tell us. One marvels that an English gentleman can write such a letter, or the *Times* print it. But doubtless the wiser attitude of the motorist is to sympathise with the excited writer on the loss of his dog, to be amused at his egregious screed, and be sure that he will only have discredited the cause he sought to promote.

To come now to the general question of legislation, it really seems that sensible people, motorists, and non-motorists, should have little difficulty in reaching common ground. Let me try to set out the whole matter clearly and fairly.

### I.—MANY MOTORISTS NOW USE THEIR CARS WITH GROSS DISREGARD OF THE RIGHTS, THE SAFETY AND THE CONVENIENCE OF OTHER PEOPLE.

With this all motorists agree, and are even more anxious than other people to see the practice stopped. The "road hogs" are comparatively few in number; a large majority of them are paid drivers, in the absence of their owners; the rest are a few reckless dealers, who, knowing they can stop in a few yards, ignore the alarm of people whom they do not injure; and a minority of merely selfish men, who "don't care." All these must be stopped—drivers by having a licence which, when endorsed by magistrates, will prevent them from securing further employment, since nobody would risk engaging a servant who had been several times summoned for furious driving; the others by fine, by imprisonment, if necessary, and in any case by invoking the great powers of the Automobile Club against them. The Club, which occupies

the same position in the motor world as the Turf Club does toward racing, or the M.C.C. in cricket, can debar an offender from taking part in any competition in Europe, and can censure or expel one of its own members. The Club uses its powers, I may add, with great severity in cases of proved offence.

II.—Before you can Censure or Punish you must be able to Identify.

A great majority of motorists, including almost all the most prominent men, are strongly in favour of cars being compelled to carry marks of identification, visible by day or night, and at any speed. The knowledge that he is leaving behind him his name and address, with the certainty of investigation and punishment if guilty, will have an electrical effect in causing every reckless motorist to behave himself. He is now fairly sure of immunity if only he has the indecency to drive off rapidly. In future he will have no immunity, however fast he drives away. Of course, for the first year or two well-behaved motorists will suffer greatly from spiteful charges or mistakes of identification. This they must put up with. There is not the slightest difficulty in arranging identification. Great Britain will be divided into districts, with approximately equal numbers of cars in them, represented by letters, and the cars' description and their owners' names and addresses will be kept in a numbered register. Thus a letter and three figures will identify any car in the country—to say nothing of further particulars to prevent mistakes, such as "a big red car, with a brown hood." Copies of all registers will be kept in a central police office in London, to which all charges will in the first place be addressed. Anybody who has suffered from a motor-car may be assured that 90 per cent. of offences will cease the moment that identification is introduced, and that nine offenders out of the remaining ten will promptly be brought to book.

III.—There is no such Thing as a Safe Speed Limit. What should be Aimed at is the Responsibility of the Driver and the Protection of the Public.

The former of these axioms will be received at first with scepticism by non-motorists, but it is absolutely true. The only time in my life I came near injuring somebody, I was driving through Trafalgar Square at about six miles an hour, when a child darted out from behind a 'bus and fell in front of my wheel. If I had been driving a horse nothing could have saved her. Twelve miles an hour is, as a rule, an excessive and dangerous speed in London. In Lincolnshire, the New Forest, and other places where there are long roads visible for a mile at a time, with no high hedges, thirty or even forty miles, with a careful driver, is often a perfectly safe speed, although, as I have said, very few cars can do forty miles. Mr. Loraine Barrow was killed by driving into a dog in the Paris-Bordeaux Race while going at a mile a minute. In an earlier race a competitor was killed outright by running into a dog while driving a car the highest possible speed of which was thirty-five miles an hour. A man who runs through a village at twenty-five miles an hour deserves punishment; to set police traps for a man going thirteen miles an hour on an open road is sheer idiocy. The twelve-mile-an-hour law never has been or never will be enforced. Every motorist, from the highest to the humblest, breaks it every time he goes out of town. No amount of fines or imprisonment will secure obedience to a law in itself preposterous. All it will do in this case is to hinder the development of a great industry and postpone a score of the benefits the motor-car will confer upon all classes. There is not, and cannot be, a safe limit of speed: what is imperative is that the public shall be protected and that every motorist, like all other men, shall be held strictly responsible for the consequences of his action. Motorists must be judged by the common law, and punished for "furious driving" when they injure, or gravely inconvenience and alarm, members of the public. Surely that is the just and only reasonable view. It has just been set forth in a convincing manner in a leading article in the *Times*, in spite of the excited letters it has published. The *Times* truly points out that "the tendency to furious driving probably depends in great measure upon the novelty of the power, and will disappear under the pressure of public opinion, when once that novelty has worn off. Nobody wants to drive furiously in a carriage, and there is every reason to regard the motor as the carriage of the future, which will be used in a proper manner as soon as it becomes general." And its conclusion is as follows:

"It should be the business of a Government to encourage industries and improvements, not to check them, even while checking any abuses to which they may have given rise; and we are happy to believe that the proposition to which we have referred will meet with no support from any but unwisely impulsive people. With regard to

the speed limit, this will manifestly have to be abandoned in any permanent legislation. Nearly every speaker in the House admitted that no real security could thus be gained; and it would be the proper course to throw the responsibility of speed upon the driver himself, as is done at present, and done quite successfully, in the case of all other vehicles. The regulation of speed is a matter for the exercise of common sense, not for legal definition. The driver of a motor should be at liberty to use any speed at his discretion, and should be responsible under the common law, as every other driver is now, for restraining his speed within the limits rendered necessary at the moment by the requirements of public safety."

Certain inconveniences accompany every step of human progress. The dust of motors is one of these, and it will continue so long as our roads are as rotten as at present, and are pecked up by the iron-shod feet of innumerable manure-dropping horses. In the not distant future, when motoring has become universal, there will be special main roads under the national authority for motor traffic, and the delights of country wandering will be preserved by motors being kept off a certain class of country lanes. Meanwhile we must take things as we find them, and all of us share the advantages and disadvantages which progress brings.

I desire, finally, to draw special attention in this connection to the wise words of Colonel Daniells, Chief Constable of Hertfordshire, a county in which the excellent roads, as he says, are a temptation to rapid driving. Hertfordshire is to be congratulated in other respects also upon its local authorities, for the Mayor, Mr. Kenneth Murchison, recently invited members of the Automobile Club to visit Hertford, and give an exhibition of the control in turning and stopping of motor-cars, as compared with horses, in which it was of course demonstrated that the horseless vehicle is much the more under control. Colonel Daniells says, and we recommend his words to Colonel Sant, the Chief Constable of Surrey:

"I have never in my official capacity—the only one that concerns the public—been hostile to automobilism. I have owned horses and lived to a very large extent on horseback for nearly half a century, and am one of those who consider a good horse to be pretty nearly the noblest animal in creation.

"Automobilism has had to fight hard against strong prejudice. The prejudice is not now so strong in country districts, owing to many of the local gentry having started motor-cars of their own, and having thus accustomed their neighbours to the sight of these machines. Much of the prejudice has been caused by the alarm of horses at the sight and smell of motor-cars. But this will rectify itself. Fresh horses are coming into work every day, and these horses will be as accustomed to the sight of a motor-car as they now are to a bicycle. Some horses—a few—are always frightened at railway trains. But we have never seriously heard a railway train blamed for frightening a horse. It is usually considered the fault of the horse, not of the railway train.

"The condition of the roads in this county is an invitation to automobilists and a temptation to rapid driving. 'I believe I am in a position to say that the County Council of Hertfordshire is opposed to the retention of the speed limit, and believes it would be better for automobiles to come under the common law, with the same rights, privileges, and responsibilities as other users of the highway. I believe, too, that the County Council will recommend the exhibiting of a number on every motor-car.

"I believe automobilism has a great future before it. It has established a great and growing industry in England, it employs hundreds—it may be or may come to thousands—of skilled artisans, whose best intelligence must be applied to their work. And all improvement in the knowledge and capacity of a skilled artisan is a valuable asset to a manufacturing country. I hope that the day is not far distant when it will be as rare to see a foreign-built automobile in England as it now is to see a foreign-built horsed carriage."

I hope I have now outlined an attitude as regards motorists and the public upon which a general agreement may be secured. The Bill introduced into Parliament by Mr. John Scott Montagu, Mr. Arthur Stanley, Mr. Murray, Mr. Leicester Harmsworth, Mr. Bull, Mr. T. P. O'Connor and myself, will be found to embody the regulations and safeguards set forth above.

In concluding this section of my article, may point out that according to the official statistics issued by the Commissioner of Police of the Metropolis the motor-car is the safest vehicle in the streets, making all allowances for the fact that horse-drawn vehicles still very greatly outnumber "light locomotives." Here are the facts:

AVERAGE NUMBER OF PERSONS KILLED ANNUALLY IN THE METROPOLIS, SINCE THE ACT OF 1896, BY THE FOLLOWING CLASSES OF VEHICLES.

70 persons are killed annually by vans.

43 persons are killed annually by carts, waggons, and drays.

19 persons are killed annually by cabs.

17 persons are killed annually by omnibuses.
6 persons are killed annually by private carriages.
4 persons are killed annually by cycles.
1 person is killed annually by light locomotives.

Not a single person was killed last year, among all the millions in the London police district, by a "light locomotive" of any kind (excluding tramways). To read the papers during the past fortnight one would suppose that somebody had been killed every day. On the other hand, the *Autocar* has published weekly for nine months a record of persons killed and injured in the United Kingdom by horse-drawn vehicles, and the total for that period is 329 killed and 2142 injured!

# II.—THE PARIS-MADRID RACE

ITS TERRIBLE RESULTS DUE TO GRAVE FAULTS OF ORGANISATION—THE MAKERS' EFFORTS TO WIN IT—RECORDS OF THE DIFFERENT MAKES OF CARS—THE ASTOUNDING SPEED OF THE WINNER

THERE will never be another race of motor-cars like that which has just ended disastrously, only one-third of it accomplished, at Bordeaux. The very class of cars produced to compete in it may be the last of their kind to be built. It already belongs in many respects to the past, for the Gordon Bennett Race in Ireland will be but a shadow of its size and an echo of its perils. Therefore, it deserves to be put on record among other examples of the world's work, while it also teaches in final form certain lessons about the sport and the industry it reflected so unfortunately.

The course extended from Paris to Madrid, following the examples of the previous races from Paris to Berlin, and Paris to Vienna. The first stage was to be to Bordeaux, the third to the frontier, and the final one to the Spanish capital—a total distance of over 800 miles. The cars were divided into three classes: heavy cars, weighing over 650 kilogrammes (12 cwt. 3 qrs. 5 lbs.); light cars, from 400 kilogrammes (7 cwt. 3 qrs. 12 lbs.) to 650; *voiturettes*, from 250 kilogrammes (4 cwt. 3 qrs. 18 lbs.) to 400; and motor-bicycles. The total number of competing vehicles was 223, and these were started at intervals of one minute. The firm of Panhard and Levassor entered no fewer than fourteen cars; that of Mors thirteen cars; the Darracq Company eight cars; the Daimler Company six Mercédes cars; and the Wolseley Company four cars. These figures indicate the overwhelming importance attached by the great makers to making a good show in the race, and this is emphasised by the enormous expense to which they went—most of which, as events turned out, was money wasted—to win it. It is computed that £200,000 was spent on producing the competing cars, and that such firms as Panhard, Mors, Mercédes, and Darracq must have spent from £6000 to £10,000 apiece. One Paris newspaper declares that £2,000,000 was the total cost of the race!

A tourist class of car had started previous to the great contest, under limits of speed, and about a hundred of them reached Madrid without a single accident to a human being, and were received with much honour and enthusiasm.

Of course, all the usual accidents happened to the racing cars, and some unusual ones. The Chevalier de Knyff, the famous amateur driver, on a big Panhard, broke down immediately from a cracked cylinder-head; another Panhard was set on fire by a Serpollet steam-car; Jenatsky's car, a ninety horse-power Mercédes, was stopped for three hours by a mysterious breakdown he could not locate and which finally proved to be a fly in the little jet of the carburator; still another Panhard had its petrol tank accidentally filled with water. These unlucky mishaps account for the comparative want of success of those famous firms. But the accidents to competitors and spectators were appalling, though they have been much exaggerated. The total casualty list was eight killed and several injured. Of the causes of these accidents I shall speak later.

The result was a triumph for French manufacture, in all classes. A magnificent performance was made by Mr. Charles Jarrott, the only English driver to reach Bordeaux, on a forty-five horse-power De Dietrich heavy car. He started first and arrived second, being

beaten only by M. Louis Renault on a thirty horse-power light car of his own make. The official net times of the first ten cars (as the race was declared off, there are no "winners"), irrespective of class, were as follows, the distance being just under 343 miles:

| Driver. Class and Maker. | H. | M. | S. |
|---|---|---|---|
| 1. Gabriel (heavy car, Mors) | 5 | 14 | 31 |
| 2. L. Renault (light car, Renault) | 5 | 29 | 39 |
| 3. Salleron (heavy car, Mors) | 5 | 47 | 1 |
| 4. Jarrott (heavy car, de Dietrich) | 5 | 52 | 55 |
| 5. De Crawhez (heavy car, Panhard) | 5 | 54 | 11 |
| 6. Warden (heavy car, Mercédes) | 5 | 55 | 30 |
| 7. Voigt (heavy car, Charron, Girardot, and Voigt) | 5 | 57 | 49 |
| 8. Gasteaux (heavy car, Mercédes) | 6 | 1 | 16 |
| 9. Fournier (heavy car, Mors) | 6 | 12 | 39 |
| 10. Baras (light car, Darracq) | 6 | 13 | 20 |

All the first ten were thus heavy cars, except the Renault and the Darracq. The speed of the fastest car is almost incredible, but, of course, there is no doubt whatever about it. Gabriel on his Mors covered the 343 miles in 314½ minutes—an *average* speed of over sixty-five miles an hour. Moreover, to gain this place he passed nearly eighty competitors on the road. This, with corners, crossings, crowds, and other reasons for slackening speed, makes it clear that he must at some points have been going at the rate of one hundred miles an hour! But his recorded average speed is a world's record: no vehicle of any kind has reached it since vehicles were invented. It leaves any railway record far behind. One's imagination falters at the thought of such a task. We talk of the strain of driving a locomotive at a mile a minute. What is that to the strain of not only managing the engine, but looking out for obstacles and steering with the most marvellous accuracy—for a swerve would be instant destruction—while going much faster, for five hours and a quarter?

The results according to classes were as follows:

### Heavy Cars.

| Car. | H. | M. | S. | Miles per hour. |
|---|---|---|---|---|
| Mors | 5 | 13 | 31 | = 65½ |
| Mors | 5 | 46 | 1.4 | = 60 |
| De Dietrich | 5 | 51 | 55 | = 58½ |
| Mercédes | 5 | 56 | 30 | = 58 |
| Panhard-Levassor | 6 | 1 | 8.2 | = 57 |
| Charron, Girardot and Voigt | 6 | 1 | 9.1 | = 57 |
| Mercédes | 6 | 8 | 0 | = 56 |
| Mors | 6 | 11 | 39 | = 55⅓ |
| Turcat-Mery | 6 | 16 | 7.4 | = 54¾ |
| De Dietrich | 6 | 17 | 54.1 | = 54½ |

### Light Cars.

| Car. | H. | M. | S. |
|---|---|---|---|
| Renault | 5 | 29 | 39 |
| Darracq | 6 | 13 | 20 |
| Decauville | 6 | 20 | 8 |
| Darracq | 6 | 56 | 53 |
| De Dion-Bouton | 7 | 13 | 42 |
| Decauville | 7 | 24 | 16 |
| Darracq | 7 | 52 | 24 |
| Darracq | 8 | 5 | 7 |
| De Dion-Bouton | 8 | 26 | 13 |
| Darracq | 8 | 30 | 40 |

This is a striking victory for the Renault car in point of speed, and a magnificent record of consistent running for the Darracqs—five out of the first ten cars.

### Voiturettes.

| Car. | H. | M. | S. |
|---|---|---|---|
| Clément | 7 | 14 | 45 |
| Richard-Brazier | 7 | 40 | 0 |
| Darracq | 7 | 48 | 12 |
| Richard-Brazier | 8 | 8 | 26 |
| De Dion-Bouton | 8 | 23 | 19 |
| Clément | 8 | 26 | 32 |
| Ader | 8 | 26 | 50 |
| Passy-Thellier | 8 | 26 | 56 |
| Darracq | 8 | 43 | 7 |
| De Dion-Bouton | 8 | 43 | 32 |

A victory in point of speed for the Clément car, and for the Richard, Darracq, and De Dion-Bouton cars for places. The Darracq Company started eight cars, and seven of them were in the first ten of their respective classes—a great triumph.

### Motor Bicycles.

| Make. | H. | M. | S. |
|---|---|---|---|
| Werner | 8 | 56 | 55 |
| Griffon | 9 | 4 | 44 |
| Griffon | 9 | 26 | 54 |
| Peugeot | 9 | 40 | 36 |
| Peugeot | 9 | 45 | 31 |
| Clément | 10 | 21 | 8 |
| Griffon | 10 | 44 | 46 |
| Peugeot | 11 | 4 | 20 |
| Werner | 11 | 11 | 18 |
| Doué | 11 | 43 | 5 |

Mr. Arnott, the well-known English rider of Werner machines, came in eleventh, in 12 hours, 6 minutes, 2 seconds.

It will thus be observed, with great regret, that no British-built machine of any class, though fourteen cars started, reached Bordeaux, though it is only fair to add that Mr. Mark Mayhew, member of the London County Council

and Colonel of the Motor Volunteer Corps, who will, as a task of honour, drive the "pilot car" before the Gordon Bennett Race starts, had done very well on a Napier car to within thirty miles of Bordeaux, when his steering gear failed, and he narrowly escaped a catastrophe.

As regards the causes of the accidents I may repeat what I wrote next day in the *Westminster Gazette*, when the panic was at its height. The greater part of the race was along ordinary country roads, the enormous distance making it out of the question to picket or guard the entire course. No fewer than 170 cars and 53 motor-bicycles—223 vehicles in all—were engaged. These were of varying powers, weights, and speeds, involving constant passing and repassing. For example, the winning car had nearly seventy cars to pass *en route*. Think for a moment what this means—to pass one after the other, seventy cars on a comparatively narrow road, in a dense and blinding cloud of dust, at a speed of over a mile a minute! The wonder is, not that accidents occurred, but that any car got through at all under these conditions. These 223 vehicles were started each one minute after the vehicle in front. Try to imagine a procession of cars, going a mile a minute, nearly four hours long, passing over ordinary country roads, protected for the most part only by warning notices and often crowded with careless spectators. One heavy fast car raises a thick dust. Over two hundred cars must have created a pea-soup atmosphere in which the driver could not see more than two or three seconds ahead. Moreover, many of the cars were driven by men without previous experience of motor-racing and often wholly incompetent for the task. One stands stupefied before the almost unimaginable courage of men who will compete at all under such conditions, just as one is shocked at the lack of foresight on the part of those who organised so perilous a contest.

As a matter of fact, all the fatal accidents were due either to avoidable causes or to causes in no way connected with the cars themselves. For example, the accident in which two spectators and one mechanician were killed is thus described by Mr. C. L. Freeston, the special correspondent of *The Car*:

"M. Tourand, having left the town, had therefore legitimately got up speed, when suddenly a child of nine years of age darted into the road right in front of the car. He made an heroic attempt to save the child by turning the car violently to one side. The child's life indeed was saved, but at the cost of causing the car to swerve to the side of the road, with the distressing result that two spectators were killed, while M. Tourand himself narrowly escaped with his own life, and his mechanician was even less fortunate and was killed outright. All the anti-automobile prejudice in the world cannot alter the fact that the only catastrophe in which any member of the public was injured along a route of nearly 350 miles was due entirely to the action of a feckless child, who ought to have been under the control of his parents at the time."

The same correspondent, who made careful investigation on the spot, explains another fatal accident as follows:

"It is surely no stretch of argument, moreover, to describe as accidental the catastrophe in which Mr. Loraine Barrow was grievously injured and his mechanician killed. Mr. Barrow had to swerve to avoid a dog, and by a cruel mischance there was another dog on the road just beyond. It was the impact with the second animal, occurring while the car was still swerving aside from the first, which caused the upset."

The following account of a third, but not fatal, accident is given by the *Motor Car Journal*:

"Georges Richard had the misfortune to be singled out by a blackguardly brute amongst the spectators who had made a bet that he would touch one of the racing-cars as it passed. As the big cars came along his courage failed him, and it was not until the first of the *voiturettes* came in sight that he screwed up courage to the striking pitch and advanced to win his bet. It was in trying to avoid him that Georges Richard met with his accident."

Moreover, the competitors themselves bear strong testimony to the faulty arrangements. Mr. Jarrott says: "How it was whole rows of people in the villages were not mown down, I cannot say"; and Gabriel, the winner, says: "The small force of police and officials were absolutely helpless to restrain the crowds. The racing men were more alarmed for the safety of the rash crowds, who stood straight in the road ahead of the onrushing cars, than for their own;" and M. Serpollet "was very severe on the organisation. No attempt had been made to keep the course clear, nor were the spectators under sufficient control."

I have given these particulars to show that most of the accidents could have been avoided, even in racing of this kind, if proper precautions had been taken, and in order to prove once more the absolute absurdity of denouncing ordinary motoring because of the results of the mismanaged Paris-Bordeaux Race.

# III.—THE GORDON BENNETT RACE*

ITS ORIGIN, HISTORY, AND CONDITIONS—THE COURSE AND HOW IT WILL BE GUARDED—CARS AND DRIVERS OF THE FOUR COMPETING COUNTRIES —THE ELABORATE ARRANGEMENTS OF THE "CONTROLS"—EIGHTY-FOUR CHRONOGRAPHS TO TIME THE RACE—THE IRISH FORTNIGHT

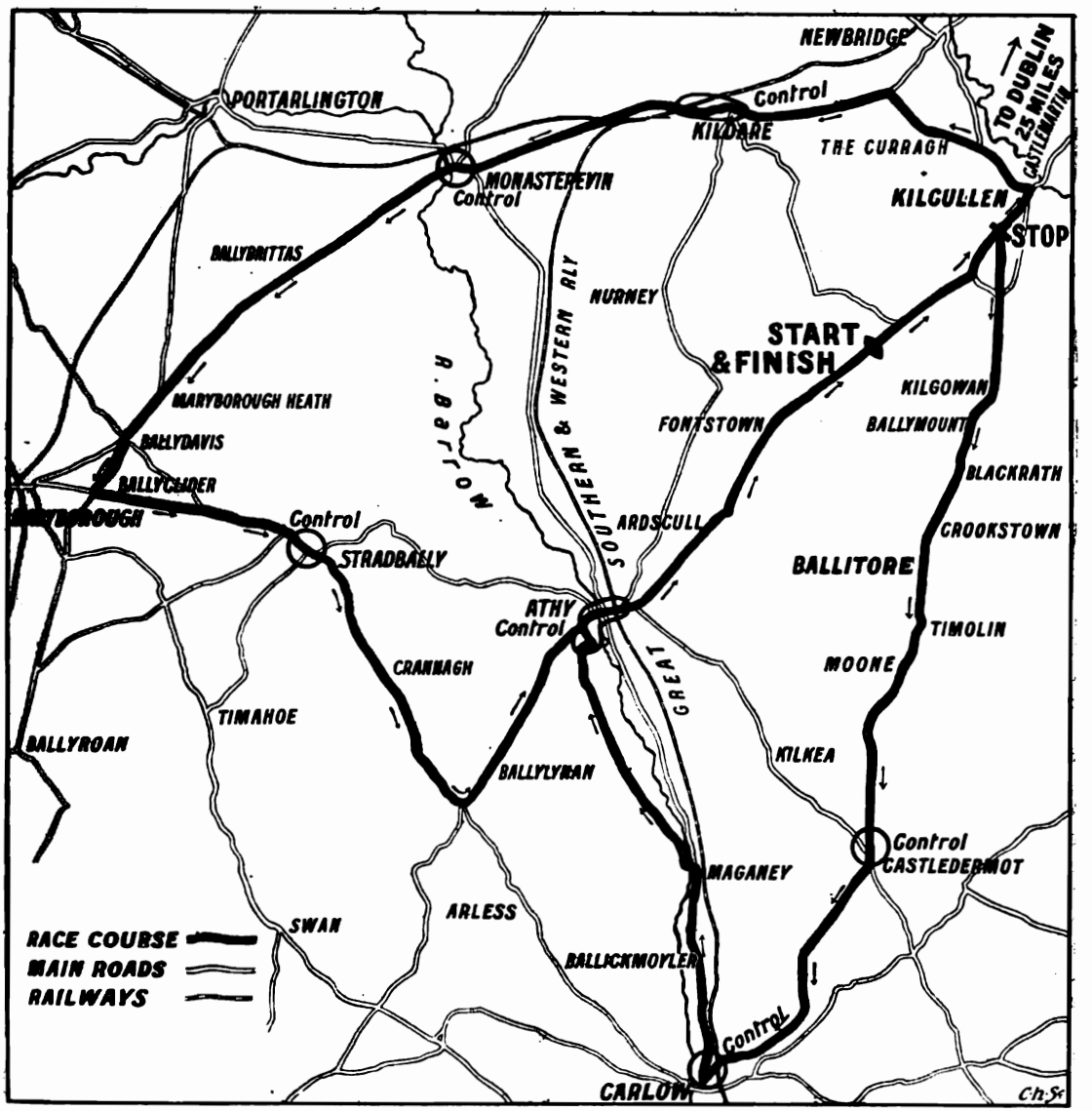
THE great motor race in Ireland will be an international event—a struggle between nations as well as between makers and drivers. Its origin and history may be told in a few words. In 1899 Mr. James Gordon Bennett presented the Automobile Club de France with a piece of silver plate representing a motor-car and a more or less graceful classic figure (the car looks old-fashioned to-day) to encourage the motor industry by promoting a great international annual race, the winning car of which (weighing under 1000 kilogrammes, say a ton) should be the best in the world. The course is to be a stretch of not more than 416 miles and not less than 344, *i.e.*, 550 to 650 kilometres (this rule has been modified in practice); the race is to be held between May 15 and August 15, in the country where the "cup" is held, or, failing that, in France; any recognised club may enter three cars to represent its own country; and—most important by far—every car competing must have been constructed throughout, and as regards every part, in the country of its origin. This last rule makes success a victory not only for the designer and the driver and the car, but for the material, manufacture, and workmen of its country. It is, therefore, an international race, in the strictest sense; hence its importance and the desperate efforts to win it. Curiously enough, there is no clause in the deed of gift specifying that the driver shall be a citizen of the competing country. In Ireland one of the German cars will be driven by an American, and one by a Belgian. In 1900 it was won by M. Charron on a Panhard-Levassor car; in 1901 by Mr. Girardot, on a Panhard; and last year, from Paris to Innsbruck, as part of the Paris-Vienna race, by Mr. S. F. Edge, the well-known Englishman, driving a Napier, the well-known English car.

The right belonged to England, therefore, of holding the race this year in the United Kingdom. But though we possessed the sporting right, it seemed doubtful if the legal right would be obtainable. To race with safety, it is obviously necessary to secure complete control of a very busy stretch of public road for several hours, and public opinion in England seemed dead against any such concession. The Irish people, however, saw the matter in a different light when it was suggested to them. A long stretch of road was found suitable; it was obvious that the race would bring hatfuls of money with it; the advertisement of the beauties of Ireland and the charm of her people would be of incalculable value; and when did an Irishman not eagerly welcome a good piece of sport? A Bill was therefore introduced into Parliament by Mr. John Scott Montagu, heartily supported by all the Irish Members, it was passed through Commons and Lords in a few days without opposition and immediately received the Royal assent. This gave the County Councils concerned the right to make such regulations of the roads for one day as would be necessary. Since then, all preparations have been pushed forward by the Automobile Club, with the cordial co-operation of every Irish authority, and the contest will be held a week after these words are in type.

The course chosen lies about twenty-five miles south-west of Dublin, and is, roughly speaking, the great triangle formed by the towns of Kildare, Maryborough, and Carlow. It is clearly shown on the accompanying map. The requisite distance could not be secured in one stretch, therefore—greatly to the advantage of the spectators—the competing cars will make the circuit several times. In detail, the race will take the following route. The starting-point is about a quarter of a mile south of the Ballyshannon cross-roads on the Athy-Kilcullen old coach road, thence north to Old Kilcullen, turning sharp to the south-south-east through Kilgowan, Ballymount Blackrath, Crookstown, Ballitore Hill, Timolin, Moone, Castledermot, Ballaghmoon, into Carlow, past the cemetery, round the courthouse, proceeding north-north-west by the road running east of the Canal to Aghamore and Jerusalem and Magheny Bridge, across

* For the portraits of the foreign competitors and the illustrations of their cars we are indebted to the courtesy of the proprietors of *The Autocar*, and the pictures of the Gordon Bennett course were taken by *Motoring Illustrated* and kindly placed at our exclusive disposal.—EDITOR.

the bridge, and then turning sharp to the right, the road runs by Ballyfoyle to Athy, from Athy, north-north-east past Ardscull and Fontstown, past the starting-point to Kilcullen, turning sharp to the left past Castle- to the four cross-roads—sharp to the left, north-east through Ballylinan to Athy, and thence to point of departure, making 103 miles 740 yards. (These figures include controls, the net racing distance being 92¾ miles.) This




THE GORDON BENNETT COURSE, IRELAND, 1903

martin and Elm Tree, across the Curragh until reaching the Newbridge road, then sharp to the left along the Curragh into Kildare; from Kildare in a south-western direction through Monasterevin, Jamestown, Ballybrittas, to Ballydavis, where a south-east turn is made into the Maryborough-Stradbally road, thence through Stradbally over the Windygap down will be run over three times, plus the western circuit once more, making in all 368 miles, 780 yards. The cars will thus pass the spectators at the starting-point no fewer than seven times. The momentary "stop" at Kilcullen cross-roads is that each driver may be clearly informed when he must turn southward, and when his time has come to go straight on;

and also to preclude the danger of accident by making it impossible for drivers to take the acute angle at high speed.

The competing cars, their horse-power, colours and drivers will be these:

ENGLAND (Green).

| Car. | Horse-power. | Driver. |
|---|---|---|
| Napier | 110 | Mr. S. F. Edge |
| ,, | 35 | Mr. Charles Jarrott |
| ,, | 35 | Mr. J. W. Stocks |

UNITED STATES (Red).

| | | |
|---|---|---|
| Winton | 80 | Mr. Alex Winton |
| ,, | 80 | Mr. Percy Owen |
| Peerless | ? | Mr. L. P. Mooers |

FRANCE (Blue).

| | | |
|---|---|---|
| Mors | 70 | Gabriel |
| Panhard | 70 | Chev. De Knyff |
| ,, | 70 | H. Farman |

GERMANY (White).

| | | |
|---|---|---|
| Mercédes | 60 | Baron de Caters |
| ,, | 60 | Mr. Foxhall Keene |
| ,, | 60 | Jenatsky |

Owing to the recent fire at the Daimler works at Cannstadt the Mercédes cars cannot be of ninety horse-power, as originally intended. It must be remembered, however, that horse-power does not necessarily mean victory. Mr. Louis Renault's thirty horse-power car was only fifteen minutes behind Gabriel's seventy horse-power Mors in the 343 miles to Bordeaux; weight, handiness, mechanical economy of power-transmission, quickness of starting, and judgment of the driver, all are important factors, and mere speed will be of less importance on a course so varied in character, with so many corners, controls, and gradients, as that in Ireland, than on the straight roads between Paris and Bordeaux.

To avoid so far as possible all passing of cars, the competitors will be despatched from the starting-point at intervals of seven minutes. The "controls," seven in number, are, of course, towns and large villages, where great crowds may be expected in narrow streets, and where high speeds would be excessively dangerous. A minimum time will be fixed for the passage through each control, according to its length, and every car will be piloted by a bicyclist, and disqualified if it passes him. When two cars reach a control within a few seconds of each other, they will not be allowed to leave it again together, to avoid neck and neck racing, but one minute interval—equivalent to almost a mile of distance—will be interposed, this minute being, of course, deducted in the net time. During the passage through the controls the cars will be allowed to take on board water, petrol, and lubricating oil—likewise refreshment for the driver and their mechanicians.

In the controls there will be no fewer than 161 officials, comprising in each a Head Marshal, a Starter, three Timekeepers, two Registrars, a Press Steward, three Control Stewards, and fifteen cyclists. They will each wear a distinguishing badge, as follows:

| Number. | Officer. | Colour. |
|---|---|---|
| 7 | Marshals | Green |
| 6 | Starters | White |
| 21 | Timekeepers | Red |
| 14 | Registrars | Blue |
| 7 | Press Stewards | Yellow |
| 21 | Control Stewards | Green stripe |
| 105 | Cyclists | Green arm band and gold badge. |

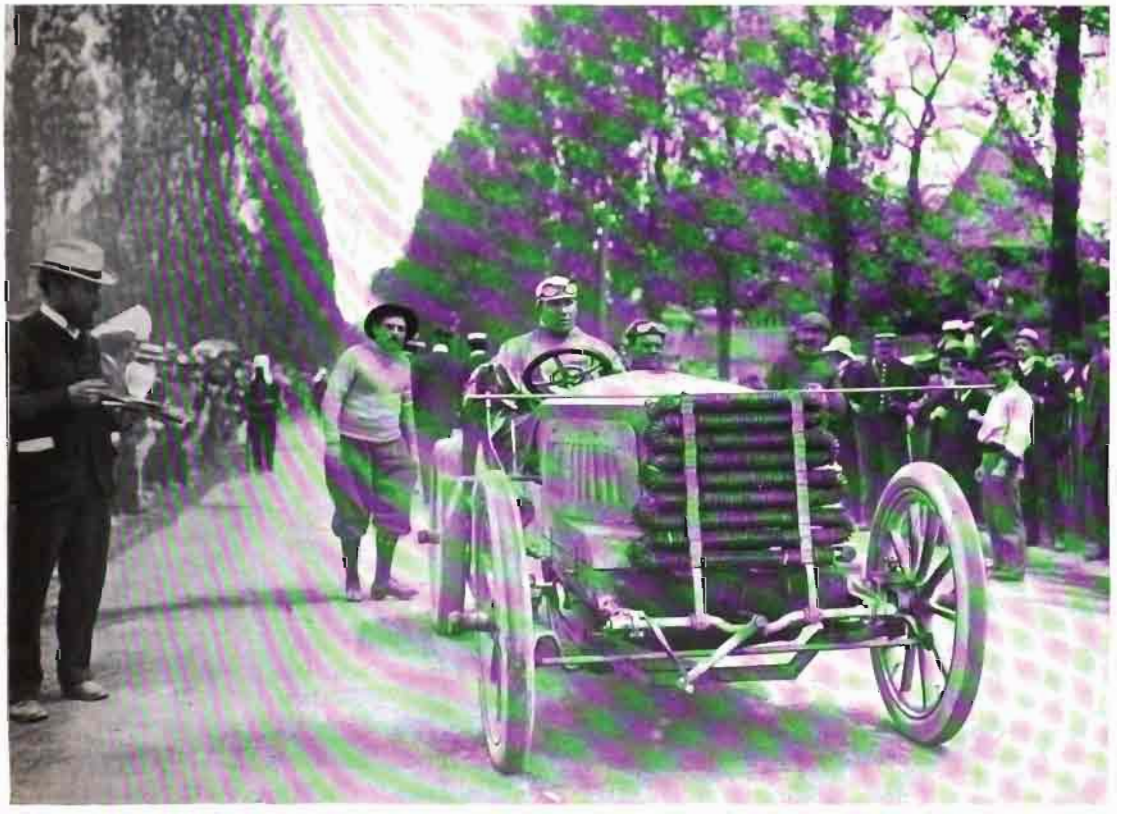
At the starting-point there will be the Club officials, the official Starter, Timekeeper, Judges, and Interpreter. Mr. R. W. Wallace, K.C., Baron de Zuylen, Mr. A. R. Shattuck, the Duke of Ratibor, Colonel R. E. B. Crompton, C.B., Mr. W. W. D. Goff, J.P., and Mr. W. Worby Beaumont, M. Inst. C.E. will act as Judges. Major F. Lindsay Lloyd, R.E., will be the Starter. The official representatives of the competing countries will be: for England, Mr. Paris Singer; for America, Mr. Clarence Gray Dinsmore; for France, Baron de Vogüe; and for Germany, Count von Sierstorff.

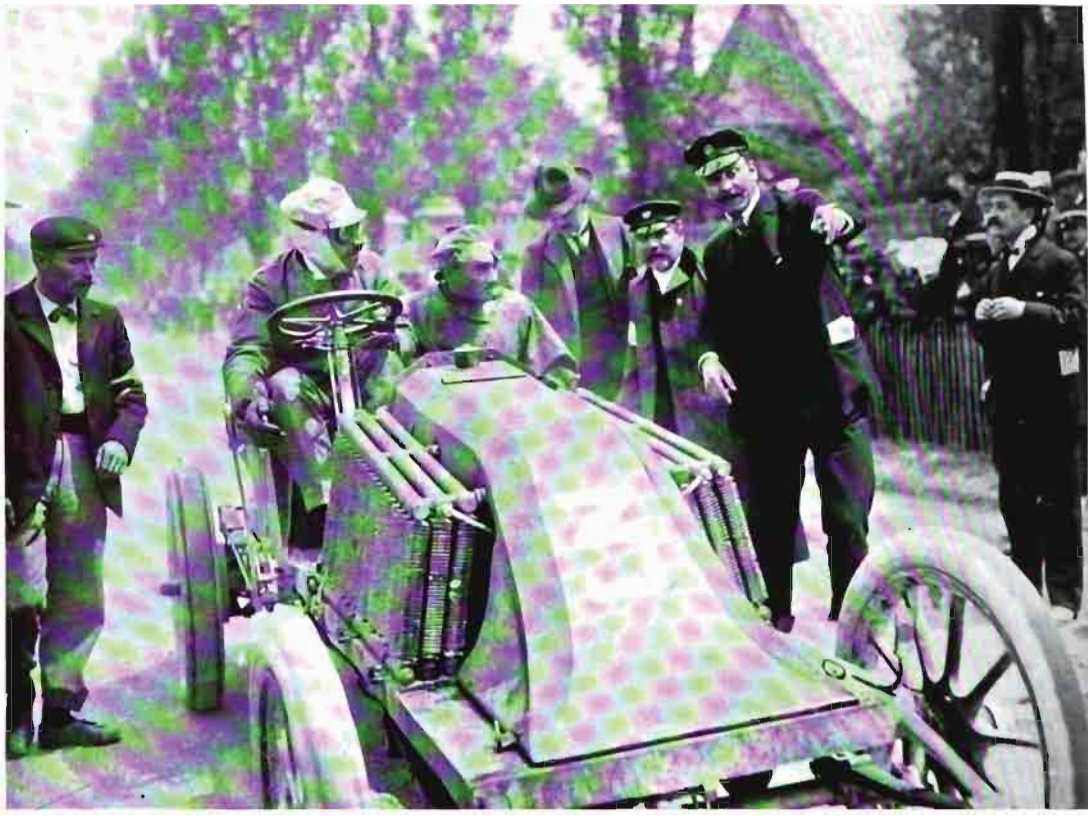
The timing of twelve cars and recording their respective passages many times through the controls is obviously a very complicated and delicate task, and the Automobile Club has entrusted it to Mr. R. E. Phillips, the well-known electrical engineer and inventor of a special electrical timing apparatus. He has explained, in the Club *Journal*, that the factors which will determine the ultimate winner will be: (1) the sum total of the periods of time occupied in traversing the various controls, and (2) the periods of time which will elapse between the finish of the first and subsequent cars. The actual time occupied in completing the course, though of interest in showing the speed at which the cars have travelled, may be regarded as a negligible quantity so far as ascertaining the actual winner is concerned.

The system which will be employed in the Gordon Bennett Race, Mr. Phillips explains,

GABRIEL, THE WINNER, ARRIVING AT BORDEAUX ON HIS NINETY HORSE-POWER MORS CAR

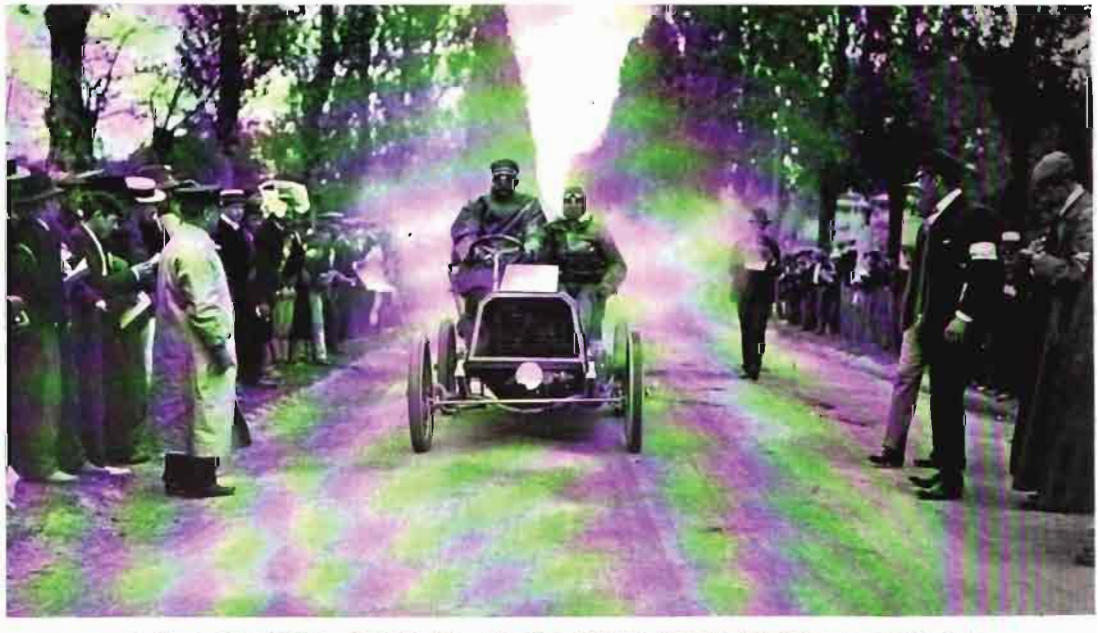
He averaged nearly sixty-six miles an hour for five and a half hours. Observe the photographers





M. LOUIS RENAULT PULLING UP AT THE BORDEAUX CONTROL

He drove a thirty horse-power Renault car, and won in the Light Car class



BARRAS REACHING BORDEAUX ON HIS FORTY HORSE-POWER DARRACQ CAR

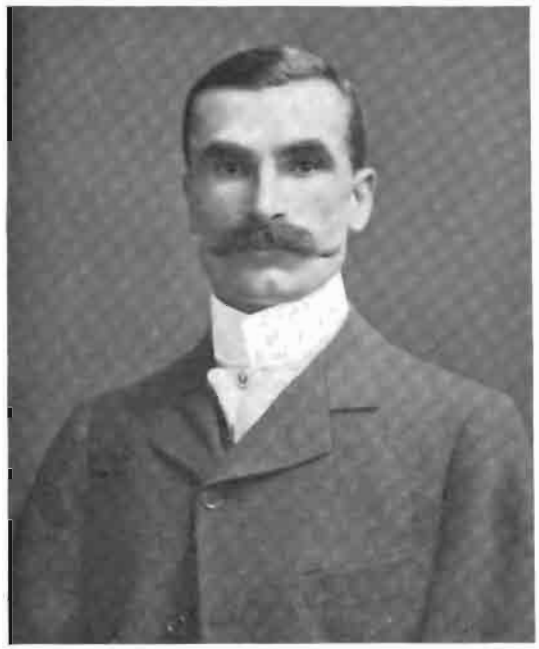
He was second in the Light Car class, in which five Darracqs arrived among the first ten cars

will provide that the time of each car in a control will be checked and recorded on an independent watch, so that the timing of each car through a control will be a separate and independent observation. To do this, it will be necessary to have twelve watches at each control, and, as there are seven controls, no less than eighty-four chronographs, with fly-back centre-second hands, and minute recorders, correctly rated, will be required.

Mr. Phillips gives the following interesting account of the elaborate *modus operandi*:

"At each control there will be twelve watches and twelve small boxes to contain the said watches. The timekeeper at the entrance to the control will start one of the chronographs immediately a car arrives at the control, and comes to a state of rest in the space allowed. He will then hand it to the head Marshal of the control, who will first satisfy himself that the chronograph is started, and will then show the same to the driver of the car, and warn him of the time allowed for passing through the control. He will then endorse a duplicate card with the number of the car, and place both the card and the watch in one of the boxes, and, having locked it with his master key, will hand it to the cyclist allotted to pilot the car through the control.

"On reaching the end of the control the cyclist will hand the box containing the watch and the card to the starter, who having opened it with the master key in his possession, will again show the watch to the driver of the car and tell him roughly how much time then remains before his time to depart,



MR. S. F. EDGE

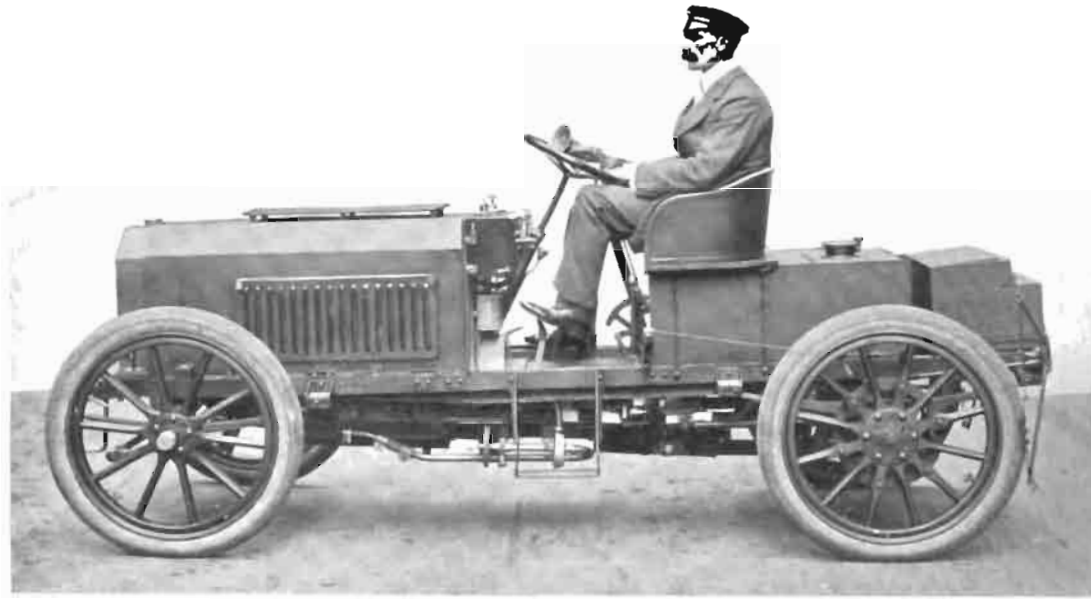
Holder of the Gordon Bennett Cup, who drives a hundred-and-ten horse-power Napier car in the Gordon Bennett Race

MR. CHARLES JARROTT

Who drives a thirty-five horse-power Napier car for England in the Gordon Bennett Race

MR. J. W. STOCKS

Who drives a thirty-five horse-power Napier car or England in the Gordon Bennett Race



MR. EDGE ON HIS GORDON BENNETT NAPIER CAR

and having endorsed the duplicate card with the period of time allowed for the control, will place one part of the card in the box on the car provided to receive such cards, and at the expiration of the allotted time, give the driver the signal to depart, and at the same time operate the button of the watch to stop the chronograph mechanism.

"The starter will then place the watch and the other half of the duplicate card in the box, lock the same, and return it by the cyclist to the time-keeper at the entrance to the control. The time-keeper will then examine the watch, and make a record of the period of time occupied in the control as shown by the minute recorder of the chrono-graph. After which he will set the hands of the chronograph back to zero, ready to be used for another car."

The start and finish of the race will be timed by two independent systems. First, by the official timekeepers of the Club, Messrs. G. P. Coleman and T. H. Woollen, assisted probably by one or more official timekeepers of other competing clubs; and secondly, by Mr. Phillips' electrical timing apparatus, which will be employed to time the arrival of the cars at the finishing-point.

THE PEERLESS CAR (AMERICA)

The greatest possible care has been taken to protect the public from danger. The Local Government Board (I quote from the Club *Journal*), and the several County Councils have ordered that the road over which the race will be run is to be closed at 6 A.M. on the morning of the race. Every road running into the main road of the course will be blocked, and two police officers will be stationed at

the point where such blocked roads join the course. All animals are to be put into the fields and not allowed to stray, and not a single spectator will be allowed either on the road itself, or on the road side of the hedges.

A force of at least two thousand of the Royal Irish Constabulary will be present to keep order, and these will be considerably augmented by a large contingent of the military, who will protect the Curragh and Maryborough Heath.

Two pilot cars will start at 6.30 A.M., to make the entire circuit of the course, one going east and the other west, and will warn the public that the race has begun, and the public will

MR. ALEXANDER WINTON

Who drives a sixty horse-power Winton car for America

not be allowed to move on to the road until it has been announced officially that the race is over.

As a final precaution, all the inhabitants on the road and within three hundred yards of each side of it will be personally circularised with warning notices; and, in addition, public notices will be posted on every convenient site, setting out in detail the names of the roads closed for the purposes of the race, and also giving a general warning to the public to remain behind the hedges and to obey strictly the police and Club officials.

In every possible respect the drivers themselves have also been protected. They have all cordially approved the course; the roads have been thoroughly repaired throughout the

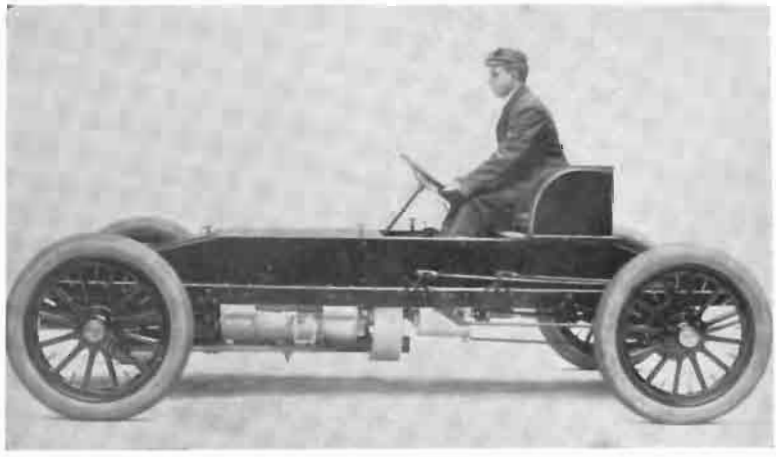
MR. PERCY OWEN

Who drives a thirty horse-power Winton car or America

circuit, at a cost of nearly £1500; certain bends have been straightened, and right-angled turns rounded off, and the hedges will be cut down for two hundred yards on the approach side of each

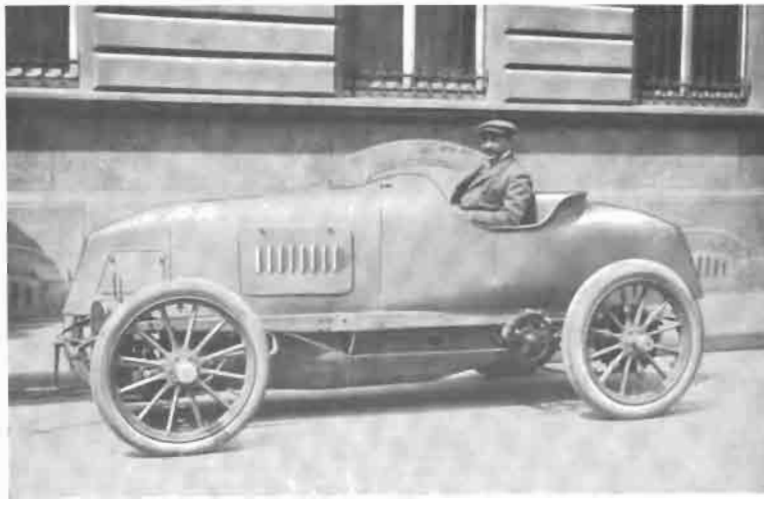
MR. L. P. MOOERS

Who drives the Peerless car for America



THE SIXTY HORSE-POWER EIGHT-CYLINDER WINTON CAR (AMERICA)

AN EIGHTY HORSE-POWER PANHARD (FRANCE)



THE EIGHTY HORSE-POWER MORS CAR (FRANCE)

corner. Caution and danger flags will be fixed where necessary, and the road-stewards will be supplied with flags for the purpose of warning an approaching car in case of an obstruction on the road. Elaborate maps, showing the controls and all stopping and dangerous points, have been prepared for the drivers' use, with instructions in English, French, and German. A system of warning-flags has been devised, a small triangular green flag, for instance, signifying, "Drive with caution for a quarter of a mile," and if caution is necessary beyond a quarter of a mile, a second similar flag will be displayed. Large green flags stretched across the road indicate that a corner has to be turned within three hundred yards. A large flag, half green and half red, stretched across the road, will show the driver that he has to stop dead within three hundred yards, the actual stopping-point being indicated by a large red flag. Moreover, all the drivers will have been on the course for several weeks, and will, therefore, know every yard of it.

It will thus be clear that if any member of the public be injured, he will only have himself to blame, while as for the competitors, every danger has been foreseen, and they will run no more risk than they voluntarily face in a contest which, like polo, steeplechasing, and other dangerous sports, cannot be free from all chance of accident.

It is needless to dwell on the complete difference in the conditions between the Gordon Bennett Race

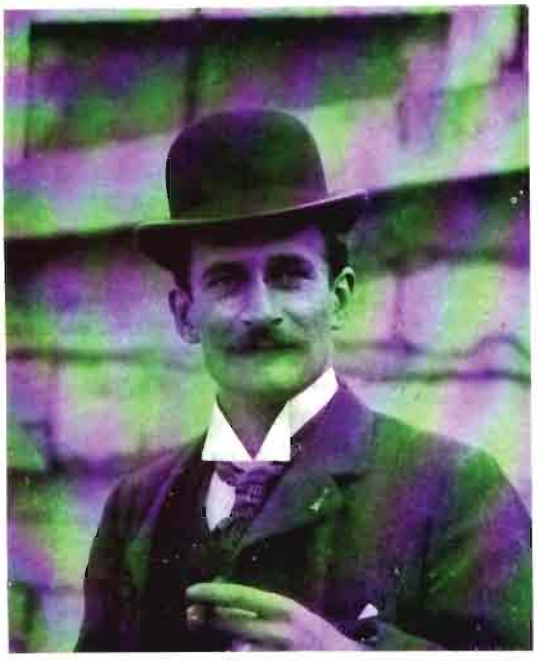
CHEVALIER RÉNÉ DE KNYFF
Who drives an eighty horse-power Panhard for France

M. H. FARMAN
Who drives an eighty horse-power Panhard for France

and the Paris-Madrid Race, but it may be remarked that the great differences are: (1) guarding of the whole course by no fewer than 7000 officials to keep the public back; (2) no level crossings; (3) all the cars of approximately the same speed; (4) very little or no passing of cars, except in case of break-downs; (5) all the drivers highly competent and experienced; (6) twelve competitors instead of 223; (7) seven minutes' interval between cars instead of one minute, giving also time for dust to settle; (8) roads tarred and hedges cut down at corners; (9) the entire road surface made good; and (10) every cross-road blocked. In fact, as regards danger, I may repeat what I said recently in the *Westminster Gazette*. I have ridden horses in various countries and under all sorts of conditions, from Leicestershire to Virginia, and from a German riding-school to a wild pony in Mongolia, and broken many as well, for five-and-twenty years, while I have only driven motor-cars for less than two years; yet if I were thinking only of my own neck, I would rather drive a car in the Gordon Bennett Race than ride in the Grand National.

With one exception, the types of the competing cars, Napiers, Mors, Panhard, Mercédes, are familiar enough by this time, and their appearance is shown in our illustrations. The exception is the American Winton car, which marks a new departure, having eight cylinders, in two units of four cylinders each, placed horizontally (all the other cars have vertical cylinders) across the frame on one side of the fore and aft crankshaft. It is stated to have made "seven miles in six minutes, forty seconds standing start, and full stop finish, course three and a half miles, turn at the end

GABRIEL
Who drives a seventy horse-power Mors for France

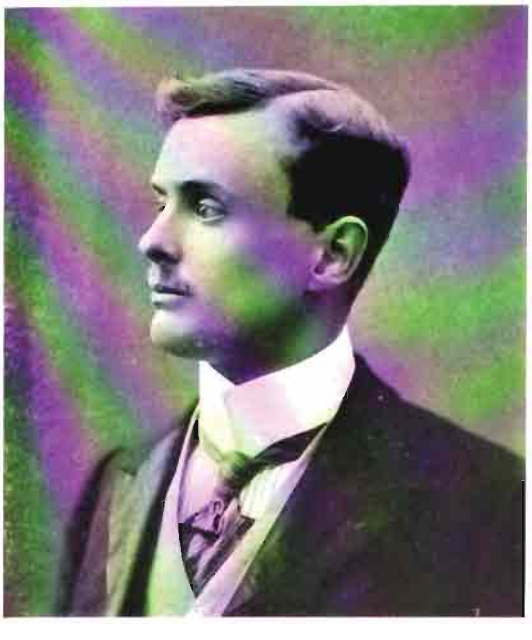


BARON DE CATERS

Who drives a sixty horse-power Mercédes car for Germany

and run back to the starting-point, asphalt pavement." As I have said, each car must have been constructed in every detail, in the country of its origin. Thus, as no good accumulators are made in the United States, the American cars will use dry cells, and the English cars will use Dunlop tyres.

The Automobile Club has erected a grand stand for its members and their friends, to hold 1000 people, at the starting- and finishing-points, and a Club enclosure, with garage and supplies for cars, food, and sleeping-camps, and many other stands have been built around the course. The railways will all run special trains and boats, and special steamers will carry foreign passengers and their cars from France



THE HON. C. S. ROLLS

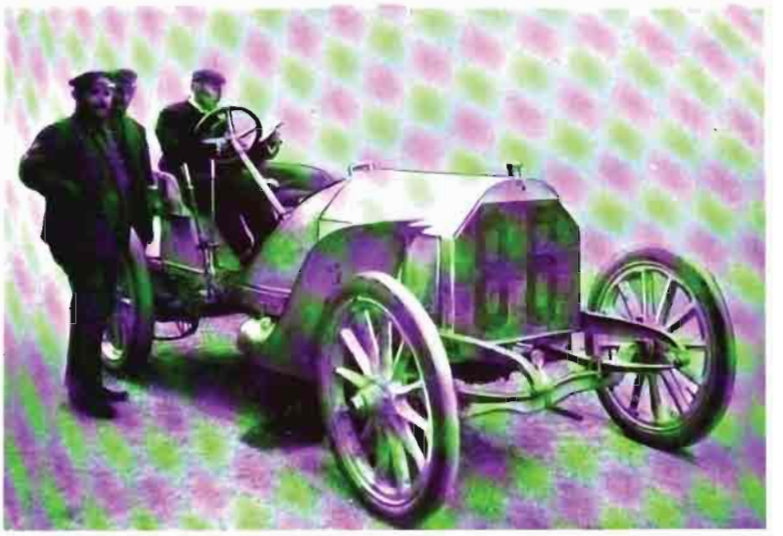
Who may drive a sixty horse-power Mercédes car for Germany

HIERONYMUS

Who may drive a sixty horse-power Mercédes car for Germany

and Germany. From all parts of England the local automobile clubs have arranged the trip for their members, with camping-out facilities near the course. Of course, all the hotel accommodation has been taken long ahead. Thousands of visitors will go from England, many taking their cars to enjoy after the race a tour in Ireland, and one may expect that almost every able-bodied inhabitant of Ireland, who can afford the cost, will go to see the race. It is impossible to estimate even roughly the total amount of money that will be spent upon the race, but it will be very large, running into hundreds of

thousands of pounds, much of which will go into Irish pockets. No public motor contest of this kind will ever be held again, racing in future being probably conducted under conditions of minimum weight of car, instead of maximum, and of maximum cylinder capacity, the winner being the maker who can get the greatest speed and reliability out of these conditions. Besides the Gordon Bennett "cup" a motor trophy will be competed for in Ireland on the water. This is a beautiful silver and bronze design to be known as the Alfred Harmsworth International Cup for Motor-boats, the contest to take place in Queenstown Harbour on July 11. It is presented by Mr. Alfred Harmsworth, to whose generosity, experiments and advice motoring in this country owes so much, and the conditions attaching to it are virtually the same as, but more clearly stated than, those of the Gordon Bennett Cup. It is to be competed for by boats of not more than forty feet over all, carrying two hands, propelled by any mechanical power



JENATSKY ON A NINETY HORSE-POWER MERCÉDES (GERMANY)

ON THE WESTERN LOOP OF THE GORDON BENNETT COURSE

Approaching Athy from Ballylinan

THE UNDULATING ROAD BETWEEN CARLOW AND ATHY

THE VILLAGE OF BALLYLINAN

A typical straight road

(except steam). They are to be constructed wholly in the country of their origin, and the helmsman must be a member of the Club of his country which enters the boat. A very interesting race is already assured, and the gift will undoubtedly be the means of directing the attention of inventors and the public to this application of the motor.

The complete programme of what is known as the "Irish fortnight," from which it will be seen that visitors will have a busy time, and all parts of Ireland have an opportunity of witnessing motor sport, is as given below. The races on the magnificent track in Phœnix Park will be one of the finest motor competitions ever held, many valuable prizes being offered, including a Hundred Guinea Challenge Cup to be given by the *Daily Mail* to the fastest car in any class.

*Thursday, July* 2.—The Gordon Bennett Race.

*Friday, July* 3.—Races on the Ashdown race-course, Dublin.

*Saturday, July* 4.—Speed trials, Phœnix Park, motor cycle time trials; garden party at the Vice-regal Lodge.

*Monday, July* 6.—Tour from Dublin to Newcastle and Belfast.

*Tuesday, July* 7.—Four-mile motor cycle race; four-mile time test and hill-climbing trial for the Henry Edmunds trophy.

*Wednesday, July* 8.—Newcastle to Dublin.

*Thursday, July* 9.—Start for Cork.

*Friday, July* 10.—Arrival at Cork; eliminating race for motor-boats and speed trial.


THE OFFICIAL BADGE, SHOWING THE GORDON BENNETT CUP, TO BE WORN BY STEWARDS AT THE RACE

*Saturday, July* 11.—Motor-boat race for the Alfred Harmsworth Cup at Queenstown.

*Monday, July* 13.—Start of tour through the south.

*Tuesday, July* 14.—Arrival at Killarney.

*Wednesday, July* 15.—Hill-climbing trial on the Killorglin-Tralee road for the County of Kerry Cup.

THE CURRAGH

This gives an idea of the road over the heath. There is room for any number of spectators in safety

THE FAMOUS STEWPONEY INN WITH A CROWD OF HOLIDAY-MAKERS

# A TRIP ON A TRAM

ELECTRIC JOURNEYS THROUGH THE ENGLISH COUNTRYSIDE—A FAST-LEISURELY METHOD OF HOLIDAY-MAKING—THINGS ONE CAN DO BY THE WAY—THE TRAM TRIPPER AND OTHERS

BY

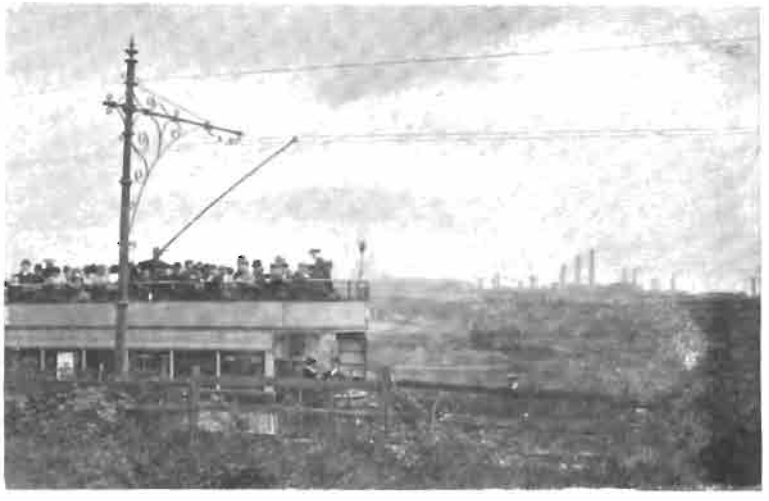
CHALMERS ROBERTS

*Illustrated from photographs specially taken for* THE WORLD'S WORK

HERE is a new recreation, and it has many attractions aside from its novelty. Only recently has it come within English possibilities that a week-end or a Bank Holiday could be devoted to a trip on a tramway. But there are now several districts where two or three days may be spent in the fast-leisurely travel which the tramway provides. It is true that inter-urban electric light railways are only in their beginning in England. There are infinite possibilities in such a thickly populated, such a picturesque and historical countryside. The wonderful success which has attended this system of travel in the United States, where often neither the population is great nor the surroundings attractive, easily proves that in this country the lines have only to be built to succeed. Apart from their usefulness much remains to be said in favour of their holiday-making possibilities.

Bicycling is good sport; it would be better if there were no such things as punctured tyres, soft roads, and long steep hills. Riding is exhilarating certainly, but there is always the responsibility of the horse, and little protection against the weather. Coaching is a noble diversion, but very few people can afford it. Motoring, also, is a brave pastime, yet the most efficient must

sometimes break down and be besmeared with oil. Even railway travel gets you from place to place within a given time if you are willing to forego pleasure and endure smoke and cinders by the way. But when it comes to cheap, irresponsible and satisfactory recreation with *no loose bolts, no punctured tyres, no lame horses*, and no *time-table* handicap, the tramway occupies a strong position. *It is not* necessary to take a *long tour* to get pleasure out of "*trolleying*," as the Americans *call it*. One-day trips are *quite* delightful, and the city dweller may go far afield and find much of interest between dawn and dark, exploring pastures new to him, lunching perhaps at some quaint wayside hostelry, and returning home in time for dinner at nightfall. Tramway travelling and tramway parties are sure to become more and more popular.

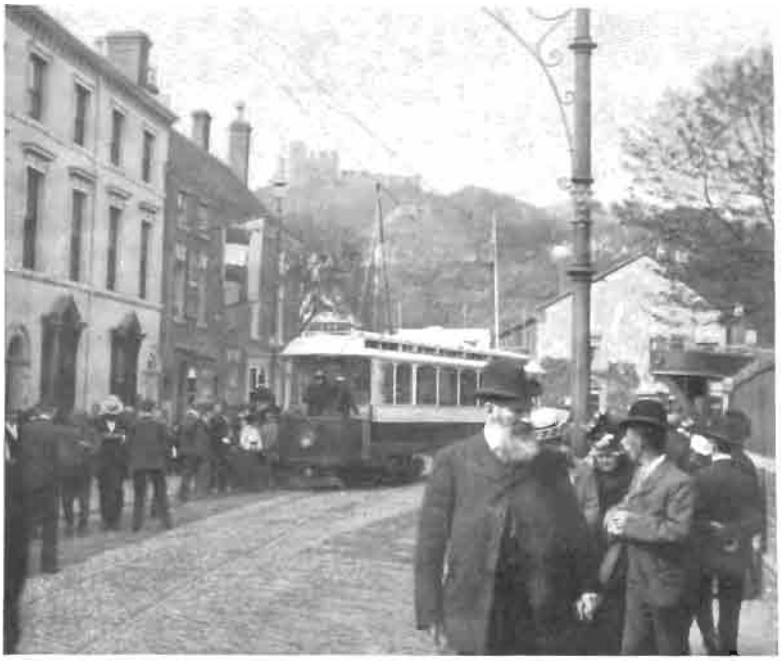


IN THE HEART OF THE "BLACK COUNTRY"

Steam is still the thing for swift travel where time is money and money the end and all, but there are many persons who are in no such hurry, who would prefer to go more slowly even at the same cost. Indeed there are a good many elderly men and women who are still rather afraid of the locomotive. Of course the tramcar has possibilities just as terrifying, but compared to an engine and a train of carriages it is really rather an innocent-looking affair. It will stop anywhere at a moment's notice and long enough to let even an aged person off or on comfortably. In the country it will even wait while you go back to the house for a handkerchief or your knitting-work. It will also stop if your hat flies out of the window, and the conductor, no doubt, will join joyously in the chase. On the whole, there is something good and sociable and old-fashioned about "trolleying," in spite of the fact that it is the newest form of travel.

TYPES OF CARS IN DUDLEY MARKET-PLACE

Steam for speed, therefore, trams for a good time. One cannot travel across England by them so far, but you can cover some of the most attractive parts of the distance. Within two or three years at the latest you will be able—but I am anticipating. It is a habit acquired from recent association with inter-urban promoters. So I had best confine myself to what can be done to-day. The first rule of conduct for the tramway traveller is, confide in the conductor. He will show you the principal places of interest on the route, even if he sets you down at the gate of the first lunatic asylum. For even the conductor is not yet acquainted with the tourist patrons in store for him. In the country, cars are apt to be few and far apart,



TRAMWAYS AT THE DUDLEY CASTLE GATES

though still more frequent than the trains. Then you need never hesitate to stop the tram when you want to get out and pick flowers. Don't fail to ask questions, even if an old gentleman tell you, as one told me on a recent tramway trip, that I asked questions no one else had ever dreamed of, much less answered. You will never realise how beautiful England is until you have travelled over it in this leisurely way. Of course my trip was in June, but no season could wholly destroy the beauty of the surroundings. You may cross the same country a dozen times by train, you will be whirled through it by night, whizzed through it by day, knowing nothing, seeing nothing, but a kaleidoscopic panorama, vague and unreal, mingled with the smell of coal-smoke and dust. You will not see, as I saw, comfortable John Bulls in their farm-clothes, sweet-faced women and children waiting at pleasant gateways for the tramcars, or getting off and disappearing down green lanes to a land which must be fair and peaceful because its people seem all so contented and happy.

It is true that the trip which I took from Wolverhampton to Stourport has yet one gap to be filled for a direct line of tramways. The inter-urban promoters assured me with inter-urbanity, which seems a part of all electric promotion, that the gaps would be closed up almost immediately. My holiday was brief, however, and I did not think it safe to wait, and a gap of five or six miles across country makes very pleasant walking. For an example of what may be done in this kind of holiday-making, let us suppose that the reader finds himself in or near busy Wolverhampton with a few days of leisure. Although within the corporate limits the tramways are municipal and of the Lorain system, just outside the boundaries of the city one finds the termini of the great system of the British Electric Traction Company, which extends over several of the Midland counties. Here the question between municipal and private ownership is very acute and not likely to be soon settled. Without entering at all upon the merits of either side, the most casual visitor cannot fail to note that Wolverhampton must suffer from the fact that its tramways are not joined to those coming from the surrounding country, and that it must be to the advantage of the owners of these country lines to carry as much traffic as possible directly away from Wolverhampton's doors.

Several ways lie open to the prospective tourist. He may go west to Willenhall and Walsall, and see at the latter place the oldest electric tramway in England. Within an hour he will find himself in a beautiful open country with the famous Sutton Park at the end of a short and charming walk. Sutton Park and the town of Sutton Coldfield are as full of historic interest as of natural beauty, and furnish much compensation for the destruction which surrounding industries have wrought upon a beautiful landscape. Here one may well spend the morning. Lunch over, your afternoon trip on the tram will lead from Wolverhampton almost directly south. On this line you come first to Bilston, one of the famous manufacturing towns of the Midlands. It used to be the centre of the japanning industry, but this has now given place to more elegant forms of art metal work, Messrs. Joseph Sankey and Sons being well-known for these goods throughout the world. The same firm, by the way, actually supplies the American market with electrical sheet stampings—a triumph of free trade

British industry. Here too, are the great steel works of Sir Alfred Hickman, the boiler works of John Thompson, the iron and galvanised sheet-iron works of George Adams and Sons, of the familiar "Mars" brand, the Cannon Iron Foundries of Coseley, and the cast hollow-ware of Thomas Holcroft and Sons—all firms whose products are of world-wide reputation. Every carpenter knows, too, of the famous grindstone quarry which produces Bilston stones. From here fine new trams run to Sedgley, whose beautiful surroundings and high beacon—which flared in the Armada—are familiar in the novels of Miss Fowler. It is mentioned by Grose for its locks and bolts and plough-shares, and this parish of great antiquity has even a curse of its own. "A Sedgley curse light on him!" is a line in Wycherley's *Woman's Prize*. Later, we reach picturesque Dudley, where Dudley Castle, one of the most satisfying of well-known ruins, commands all the surrounding country.

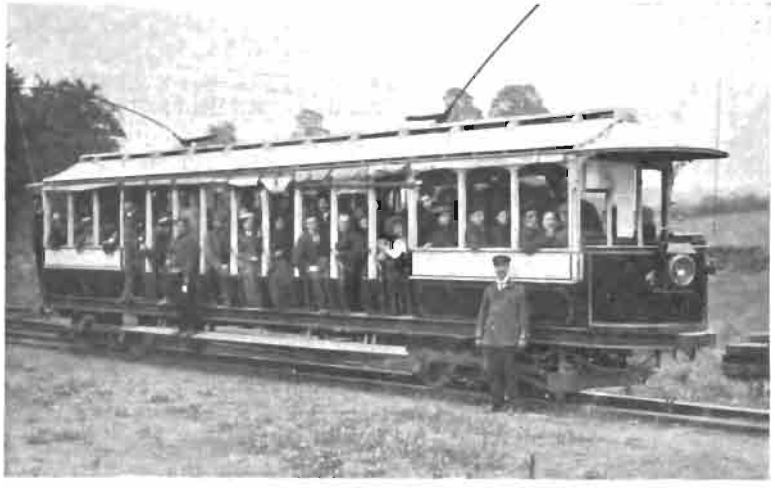
This is the least attractive portion of the journey, for it lies through the heart of the Black Country, and one feels on every hand the heavy stress of the working world. You look out everywhere on a cloud of smoke that seems to cover the earth, and to dim an horizon serrated with chimney-stacks. On you go over bridges which cover murky canals, through motley suburbs, past great iron mills overpowering, terrible, sometimes even artistic in the forest of unbeautiful chimneys about them, for ever vomiting gaseous volumes to take on every shade and hue of the changing light. One can easily imagine a horde of half-naked, muscular, and besmudged toilers, within the blackened walls, forging bands and sinews for the world's industry. As I passed through this country I thought it not an ill chance which begins a holiday by reminding you of the hardest workers of the world and the sweetness of even a short time of freedom.

But there are many things even in the heart of the Black Country to remind you also of the brotherhood of man and the leavening influence constantly at work for the amelioration of the condition of the least fortunate. In the market square at Walsall stands a monument to the memory of Sister Dora, who did so much herself and so much to attract the attention of others to the opportunities awaiting them here. And one sees everywhere in the district how such opportunities have been used. Parks have been made to cover cinder heaps, and parks of astonishing beauty at that. No one who has not seen them will believe that the ordinary grey cinder-heap can take on such a verdant growth of vegetation of all kinds, or that these huge, unsightly mounds may so well serve the artifices of the landscape gardener. There are even golf links on the cinder-heaps between Wolverhampton and Dudley. The Whitsuntide holidays were still on when I passed by, and many of the miners were thoroughly enjoying the ancient and honourable game.

The tramway constantly gives you surprises; in one moment you will be carried through the meanest streets swarming with the least fortunate of his Majesty's subjects. In another you will be bowling along a tree-lined avenue bordered with comfortable—even beautiful—suburban homes, such as one would not expect to see here even if coal had never been discovered.

AT THE SIDE OF THE HIGHWAY

Going to the Stewponey Fair



THE TYPE OF CAR IN USE ON THE KINVER LINE

The tramcars even go directly to the gates of gentlemen's parks, through which one sees long avenues of centuried elms leading to ancient manor houses. No doubt the carven lions on these gates have looked down upon many strange travellers before I came. There is unfailing interest and delight for the word-monger in the names of suburban cottages and of public-houses he passes along the tram-lines. One grows used to finding that "Chatsworth" or "Sandringham" may be only a "semi-detached," with two or three rooms, but one does not always find a country-inn called "The Labour in Vain," which cryptic title is illuminated by a large signboard showing two maids scrubbing a small negro boy. The most surprising of all on the first day was a little public-house called "The Gate Hangs Well." Just what gate and where it hung I could not stop the tram to see.

At Dudley, in the afternoon, we found the town in gala dress on account of the Whitsuntide *fêtes*, held in the Castle grounds. And here the usefulness of the inter-urban tramway was amply demonstrated. The railway station was far enough away to transfer even its passengers to the tram-lines, and from all the surrounding country—for six lines converge in Dudley—came cars loaded with holiday-makers. There were many old-fashioned *char-à-bancs*, but they were always empty as long as the cars availed. Only the overflow was theirs. But it was a contrast of past and present to find these latest of conveyances under the keep of this venerable stronghold. Beyond Dudley, past Brierley Hill, one gets glimpses of pleasant country where green fields and cattle and horses line the way. But here holiday-makers still fill the trams to overflowing. One conductor said that the name of his car was the "Bean-feasters' Joy." I asked him where the crowds who were going away from Dudley went. He said: "There are several wakes to-night." "Funerals?" asked I. "Oh no," he said, "they have wakes here without any corpses. It means a sort of evening party." At one moment the tramway will be hurtling through ancient village streets, waked from the sleep of centuries, at another it will be rolling peacefully along the king's highway, where coaches used to run.

If you have made a leisurely day of it, stopping often, you may well spend the first night in Stourbridge, which has a charming old inn called "The Talbot," where the coaches used to call. In another way tramway trips are more beneficial than those by rail, for given a good dinner and a good bed, the long day

A PLEASANT VIEW FROM A CAR PLATFORM NEAR KINVER

IN GREEN LANES NEAR KIDDERMINSTER

through the rushing open air will send you soon to sleep.

The second day of this journey as far as the scenes traversed are concerned is much more attractive. It wil take you only a short while to go by tram from Stourbridge to Kinver, and there you will have found one of the most beautiful spots in England. It has been made famous by many authors—Baring Gould in particular. It would indeed be hard to find a quainter, lovelier spot than this, where Shropshire, Worcestershire, and Staffordshire join. Passing through Wollaston, the tramway leads you first to the famous Stewponey inn, on the estate of the Foleys, who at one time or another seem to have owned the land for miles around. At Stewponey, where we stopped for about an hour, there was a country fair in progress, very different from the more dignified town *fête* at Dudley Castle. Here one found the actual farmers with their wives and children, and all the ancient paraphernalia of a county gathering. The Aunt Sallys and the shooting-galleries and the merry-go-rounds were doing great business, while penny squirts and teazers and confetti filled the air with shrieks and good-natured roystering. The picturesque old inn so overflowed with *fête*-day patrons that one could scarcely seek out its attractive points. From here the tramway leaves the high road, and going over a specially purchased right-of-way, through fields, by delightfully shaded water-courses, leads to the village of Kinver, nestling under Kinver Edge. This part of England is so covered with historic associations that one would become a very guide-book in recounting them, but they lend many attractions to the traveller, whom, however, the beauty of the place might well satisfy. The fact also that there is just now a gap of several miles in the electric line between there and Kidderminster, will make necessary the entertaining walk along the valley under Kinver Edge. On every side there are stately family seats, and the very rock itself is honeycombed with cave dwellings, where families yet live and which tradition peoples with all manner of wonderful men from the days of the giants, through early Saxon times down to historic royal refugees and later highwaymen. An easy walk of not more than two hours—if one does not stop too long over the attractions by the way—will bring the tram-tripper to Kidderminster, colloquially "Kiddie." This thriving town calls itself grandly Carpetopolis, and is particularly proud of its tramways which lead south to Stourport. And it is on this day that you would taste the real delights of tramway travel through English country. You follow the little river Stour until it empties into the Severn, and find constantly more beautiful views and vistas as the second day's travel by tram comes to a close.

One cannot fail to be greatly interested in the economic side of the question presented by this new method of cross-country journeying. In the first place, one can but feel that, whatever may be best for municipal tramways, certainly inter-urban communication is very convenient in the hands of corporate companies. The work of the British Electric Traction Company in this part of England is, to say the least, its best vindication. And as far as the people themselves are concerned the enterprise has not lacked support. The small cars of the American type which were first used have long since had to give way to great double-deckers of English design, and where this has not been possible, the Company has evolved a very attractive car in use on the Kinver section, which is half open and half closed. Length has been added, and the outside put inside, with ample protection at either end against wind and weather. There are many places on this line also giving admirable examples of light-railway construction. The best are where the line runs along at the side of the highway without in any way interfering with it. In this way the track is left clear and open, well ballasted with stones, but without any attempt to make it level with the road. The Company has employed various systems for running the trams, including the staff system, where passing cars exchange instructions and each acts as a check upon the other.

LIGHT RAILWAY CONSTRUCTION ON THE ROAD TO STOURPORT

But as the line is yet in many places a single one, it has found the ordinary system of waiting at loops to answer more satisfactorily. The line is followed throughout, however, by telephone, and accidents and breakdowns are very few.

One has not yet in England come to one development to which Americans have put the inter-urban lines. They have dining, sleeping, large goods cars, in which even horses and cattle are shipped, loaded at the farmer's door, and even funeral cars for country burials.

I like trolleying—as they call it in America. I like to stand on the rear platform and talk with the conductor. It is pleasant to become acquainted with your own country in this way, often acquiring intimate knowledge of goodly cities and attractive towns of whose very existence you were almost unaware. It is pleasant, too, to ride through the best parts of a town instead of traversing the squalid environs, peculiar to railway rights-of-way. Then the small fare you have paid makes you feel so free. There are no financial obligations—you get on or off as you please. I believe in the future of the tramway. It is in its infancy, and its possibilities are infinite. In ten years it will not merely cross many sections of England, but it will probably supply neighbouring farms with electric power and even give them smaller branch tramways of their own.

This is, of course, a look into the future, but it is not impossible when one passes, as we did, on this trip, the four best-known methods of transportation. At one time I could see a toiling-cart, a creeping canal-boat, a speeding train—all from the tram which carried me. This makes an interesting study of the march of events, and convinces one that electricity must finally prevail. The cart and the canal-horse must, indeed, have given way; the railway of the future will no doubt make use of electricity for frequent local trains—even if it never supplants steam for long and heavy hauls. In fact, American railways are building parallel electric lines for local traffic. But tramway development has so closely followed the general line of recent industrial progress, that its future is not one for prediction. At first there was local consolidation, then rural expansion, and these again were consolidated into complete systems. The success, therefore, of inter-urban light electric railways in England is not difficult to assure. Neither can antiquated and almost hostile laws, or the most determined and bitter local conservatism, stand long in their way. The whole subject is too big with industrial progress, too necessary to the well-being of the people, for small artistic prejudices, or large questions of ownership, to hinder its growing force.

THE FIRST RAIL-LESS TRAM LINE: BERLIN TO TREPTOW


# TRAMS WITHOUT RAILS

THE TROLLEY MOTOR-'BUS—A CHEAP SYSTEM OF TRANSPORT WITH OVERHEAD WIRES—FEEDERS FOR TRAMWAY SYSTEMS

A NEW form of conveyance, half electric-car and half omnibus, may be recommended to the attention of local authorities in this country. The object is to do away with the great initial cost of tram-lines (the saving in cost of construction is estimated at £6000 per mile), which after all make a rather tyrannical demand upon the roadways of busy towns, and are particularly inconvenient when they are laid among the traffic of narrow streets.

The system is named after its inventor, Mr. Max Schiemann. In conjunction with Messrs. Siemens and Halske, of Berlin, who first began to experiment with a rail-less system of locomotion twenty years ago, vehicles have been put on the road which derive their motive power from an overhead current but do not run on steel rails. At the present moment two lines are thus operated—one running between Berlin and Treptow, the other extending from Königstein-Hutten, in Saxon Switzerland, to Königsbrunn, through the valley of the Biela.

The name of "rail-less trams" has been applied to the vehicles by Mr. J. G. Wilkinson, who recently read a paper on the system before the Lincoln Chamber of Commerce. One important advantage it possesses is that no alteration in the road is needed, and as the overhead wires are arranged in the same manner as in the case of an ordinary electric-tram, they will stand good should it at any future time be decided to instal the latter system. In the rail-less electric line, as there are no rails through which to return the current to the generating station, a second wire has to be provided for that purpose; in all other respects the wires may be suspended from cross wires or hangers in the usual manner. Rods of light cane or steel tubing are pressed

CAR AND POWER HOUSE

The roads rom Königstein-Hutten to Königsbrunn are very good and a speed o. about eight miles an hour is easily maintained

against the above wires, each being provided with a skate properly lubricated and adapted to take the current. As these rods are arranged to be easily movable on the roof of the car, curves can be rounded with ease, and as a play of ten feet is allowed on each side of the wire, the car can be steered round any object, or about the road within the above limits. In narrow streets, where only one set of wires is permissible, the cars stop when meeting and the rods are taken down and passed, a simple and speedy operation, as is also that of turning.

The latest type of car has a body of the 'bus pattern mounted on two single-wheel bogie-trucks. The wheels are all of the same diameter and are of the "artillery" pattern, the axles running in roller bearings, and the trucks being connected by cross-pieces, so that the two axles will move equally. No differential gear is required, as the wheels are free to revolve independently, and the body is connected to each truck by four vertical pivots, four horizontal pivots effecting the steering, thus leaving the central portion of the truck free for the brake lever, and admitting of the application of the brake when running round a curve without interfering with the movement of the bogie. The rear wheels are the driving wheels, and independent motion is imparted to them from a pair of motors, each 8.5 horse-power equal current, suspended at the centre of gravity, by which it is stated that a speed of about nine miles an hour can be obtained, and short ascents of 50 per cent. can be successfully surmounted. The speed of the motors is, on an average, 900 revolutions per minute, and transmission is effected independently to each wheel through a single reduction "Grisson" gear, which effects a reduction of speed of 1 to 10.

These cars are made semi- and entirely closed in, both patterns having a seating capacity of twenty-six passengers. The driver's seat is located on the poles of the carriage at the front of the car, and is provided with a protecting roof. The speed regulator is formed with a hollow or tubular shaft or sleeve, through which the shaft or spindle of the steering-gear passes, and the hand wheels for operating both these shafts are placed one above the other in a convenient position in front of the driver's seat, so that both of them can be used at the same time when necessary. As the weight borne by the front steering wheels is only about one-third of the total weight, the steering is a comparatively easy matter, and as the other two-thirds of the weight are on the rear or driving axle, there is a mimimum of slip. The carrying poles are supported on the axles through six springs, so that the car is capable of running smoothly.

Halifax and Bolton are among the cities which are considering the new transport, while the Stroud District and Cheltenham Tramways Company is endeavouring to secure the necessary powers to run services through the valleys radiating from Stroud to Cheltenham, and connecting at Brockworth with the light railway to Gloucester about to be constructed by the Gloucestershire County Council. This indicates another important use for the new system, namely, for lines to act as feeders for a tramway or railway line. Such feeding lines might be used with advantage on the Bilston and Sedgley system.

Our photographs are supplied by Siemens Electric Appliances, Limited, 61 Watling Street, London, E.C., who are the agents in this country for Messrs. Siemens and Halske.

# FRENCH FROCKS AND THEIR MAKERS

FAMOUS KINGS OF COSTUME AND THEIR GREAT ESTABLISHMENTS—EXTENT OF THE INDUSTRY—BEAUTIFUL "MANNEQUINS" AND POOR "MIDINETTES"

BY

OCTAVE UZANNE

*Illustrated from photographs specially taken in Paris for* THE WORLD'S WORK

THE SEAMY SIDE OF FASHION

UNDOUBTEDLY Paris is the first city in the world for the production of the thousand and one aids which art and genius lend to beauty. But there is in this great metropolis a quarter clearly circumscribed, a sort of island of luxury, an oasis of elegance. Here more *than* elsewhere is in evidence the rule of that tyrannic deity, Fashion. This quarter, bounded by the Rue de Rivoli on the south, the Chaussée d'Antin on the north, the Rue Taitbout on the east, and the Rue Royale on the west, makes practically a city within a city, a sort of glittering hive where converge the many ingenious activities of elegance, where are multiplied all the varied examples of costume and of ornament, elaborated for the embellishment of the richest and loveliest of women. In this modern Paris of large arteries, of vast and spacious vistas, of beautiful perspectives, the veritable cosmopolitan centre of residence for all wealthy foreigners, the Rue de la Paix, which leads by way of the Rue Castiglione, from the brilliant quarter of the Opéra to the ancient royal promenades of the Tuileries, is the most dazzling and the most luxurious of all. There, as in the Rue Royale, are established the most opulent jewellers; there reside the masters of costume and of ornament, the most famous perfumers, the most artistic *modistes* — and also the

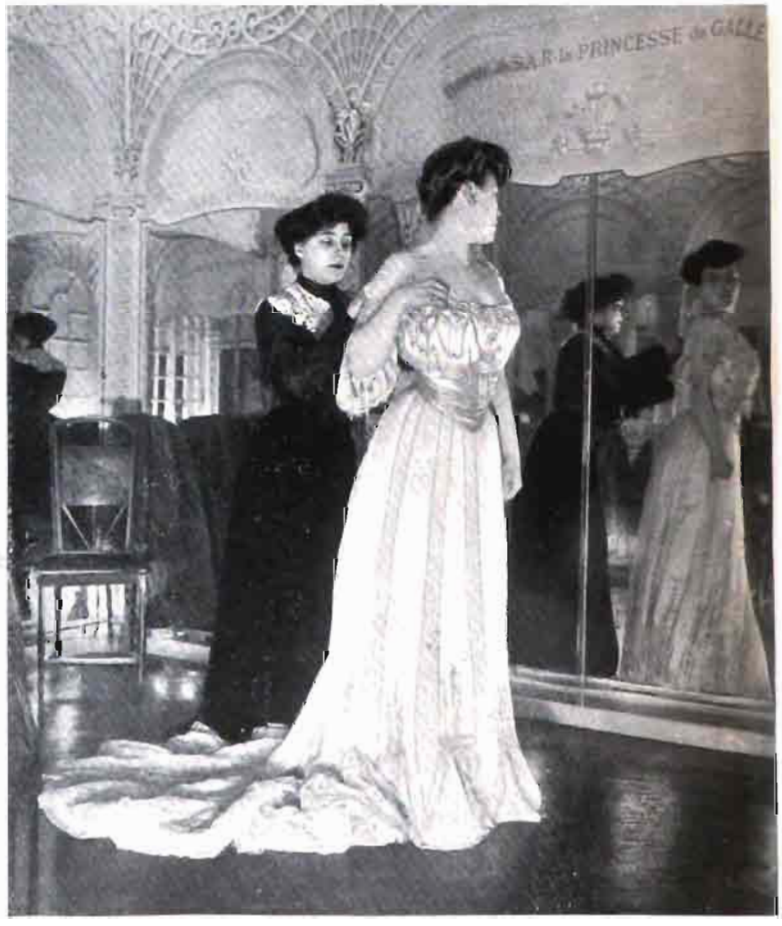
A FAIR CRITIC AND AN IMPORTANT ALTERATION

THE FINISHING TOUCHES

these women, sovereign by charm and *esprit*, humbly submit at a distance to the authority of the great *modistes*, the master furriers, and the master milliners of Paris. A dozen men, all-powerful creators of fashion, poets in a way, with a rhythm of chiffons, live here, on the alert to remodel every season by a caprice of elegance, the style, the silhouette, the figure of contemporary woman. These *couturiers*, able diplomats, authoritative and clever, are more autocratic even than kings, and they govern the most difficult and frivolous portion of humanity.

most pretentious in the matter of prices and fees.

Verily this is the Paris of the future, the Paris of attractive and beautiful shops, of houses overflowing with a million varied tributes to feminine luxury. This sumptuous quarter does not attract the attention of Parisians alone, but of the entire world, and charming Frenchwomen are not its only patrons. Its influence extends far beyond the metropolis, far beyond the borders of France itself. It appears as the place of delight, the paradise of flowers, of millinery, of trinkets, and of unimagined baubles, about which the women of the great worlds of London, of New York, or of St. Petersburg dream when they think upon the coming *modes* and their inevitable metamorphoses. The exquisite *mondaines* of the new world, the aristocratic beauties of the United Kingdom, the proud patricians of Russia or of Scandinavia, nearly all have their purveyors in this corner of modern Paris. These queens,




BEAUTIFUL FIGURE AND BEAUTIFUL FROCK

There stands in Paris, at the end of the Rue du 4 Septembre, a massive temple, black and ugly, resounding with the most violent financial clamour: this is the Bourse. The Rue de la Paix, the Avenue de l'Opéra, the Boulevard Haussmann, the Rue Royale, and the Chaussée d'Antin, hold a bourse more frou-frouing, less intense but more active. Here are transacted in costumes and *lingerie* a trade surpassing, perhaps, in value what is done in all the ports of France in cereals, in oils, or in metallurgy. This is the Bourse of Beauty, and, no less than the other, it offers behind a glittering façade, scenes where are unrolled the most poignant dramas of labour, where the social question, just as interesting when it concerns the little workwomen as miners or factory hands, presents itself in a fashion not less real because unnoticed. One finds a whole world there, a world that has been little described, but which presents, nevertheless, to the great public an interest infinitely more touching than any other. For a penetrating spirit, for a clairvoyant psychologist such as Balzac was, no field, no centre of labour, offers a more terrible subject for charitable meditation.

One encounters all the circles of paradise and of hell in this Kingdom of Fashion, from the cold and haughty elegance of the greatest clients living in splendour, down to the suffering and tears of the most humble workwomen existing in purgatories of misery.

Unceasing and formidable rivalries between the more important houses of the place only tend to add to the activity which forces them to provide every season designs of undoubted novelty, of success in the infinite combinations and variations of fashion. Each of the grand *couturiers*—or man-milliners—is determined to surpass his neighbour as much in imaginative art as in the magnificence of his models. The prize is indeed to him who will anticipate the forthcoming ideal of costume for day or evening, the triumphant millinery, the conquering cloak which all the women of luxury will wish to wear, or the bolero with a novel form, which will outstrip all that the mediocre little makers are able to design. Success is often attained by a mere knot of ribbon well placed, a cloud of lace, or a harmonious fold ingeniously hung. Here style is sovereign master; there does not exist yet an Ecole des Belles Modes as there is an Ecole des Beaux Arts, and the secret of the laws of elegance—of supreme prestige to the woman of the world—cannot be learned in any official academy. The art of the toilette is the most difficult of all. Is it not undulating, fugitive, subtle, charming, volatile, uncertain, like those who inspire it?

The type of great French *couturier* as he is known to-day, curiously enough, did not exist before the reign of Napoleon III. Before 1850 only women clothed women. The women-workers in fashion which one so often sees in the old prints of the eighteenth century reigned supreme for a long time; in fact, they will always exist, because they are often very great *modistes*. But the *couturier* has become the master, the all-powerful arbiter of the great lady's toilette. These men are, or have been, great artists. The aristocratic graces Watteau and Gainsborough found erstwhile with which to clothe the amiable and ravishing English and French women of the eighteenth century are yet at the disposition of great artists like Sargent, Shannon, Jacques Blanche, Albert Besnard, and many others; but, by the side of these masters of the palette, the great Parisian *couturiers* have become, in a way, the collaborators of the portrait painters, in the sense that they clothe our fair contemporaries with a taste, a delicacy, a sentiment of shade and of fold, delighting the senses of all lovers of art.

Michelet had reason to write, "Most trades are real and active branches of some art. The tailor, for example, is very near to the sculptor. For one tailor who understands how to model and rectify nature, I would quite willingly give three classic sculptors." Charles Blanc, in a volume devoted to Art in Ornament and Clothes, also studied the general laws of personal decoration, and demonstrated in a peremptory fashion that, far from being an object of frivolous observation, ornamentation by clothes and jewels is for the philosopher an incontestable indication of reigning morals and ideas. It would be interesting to write the history of the great *couturiers*, French and others, since one by the name of Worth—a British subject who had begun to sell shawls in London about 1850—established himself in Paris, where he immediately acquired considerable vogue as a *couturier*, and above all as an instigator of great reforms in costume. He was for a long time the autocrat of good style, and it was by following his example that other intelligent men, abandoning diverse professions, improvised themselves into *couturiers*, and acquired universal reputation under short and characteristic names, which need not be recalled here. Their success was, for the most part,

very rapid, and, in spite of a competition every day more keen, their *clientèle* seemed equally to grow, for the sum total of this business reaches to-day in the majority of these houses an extraordinary value. Clients who annually spend with their *couturiers* at least £2000 are certainly not rare. As one may imagine, the great difficulty of the trade is in obtaining regular returns, and in being able to enter annually full payment for goods sold. For women, true daughters of Eve, are easily tempted and fascinated by the charm, the elegance, and the luxury of models submitted to them. They often lose their heads, and do not know how to buy according to their means. Therefore, many of them are surprised when they are called upon to pay what they call in worldly slang their "great griefs." For these reasons the Parisian *couturier* often becomes the friend and confidant of his pretty clients who have had to implore his commiseration—to solicit his charity even—in accepting new orders which will add to debts already extensive. He therefore plays a very curious *rôle* in many Parisian households, and he appears as a sort of Mephistopheles in many divorce cases. Dramatic authors have not failed to put this personage on the stage, indicating the amusing traits of his professional character, his comic self-infatuation, and his pretensions to high art.

The products employed by the great Parisian *couturiers* are divided in the following proportion: silks make up 46 per cent.; laces are figured at 13 per cent.; *passementeries*, 11 per cent.; and of the remainder, according to the official statistics, furs, 8 per cent.; embroideries, 7½ per cent.; skirting, 4½ per cent.; wools, 3½ per cent.; feathers, 2 per cent.; and flowers, whale-bones, details of *lingerie*, horsehair, rubber, thread, needles, and so forth complete the percentage.

The great *couturiers* in the neighbourhood of the Place Vendôme calculate that their shipments abroad amount annually to about 65 per cent. of their total business. They divide these into deliveries to agents and middlemen abroad, and deliveries to English, American, and German *couturiers*, who come once or twice a year to see their new models, and to bring orders when they do not buy new types especially designed for reproduction. The rest are sales made directly to strangers who have come to Paris for the renovation of their wardrobes. The Parisian *clientèle* and that of the French provinces does not, therefore, exceed 35 per cent. of the total business of the great *couturier*. It must be confessed that this is very small, and little proportionate with the reputation for elegance of Parisian women. It is necessary therefore to recognise the fact that a great majority of these *élégantes* content themselves with much more modest dressmakers, who, after serving an apprenticeship with the famous masters, know how to copy with great ease new models at a much lower price for their faithful clients.

The value of business done annually by the Kings of Costume in Paris varies between seven and nine million francs (£280,000 to £360,000). These large sums are divided between about four or five thousand running accounts. Some of these accounts are very small, others fabulously high. One finds figuring there a number of women who enjoy a reduction of more than 60 per cent. from regular prices by reason of their positions in the world of art. These women are famous actresses, singers, music-hall *artistes*, or lady journalists very much in evidence, *élégantes* who are able to give a turn to fashion, and, in a word, all those who by their relations with the great world, or their personal publicity, are able to attract to the *couturiers* new clients, and thus keep alive the reputation of great establishments.

All the *couturiers* have the most minute reports upon the solvency of their clients both in Paris and abroad. They have a "white list" of prompt-paying women of assured fortune, a "yellow list" of less fortunate clients, to whom it is necessary in the French phrase "to pull their ears" in order to secure the payment of arrears, and also there is a "black list" of insolvents, that is, those *élégantes* having no available resources, and who, having found means to secure the delivery of numerous orders, are never able to pay the least sums on account for the costumes they wear, and with which they secure new dupes elsewhere.

The number of these bad debts is very great, and many of them belong to women of high rank, who would seem to be worthy to figure at the top of the famous "white lists." Without wishing to state any names, although many have already figured in the Press of the world, one may say that the sovereign families of Europe contain many women who have never been able to settle their debts with their *couturier*-creditors. It is estimated that at least 15 per cent. of the business done in the great costume houses is charged annually to profit and loss. Naturally, therefore, the good clients must pay for the bad.

The philosopher is able to remark upon good ground that a whole portion of humanity only thinks, lives, moves, for the satisfaction of this most insatiable and arbitrary goddess, Fashion. From the hunter, alert on the Pampas, in the forest, on the plain, to the most modest workwoman of the great city, the number of men and women employed upon the collection and the manufacturer of clothes is considerable. A great part of the work of the world, if one looks at it closely, is devoted to clothing woman and her beauty with comfort, elegance, and harmony. It is a curious thing that when a new fashion comes in, or is imposed, it either makes altogether a new branch of trade or resuscitates an old one. If fashion turns to delicate and cloud-like muslins, immediately new industries are put in motion and factories are filled with orders. If lace is exiled from the empire of dress, at once the most delicate production of this handiwork, embracing the fortunes of Bruges, of Chantilly, or of Venice, is paralysed. It is the same with velvets, with satins, and with the silk industries, which languish, or live a new life, according as the *modes* adopt or reject them. The wearing of crinoline in the old days caused the establishment of innumerable factories for steel bands, and the taste for bustles gave to the trade in horsehair an extension which it has not since enjoyed. The variations of fashion, therefore, governed by the great *couturiers*, have an economic importance of the first order; one might say also that they have a social importance, and that the condition of women employed in costume-making is worthy to be investigated with a little more solicitude by our legislatures.

Let us, therefore, return to our workwomen, and penetrate into the overflowing hives which they fill with their activities. The rooms for the designing of costumes contain many sorts of workwomen. Among the first rank of these are the cutters, who are charged with cutting out the stuff according to the measures furnished them, and the types of costume adopted; the fitters, who gather together the pieces of cut stuff and put them together according to order with the aid of a tacking thread. Then one finds here the most delicate seamstresses, who are called by the pretty name of "the little hands," whose needles add all the refined details to the costume. The work of a dress is equally divided between fitters, finishers, skirt-makers, bodice-makers, and those who attend to the lining. And these are only the large divisions, for it would take too long to name over the diverse category of work in a studio of dress confection.

The Parisian ladies and the great foreign clients who enter into the *salons* of the fashionable *couturier* only see the attractive and brilliant surface, enlivened with luxury and comfort, of the great house where they make their purchases; they would not be able to conceive the prodigious amount of labour which goes on behind the scenes of this theatre. They see moving about before them, very active, and nearly always occupied with receiving or delivering orders, about twenty saleswomen, many pretty girls called *porte-toilettes* or *mannequins*, and many triers-on, who know how to please and satisfy clients. But during all this time, responding to the exigencies of their orders, more than eight hundred workwomen are busy with feverish activity in the darkest of workrooms, badly heated and lighted, which are carefully hidden from public view. There, according to rank, seniority, and capacities for regulation and for work, the proud and haughty *premières* command and give orders to hundreds of beings, with whom they share the daily strain. Here the cutters cut out, the managers distribute, the measurers measure, surrounded by numerous apprentices, with thin, badly developed figures, mutinous, and often perverse, going, coming, hustling, bustling.

Suddenly a door opens, a brilliant *salon* is seen. We are here within the most luxurious retreat of the house; flowers are reflected in a multitude of mirrors, soft carpets glisten upon shining *parquets;* the rite of trying-on begins, very church-like, very solemn, very complicated, with gestures and with chosen words, like a mystic ceremony. The clients are seated in a group before a broad well-lighted stage, often they form a circle of beautiful stuffs and of rustling frou-frou. Many times, alas! rich clients are not of the type of beauty which responds easily to embellishment. On the other hand, those who serve them—the saleswomen, the fitters, above all the *mannequins*—are young and beautiful. But the clients have rank and fortune. They hold at their discretion these women who submit to their slightest wish without daring to laugh at their pretensions. Already there is a discussion as to the difference between what is demanded and what is offered. The buyer asks for such and such an article, for such and such a preferred quality. The saleswoman, always governed by the "latest fad," suggests on the contrary some new stuff of a striking and bizarre colour. Then the *mannequin* appears,

a woman young, beautiful, elegant, of an admirable figure which enhances the value of a robe. Such a marvellous skirt, such a striking bodice she would never wear outside of this *salon*, where she is paid for one of the most ironic and most ungrateful usages to which a woman was ever submitted.

At the command of the saleswoman, or of the purchaser, the *mannequin* turns, lifts her arms, lowers her head, bends, stoops, sits down, walks, and each time does everything with grace and dignity. A subordinate workwoman armed with pins and thread corrects, fixes, alters; the saleswoman makes notes, the *mannequin* turns about, strikes poses, mimics all the allurements of the coquette, and the satisfied purchaser smiles and decides.

These trying-on studios, and all the *salons* of the great *couturiers* which surround them, only constitute a gilded circle of the hell of work in which so many delicate and frail little Parisiennes suffer. What is infinitely more terrible are the workrooms where the workwomen live in a restricted space, ruinous to their health. The picture which I could paint would surely attract commiseration of people of the upper classes; but the canvas would be a long and elaborate one; it has been made the subject of a book by the Comte d'Haussonville, entitled *Misères et Remèdes*, and I may say the subject is far from being exhausted.

It is necessary to recognise the fact that it is a hard and painful existence, that of needlewomen. If one notes only the head women of the shops, the beautiful *mannequins*, and the clever saleswomen with the great *couturiers* who are able to make life acceptable, it is they alone who are the privileged ones, and the number is excessively limited. By the side of these lucky favourites of chance, beauty, distinction, and manner, whom intrigue or gallantry have often served, how many thousands and thousands of small workers reach painfully, at the price of twelve and more hours of labour per day, a reward of only 4 or 4.50 francs at most. The daily salary of the greater number does not exceed 3 francs, and moreover, nearly all these poor girls have to support themselves during the dead season, which lasts many months and reduces them often to the direst necessity. And this concerns only the able workwomen trained by apprenticeship from their childhood. How much worse is the lot of the inexperienced, of the unfortunate seamstresses in garrets or packed in numbers in great workrooms? Their salary seldom reaches more than 1.75 or 2 francs per day, after having sewn from daybreak to dark. Every day thousands of young, delicate women already suffering from disease could sing with truth the terrible words of "The Song of the Shirt" composed by a great English poet.

We talk very often of these little workers, of these marvellous little "fairies of fashion." Often in France the couplets of the music-halls sing their praises. People are pleased to hide their distress under joyous refrains in praise of their gentleness, or under propositions of love which their frail beauty has inspired. But what a life is theirs! Every morning when one sees them descend from the populous quarters and the suburbs, nearly all well gowned and smart, more than one has left at home a mother helpless on a bed of illness, a father in a hospital, brothers and sisters more or less naked and hungry. Nevertheless, such heavy griefs are unable always to conquer their twenty years of youth; joyousness and gaiety dominate for the most part the moving groups, and laughing and singing they walk side by side before going to imprison themselves in the great gilded cages where they are short of air, light, and space. At mid-day the cage-door is opened, and they all come gaily out to take, in all sorts of places, a repast as short as it is frugal. This tumultuous flight of the little workwomen from the workrooms at full mid-day has given them the name, *midinettes*. They are the *midinettes* who in groups fill the little creameries in the Quartier Latin, the restaurants of the poor, the most lamentable *gargottes*. The less fortunate ones, those who can scarcely afford to nourish and clothe themselves, must be satisfied with a bowl of milk drunk in haste with nothing more than a crescent or a *brioche*. Others accomplish miracles of economy, and remain virtuous, which is not so rare as one might suppose, while sustaining on their meagre income a necessitous family.

Men in whom the talent of artist has not excluded goodness of heart, also certain generous women, have for some years sought to ameliorate the condition of these little workwomen. Many associations have been established in Paris in their behalf. That called "Mimi-Pinson" is one of the most recent and the best administered. But all these efforts are yet very meagre, and I wish women of the world would at last understand that some solidarity unites them to these modest creators of their luxury, their style, and the elegances enveloping them.

# THE FACTS ABOUT PREFERENTIAL TRADE

A CURIOUS CHANGE OF ATTITUDE—THE NECESSARY FOOD TAX: WHOM IT WOULD BENEFIT AND WHOM INJURE—DO FOREIGN NATIONS SHUT OUT OUR GOODS?—WHAT CANADA HAS REALLY DONE—THE PRICE OF PREFERENCE

THE primary difficulty with regard to Mr. Chamberlain's demand for preferential tariffs is to reconcile the attitude he now adopts with the line he took up when addressing the Premiers at the Colonial Conference last summer. He then demanded of the Colonies two things: First, that they should make a regular and fair contribution to the cost of defending the Empire; and secondly, that they should treat the goods of the mother country *more* fairly in the matter of tariffs than they *now do*. On both these points he was emphatic; on neither has he received any adequate response from the Colonies. On the Defence question he pointed out to the Premiers that while the inhabitants of the United Kingdom spent at the rate of 29*s*. 3*d*. on military and naval defence—apart from war expenditure—the corresponding expenditure in Canada was only about 2*s*. a head, in New South Wales 3*s*. 5*d*., in Victoria 3*s*. 2*d*., and so on. He further pointed out that the navy of the United Kingdom defended not only the trade of that kingdom with foreign countries and with the Colonies, but also a trade in which the United Kingdom had no direct interest, namely, the trade of the Colonies with one another and with foreign countries. In conclusion he asked the Premiers to direct "their serious attention to a state of things which cannot be permanent." The result of this appeal was a promise of an increased naval contribution of about £100,000 a year from the Australasian colonies and about £40,000 a year from the South African colonies, and a renewed refusal from Canada to contribute anything at all. The first of these promises has not yet been redeemed; but meanwhile the burden on the taxpayers of the United Kingdom for naval defence alone has been increased by £3,000,000 a year. Thus the grave injustice of which Mr. Chamberlain complained to the Colonial Premiers has been very greatly enhanced since he spoke.

On the tariff question he obtained no concession whatever. A large part of his speech was occupied in showing that the so-called "British" preferential tariff initiated by Sir Wilfred Laurier in 1897, in reality benefited American rather than British trade. He concluded his argument with the following emphatic declaration:

"While we may most readily and gratefully accept from you any preference which you may be willing voluntarily to accord to us, we cannot bargain with you for it; we cannot pay for it unless you go much further and enable us to enter your home market on terms of greater equality . . . So long as a preferential tariff, even a munificent preference, is sufficiently protective to exclude us altogether, or nearly so, from your markets, it is no satisfaction to us that you have imposed even greater disability upon the same goods if they come from foreign markets, especially if the articles in which foreigners are interested come in under more favourable conditions."

Yet Mr. Chamberlain now proposes to make the people of the United Kingdom pay heavily for a preference which less than twelve months ago he declared, and proved, to be delusive!

The payment is to take the form of a tax upon food. Of all forms of payment that is the worst. A tax upon food possesses the primary vice of being unjust as between rich and poor, because it presses most severely on the very poorest classes. Nor is it possible to compensate for this injustice by other taxes, such as the income tax, which the poor do not pay. There are poor and poor. An artisan with 35*s*. or 45*s*. a week pays no income tax, but to him a tax on bread is a straw in comparison with the burden which such a tax inflicts on a country labourer with 15*s*. a week. It may indeed safely be said that a small tax on bread is only felt seriously by the very classes who ought not to be subjected to any burden of necessary taxation whatever, because they are already living on too low a scale of subsistence.

That is the primary wrong of the bread tax with which Mr. Chamberlain's scheme must begin. Moreover, his scheme would require

not a little tax like the present tax of 3*d.* a cwt., but a substantial tax of probably at least 1*s.* a cwt. For the essential purpose of the scheme is to give an advantage to the Colonies, and unless that advantage is a substantial one they will not be satisfied. But whether small or large, a tax which gives a preference to one body of producers is unjust to the rest of the community, whether that community be a nation or an empire. This is the second objection to Mr. Chamberlain's scheme, and it is perhaps more serious than the first, for it cuts at the very root of that system of honest finance upon which the marvellous prosperity of the United Kingdom is based. The one really satisfactory feature of the South African War was the proof it afforded of the tremendous financial reserves of the United Kingdom. It was the costliest war for its magnitude the world has ever known, yet the people of two little islands provided for the whole cost without any serious strain upon their resources. Meanwhile France and Germany in time of profound peace are faced with successive deficits, and cast longing eyes at England, who is able now to reduce taxation while they have to bear ever-growing burdens. The root of the difference lies in this: In England no tax is imposed except to raise revenue for the State. In France and Germany taxes are imposed partly for the purposes of revenue, and partly to subsidise private individuals at the expense of the community. The greater the advantage that a protective tax gives to the favoured producer, the less is the revenue that it yields to the State, and therefore in protective countries new taxes must constantly be imposed to make good the constant drain upon the revenue.

This is the system which Mr. Chamberlain wants to introduce into the United Kingdom, not for the benefit of any English or Scotch or Irish producers, but for the benefit of Colonial producers. Incidentally, of course, his taxes would benefit some home producers, for the British corn-grower will profit as well as the Colonial corn-grower by a tax on foreign corn. But that is not Mr. Chamberlain's object. His whole purpose is to benefit the Colonial producer. He argues that by so doing he will bind the Empire together. Surely the conclusive answer is that the Colonies can never be bound more closely to the United Kingdom than the different portions of the United Kingdom are already bound to one another. Yet no such tariff preferences exist within the United Kingdom as those which Mr. Chamberlain wishes to create as a bond of union throughout the Empire

To demonstrate the nature and the extent of the injury which Mr. Chamberlain proposes to inflict upon the Empire, in order to promote imperial unity, it is necessary to quote a few hard facts and figures. And first with regard to the broad issue as between colonial and foreign trade. Both Mr. Chamberlain and Mr. Balfour spoke in the House of Commons as if there were a sort of conspiracy on the part of foreign countries to shut out British goods, and implied that our Colonies on the contrary welcomed our goods and were able to buy them in unlimited quantities. That is a travesty of the truth. As a matter of fact, our trade with British possessions does not increase any more rapidly than our trade with foreign countries, and if we take account of the enormous growth in the area of the British Empire it might fairly be argued that our inter-imperial trade shows a relative decline as compared with our foreign trade. Going back half a century we find that the proportion of our exports of home produce sent to British possessions in the five years ending 1859 averaged 31.5 per cent. of our exports to the whole world. After forty years devoted to expanding the Empire the corresponding figure for the five years ending 1899 was only 33.9 per cent. The figures for the three years that have since elapsed have been greatly affected by the war, and by the subsequent necessity of sending out to South Africa large quantities of British produce of all kinds to make good the damage done by the war. Even so, however, we find that in the last completed year, 1902, the proportion of our exports to British possessions only rose to 38.4 per cent., leaving 61.6 as the share of foreign countries.

Descending to details the following concise table may be commended to the attention of Mr. Balfour before he next speaks on the subject of British trade:

EXPORTS OF BRITISH PRODUCE.

| To | Yearly average 1855-59 | Yearly average 1895-99 | Yearly average 1900-02 |
|---|---|---|---|
| | Million £ | Million £ | Million £ |
| Germany, Belgium, and Holland | 19 | 40 | 44 |
| United States | 19 | 20 | 21 |
| France | 6 | 14 | 18 |
| Canada | 4 | 6 | 9 |
| Australasia | 10 | 21 | 26 |

The above table shows that our exports to the principal Continental countries have increased quite as rapidly as to our self-governing Colonies. The table also shows that Germany, Belgium, and Holland together take considerably more British goods than Canada and Australasia combined. The only apparently stagnant trade is with the United States, but this stagnation, instead of furnishing any plea for Mr. Chamberlain's scheme, is one of the most powerful arguments against it. The slow increase in American purchases of British goods is due to the complete change that has passed over the nature of the trade between the two countries. In the fifties the United States was still a raw agricultural country and drew upon the United Kingdom for almost every kind of manufactured article, from steel rails to cotton goods. Now America manufactures largely for herself and only buys from us those manufactured articles in which we still have special advantages for cheap or excellent production. Exactly the same process is taking place *in our own* Colonies, and they are doing everything they can to expedite the process by placing heavy duties upon our manufactured goods so as to force the development of a local manufacturing industry. Even if they were to abandon this policy it is certain that as their population grew, so would their manufacturing industries automatically increase. Inevitably, therefore, the Colonies will tend to approximate more and more to the condition of the old countries on the Continent of Europe. They will in the future only buy from us, as France and Germany now do, those articles in which we display special excellence. They will not be such good customers as France and Germany and the rest of the Continent, for the simple reason that their populations are smaller. Canada and Australasia have a combined population of about ten millions. The Continent of Europe has a population of more than two hundred millions, rapidly growing in numbers and steadily increasing in general well-being, in spite of fiscal blunders and military burdens, and therefore every year forming a better market for manufactured goods. On the other hand there is no possibility that our self-governing Colonies can in anything less than a century outstrip in population say Germany alone. The population of Australasia is almost stationary. Last year in the State of Victoria there was an actual decline. In Canada the position is less serious because the policy of the Government is to encourage immigrants from all parts of the world. And they come—Russians, Poles, Germans, Hungarians, Italians, Japanese, Chinese, and negroes! There is also at present an enormous influx of Americans from across the border, but so far as can be gathered the purely British population of Canada increases very slowly indeed.

Thus, neither in Canada nor in Australia can we expect any greatly increased demand for British goods either in the near or in the remote future. At present Canada takes about 3 per cent. of our exports and Australia 10 per cent. But it may be asked, how about the rest of the Empire? The answer is very simple. With the rest of the Empire we already possess the advantage of mutual free trade. The Indian tariff is a purely revenue tariff, specially arranged so as not to injure the principal exports from the United Kingdom. Hong Kong and Singapore have no tariff at all, and in Ceylon and other Crown colonies the duties are generally moderate. In Natal and Cape Colony there is a protectionist bias, but it is from an agricultural rather than a manufacturing point of view, and therefore does not injure the mother country. Thus it is only in Canada, Australia, and New Zealand that there is anything to gain from what is pompously described as free trade within the Empire. Even if these colonies were willing to give free trade to the goods of the mother country, there would, for the reasons above stated, be little chance of any appreciable development of the trade. As a matter of fact, however, these three colonies have not the slightest intention of abandoning protection. On this point the resolution passed by the Colonial Premiers last summer is emphatic:

> "That this Conference recognises that in the present circumstances of the Colonies, it is not practicable to adopt a general system of free trade as between the mother country and the British Dominions beyond the seas."

The utmost the Colonial Premiers would agree to was a system of preferences. We know from the experience of the Canadian preferential tariff what such a system means. It means that the Colonies will first put up a tariff wall so high that neither British nor foreign manufactures can get over it, and will then make a small gap at the top for the professed benefit of the Briton, taking care, however, to leave the tariff still high enough to prevent any real competition with the protected colonial producer. This, as Mr. Chamberlain clearly showed, is the essential characteristic of the Canadian preference which has been so much boomed as an act of

spontaneous loyalty to the British Crown. The really effective portion of the Laurier tariff of 1897 consisted in the reduction or abolition of a number of duties on raw materials coming principally from the United States, so that an immense fillip was given to American exports to Canada, while at the same time the Canadian manufacturer had the advantage of being able to get his raw materials cheaper. The results are shown in the fact, that in the five years preceding the so-called preferential tariff the proportion of British imports into Canada averaged 32 per cent.; in the five years succeeding that tariff the proportion fell to 25 per cent. That is not a result which should make us anxious to ask for any more preferential tariffs. Moreover, we have to face this fact, that the United States can always outbid us in any offer we choose to make to Canada. The natural market for many Canadian products is the United States, and if the American Government had the intelligence to offer any real concession to Canada, the Canadians would instantly respond by giving to the United States as much or more than they could ever be induced to give to Great Britain.

In Australia the conditions are dissimilar, but they lead to similar results. The people in Australia who would benefit by a preference in the British market are the producers of wool and wheat and butter. The people in Australia who are responsible for the present protectionist tariff against British goods are the artisans and manufacturers living in the towns. There is little reason to believe that the latter class would make any great sacrifice of what they conceive to be their interest for the benefit of the former class. Nor is it by any means certain that the wool-growers of Australia would be anxious to see a preferential system established at the risk of German or French retaliation. The direct trade between Australia and the Continent of Europe is rapidly increasing, and the Australians would not care to see this trade destroyed even in return for a preference in the market of the United Kingdom. There is, in fact, no popular demand from any class of the Australian community for preferential tariffs.

The case for preferential tariffs, therefore, breaks down at the outset, because the utmost preference that the Colonies are willing to concede is a preference of the Canadian type, that looks well on paper, but gives no real advantage to the general trade of the mother country. To buy such a preference as this by a system of reciprocal preferences involving taxes either on food or on raw materials would be an act of national madness. Our free-trade system gives to us as a manufacturing nation two enormous advantages:

First, it enables us to buy the food of our people and the raw materials of our manufactures at the lowest attainable cost and of the best attainable quality.

Secondly, it gives us the benefit of the most-favoured-nation clause in the commercial treaties that other countries may negotiate with one another.

Possessed of these two advantages, we are able to compete in neutral markets on more favourable terms than any other Power. As a result, we find that even those foreign countries which are our most active competitors, buy more largely from us than they buy from one another.

France buys more from us than from any other country.

Germany buys more from us than from any country except the United States and Austria, from whom she buys raw materials which we cannot supply.

The United States imports half as much again from us as from Germany, and twice as much from us as from France.

Our position as a manufacturing country is thus pre-eminent even in these protected markets. To sacrifice this manufacturing pre-eminence for the sake of colonies whose main ambition is to become manufacturers themselves, would be sheer folly. Instead of binding the Empire together such a step would inevitably lead to disruption, for the people of the United Kingdom would not long tolerate a political connection with Canada and Australasia, when they found that the price of that connection was dearer food and failing industries.

# THE BOTTOM OF THE SEA

THE FAIRY STORY TOLD BY THE DEEP-SEA LEAD—CABLE-LAYING, ITS DIFFICULTIES AND LESSONS—STRANGE AND TERRIFIC ANIMALS OF THE DEPTHS—THE EXPLORATIONS OF THE PRINCE OF MONACO

BY

H. DE VERE STACPOOLE

I HAVE before me an old, old chart of the Spanish main. Irresponsible dolphins are figured gambolling over the free and open waters; on one margin there is a mark which may possibly be blood; at the top left-hand corner there is a mark which is certainly that of a tarry thumb. The thing is as full of romance as an old ballad, and just about as useful for the purposes of practical navigation. In the days when it was printed, yes, and long after, it little mattered to the world whether a ship had two feet or two miles of water under her keel so long as she had water. It matters now. And no one who studies the proceedings of the International Conference on Deep-Sea Investigation, which was recently held at Wiesbaden under the presidency of the Prince of Monaco, can fail to acknowledge the importance of oceanic research at great depths.

I turn from the old Spanish chart to the epoch-making chart of the *Challenger*. Here in place of dolphins we find soundings. This chart of the *Challenger* deserves and possesses a foremost place in the archives of the world, for it is practically the birth-certificate of oceanography. Before the *Challenger* expedition we knew next to *nothing* about the floor of the sea. For one thing, in those days we had not as fully the scientific spirit which urges men to lay out money without hope of return in the form of money; for another thing we had not the practical necessity for such knowledge. When Cyrus Field projected the Atlantic cable he little guessed, perhaps, the work to which he was putting his hand, or dreamed of the great fleet of cable ships that is now spread over the seas, a fleet to which knowledge of the sea floor is as necessary as knowledge of its surface, and to whose cable engineers and hydrographers we are indebted for many things, and not least for their maps of the ocean's floor.

What do we mean by the depth of the sea? The distance, you will say, from the surface to the bottom. Practically that is so, but it must be remembered that the ocean like the land has a very complicated undulating surface—the surface of the sea, in fact, has its hills. These undulations are caused by the attractions exercised by high portions of the lithosphere on the plastic hydrosphere. It is estimated that in this way the geoid or figure of the earth departs from the figure of the spheroid in some places by as much as 1000 feet. Though of no practical importance, it is as well to remember this philosophical fact when we consider the question of the sea depth. From the mass of evidence produced by the deep-sea lead we now know that more than half of the sea's floor lies at a greater depth than two geographical miles (2000 fathoms) from the surface, and no fairy tale could be stranger than this story told by the deep-sea lead about the appalling dimensions of the sea.

Along the continental slopes the sounding lead shews as a rule sudden depths, sometimes sheer submarine cliffs. What a tale that extraordinary lead tells! North of Teneriffe I have seen soundings of a few hundred fathoms taken quite close to soundings of over a mile; the difference was caused by a range of submarine mountains that lie there, mountains with peaks a mile high, mountains over which the wind has never blown or the sun shone. Our cable engineers knew the lie and configuration of those mountains as well almost as if they had climbed over them, for to be a successful cable engineer you must know the bottom of the sea—and know it well.

Take for instance, the job of laying a cable. The cable is coiled down in high tanks on board your ship, the ship steams along, and the cable is paid out behind. Nothing seems more simple? Well, you little know the excitement and nerve-tension of a cable-laying job. To the engineer in charge one of the chief questions apparent in his mind is, "Am I paying out the cable too swiftly or too slowly?"

Suppose the ship's course lies across two sub-

marine hills half a mile apart, well, if he is paying out too slowly the cable will be stretched between those hill summits like a clothes-line between two props, to be broken by its own weight or by the first big fish in a bad temper that fouls it. Suppose the ship is passing over a level plain, if the cable is paid out too fast it is simply wasted, and cable is not stuff to waste. All the time the ship is steaming ahead and the cable drawing out of its tank the engineer in charge knows that he is practically spraying sovereigns behind him; besides, if you cast too much slack out it lies about on the sea floor and is liable to get tangled and kinked. I have seen a broken cable brought up on a repairing job, and it looked as if mermen had been amusing themselves tying knots in it. I have never seen such a tangle before or since. Besides hills and plains, cable engineers have to take into account hollows, and there are some very considerable hollows in the sea's floor.

On the *Challenger's* chart all spaces where the depth is over three thousand fathoms are called "deeps." Forty-three of these deeps are known. Twenty-four in the Pacific Ocean, three in the Indian Ocean, fifteen in the Atlantic Ocean, and one in the South and Antarctic Ocean. Within these "deeps" over two hundred and fifty soundings are recorded, of which twenty-four exceed four thousand fathoms, including three of over five thousand fathoms. Five thousand fathoms are equal to five geographical miles. Imagine, if you can, a five-mile depth of water!

The bottom of the sea is, in fact, a country of hills and mountains, plains and valleys; could the water be stripped away you would see a landscape more fantastic than any we know of, and moreover, it would not be destitute of life.

If when the waters were stripped away the deep-sea things were left behind, no man knows what enormities in the form of life would be exposed, but we do know that in parts of this newly exposed country the sights seen would be terrific. One decapod of large size is a sufficiently terrifying sight, but if you wish to gauge the number of the giant decapods you must number their destroyers the cachalots, of whom no man knows which is greater—their number or their appetite. The world of the sea is larger than our world in many ways, in size, in population, even in imagination. Man imagined the devil, but the sea imagined the decapod, and who knows what else she has imagined worse if possible than the worst of all known forms?

Cable ships, as I have said, have done much to increase our knowledge as to the composition of the sea's floor and its varying depth, but necessarily they have not done much to increase our knowledge of the fauna of the great depths. When a cable is broken and one picks it up to repair it specimens of deep-sea life often come on board clinging to the cable. Unfortunately, however, the wheel at the bow-bulks over which the cable is pulled aboard crushes and destroys three-fourths of the things on the cable. I have picked a little star-fish from a cable brought up from over a mile away below and that same cable was tufted with lumps of coral as big as my head. But to pursue the study of deep-sea zoology, you require a host of instruments which no cable ship carries—dredges, nets, traps, &c.,—and all that the ingenuity of man could suggest has been done in the construction of this gear. It has not been ingenuity wasted. In the twelve deep-sea expeditions undertaken by the Prince of Monaco since 1885, these traps and dredges and nets have enriched zoology with hundreds of new species of living things. During the *Hirondelle* expedition (1886–1888) 167 species of sponges alone were brought up, of which 58 were new to science. Six species of star-fish hitherto unknown, and 39 new species of amphipods may be given as a small item in the list of things brought to light during these wonderful expeditions; while innumerable soundings were taken, which gave us amongst other facts the extent of the great depression south-west of Madeira named the "fosse de Monico."

That the sea is teeming with life even in its greatest depths these and other expeditions have proved. We know also that plant life is absent over nearly the whole of the deep-sea floor. On what then do the deep-sea creatures live? As far as one can see a community of living creatures cannot exist entirely by feeding on living creatures. The lion devours the deer or horse, but the deer or horse lives on grass. There must be, so to speak, a basement food. It is said that plants living on or near the surface decay and die and fall to the depths, forming a sort of manna from the watery heavens, and that this manna is absorbed by the ooze covering the floor of the sea, which ooze is devoured by all sorts of humble mud-grubbers who in their turn are devoured by more distinguished relatives. The whole of the ooze at the bottom of the sea, in fact, has probably passed through the alimentary canals of deep-sea creatures many times over!

Another vital question, "How does life obtain oxygen at great depths?" is answered, strangely enough, by the deep-sea thermometer.

The thermometer tells us that 92 per cent. of the floor of the deep sea has a temperature of less than 40° F. The floor of the Indian Ocean in a great part of its extent has a temperature of only 35° F.

This low temperature is acquired at the surface in polar regions—chiefly at the South Pole—and the chilled water, bearing oxygen with it, sinks and creeps along the sea floor towards the equator, bearing life to countless gasping myriads. Actually the sea may be said to breathe, for if this is not respiration, what is?

The history of deep-sea exploration is yet unwritten, but what a field it presents for an historian! It is impossible to leave even this imperfect glance at the subject without paying a tribute to the men who have cast light on the darkest places of the earth, places with which the names of Makaroff, the Prince of Monaco, Benest, Peak, and a hundred others will ever be connected.

They have drawn the map of a world which no man has ever seen, a world of hills, mountains, valleys, and plains far larger than the world we call the earth; they have taught us that this world is peopled to its uttermost places with life in forms that we know of, forms more fantastic than any born of the imagination of a Fuseli or the dreams of a madman; they have taught us how this life exists and under what conditions; and great as their labours have been they perhaps have brought us only to the threshold of the subject, for no man can get into his brain the idea of the vastness of the sea or the vastness of the number of its people. The herring shoals alone are beyond the compass of human conception. It is strange to think what the word oceanography means to-day and then to turn again to the old-time chart, which is still at my elbow, the chart yellow with years, engraved when Spain was a power in the world by one Antonio Guitero of Cadiz.

# AN AMERICAN COMMERCIAL TRAVELLER IN ENGLAND

THE "COMMERCIAL GENTLEMEN" OF ENGLAND—THEIR MANNERS, CUSTOMS AND METHODS SEEN THROUGH AMERICAN EYES

BY

FRANK J. POOL

ON my initial trip as commercial traveller in England, a kind friend told me that I must state I was a commercial on entering an inn, and he added that the Commercial Room had peculiar customs. Arriving on a morning train in a famous university town, I was soon in the courtyard of an old-fashioned inn, which had been recommended as the best commercial hotel. I was welcomed by the "Boots" and directed to a "Commercial Room" marked "Private," a warning to be heeded. It was a large room on the ground floor, bright and cheerful, with a long dining-table in the centre, a big side-board at one end, small writing-desks by the windows and comfortable easy chairs before a generous fire-place. The desks were covered with the leather writing-cases of the Commercials awaiting the result of the day's work; overcoats and umbrellas were on the hat-rack—the room had a habitable air. Two men who were writing when I entered, looked up and bade me a cheerful good-morning, and then returned to their work. After returning their greeting I went out to interview the Boots.

The Boots is really the most important person in the inn, and has much to do with its popularity from the commercial point of view. He helps you unpack your sample trunks, provides a man to carry them to your customers, knows all about the arrival and departure of trains, and will arrange a suitable plan of campaign for a stranger. As I carried no samples, all I had to do was to arrange a route, with his help, and sally forth. But as the average English buyer does his work slowly and in small quantities, very few pages of my new order book had been used before thoughts of dinner began to suggest themselves.

The Commercial dinner is served promptly at

one o'clock or at a quarter past one. Should twenty Commercials be stopping at the house and only one be present at the appointed hour, the soup is served. It was a few moments after the hour when I re-entered the Commercial Room to find sixteen seated at the long table, now covered with white linen and decorated with flowers. At the head of the table, engaged in serving the soup, sat Mr. President, who occupies this position by virtue of having remained in the hotel longer than any other person present, and at the other end is Mr. Vice, the second in length of stay. This I did not then know. After hesitating for a moment, I slipped modestly into a vacant chair. In a few seconds I was conscious that every eye in the room was fixed upon me. Presently the President, a ruddy-faced old man of about sixty, said: "Perhaps the gentleman who has just seated himself is unaware that this is a private room?" This was said courteously, but firmly. My first thought was to telegraph to the American Ambassador and to get out my passport declaring me to be a free-born American citizen, but the savoury odour of the soup and my friend's warning prevailed; so, half rising from my chair, I stammered out something about my ignorance. With every desire to relieve my evident embarrassment, and at the same time to uphold the traditions of the table, the President said, "The gentleman is a stranger and wishes to join us." A hearty permission was given at once by all, and I reseated myself.

Just at this moment another late-comer arrived, and on entering said, "Mr. President, Mr. Vice, and gentlemen, may I join you?" All chorused in a hearty welcome, whereupon the President said, "Be seated, sir. There is ox-tail soup, may I serve you?" I afterwards learned that this man was known to almost every one in the room and was a prominent official in the Commercial Travellers' Association. I had learned my first lesson and thereafter never seated myself at table without first asking permission.

Meanwhile I had not been neglected. I had been served by the President, and my neighbours on either hand spoke to me on general topics, but made no attempt to ascertain my "line," nor did any one talk "shop." "Shop," politics, and religion are tabooed in the Commercial Room as breaches of etiquette, and a constant offender is barred from the room. Should a Commercial desire to talk business it must be done in the coffee-room or bar-parlour. In my journey about the country but one attempt was made to pry into the nature of my business and that was by an American. The only personal point ever touched upon was my nationality. My accent betrayed me almost invariably at first, and although there was at the time a strong feeling against the "Yankee Invasion," I was never made to feel it.

The fish now being on and the cover removed, the President announced: "A boiled cod with white sauce, gentlemen. Mr. Vice, may I have the pleasure of serving you?" To which Mr. Vice promptly responds that he will take some a little later, but in the meantime has some whiting to offer. The President also begs for time—and they proceed to serve the fish. This formal announcement and exchange of courtesies accompanies every course. With the fish comes the matter of drink and also another pitfall for the stranger. The old custom was that the President ordered for the table, the expense being divided equally, but this custom, owing to the number of total abstainers and diversity of taste, is not followed. The tradition is kept up, however, by an announcement from the President that the table is "free"—that is, each diner orders for himself. If the President be an elderly man, he generally says, "If you desire to give me the honour of ordering for you, pray command me; otherwise the table is 'free.'" On special occasions, however, such as the King's birthday, the President usually has to thank the table for the honour of ordering. Claret, ale, and cider are the drinks most frequently used at this time, and the tardy appearance of my half-pint of bitter was the only thing that saved me from another serious breach of manners.

Before drinking for the first time, each man lifts his glass and says, "Mr. President, Mr. Vice, and gentlemen, your very good health." Every one says "thank you," with that rising inflection on the *you* peculiar to England. My gravity was nearly upset by the continuous musketry fire of toasts, followed by an explosive "Thank *you*."

No fish, joint, fowl, or pie, that has been cut can come on the commercial table. The commercial gentleman does his own carving to preserve the privacy of his table and will not permit the landlord to do it. He makes of carving a fine art and it is a joy to watch him at work. I use the word "work" advisedly, for it is no small task to carve and serve twenty hungry men with skill and dignity. The roast joint is placed at the head of the table, the boiled one at the foot, and the fowls or pies are served by those occupying the centre seats on each

side, so that a stranger within the gates, unless an expert carver, should avoid those places.

With the cheese and sweets the waiter passes around a plate on which each diner puts one penny—no more. This is for the support of the Orphans' School and Pension Fund of the Travellers' Association. The money collected is counted by the President, who enters the amount in a book kept for the purpose, signing his name to the amount. It is then cared for by the innkeeper until a quarterly visit from the proper officer verifies the amount and receipts for it. As this collection is taken up at every commercial dinner in Great Britain each day, a considerable amount is realised in the course of the year. I once had the honour of presiding at dinner, serving myself as Mr. Vice, announcing a "free table," proposing my own health, and signing my name in the book for the one penny collected. I told a travelling acquaintance this story and all the appreciation I received was, "Really? What extraordinary things you Yankees do!"

When dinner is over the men go their several ways until tea-time. Tea is a continuous performance lasting from half-past five in the afternoon until nine o'clock; then the cloth is withdrawn and those desiring supper go to the coffee-room and pay coffee-room rates.

It was cold and stormy when I re-entered the Commercial Room for tea. A cheerful fire was burning and about it were gathered a dozen men. Several rose at once from comfortable places in front of the fire and offered me their chairs. As I was the latest comer, wet and weary, I was therefore entitled by the custom of the room to a place, only to give way in my turn. Letters are now written, and orders and advance notice of visits made out, while the Boots comes in every few minutes to collect the mail. At nine o'clock the Boots coming in with an armful of the old-fashioned carpet slippers, removes your shoes and marks on the soles the number of your room and the hour of your morning call. A cloth cover replaces the linen one on the table. Smoking is now permitted in the room.

As this was my first visit to a university town, I left the Commercial Room before nine o'clock to sit in the bar-room and get a glimpse of undergraduate life. Very soon the hostess came in, to remain the rest of the evening, looking after her guests and chaperoning the barmaids. She passed from table to table with a word for every one, and a handshake for the visiting graduate. On coming to my table she noticed that I still wore my muddy shoes. She recognised me as a Commercial stopping at her house, and sent one of the barmaids to the Boots for a pair of slippers, only to learn that the supply had given out. Again the maid was sent, this time for the landlady's husband's, and not until the maid returned a second time empty-handed did I learn the object of her quest. I assured her that I did not care for slippers and that I had a pair in my bag, whereupon she insisted on having my keys and sending the maid up to my room. I prevailed, however, when it came to helping me off with my shoes, but had to watch them disappear in the hands of a woman.

Returning to the Commercial Room I found the men gathered about the fire talking cricket, fishing, the odds of the next Oxford-Cambridge Boat-race or other matter of local interest. The subject is never business, though sometimes a veteran of the road will tell of the inns and travel forty years ago. I heard a story of a waiter in one of the inns I would presently visit, and verified it afterwards. This waiter, who had served thirty years in the Commercial Room, had a hobby—to order your breakfast for you. The tenderest chop, the sweetest slice of bacon was yours if you only said to him when he came to take your order before going to bed, "You order my breakfast at nine, Paul, with coffee and hot toast." At nine o'clock it was on the table hot and appetising. When I visited the inn a year later he came to me and said, "Will you breakfast at nine as usual, sir, with coffee and hot toast? Thank you."

With the evening pipe a long "peg" of whiskey and water, or ale, is permissible, but the custom of treating is not good form. With each fresh glass, and before drinking, the toast, "Gentlemen, your good health," should be proposed. Due care must be taken to acknowledge all offered. By half-past twelve the Commercial Room is in darkness.

As the custom and tradition contribute to the personal comfort of the Commercial, in a like manner do they impose restrictions and burdens. The social distinction between the Commercial and his "Governor" is very marked, and he seldom has the benefit of personal intercourse and exchange of ideas. He must keep along in the track beaten by his predecessor without chance for improvement. I have met refined and educated men on the road who have been spoken to by their employers but three or four times in as many years, and then a simple recognition was the favour bestowed. I know of one case where this recognition came but three times in fifteen years.

# "BACK TO THE LAND"

## LIFE IN THE COUNTRY ON LIMITED MEANS

POSSIBILITIES AND IMPOSSIBILITIES—WHAT A FARM, A SMALL HOLDING, "A COTTAGE IN THE COUNTRY," OR POULTRY-FARMING INVOLVES—WHERE THE WOULD-BE BACK-TO-THE-LANDER ORDINARILY FALLS SHORT—PRACTICAL EXPERIENCE OR THE PURCHASE OF IT THE SECRET OF SUCCESS

BY

"HOME COUNTIES"

*Illustrated from photographs specially taken for* THE WORLD'S WORK

"Hackney'd in business, wearied at that oar,
Which thousands, once fast chain'd to, quit no more,
But which, when life at ebb runs weak and low,
All wish, *or seem to wish*, they could forego;
The statesman, lawyer, merchant, man of trade,
Pants for the refuge of some rural shade,
Where, all his long anxieties forgot,
Amid the charms of a sequester'd spot,
He may possess *the joys he thinks he sees*,
Lay his old age upon the lap of Ease."

THE familiar lines are now more than a century old, "O more than happy husbandmen if they only knew their good fortune" dates back nearly two thousand years, and sentiments resembling those of Cowper and Virgil may yet be found inscribed on the tablets left behind by the folk who paced those "elevated sidewalks" of Nippur in B.C. 4500. The "Back-to-the-Land" sentiment is no new thing. To-day, for various reasons, more is heard of it. To mention no other causes, the number of countrymen turned townsmen, and their descendants, who,

"employed with ceaseless care
In breathing smoke,"

lift wearied eyes "from cities humming with a restless crowd"

"To regions where, in spite of sin and woe,
Traces of Eden are still seen below,"

has grown so much larger, and the attention of the world is now arrested, morning, noon, and night, by the myriad sheets of that daily and weekly Press Sandalphon, into whose ears, as a great journalist once wrote, are poured sooner or later the sorrows of the heavy laden and overborne.

Commonly, when "the statesman, lawyer, merchant, man of trade" seeks the retirement of the country, he is in possession of a competency. He can afford, therefore, to buy his experience. There is a class, however, drawn from various ranks in life, keenly desirous of getting "back to the land," which has none too much money to spare, and eagerly, according to its lights, seeks a mentor. It is for these folk that I have been asked to furnish a few hints in THE WORLD'S WORK.

Turn to the "Answers to Correspondents" columns of the agricultural and *petite culture* Press, look into (if you could) some of the letters rained down upon the editor of a daily newspaper which happens to have printed an article on rural life and industries, and you discover scores of cases of men and women with small incomes or a few hundred pounds saved, City clerks with little but their wages, pensioners (officers and men), tradesfolk who do not like their business or are recommended by their doctors to live in purer air, all united in a common bond of limited means, a fervent wish to live in the country—and ignorance of the real conditions of country life.

Some of these correspondents have produced a few vegetables and kept half a dozen more or less unhappy hens in their back gardens—the green-stuff grown and eggs laid costing them, it may be, about what they could have been bought for in the shops, or perhaps twice that amount. If there are cases in which the gardens and poultry are alleged to have "paid"—it is seldom, one notices, that anything is put

down for labour, rent, and wear and tear of tools when the profits of this activity are made the basis of glowing estimates of receipts in a more elaborate venture in the country—two things at least are true of these would-be Back-to-the-Landers. First, nearly all they know of the country is what they have read about it, and seen, or, rather, in Cowper's phrase, think they have seen, during their holidays or cycle runs. In the second place, they are gorged to the lips with an untested and undigested mass of here-and-there skimmings of poultry, market-gardening, and agricultural papers and handbooks which they fondly cherish as the very milk of the word of knowledge and experience, and as rendering unnecessary the acquirement of much further information before the journey into the country is entered upon. These "good people all, of every sort," merely seek to be told where there is a house in a rural district that would suit them, whether it is best at present to go in for cows or poultry, how many hens would have to be kept to bring in £100 a year (or possibly £200), and what "a small farm" would cost to buy or rent? And what could be easier than to answer these questions satisfactorily?

The plain truth is, that the success of only two classes who go "back to the land" with a view to making money is reasonably assured. These are men who as farmers' sons spent their youth in the country and men who began life as farm-labourers. They know what they are doing. Other ex-townsmen who project themselves "on the land" usually do not. It might be added that it is not very long before they find this out.

What are the ideas with which, as one learns on cross-examination, the folk of this last class would betake themselves to the country? Some "very much wish to try farming." Others aim at the possession of "a small holding." Many merely seek a pleasantly situated house or cottage, a large garden and a paddock. All, or nearly all, expect to derive some sort of income from their life in the country. Not a few of them thoroughly believe they will be able to do it by "poultry-farming."

As there are people who actually imagine that they could "soon get into the way of farming," it is necessary to say in as many words that, though a poet may lisp in numbers for the numbers come, a knowledge of the management of manures and mangels is ordinarily obtained with greater effort.* Unless a novice wants to lose all his savings, break his spirit, and become the laughing-stock of the countryside in which the farm on which he quarters himself is situated, he must put the notion of farming without experience entirely out of his head. If he will farm and would learn something of farming before beginning to farm, the *Agricultural Gazette* or *Farm and Home* will give him the addresses of the Agricultural Colleges most suited to his means, and at one of these he could spend two years. He would be better advised, perhaps, if instead, he persuaded some intelligent farmer, engaged in mixed husbandry on not too great an acreage, to let him work for him early and late—beginning with loading dung—for a few years, studying theoretically at odd times. As to labourers' wages—if the learner looks for wages towards the end of his term—see, for the rates for different districts and for the counties where labour is most in demand, Mr. Rider Haggard's *Rural England*. As to learning in a lordlier fashion, by premium, there is undoubtedly something to be said for paying a farmer, market-gardener or poultry-expert, a fee. Naturally, few experienced men see the justice of giving away for nothing what has cost them dear; and, as a matter of fact, they will not for nothing give much away. On the other hand, it is not the most successful men who particularly care about being bothered with learners, and it is notorious that some persons who have advertised their willingness to teach various country pursuits have been more successful in precept than example. Learners must avoid falling into the hands of the premium-farmer, whether agriculturist, aviculturist, or horticulturist. In any case a learner must realise that he is not likely to be actually taught very much. He will have opportunities of learning extended to him, and what he acquires he ought to owe as much to himself as to his master.

Turning from farms to small holdings, of which so much is heard, it is again the case that only men of experience, whether newly gained or the result of a life spent "on the land," can hope to make a success of them. Mr. Rider Haggard, in his tours during 1901 and 1902, made special inquiries as to the results obtained on small holdings, and the impression conveyed by his report is that many old country hands have nowadays to work very hard and manage remarkably well to furnish more than a bare

* A London friend, not a farmer, who rents and farms through a bailiff two hundred Midland acres of land with which he has been familiar since boyhood, told me in his fourth year (see *County Gentleman*, December 6, 1902) that as to results he was satisfied to have "a good hobby for nothing." There was no mention of profit.

living. Obviously a great deal depends upon the wit and character of the holders; but it must be remembered that small pieces of land are in not a few cases handicapped by the relatively heavy rent asked for them—quite out of proportion, of course, to the rent paid by farmers on larger areas. The successful small holder, it is noticed, has often more than one string to his bow; in other words, he does carting, hires himself out at harvest and other times to local farmers, is a rough carpenter, a carrier, or a poultry-higgler, or personally disposes of his produce in neighbouring towns. In most cases where there is not an income arising from some other source than the holding—such as a small shop or an annuity—the whole family works on it, and no doubt credits itself with wages below what would be expected on a stranger's land. Details of the latest development of the Small Holdings Movement may be gained from the prospectus of the new land-letting association, of which Professor Long, of Cheshunt, is the moving spirit.

Many townsmen who have the notion that people more or less indiscriminately sent back to the land to occupy small holdings must succeed if they only work as hard as the small proprietors of France, forget that success is not so much a question of hard labour or the size of the area worked, as of long experience. It is the knowledge possessed by the small holder of the Continent which, joined to hard work, frugal living, co-operation—particularly in Denmark—and some other advantages, enables him to do as he does.

Putting aside small farms and small holdings, there remain the pleasant house or cottage in the country and a big garden and paddock. Can the townsman who discovers a place of this sort to his liking within his means find a method of making money? Without experience—unless he is content to let lodgings to his friends and their friends in summer, or open a ginger-beer-sold-here "cyclists' rest," or a "photographic studio" (the latter not a bad idea, by the way, in favourable circumstances, where an amateur photographer is concerned), or get taken on as a village minister, schoolmaster or postman, or obtain a Prudential agent's book, or take a share in a country business he thoroughly understands—certainly not. If he can support himself for a few years until he really learns experimentally (and expensively) something of small stock and *petite culture*, or, much better, can go somewhere first—possibly boarding with an intelligent small-holder—before he launches out for himself, and learn exactly what he needs to know, he may expect, by hard work, with his head as well as his hands, to produce not a living but something in augmentation of his income.

To contemplate schemes of "poultry-farming," miscellaneous small stock-keeping or fruit-growing, on a small area or a big, without experience, or readiness to buy it at its full cost, is madcap folly. No number of agricultural and horticultural handbooks and penny papers can possibly provide the inexperienced townsman with this absolutely necessary training and practical wisdom.

There is space to deal, with any attempt at detail, with one only of the various plans for money-making which take the fancy of townsmen who want to live in the country—"poultry-farming." Briefly, poultry is usually a by-product. The few hens running about the cottager's door clearly pay because they live largely on house-scraps, garden-waste, and gleanings. There is nothing to pay for rent, labour, or utensils, and the birds' house is a shanty which was knocked together for a shilling or two. A farmer can also make money out of poultry if he proceeds on the right lines, because he need put up no wire-netting pens, there is hardly any labour to provide for feeding and attention, the free-ranging birds are healthy and find half their living (in the autumn, in the stubble, all of it), the food which is given to them is either off-corn or home-grown food-stuff at cost price, or bought in bulk, litter and a lot of other odds and ends, including carriage to and from the station, have not to be paid for, and the birds, by reason of the manure they drop and the cleaning they give the land, undoubtedly offset any rent which could be charged against them.

During the last ten years a very large number of poultry-farms have been started, but the facts (1) that hundreds of poultry-farmers have undoubtedly come to grief after heavy losses; (2) that poultry-farms are always in the market; and (3) that many experts still doubt whether an enterprise solely concerned with the production of table-poultry and market-eggs can possibly pay, claim consideration. It would be very difficult, I imagine, to find in this country five poultry-farms of this type which have survived under the same proprietorship and been conducted on the same system (and have shown a profit), for seven years at a stretch. Even in America, where the public asks for "broilers" (chickens at an earlier and more profitable age than British salesmen will handle), and feeding, housing, and breeding

for eggs have been more carefully studied (though it is a mistake to suppose that American methods can be adopted as a whole here), very many folk are stated to have burnt their fingers over poultry enterprises. Profitable poultry-farms in this country have hitherto—whatever may be promised for the future—made money out of expensive sittings of eggs and the breeding of costly birds for "the fancy" for exhibition work—there were 600 poultry-shows held in England and Scotland last year. This requires great experience, large capital—which puts such an establishment, if for no other reason, out of reach of most would-be back-to-the-landers—and a long wait to acquire a name and reputation. Many of the poultry-farms which seem to do well are really adjuncts to the ordinary agricultural operations of a gentleman-farmer's estate, or are part and parcel of a plain workaday farm. Again, not a few of them are conducted by ladies who help themselves to their father's or husband's corn, run their birds in his fields, send them to market in his carts, and then say that "poultry-farming undoubtedly pays."

AYLESBURY DUCK HOUSES

Made out of packing-cases and a hogshead. The ducks are not let out of the small run until they have laid, or they would drop their eggs in the water

For the townsman without experience to embark his money in poultry, whether it be for egg-production or table-fowls, the incubator day-old chick trade, prize or utility birds or sittings, is madness. He must learn about poultry first, either in the Reading College poultry course or at a respectable and resourceful poultry expert's establishment—which has been in existence not less than five years. When he has learnt something, it is very possible that he may not set up a poultry-farm in the ordinary sense at all! If he does he will certainly require considerable capital and a considerable area, and should start in the vicinity of a health resort where good prices may be obtained. He may possibly decide to manage a gentleman-farmer's poultry—very many of the graduates of Reading College seem to find posts

ORGANISING A RAIN-WATER SUPPLY

The photograph also shows a home-made wheelbarrow and hatching-boxes

GOATS BARKING FIREWOOD

A place such as this in which these mischievous animals can be shut in securely on occasion is absolutely necessary

as County Council lecturers on poultry-keeping —or, proceeding on modest lines on a small holding of his own, set about working in poultry with other small stock of which he may have gained some knowledge.

In the latter case he will realise that in his small field it is better to run a couple of dozen birds than a hundred, for they will often pick up half their living, profitably use waste stuff, need little looking after, and improve instead of injuring the hay-crop. If he finds his friends will take table-poultry and eggs from him, he will know the very best birds to keep and how to deal with them alive and dead. He will be aware that there is little or no money to be made by the man who is not a farmer in producing for the higgler (outside Sussex) or sending up small lots to London for sale at wholesale rates, less carriage and commission, at the City markets. If his stock is specially good he may sell a few sittings, stock-birds, and chicks, but knowing how easily, amid so much competition from poultry enthusiasts who have not to make a living out of their hobby, several pounds may be sunk in vain in advertising, he will be chary of letting good money go unless he is really reaching customers. If he determines to extend his poultry he will only do it because he finds he is actually making money, and because he can effect an advantageous arrangement with neighbouring farmers to let his birds run over their land. He may add to his poultry two or perhaps three good goats—one of these pictured is giving two quarts of milk daily—and some of the right kind of rabbits, and when he thoroughly understands these, and is certain they are paying their way, possibly bees and a breeding sow. If he happens really to know anything of dogs or cage-birds he may also do a little in breeding them. There

THE BACK-TO-THE-LANDER AS ENGINEER

Oak dam for providing swimming-water for ducks in summer

INCUBATORS

Two 120-egg non-moisture machines in front, a 60-egg non-moisture to the left, and a 13-egg moisture on the shelf. The tin contrivance below the slate is placed over the funnel of a lamp and so used for testing the fertility of the eggs after a week's or a fortnight's incubation

are people who find not only cat, but rat and mouse-breeding profitable. (I have read the gravest disquisitions on the proper points of show mice.) His garden and field will also be turned to the utmost advantage. "Hasten slowly" will be the daily motto. Much will not be made out of each sort of stock by itself—but on Mr. Kruger's principle of one hand washing the other, the total return for stock and garden, in kind as well as cash, will agreeably supplement his small income, and in time, perhaps, do more. Of course, he must be a handy man, ready to tackle anything from hen-house or goat-house building to making a substantial dam—which will not have to be re-made every two years—for the stream which runs through his meadow and enables him to keep a few first-class Aylesbury ducks.

Clearly this is not the road to fortune. But if it was a fortune the townsman was after, why did he leave town? If he values the open-air life and the quiet and simple existence of the country, he will be glad to arrange his domestic

THE BACK-TO-THE-LANDER AS BRIDGE-BUILDER

The young trees by the stream are willow branches stuck in to grow into trees. The small open trench running towards the watering-can is the track of a mole uncovered

PERMANENT POULTRY HOUSE

There is a scratching-shed communicating with the roosting-place for use in bad weather. The screen is for the front of the scratching-shed, and the trap for rats, which, with foxes, are the bane of poultry-keeping. The illustration also shows the mode of pegging out a goat

affairs on a modest basis. With management, money will certainly go twice as far in the country as in the town. A couple of pounds or even a pound a week is a lot of money in a rural district. In the Eastern counties the Londoner may possibly rent a good cottage with a big garden for £12 or less, and a small farm-house with a garden and paddock for £20. The farther away from the metropolis the cheaper houses are. Sussex and Kent are dearer, and remoter Suffolk and Norfolk cheaper than Essex. As to purchasing a little property at a fair price, there seems to be no doubt that the value of country land and houses worth

PENS ON A POULTRY-FARM

The wooden contrivance between ducks and gate is a wind-break. The fruit is apples—standards planted two years

having is steadily rising. County paper advertisements and cycle trips are the best means of finding likely places.

No really useful purpose can be served by attempting a balance-sheet, for it is difficult to find two would-be back-to-the-landers as to whose earnings and prospects one can be equally confident. So much depends upon gumption, adaptability, stick-at-it-iveness, and the power of gripping and weighing facts. A failure in a town is not likely to be miraculously endowed with businesslike habits by transporting himself to the country. There are in rural districts all sorts of facilities for living at small cost, which can be taken advantage of by those who are careful and cautious. Beyond this, the qualities I have named, together with experience, thorough interest in and concentration on the humble task in hand, whatever it may be, and

"What's aft mair than a' the lave,"

the hearty backing of a thoroughly efficient wife or sister, count for everything.

The biggest item in country cottage expenditure is butcher's meat. The produce of the holding—birds, a kid or a porker—should keep this down a little. Money not spent is money earned. As to shopping, this will seldom be necessary. One, two, or even three bakers will probably pass the door thrice a week, butchers—and a fishmonger too, perhaps—twice, and grocers and ironmongers fortnightly. By insisting on cash transactions domestic supplies can be got as good and no more expensively than in town. Tradesmen commonly oblige one another by bringing each other's urgent small parcels. Coal is dear because there is cartage, but firewood (faggots from the farmers) is cheap. Go quietly to work, and so pay villagers', not town visitors' prices. A pony and trap will cost 10s. a week for maintenance—less if a farmer will provide straw in exchange for manure—but a bicycle and the hire of the village trap now and then ought to suffice at the beginning.

Remove to the country in the autumn or winter, and do not encourage callers at the start. This to give yourself a fair chance of knowing positively as soon as possible whether you will find a truly rural district dull. But it is better to cross-examine yourself sharply about this before leaving town. Bear in mind Cowper's warning to the man looking towards

HOME-MADE HEN-COOPS

A bought coop costs 5s. Chickens of various ages with ducklings

SCENE OF THE AUTHOR'S LABOURS AT 7.30 A.M.

Milking the goat. When the guillotine is opened the nanny jumps upon the bench and puts her head over the bottom half of the apparatus, whereupon the top half is dropped and locked, so preventing the animal strolling off when she thinks she has given enough milk

the country who sighs for "the joys he thinks he sees." Do not be carried away with the notion that there is any virtue in itself in moving into the country. As noble lives have been lived, and will be lived, in towns as in country districts. Some natures seem to need, for their highest intellectual life, daily friction with their fellows. Remember that a man is little changed because his surroundings have been changed by moving out of the area of gas-lamps. He will have in the country very much what he takes down to the country. Do not consign yourself to a rural district with the notion that the country is Paradise Regained. It is not. "Traces of Eden," may be, but still traces. The life of the country is not necessarily more intellectual or more manly than that of the town. It has its own temptations.

And as to anxieties: until chicken-rearers go out in a frost; an incubator takes fire the night before hatching-day; a goat slips its spring-hook and barks and ruins three valuable apple-trees in an hour; mice, before you suspect their presence, make off with every single pea in two quarts carefully picked for seed from the choicest growth; a stoat or rat kills and maims eight half-grown chickens, with the dearest time of the year for table-poultry approaching; a fox slaughters valuable stock-birds for which the Hunt offers you the magnificent recompense of a shilling a head; or a cold snap destroys all the promise of fruit, you will probably not realise that the country life has its own worries, and that the man who said that "the earth hath bubbles" knew what he was writing about.


CAPITAL *v.* INGENUITY

The outdoor chicken-rearer cost £3 17*s.* 6*d.* The sugar-box, covered by an old tea-tray (found in a ditch), with a hole through it for the funnel of a house-lamp, cost, say, 6*d.* It serves indoors for smaller ducklings than those shown in the picture. The chicks are Anconas

Because more will depend on the Back-to-the-Lander himself for his happiness than on his surroundings, I should like to say, in conclusion, that he should not distress himself if he cannot, in choosing his cottage for its comfort, accessibility, inexpensiveness, and garden and ground area, also secure that "view" of which he had dreamt.

"Not rural sights alone, but rural sounds,
Exhilarate the spirit."

Failing the sea, the hills, or a river, are there not trees which, fiercely swept or gently breathed on by the wind,

"make music not unlike
The dash of Ocean on his winding shore"?

At night, as I stroll under my own cottage elms or rest indoors, every detail of those lines of Dr. Smith's, written on

"the grey sand-dunes
Looking out on the cold North Sea,"

is brought home to me by the tree-sounds:

"Sitting o' nights in his silent room,
The student hears the lonesome loom
Of the breaking waves on the long sand reach.
And the chirming of pebbles along the beach;
And gazing out on the level ground,
Or the hush of keen stars wheeling round,
He *feels* the silence in the sound."

A county stretches itself between me and the sea, and the hills and the heather are far away, yet

"in the waves and troughs of the plains where the healing stillness lies,
And the vast benignant sky restrains, and the long days make wise,"

I have been able to say with much contentment, "It is good to be here."

"Scenes must be beautiful, which daily viewed,
Please daily, and whose novelty survives
Long knowledge and the scrutiny of years."

SCENE OF THE AUTHOR'S LABOURS AT 7.30 P.M.

THE VIEW FROM THE ARBORETUM

# THE DAY'S WORK

## V.—IN KEW GARDENS

ONE OF THE LOVELIEST PLACES IN ENGLAND—HOW IT TRAINS GARDENERS AND SENDS SKILLED OBSERVERS TO ALL PARTS OF THE WORLD

*Illustrated from photographs specially taken for* THE WORLD'S WORK

IF you go down to Kew on a fine day in early summer (and there are few lovelier places in England), if you stroll through the gardens, wonder at the Tropical House, admire the Alpine rockery, marvel at the orchids, loiter over your tea under the trees in sight of the pagoda, and wander on into the solitudes about the lake where strange waterfowl give you a private performance, you will probably spare a thought of gratitude to the mysterious Power which has spread these gardens for your delight, and invited you to come and enjoy them without money and without price. If you are of curious disposition, you will probably trace that mysterious Power to its source. Then you will find that the Power is—yourself as a taxpayer. For Kew Gardens are under the prosaic control of the Board of Agriculture, and the motive force behind the Board is the annual sum—from £25,000 to £34,000 a year—which you pay for the maintenance of the establishment. Rather a large sum to pay for the most delightful of tea-gardens, you will reflect. Such was the mental process through which I went as a casual visitor to Kew. But my curiosity carried me further, and brought me at last to the conclusion that the exquisite beauty of the Gardens is but the carefully designed lure for the sovereigns of a public which might hesitate to contribute to a serious purpose. Behind the surface beauty, intelligence is at work, and

of that work the ordinary visitor sees nothing. Even those strange waterfowl which attract the stroller to the lake are grudged their board and lodging by the Curator, whose experiments in waterside plants they ruin. But Sir W. T. Thiselton-Dyer, the Director, maintains that as the public pays the public is entitled to its waterfowl. For six hours before mid-day the gardeners have been busy. And long after the last lover has lingeringly led his maid forth from Paradise, the gardeners are still at their work behind closed gates and barred doors.

Through a gate marked "Private" we pass to the Director's office; and here at ten o'clock Sir W. T. Thiselton-Dyer is to be found working through and sorting a correspondence which reaches to every corner of the globe. From the ends of the earth come questions as to what plants may be expected to grow in such and such a climate, and dried specimens for classification by experts. Then come questions from the Customs department; and these questions were particularly numerous when the corn registration tax was in force. These dues affected about one hundred and fifty articles, and it fell to Kew to decide from their nature whether they were taxable or free. Only the other day the Customs laboratory forwarded specimens of a fruit, hitherto unknown, said to come from China. Was it a peach or a plum, an apricot or a nectarine? Plums and apricots are dutiable, while peaches and nectarines are free. The distinction lies in the roughness or smoothness of the stone. Now the stone of the unknown fruit was half-and-half. It rested with Kew to decide that the revenue officers had botany to back their demand for payment. And then came a remark of the Curator as to the application of a young gardener for admission. It is the young gardener who forms the pivot of the practical usefulness of Kew.

These young men are no mere amateurs, nor are they admitted to Kew as to a primary school of horticulture. They must be between twenty and twenty-five years of age on application for admission; they must be healthy, free from physical defect, and not below average height. Furthermore, each applicant must have been employed at least five years in some good garden or nursery, and produce first-class testimonials as to conduct and general ability. Having complied with all these conditions the applicant waits his turn. When his turn comes, he is taken into Kew Gardens for a two years' course, during which he is paid one guinea a week, which is precisely the wage of the unskilled labourer who does the rough work of the Gardens. By this arrangement it is ensured that the young gardeners in training shall be the very pick of their calling. For they are already familiar with the routine of their work, a five years' experience has made them, for all ordinary purposes, gardeners. But beyond that, they give guarantee of their genuine desire for self-improvement by their willingness to devote two years at labourer's wages to turning their empirical skill into scientific knowledge.

Thus we have sixty young men, drawn from the junior ranks of ordinary working gardeners, each one of whom is determined to gain his degree—which is the Kew certificate. Among

THE ALPINE ROCKERY

them may be four or five foreigners (who must be able to write and speak English). But the Director finds it necessary to limit the foreign entries, for these visitors are perfectly willing to work for nothing in order to obtain the coveted certificate, which is the highest horticultural degree in the world. There were a few young women among them a short time ago; but Kew does not take the "lady gardener" very seriously, since the five years' in front of him. In many cases he has already fixed his eyes on a definite objective: he wants to specialise on the tropics, on landscape gardening, on tea-planting. Here he meets with immediate encouragement; for the work of the Gardens is carefully dovetailed into the training of the workers. The young man whose aim is to emigrate to some sub-tropical country is placed at once under control of the official who has charge of that Tropical

THE DIRECTOR'S ROOM

Sir W. T. Thiselton-Dyer is on the left of the picture

previous experience cannot be demanded of her, and a two years' course cannot turn a lady into a gardener. But though these sixty young men come from the labouring class, and are paid labourer's wages, they are no sooner entered as undergraduates of Kew than they are made to feel that there is a difference between them and the spadesmen who will never be anything but labourers. That is the wider meaning of the regulation which prescribes "blue serge suits and grey flannel shirts with turned down collars" during working hours.

Having gained admittance to Kew—possibly after waiting a year or two—the young gardener sees two years of strenuous labour House that is the breathless delight of the Sunday visitor. From six in the morning until six in the evening he is tending, watching, observing, examining temperatures and growths, and taking notes meanwhile for future reference. Behind the scenes he is sorting seeds and packing plants for distant lands, and learning how a delicate growth may be bedded and protected so that a three months' voyage without further attention will bring it no harm. Even at the dinner-hour you will find his enthusiasm triumphant over his appetite. For he will stop on his way, and jot down a note. He knows he has to make the most of a limited time, and get the best that the Gardens, the Museum, and the Herbarium can teach him.

For the work in the Gardens is but one side of the training he undergoes. Morning after morning small batches of young men are taken through the Museum. To the average visitor the Kew Museum is merely a dull collection of commonplace-looking objects. To the young gardener who listens to the demonstrations of Mr. Hillier, the Keeper of the Museum, it shows the goal of the planter who plants a seed. For here he sees and handles the things that can be made out of the plants which he has been tending and bringing to maturity. What is the best broom for sweeping? He has seen the seed, tended the plant, and here is the broom. Does he aim at tea-planting? Here in the tea-case he will find all manner of teas in balls or bricks as they come from China or Burmah. He sees the results of the back-bending labour of his profession, and realises that in the end the gardener is the purveyor to the human race. That is Economic Botany.

But even when six o'clock comes the undergraduate's work is not over. Behind the Curator's office, hard by that spacious green at the southern end of the new bridge, is a library and reading-room, managed by the undergraduates. Here you will find the young men digging among records, formulating their experiences, between the time of manual work and the hour of lectures. For in the evening are lectures at the laboratory on chemistry and the physical side of botany.

Thus two years pass. And at the end of two years the young gardener, who may be anything between twenty-two and twenty-seven, is a very long way ahead of the boy who decided to take a guinea a week with the chance of a future. If he has satisfied the

THE CHINESE RUBBER PLANT

Director and the Curator, if he has satisfied his lecturers, if he has made proper use of the Gardener's Library, if he has made a good dried collection of British plants, if his general conduct has been without flaw, he is given the Gardener's certificate with the Royal Arms at the head, and need but wait until such a post as he desires falls vacant. To the young man with that certificate in his pocket the

GLASS-HOUSES IN THE ROYAL BOTANIC GARDENS, KEW

IN THE LABORATORY AT KEW

world is open, and there is scarcely a corner of the habitable globe which does not owe something to the tending or the advice of a man from Kew.

"Wherever we get a chance of sowing a seed, we sow it." That was the suggestive summing up of Mr. Watson, the Curator, as he took me through the various houses and potting sheds. The mosquito plant, for example. The recent discovery that malaria is propagated by mosquitoes has suggested the obvious remedy—the destruction of mosquitoes, or at least their exclusion from human society. Still more recently the mosquito plant has been found to have the same effect on a mosquito as the sign of the cross on the devil. At Kew you may see a specimen of the plant; and in one of the packing-sheds I saw a consignment of seeds being made ready for India. Sir Charles Lawson had heard of the plant's peculiar properties, and called at Kew, where he obtained seeds. By this time they are in the hands of an experimenter in India, and if the seeds will acclimatise themselves, we may hope to see huge and pestilent districts cleared of malaria.

Again, in one of the houses seldom visited by the public, for it has little spectacular interest, is a large collection of fibre-producing plants. Now this fibre question is one of very great importance in the industrial world, and the main problem is not so much to discover the most productive plant as to discover the most effective, the simplest, and the cheapest method of separating the fibre. The machines at present in use are very far from perfection. All over Great Britain inventors are quietly at work upon experimental machines, and it is to this house at Kew, filled with growths of dull and dingy green, that they come for the living material of their experiments.

But the most interesting problem on which the Kew gardeners at home and abroad are working is that of the rubber plant. With the coming of the bicycle rage in the last decade of the nineteenth century the demand for rubber took a tremendous leap, and the search began for new rubber plants and new places in which to grow them. Within the last year or two, with the coming of the motor-car, the demand has risen in intensity. In every botanical station throughout the world where a Kew graduate is to be found, there is to be found a man tending, observing, reporting, in the hope of "getting a chance to sow a seed, and sowing it." Already the plan of decentralising observation and centralising information has brought its commercial reward to the British Empire. For it was Kew that foresaw the suitability of Ceylon for growing the Para rubber, and the industry has turned out most successfully. Success, however, can be attained only by widespread experiment; for without experiment one can never be certain that soil, latitude, rainfall, sunshine, temperature will suffice for the flourishing of an imported growth. There may always be some fungus, some animal, even the least considered insect, that declares victorious warfare. Thus the success of one of the latest rubber tree—the ***Funtuma Elastica***—hangs in the balance. The original habitat of the tree is the West Coast of Africa. But the tree is so productive both in quantity and quality that Kew has raised seeds enough to supply every station within the Empire. And on the reports which arrive will depend the planting of whole areas. For it must be remembered that while the botanical stations

are in touch with Kew, the tea-planters of Assam, the banana cultivators of Jamaica, the grain-growers of Canada have learned to depend on the advice of the botanical stations.

Hard by the Economic House, springing unobtrusively within a few feet of the public path, is a specimen of the *Eucommia ulmoides*. It is not attractive; the nursemaid never stops to admire it. But as I sat on an adjacent seat with the Curator I came to realise that the modest plant of seven feet in height was about the most interesting thing in the gardens. It was discovered a few years ago in central China, by Dr. Augustin Henry, who despatched some seeds, which, being sown, sprang up into a hardy plant. The *Eucommia* is valued in China for medicinal properties. But its value for us lies in the fact that it produces rubber. And its special value lies in the fact that it can grow in Central China, and therefore, inferentially, will grow in a temperate climate. So far the inference has proved correct, and the tree has flourished for five years in the open air, exposed to all the variations of an English climate, and remains so far the only rubber-tree which has been able to exist outside the tropics. In view of the ever-increasing demand for rubber I need scarcely point out the immense commercial importance of a rubber-tree of which plantations are already being formed in France, and which is certainly able to attain a healthy growth in the southern parts of England. In many parts of the world Kew gardeners are experimenting with the *Eucommia* and advising planters as to its value and treatment. But the English landowner neglects the sources of information at his elbow; he is far less enterprising than the Colonial planter; and I have not heard that any English magnate has planted his derelict farmlands with trees that in a few years are likely to flow, not with milk and honey, but with gold. For at present we can foresee nothing but a steady and rapid increase in the demand for rubber, and the possibility of producing it at home.

Such then, is one aspect of the serious work of Kew Gardens, carried on quietly, and seldom suspected by the strolling visitors who regard them as pleasure-grounds for the public enjoyment. It would, indeed, I think, be an advantage if some means were devised of placing before the general public the results of the observations and experiments which are collected at Kew; since at present they are buried on the earth-to-earth system in the dry records of technical journals.

DR. BAKER LECTURING TO YOUNG GARDENERS

THE "SEA OF GLASS" NEAR L'ISLET

# FRUIT AND FLOWERS IN GUERNSEY

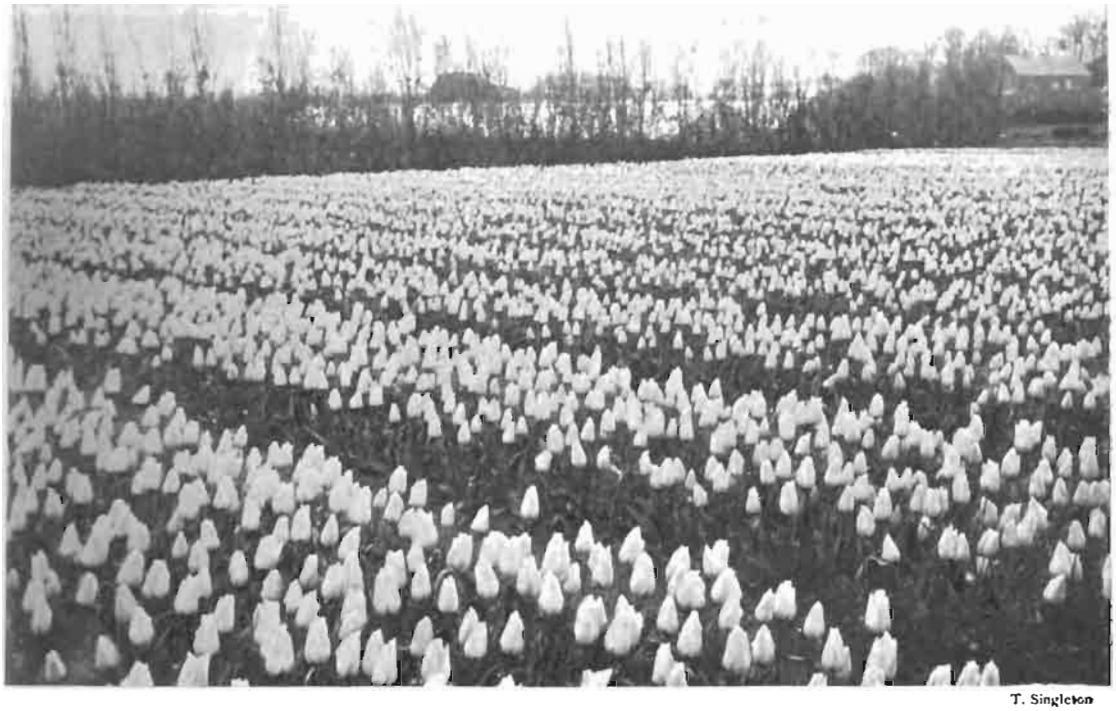
CONGENIAL CLIMATE AND THE INDUSTRY OF THE PEOPLE HAVE MADE GUERNSEY THE CONSERVATORY OF THE UNITED KINGDOM—TOMATOES AND BULB FLOWERS, GRAPES, MELONS, AND FIGS—ACRES OF GLASS-HOUSES—A TOWN IN THE SEA—THE PECULIAR SYSTEM OF LAND TENURE

BY

ELSPET KEITH

DURING recent years fruit and flower culture has developed to such an extent in Guernsey, that the island might well be described as the conservatory of the United Kingdom. It is thirty years since the first grape-house was built in the island, and about fifteen years later the tomato was grown generally. One large grower who grew tomatoes as early as 1874 had a difficulty in disposing of from three to four hundredweight per week at 3*d*. per pound. The same grower in March 1887, received as much as 4*s*. per pound for his tomatoes. And, although foreign competition soon reduced this high figure, to-day he can more easily get rid of forty tons per week than he could sell four hundredweight thirty years ago. An accurate comparison of the exports for the past fifteen years—if it were possible—would be an interesting index to the rapid growth of the industry. According to the *Guernsey Growers' Year-book*, 138,508 packages of fruit, flowers, and vegetables were exported in 1883, and in 1899, with slight fluctuations during the intervening years, this figure had risen to 1,691,556. In 1901, the number of packages exported had reached 1,770,352, which was rather more than the figure for last year (1902). These reports are, however, somewhat misleading, as a package may mean anything from a little Guernsey basket filled with tomatoes, to a huge crate weighing several hundredweight, and of late years big exporters have almost invariably adopted large cases for grapes, figs, and melons.

Nature seems to have endowed this little



T. Singleton

A TULIP FIELD IN THE BROOKDALE NURSERIES

island with a special capacity for luxuriant growth. It has a wealth of most un-English products, such as aloes, cacti, magnolia-trees, and some fine specimens of the benthamia-tree; while camellias, hydrangeas, and fuchsias grow out-of-doors in tropical profusion. Arums, too, grow in the open, and, in fact, there are flowers of one kind or another all the year round. The "rathe" primrose appears as early as January, and even the common cabbage in Guernsey has aspirations, and often reaches a height of eight or ten feet. But the chief exports are tomatoes, bulbs, and bulb flowers, grapes, melons, and figs.

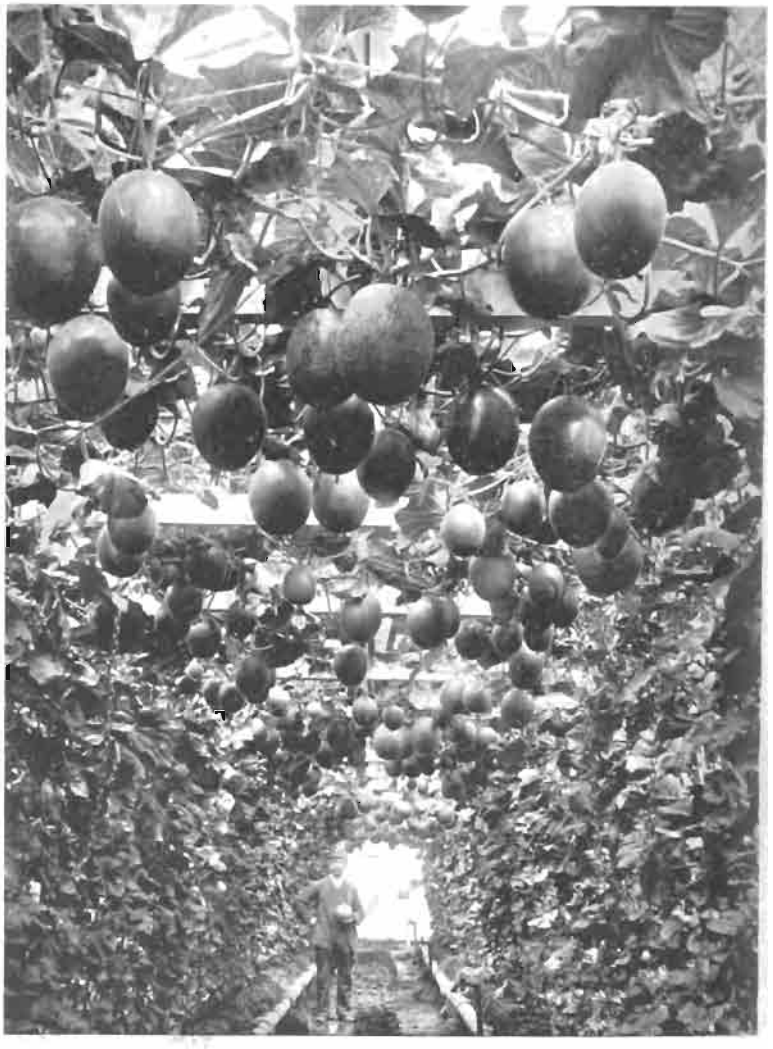
T. Singleton

INTERIOR OF A CARNATION HOUSE

The tomato—or love-apple, as it is more prettily named—can be grown in the open air, but is generally encouraged in cold or in hot-houses. For the early market, the hot-house tomatoes are seeded in shallow boxes or small pots in November, pricked out into larger pots a fortnight later, and finally planted separately in large pots in the third week of January. The plants have

to be strung, and the side-shoots nipped, one leader being left. The first bud shows very early. If the grower means to plant a second crop, he stops the plant at the third or fourth cluster, and forces the fruit for the first prices. If only one crop is wanted during the season, eight or nine bunches are left, and when these are finished, side-shoots are encouraged which bear inferior fruit. Picking the tomatoes begins about the first week in May, and the crop should be finished about the third week in June, when the plants are pulled out, and a second crop planted which ripens in early September. A house of 160 ft. by 35 holds 1700 pots, which, with a good average yield of 4½ pounds per plant, or 3½ tons to the house (and the second crop would be rather less than half that), comes altogether to 5 tons per house per annum. One big firm of growers last year exported 300 tons of tomatoes alone. Two years ago a record crop of tomatoes was produced from a Guernsey variety in a small span of 90 ft. by 15. There were in the house 145 pots, from which 2056 pounds of tomatoes were gathered, being a yield of 14 pounds (Guernsey weight) per plant. A novel method of utilising space is adopted by a big firm of growers in the Castel parish. They have as many as sixteen houses of 160 ft. in length side by side, separated by a space of about 35 ft. In these intervening outside spaces are planted two rows of vines, which are tied together in an arch, while the houses are filled with tomatoes. When the first tomato crop is disposed of, instead of introducing a second crop, the pots are removed, the sides of the glass-houses are raised, and the vine canes are untied and bent backwards inside the house; presently, instead of the usual second tomato crop, the houses are rich with grapes.

Bulb-growing, which can be so profitable, has the additional attraction of increasing the beauty of the island, which, alas! has been sadly impaired by the acres of glass-houses that greedily devour its greenness. Field after field in springtime is one stretch of billowy white or yellow, and the air is fragrant with the aromatic breath of daffodil and narcissus in all their complex varieties. The Brookdale nurseries at L'Islet, in the north of the island, which are forty acres in extent, have a soil similar to Holland, having been almost entirely reclaimed from the sea. In one corner of a tulip-field, a Guernsey nonogenarian, who died three years ago, used to point to the place where he had made a famous catch of mullet. Here are grown over 160 different varieties of daffodils from the familiar *Soleil d'Or*, through all the



INTERIOR OF A HOUSE OF THE GUERNSEY "MELON KING"

various grades, to the Glory of Leyden. A favourite narcissus in Guernsey is the *Narcissus Poeticus Ornatus*, one firm growing 2,000,000 of this variety. But it needs the eye of a connoisseur to discriminate between the different kinds, and to most flower-lovers a daffodil gives the same keen pleasure whether its bulb is worth half a crown or five guineas, which is the price some of the costly varieties run to. Bulbs, when successfully grown, are a very good investment, not only on account of the ready sale of the flowers; this is a secondary matter compared with the profit on the bulbs themselves, which increase at the rate of some 30 per cent. per annum. The labour, too, is less arduous than in tomato- and grape-growing. After the bulbs have been planted, in August or September, so many inches below the surface of the ground, and so far apart, the work is comparatively easy until the picking and bunching begin for Easter. Just before Easter is the heaviest time, and the big bulb-growers employ a large number of women and girls to bunch and pack. They deftly fix the daffodils with twelve long stalked blooms together. These are crowded carefully into huge pots in a darkened shed to stand in water overnight, and are packed for transit in shallow wooden boxes with paper lining. The boxes are tied in twos, and so well are the flowers arranged, that the boxes bear a good deal of rough handling without one bloom being displaced. These flowers are good for a week after shipment. The work of bunching is pleasant, and the women are paid two francs a day. In one bulb-nursery the pickers and bunchers are paid by the piece, and the women earn very good money during a busy season. Considering that in one week alone a large bulb-grower exports over 570,000 blooms, it can be realised how many hands are required in the work. From the middle of July until the middle of September these workers are employed at the same rate of payment preparing the bulbs for export. Besides daffodils, there are also freezias, irises, anemones, gladioli, and tulips, and one bulb-nursery at least can show, in addition to an enchanting array of scarlet, pink, gold, and white tulips, several specimens of the *Tulipe noire Alexandre Dumas*. The early flowering gladiolus is a beautiful speciality of Guernsey. In the bulb-nurseries movable green-houses, sometimes 100 ft. in length, are much in favour. Rails are laid alongside the flower-beds, and the frames can be run from one end to the other when necessary. This method of forcing has proved most economical.

In addition to the bulbous flowers, chrysanthemums are also grown for market, and every year, in November, a fine chrysanthemum show is held, when some magnificent blooms are to be seen. The chrysanthemum, however, is becoming a less fortunate export than formerly, and a few years ago among 50,000 boxes of this flower that left the island, many consignments did not pay for their freight. But flower-growing is not by any means all profit. The risks are great, and it often happens that a field of blooms ready for picking may be entirely ruined by fog, not to speak of the losses when a boat is delayed in the Channel.

Vines require greater skill and more constant supervision, if less continuous labour than tomatoes. The usual varieties grown for market are *Black Hamburgs*, *Gros Colmans*, *Alicantes*, and *Muscats*. The vine, of course, takes some time to come to maturity. It is usual to plant in February with nursery plants, or in June with pot plants raised the same year from buds. For the first year a border 6 ft. in width is necessary, and this must be added to yearly. Well-drained soil is one of the most important factors in the culture of the vine. The plant is usually two or three years old before it is put into a house; in its third year it begins to bear fruit. Some fruitful vines will go on bearing until they are forty or fifty years old, but the ordinary market-plant is useful up to its tenth or twelfth year. There is always work to be done in the vinery, disbudding, watering, pruning the plants, thinning the fruit, manuring the soil, and keeping the houses well ventilated. The cold-house grower especially must be ever on the alert, as he is so much at the mercy of the outside temperature. A fair return crop for a cool house 100 ft. by 30 would be twenty to twenty-five hundredweight of grapes in a season. At the last Paris Exhibition, a record price of £1 10*s*. per pound was realised for Guernsey grapes. The usual market price is 2*s*. per pound for hot, and 8*d*. per pound for cold-house grapes. Guernsey grapes are not supposed, on this side of the Channel, to be equal to English grapes. This is probably owing to the fact that grapes present special difficulties in transport, and, therefore, do not reach the London markets in their original perfection.

Melons are very successfully grown in the island. The earliest melons were exported this year on March 30, and realised very good prices. A usual size for a melon-house is 150 ft. by 24, holding 700 pots, which means 700 melons. A crop takes nine weeks from planting

to finish, and, therefore, several crops are grown in a season. An expert melon-grower finds an easy market for the fruit, and melons among all the exports, perhaps, run fewest risks in transport. Guernsey grows excellent figs, and the fig-tree by no means demands exacting attention. There are some fine old specimens in the island; one in particular over 100 years old has five crops in a season, bearing altogether 12,000 figs; this tree has of late years been protected by glass and the frame to cover it is 85 ft. long and 30 ft. wide.

The chief causes of Guernsey's success in this growing industry are: its congenial climate and soil, the industrious character of the people, and its peculiar system of land tenure.

The most important climatic factor is, of course, the almost entire absence of frost; the usual frost record for the island during a whole year being two days, and then it rarely lasts longer than an hour or two. In a sunny year, Guernsey registers 2200 hours of sunshine, and has an average of 9 per cent. more sunshine than the sunniest part of the South of England. Its winter temperature is 43° and 44°, while Greenwich is 37° and 40°. All the weather elements are modified except wind. Indeed, the high winds prove a special drawback, as the island is in some parts wholly unsheltered by trees. The absence of weather extremes, combined with a high winter temperature and fairly constant sunshine in early spring, give the island a unique advantage. And whatever natural advantages it can boast, they have all been used to the utmost. The Guernsey people, direct descendants of the conquering Normans, have the spirit of industry that would turn a desert into fruitfulness. The little island, twenty-four square miles in extent, is cultivated like a garden. From the highest tower in St. Peter's Port it looks like a town in the sea, houses and gardens everywhere—no spot wasted—while towards the north it is a perfect sea of glass, and all over the island the sun picks out the gleaming tomato and grape-houses. The people have proved themselves extraordinarily adaptable. Before the introduction of the tomato, which has revolutionised their whole system of life, they were the market gardeners for London. Formerly also they grew potatoes for spirit manufacture; there are a few unused distilleries yet in the island. Their cattle-rearing, too, they made famous. But whatever they have taken in hand they have done well. They possess a large capacity for work, and are keen economists. They live sparingly, take few holidays, and grow rich, not so much on what they earn, as on what they save.

One of the secrets of their self-respecting industry is that the land is rented in practically perpetual leaseholds. Under the system of "rentes," an intending purchaser who cannot afford to buy the land outright at a fixed purchase price, may pay a part in cash only, and the remainder in corn rents to be paid annually, or he may pay the whole in corn rents. By this he is as much a proprietor as if he had bought the land. It is his to cultivate or build on just as he pleases, without any restriction, and so long as he pays the annual rent, he and his heirs remain undisturbed for ever. Thus the smallest "rente-holder" is lord of his own property, and a spirit of independence and thrift is encouraged. He feels that he is working for himself and his children, and is not a mere piece of rustic machinery. The following extract from the *Examiner* of September 1832, in praise of these tiny holdings, is attributed to Mr. Frederick Hill, Government Inspector of H.M. Prisons in Scotland:

"The happiest community which it has ever been my lot to fall in with, is to be found in the little island of Guernsey. . . . The poor man has his neat little house, is surrounded by his family, and is under no apprehension that he shall not be able, with moderate labour, to provide a full meal and a comfortable lodging for all who are dependent upon him. What are the causes of this superior state of things? . . . Guernsey has superior laws—superior institutions. . . . One of the most striking changes which the visitor, whether from England or from France, meets with on his landing in Guernsey is the entire absence of beggars. . . . A tradesman who had been established at St. Peter's Port for upwards of thirty years, assured me that during the whole period of his residence in the island, he had never once seen a beggar."

Whatever the cause may be, it is certainly true that the young Guernsey grower is an enthusiast in his work. He thinks nothing of working for several nights in succession, and making up for lost rest by a short sleep in the daytime. He finds plenty of risk and excitement in the work, and has discovered that if success is to be attained, the director of affairs must also be a worker. He might well have for his motto the old Hindu proverb: "The cocoanut grove will not flourish which does not daily hear the steps of its owner in it." There are altogether 2000 growers in a population of 40,000, and quite half the population depend directly on the growing industry. It

is the one producing trade of the island, and, in addition to the large growers, every little *propriétaire* has his tomato or grape span, which is worth much more to him than the whole of his other agricultural produce. The development of the Guernsey Growers' Association, established by the more modern spirits of the industry in 1894, has been an undoubted help in furthering the best interests of the trade. It airs all transport grievances, and does everything that such a society can do to fulfil its aim of "mutual help and protection."

But if Guernsey is a land of promise, where practically every man may sit under his own vine and fig-tree, it is not a Klondike. And some grievous mistakes have occasionally been made by English would-be growers who have gone to the island, thinking—without practical knowledge—to make a fortune in tomato or in bulb culture. They have left the whole management in the hands of hirelings, with disastrous results. But there is still room in Guernsey for young men of capital who are willing to cast their coats and begin at the beginning. The Guernsey people, too, are less conservative in their outlook, and readier to welcome the stranger than they were in the days before the tomato export trade. And it is their delight to be recognised as fellow subjects of the Empire, for Great Britain, of course, belongs to the Channel Islands by right of conquest, and King Edward has no more loyal subjects in his dominion than the hard-working inhabitants of Sarnia.

# THE ROMANCE AND BUSINESS OF TRAVEL

## I.—THE PAST AND PRESENT OF TRAVEL IN GREAT BRITAIN

OUR FATHERS FIFTY YEARS AGO DID NOT KNOW THEIR OWN COUNTRY—THE INFLUENCE OF THE EXCURSION TRAIN—THE FIRST TRIP TO SCOTLAND—CREATION OF THE SEA-SIDE RESORT—A WONDERFUL DEVELOPMENT

TRAVEL in these isles, properly so called, is not quite eighty years old. Go to Euston any night after the middle of this month, and watch the start of the wonderful "Grouse" mail for the North, and reflect meanwhile on the beginnings of the little Stockton and Darlington line in 1825. Think of the *trains de luxe* traversing England every night of the year: soft electric light, dining-cars, smoking-saloons, sleeping-chambers: and call to mind the uncovered trucks in which our grandparents—having previously made their wills—took their first nervous trips by rail. Think of the tens of thousands of persons who are rolled southwards on Derby Day, from the north, from the east, from the midlands, from the west; of the tens of thousands who are carried northwards to see the St. Leger run; of the hundreds of thousands of excursionists and holiday folk of all kinds who are conveyed the summer long to sea-side places, to the Highlands of Scotland, to the Scilly Isles, to Connemara, to the farthest spots within the Kingdom: and consider that all this amazing traffic (itself a mere item of the general traffic of the year) is the growth of seventy-eight years. By the Great Northern, the London and North-Western, and other lines, some 50,000 racing-people travel to Doncaster on the day of the St. Leger, when "special" trains are run to the number of nearly one hundred. The point at which the bulk of the anglers' traffic originates is Sheffield, and almost every Sheffielder is more or less interested in fishing. From Sheffield and its neighbourhood the Great Northern carried last summer nearly 30,000 anglers. On the day of the Final Tie in the competition for the Football Association Cup, generally played at the Crystal Palace on the third Saturday in April, the same Company provides from eighteen to twenty "specials," each capable of carrying 300 passengers. On a busy night during the summer rush to Scotland beds are

made up for as many as 400 travellers by the London and North-Western—and by no means every traveller indulges in a sleeping-berth.

Said George Stephenson to his son Robert, after the first English train had crawled safely to its little journey's end:

"Now, lad, I will tell you that I think you will live to see the day, though I may not live so long, when railways will come to supersede almost all other methods of conveyance in this country; when mail-coaches will go by railway, and railroads will become the great highway for the King and all his subjects. The time is coming when it will be cheaper for a working man to travel upon a railway than to walk on foot."

Said a *Quarterly* reviewer at about the same time:

"As for those persons who speculate on making railroads general throughout the kingdom, and superseding all the canals, all the waggons, mail- and stage-coaches, post-chaises, and, in short, every other mode of conveyance by land and by water, we deem them and their visionary schemes unworthy of notice. . . . The gross exaggerations of the powers of the locomotive steam-engine, or, to speak in plain English, the steam-carriage, may delude for a time, but must end in the mortification of all concerned."

It had been proposed to carry passengers from London to Woolwich by rail at the fearful rate of eighteen miles an hour, and the hair of the *Quarterly* reviewer stood on end:

"We should as soon expect the people of Woolwich to be fired off upon one of Congreve's *ricochet* rockets as to trust themselves to the mercy of a machine going at such a rate."

There are, of course, plenty of people still living who were born into a world without railways, and that was a world in which travel was necessarily of the most limited and most primitive description. Nowadays, as the summer comes on, the annual holiday from home begins to be thought about. There is no consideration of importance except the amount of money that can be devoted to the outing. That being settled, it is a choice amid embarrassing riches. All the railway and steamship companies in Great Britain have been preparing for you. The newspapers overflow with alluring advertisements; every big company issues its programme of tours; its million of coloured posters flame from the hoardings, its ten millions of handbills (these figures are not fanciful) float upon the air. The penniless Londoner, indeed, may survey the kingdom from Cornwall to the Orkneys, from Kent to the Giant's Causeway, by merely walking the streets of an afternoon.

But all this is as modern as modern can be. The Great Britain of fifty years ago was an unknown country to the majority of its native inhabitants. The north knew nothing of the south, east and west were all but total strangers. As for Ireland—and that lovely western region in particular, which the Midland Great Western has opened up completely—it was regarded as not altogether safe. The world at large was strictly stay-at-home. Rich people did a certain amount of travelling in their own carriages, or by post-chaise. In 1828, three years after the first railway was laid, it cost Sir Walter Scott and his daughter Anne £50 to go by post-chaise from Edinburgh to London. Necessary travelling on the part of the non-luxurious was done for the most part by stage-coach; but the business of travel as we understand it to-day, one of the most imposing industries of the country, ramifying through countless different trades, had not even begun to be organised. It was not merely Hodge of the hamlet who spent all the years of his life in the place that had reared him; dwellers in town and city were scarce a whit more adventurous. Many a hundred wives of London might have apostrophised their spouses as dame Gilpin did her John:

"Though wedded we have been
These twice ten tedious years, yet we
No holiday have seen."

Keeping to the argument—for the story is strictly one of cause and effect—it is clear that the hour of travel came with the coming of the railway. But the prospects of the railway were not very brilliant at the outset, and it is probable that the obtuse contributor to the *Quarterly* spoke the opinions of many thousands of persons, while Stephenson, giving voice to his dream, was a prophet with very few followers. The railway people themselves had not the ghost of a notion of what the very near future was to bring them. The successes of the railway began with the excursion train, and in thirty years the excursion train has changed the fortunes of every town and village on the British-coast line. The summer exodus to the sea-side—one of the most remarkable developments of travel in our own country—had as humble a beginning as the "steam carriage" itself.

The first excursion by rail in England was a small affair organised in the interests of a temperance society. It was in 1841, just after

the completion of the Midland Railway, and the organiser was the late Mr. Thomas Cook (founder of the celebrated firm of personal conductors), who persuaded the Company to run a special train from Leicester to Loughborough, for a meeting of the Loughborough Temperance Society. Five hundred and seventy passengers were carried from Leicester to Loughborough and back at one shilling a head; and this was the beginning of excursions and, indirectly, the beginning also of the great industry known as Thomas Cook and Son. The excursionists of those days were looked upon with wonder, and their courage was proclaimed, for the locomotive was always expected to blow up. Bands of music turned out to welcome the heroes, and speeches were made in their honour. Quite a "startling novelty" was the first trip to Scotland, a totally unknown country to the mass of Englishmen. This also was the enterprise of the dauntless Cook, who, in 1846, took 350 sanguine English from Leicester to Glasgow and back—"a privilege," as the conductor said in his prospectus, "which no previous generation ever had offered to them"—for a guinea. Guns were fired when the adventurers entered the Glasgow railway station, a band of music accompanied them to the Town Hall, where their presence was hailed by Mr. Chambers the publisher, as "a happy augury of closer intimacy between the northern and southern inhabitants of Great Britain." Yet that was only fifty-seven years ago, and Queen Victoria had been nine years on her throne.

Truly, however, the pioneer trippers of Great Britain tasted something of the excitement of foreign travel in their mild and meagre little trips. Thus, the first adventurers by steamer to the country of the Welsh in the 'forties found, on landing at Carnarvon, one man only among the aborigines who had sufficient English to act as their guide. The first hardy trippers in the wilds of western Ireland found many districts in which no English at all was spoken—indeed there were many such when Thackeray was writing the *Irish Sketch-Book*.

But now consider what has directly followed from these inconspicuous beginnings. Of the business of travel in this country there is no apter or more notable illustration than the voluminous and multifarious holiday traffic of the summer months. It is the railway train that has created the "sea-side resort." As late as the middle of the nineteenth century, many carriage-keeping folk in London were satisfied with the suburban billows of Gravesend. At no time in the coaching era was it possible for thousands of people living any distance inland to spend the greater part of a day at the sea-side, and return home in the evening. Had they got to the sea they would have found but scant accommodation of any kind. Proprietors of inns on the coach routes knew pretty well how many passengers would alight on any day of the year, and what provision of food or beds would be wanted. But when trains began to disgorge passengers by the hundred, the historic inn would serve no longer. What a vast business is that of the modern hotel, and the ever new thing in restaurants; and it is the railway that has brought this about. By-and-by the railway company also turned hotel-builder, and most of the great companies now own the hotels along their lines. In far Connemara, where not so very long ago the guard of the mail-coach was armed with a blunderbuss, I found in the autumn of last year hotels of the very best.

The development has been complete, magical almost, wherever the railway has come, and the motor-car will work an equal revolution. Out of or side by side with the tiny fishing village has grown the great gay town, with esplanades, wide roads, piers, hotels, electric lamps, tennis and croquet lawns, coaches, theatres, concert halls; and here, during the best or the worst weeks of the summer, carnival is held by day and by night.

Superior persons complain that the hurried travel of these days no longer produces literature. Nobody, we are told, writes a "Sentimental Journey." But, in any age, what proportion has the literature of travel borne to the quantity of travellers? There were plenty of English trundling up and down France and Italy in Sterne's day, but there was only one Sterne. We exaggerate the literary output of the first great age of English travel, the Elizabethan age. They are not all masterpieces in Hakluyt's *Principall Navigations*. The Pole itself has not given us one book of real greatness. Stevenson made more out of his donkey in the Cevennes. But this point of view is absurd. The less we have of writing about travel, and the more we have of travel itself, the better for everybody.

# II.—HOLIDAYS ABROAD: WHERE AND WHEN TO GO, AND WHAT IT COSTS

HOW TO USE THE TOURIST AGENCY AND THE HOTEL COUPON SYSTEM—ETIQUETTE IN CONTINENTAL TRAVEL—THE NEW YACHTING—ROUND THE WORLD FOR A HUNDRED POUNDS

BY

EUSTACE REYNOLDS-BALL, F.R.G.S.

(AUTHOR OF "MEDITERRANEAN WINTER RESORTS," "HINTS FOR TRAVELLERS IN THE NEAR EAST," &c.)

NINE out of ten Englishmen with a foreign tour in prospect, whether it be merely a modest "week at lovely Lucerne for five guineas," or a tour round the world, instinctively wend their way to the offices of some tourist agency. Indeed the old-fashioned prejudice against these useful aids to travel has virtually died out, and though personally conducted tours still stink in the nostrils of the exclusive and high-minded travellers of the old school, most tourists nowadays, from the German Emperor down to the modest tripper anxious to get the best value for his money in a week's trip to Paris or Brussels, have, sooner or later, been glad to avail themselves of the kind offices of the tourist agent.

But it is scarcely accurate to suppose the tourist agency is a comparatively modern development of travel. Indeed, even the "personally conducted" tour, upon which so much cheap wit and ridicule has been expended, can, as a matter of fact, boast of quite a respectable antiquity. In the mediæval pilgrimages may be seen the germ of the personally conducted system; and the plan of co-operative travel so successfully developed within recent years is actually foreshadowed in the Crusades. The tourist agent, is in fact, in the most comprehensive sense, a pioneer of popular travel, and therefore of great public utility.

Touching the delicate question of the *personnel* of the conducted parties, the social standing of the members depends a good deal on the extent and cost of the tour. In the longer and more expensive tours—Constantinople, Egypt, Palestine, for instance—the members are mostly recruited from the professional and leisured classes, including, indeed, many who do not much relish the personally conducted element *per se*, but are fain to take advantage of the conducted tour system for the sake of economy, for only wealthy travellers can satisfactorily visit the Holy Land or some parts of the Near East independently.

It is sometimes objected that the great excursionist agencies, as precursors of popular travel, do not fulfil expectations, and that in their Continental touring arrangements they are disinclined to open up new fields of travel. Many of their tours, it is urged, cover the same ground as those taken under the same auspices by the last generation of travellers. These critics forget, however, that the expense of exploiting and popularising new touring grounds is considerable, and that it takes many years before the travelling public can be educated up to new and unfamiliar countries. Besides, though the tourist agencies may be rightly regarded as among the "humanising factors of the age," they cannot be expected to be superior to financial considerations. Nor must it be forgotten that the majority of the members in each personally conducted tour are making their first essay in Continental trips, and what can serve as a better apprenticeship to foreign travel than the week's trip to Paris, the journey down the Rhine, or the familiar Swiss round?

But the railway agency is perhaps the most important business of the great tourist agents. There are distinct advantages to the traveller attaching to railway tickets bought through these agencies. They can be bought in advance, and for any date, they are available for periods varying from seven to sixty days, and they afford unusual facilities for through-booking from one end of Europe to the other, thus minimising the loss by exchange. On most railways the pecuniary gain is, of course, only indirect, but in some countries the use of these tickets is a distinct economy to the traveller. For instance, in India and some of the Australian colonies

*bonâ fide* tourists are carried on the railways at a reduction of 10 per cent.

The hotel coupon system, another important feature of the tourist agency, appeals to a far more limited section of the travelling public. The chief objection to the use of these tickets is that, though hotel proprietors and their employees will take care that the holders shall have no serious cause for complaint, and will scrupulously observe the letter of the bond, yet, when the hotel is crowded with ordinary guests, the holders of course are not always cordially welcomed. After all, waiters are human, and it is not to be expected that they should go out of their way to pay a guest any special attention with a very remote prospect of any pecuniary return in the shape of gratuities. For, rightly or wrongly, coupon-holders, as a class, are thought to hold most uncompromising views on the tipping-question. A sensitive traveller, too, does not relish the idea of labelling himself a follower of a tourist agent—the sentiment, perhaps, denotes a latent snobbishness, but it has to be reckoned with. Then the uniform character of the price of the coupons, for there are only two or three classes, is another objection. The old stager can occasionally make better terms by bargaining for himself; and this applies particularly to much-frequented, but not necessarily fashionable, tourist centres. But it must be admitted that this objection has little weight in extra-European countries.

On the other hand these coupons are of great use (1) as a guide to hotels of respectable standing, especially to those where English tastes and customs are understood; (2) they enable a visitor to gauge his expenditure beforehand, and (3) they are a valuable safeguard against extortion, particularly in the East. In extra-European travel, in fact, especially in Egypt, India, and the East generally, the tourist agent is of the greatest use to those unversed in Eastern travel.

In considering a Continental tour the three chief factors are (1) cost, (2) time available, and (3) locality, the latter of course depending on the season. For summer touring the most popular fields are perhaps Norway, Switzerland, and the Rhine, and for those of more modest means the Belgian Ardennes, Holland, Normandy, and Brittany.

Advice as to the best Channel route seems unnecessary, except to say that the most comfortable (for good sailors) and at the same time the cheapest are not the fashionable short routes *viâ* Dover and Calais, Folkestone and Boulogne, or Dover and Ostend, but the longer or so-called "sea-routes," Newhaven and Dieppe, Southampton to Havre, Queenborough to Flushing, and Harwich to the Hook of Holland. These steamers are larger and less crowded as a rule, and by taking the night service there is of course a saving on the hotel bill.

A useful tip to the untravelled is that the homeward bound great ocean steamship lines, such as the Hamburg-American, General Transatlantic Company, North German Lloyd, &c., which call at Plymouth or Southampton before reaching their port of destination, are glad to fill up the vacant berths for the last stage of the journey. For instance one can travel by one of the magnificent boats of the Hamburg-American line from Plymouth to Hamburg and enjoy a sumptuous cuisine for £3 or so.

Perhaps, on the whole, the most enjoyable as well as the most economical holiday field is the picturesque region between the Meuse and the Moselle, loosely described as the Ardennes, into the heart of which the traveller can be carried from London at a first-class return fare of some fifty shillings only.

Holland, too, is an easily accessible tourist centre, though not so cheap as the Ardennes. As to time and cost, an independent traveller could visit the most interesting cities of Holland, including the "dead cities" of the Zuyder Zee, comfortably in a fortnight at a total cost of some £12, including first-class tickets.

Owing to the great competition among the steamship companies Norway has become one of the cheapest countries in Europe to visit, and a fortnight's cruise to the principal fjords could be managed for £15, or half that sum for a week.

For those who wish to avoid the beaten track of travel without going too far afield, no district for interest, picturesqueness, and variety, can surpass Brittany, a country where the customs and dress seem to take the traveller back to pre-Revolution days. The following skeleton tour would enable the tourist to see the most interesting portion of Brittany in about a fortnight at a very moderate cost. St. Malo to Morlaix and Brest, then *viâ* Douarnenez to Quimper and Quimperlé, returning through the heart of the country by the new railway from Quimperlé to Huelgoat and Guingamp.

Switzerland in the summer, though cheap enough for the personally conducted, is a comparatively expensive holiday resort in the height of the season, and the hotels are of course liable to be very crowded in the more popular tourist centres.

I have no space even for the barest skeleton outline of the innumerable Swiss routes for

tourists in what is still the great summer playground of Europe, as the Riviera is for winter holiday-makers.

As for the Rhine, it should not be regarded as the goal of travel, but rather as the most suitable and most picturesque gateway to Switzerland, Tyrol, and Italy, and should be included in the itinerary of all Continental tourists. Though superior travellers may call the glorious Rhine hackneyed, it offers after all the finest river scenery in Western Europe.

So far I have confined myself to summer touring fields on the Continent, but Italy, though its fashionable season is the winter and spring, might with advantage be visited by summer holiday-makers. It is at this season that travel is cheap and the hotel tariffs more reasonable. The heat is much exaggerated, and is more felt in Northern and Central Italy than in the south, just as the greatest tropical heat of India is experienced not in the south but in the plains of the Punjab and Scinde. Indeed, Piedmont, like the Punjab, has been described as a Siberia in winter and the Sahara in summer. There is much to be said for the opinion of Edmond About that each country should be visited during its most characteristic season. The season for Italy is unquestionably the summer—the houses, the customs, the dress of Italians are meant for a hot country. Consequently, English tourists, if they will only condescend to adopt the customs of the inhabitants, need not fear suffering from the ill-effects of the genial summer temperature.

I may, perhaps, be pardoned for giving a few hints as to demeanour and conduct of travellers. Even those who consider themselves seasoned travellers may be reminded that it is well to observe the social points of etiquette in travel which obtain more or less all over the Continent. For instance, many a harmless and inoffensive tourist has been voted a boor because through ignorance or shyness he abstains from lifting his hat when entering a shop or railway carriage, or on meeting fellow guests on the hotel staircase, or because he fails to bow to the company on rising from the *table-d'hôte*. But it is of course in matters of dress that English people are most apt to wound the susceptibilities of Continental nations. As has been unkindly said, the British abroad take their pleasures seedily as well as sadly. Though full evening dress is rarely worn in Continental cities at theatre or *table-d'hôte*, that is no reason why the tourist should attend these functions clad in flannels or in a check tourist suit.

What are called pleasure-yachting cruises are a comparatively recent but very popular development of travel. Even the great passenger steamship companies have found it advisable to cater for what has been felicitously described as the new yachting, and to encourage this new kind of passenger traffic. The Orient, Pacific, Hamburg-American, North German Lloyd, White Star Companies, and even the somewhat aristocratic and exclusive P. and O. Company, now arrange summer and winter cruises to the Baltic, the Norwegian Fjords, the Canaries, the Mediterranean, the West Indies, &c., at very reasonable rates. Then there are well-known steamers devoted solely to these cruises. The varied choice of routes is almost bewildering, but an analysis of the different services shows a certain uniformity of time and price. The cruises are usually for a period of fifty to sixty days, and in each voyage the company aim at calling at as many places of scenic interest as possible. The fare usually works out at about £1 a day. These public yachting trips are an admirable substitute for the conventional Continental tour. Apart from the obvious advantages of freedom from postal worries, perpetual packing and unpacking, frequent consultation of railway guides, risks of inferior hotel accommodation, and other inseparable drawbacks of land travel, the tourist can gauge his expenditure accurately beforehand, with no necessity to allow a large margin for incidental expenses. Then, too, the passenger is not tied down strictly to dates at the ports of call, like those by the regular liners, for in these pleasure voyages considerable discretion is given to the commander as to the stay at each port, the duration mainly depending on its attraction from the sight-seer's point of view.

Some suggestions on the popular Round the World tour may not be inappropriate, especially as there is no particular season for this kind of travel, though it is true the tourist agents recommend the autumn for the commencement of the voyage. It is possible to circumnavigate the globe by the so-called All-Sea route (first-class steamer and second-class rail), for £150 or even £100, if the new line of Japanese mail steamers (Nippon Yusen Kaisha) be taken from London to Yokohama (£55 first-class, forty-five days) and Seattle, and thence to Montreal by the Canadian Pacific Railway, but such a voyage can hardly be considered as seeing the world. The journey need occupy only three months or so, but if the really interesting portions of the globe are to be visited, with reasonable breaks for sight-seeing and allowing, say, six months, it would cost the globe-trotter at least double.

But even in these rough estimates only the steamer and railway fares and the bare hotel bills are reckoned. For incidental expenses of every description at least 25 per cent. should be added to the total, if the traveller cares at all for material comfort. Either of the two popular round-the-globe six months' tours, viz., (1) *viâ* Australia and (2) *viâ* Japan and India, would thus cost the independent traveller from £300 to £350.

The same tour by the annual personally conducted tours of the tourist agent would cost from £50 to £100 more. A typical round-the-world tour, which would include many of the great sights of the world, is as follows; the time would be six to seven months, and the cost, allowing reasonable breaks at places of interest, would be from £350 to £400 (first-class throughout): London, Paris, Milan, Florence, Rome, Naples, Cairo, Aden, Bombay, Jeypore, Delhi, Agra, Cawnpore, Lucknow, Benares, Darjeeling, Calcutta, Colombo, Kandy, Singapore, Hong Kong, Canton, Nagasaki, Osaka, Kioto, Hakone, Nikko, Tokyo, Yokohama, Honolulu, San Francisco, Salt Lake City, Colorado Springs, Chicago, Niagara, Boston, Philadelphia, Washington, New York, Liverpool.

# ARE WE TO HAVE AN INTERNATIONAL LANGUAGE?

THE MOVEMENT TO SUPPLY THE NEW AGE WITH A NEW LANGUAGE—IT MUST BE SIMPLE, PHONETIC, AND AGREEABLE TO EYE AND EAR—SYSTEMS TO CHOOSE FROM—VOLAPÜK, LATINESCE, NOV LATIN, SPELIN, THE BLUE LANGUAGE, AND ESPERANTO—A GRAMMAR THAT CAN BE UNDERSTOOD IN AN HOUR

BY

TIGHE HOPKINS

THINGS are in season or they are not in season; proposals are timely or they are not timely. More than two hundred years ago a learned Englishman, Bishop Wilkins, of Chester, was trying to interest the world in a Universal Language. But in the middle of the eighteenth century the world did not care twopence about a universal language. Bishop Wilkins' treatise, *The Essay towards a Real Character and a Philosophical Language*, had been published by the Royal Society, but it might almost as well have made its appearance in Central Africa. A little later came Leibnitz, whose *Spécieuse Générale*, as he called his system, doubtless owed something to Wilkins' work. The Hanoverian scholar, famous as philosopher, mathematician, and man of affairs, was the very opposite of a trifler; and if the problem of a universal language had not appeared to him to be capable of solution, he would certainly not have troubled himself to investigate it. So confident, indeed, was he that he placed his *Spécieuse Générale* on a leve with his differential calculus. But Leibnitz, like the Bishop of Chester, might as well have been relating dreams: the world was not wanting a universal language. If, for that matter, such a thing were being thought of, French would have been considered much more suitable and convenient than a new and artificial speech.

The situation is a different one to-day. True that, in the matter of a new speech, a second and common tongue for everybody, Europe at large is scarcely more advanced than were the contemporaries of Bishop Wilkins or Leibnitz; but whereas the absence of such a speech incommoded few people at that era, it is regarded to-day as a grievous international inconvenience. The races of the world, and the Aryan races in particular, begin to be drawn together in countless different ways. What a link, for instance, is an international European law! Consider what commerce was in Wilkins' day, and what it is at the beginning of the twentieth century. Think how vast an army of globe-trotters—from the man of science and the explorer to the ubiquitous commercial traveller and the merest tripper—is in motion every year and the whole year round. Within half a century, science has overspread the world; but

the men of science, having practically dropped the use of Latin, have no longer a common medium of communication, and the scientific societies which are supposed to keep themselves abreast of affairs can but file in despair their exchanges in Roumanian, Bohemian, Icelandic, Basque, Hungarian, Swedish, Armenian, Greek, Japanese, and Portuguese. Science, which should have its world's terminology, is a babel; and no scientist, intent upon his own branch of knowledge, would ever make time to carry out Max Müller's suggestion, that he should acquire at least a reader's familiarity with the six principal languages of Europe. But specialists in this science or that art are nowadays invited to meet other specialists from other countries, to discuss the things they are interested in. During the last quarter of a century, international congresses have been bringing people together from every State of Europe, from America, from the East; but is it doubted that the usefulness of these meetings would be very greatly increased if those who attend them were able to exchange their ideas in a language with which all were equally familiar? Thoughts may be identical —at any rate they cannot fail to have much in common on these occasions—but what a hindrance is caused by the diversity of words and grammatical forms.

Why not attempt a remedy?

It is proposed to do so. Congresses and learned societies, tired of only half-understanding each other, have resolved upon a plan of action, which seems first to have been suggested by the French doctor of science, M. Leau, delegate of the *Société Philomathique de Paris*. During the Paris Exhibition of 1900 several delegates were appointed by various congresses and societies "to study the question of an *international auxiliary language*." The expression "international auxiliary language" should be noted. Except the Swiss pastor Johann Martin Schleyer, the inventor of Volapük, no one at this day talks of a *universal* language; nor is there any idea of interfering with the tongue of any living nation. The proposed new language would be merely an auxiliary one, the one foreign language for everybody—"*la deuxième pour tous*," the motto of the "Langue Bleue" or "Blue Language" of M. Léon Bollack.

In January 1901, the delegates signed a Declaration as to the end in view and the means to be pursued for its attainment. The most important points were these:

"There is a necessity to choose and to spread the use of an international language, designed not to replace national idioms in the individual life of each people, but to serve in the written and oral relations between persons whose mother-tongues are different.

"In order to fulfil its purpose usefully, an international language must satisfy the following conditions:

"'1st Condition.—It must fulfil the needs of the ordinary intercourse of social life, of commercial communications, and of scientific and philosophic relations;

"'2nd Condition.—It must be easily acquired by every person of average elementary education, and especially by persons of European civilisation;

"'3rd Condition.—It must not be one of the national languages.'

"The choice of the auxiliary language belongs in the first instance to the International Association of Academies, or, in case of failure, to a committee appointed by the delegation."

What, it may be asked, is the International Association of Academies to which the delegates refer? Founded in 1900, the Association takes in certain Academies and Scientific Societies of Amsterdam, Berlin, Brussels, Budapest, Christiania, Copenhagen, Göttingen, Leipsic, London (the Royal Society), Munich, Paris (A. des Sciences, A. des Sciences morales, A. des Inscriptions), St. Petersburg, Rome (A. dei Lincei), Stockholm, Vienna, and Washington. The Association holds a General Assembly or Congress every three years, and is represented in the interval by a Committee. It met for the first time in Paris, in 1901, and its second Congress will be held in London next year, under the auspices of our Royal Society.

It becomes evident that the question of a possible international language has advanced itself, intellectually speaking, into high society. Moreover, the delegation has grown from a small number of chosen and deputed experts into a federation of scientific and commercial societies in all countries pledging themselves to accept and spread the use of whatever international language may be agreed upon. If the next meeting of the Association were to be held, as the first meeting was held, in Paris, the problem of the Lingua Franca of the future would almost certainly be placed in the forefront of its programme; for France, always so receptive of ideas, has been more active than the rest of Europe put together in this propaganda. But the Association is pledged to London for its second congress, and it will be curious to see what attitude will be taken in 1904 by the Society which, in 1668, so cordially befriended the otherwise unbefriended Wilkins.

In April 1901, some three months, that is to

say, after the appearance of the Declaration, a petition signed by the secretary and treasurer of the Delegation (M. Leau, one of the prime movers in the matter, and Professor Couturat, of the University of Toulouse) was presented to the Paris Academy of Sciences, urging upon France the claims of an international auxiliary language. The petition arrived too late to be properly discussed at the meeting of the International Association of Academies, but it received immediately the signed approbation of twenty-nine members of the Institute of France, and up to March of this year some four hundred members of the Academies and Universities of France had expressed in writing their sympathies with the enterprise of the Delegation.

This notable success has suggested the idea of extending the petition, or a modified form of it, to the Academies of all civilised countries, and in this modified form it has been adopted by academies, universities, or societies of Brussels, Berne, Budapest, Edinburgh, Geneva, Genoa, Helsingfors, Kiel, Krakof, Leipsic, St. Petersburg, Rome, Turin, and Vienna.

Briefly speaking, the work of the Delegation is to "obtain the enrolment of as many societies as possible, and then to request the Association of Academies to undertake the institution and control of an international medium which would be accepted by the Federation of Societies and carried into general use and taught in all civilised countries in every school."

Language arises out of the necessities of daily life, and when, as in the intercourse of commerce, peoples whose tongues are different are brought cheek by jowl, they will and must by some means understand each other. Languages invented in such circumstances are not so much languages as jargons, but they serve a very useful turn; and sometimes, as in the case of Hindustani, what was originally a jargon has become the common speech of a continent. In the Chinese ports and elsewhere, "Pidgin English" has done a pretty good day's work. The Mediterranean has a whole Lingua Franca of its own. Chinook and Pennsylvania Deutsch are other developments; and in Petropolis, by Rio Janeiro, in Brazil, there is still in use a dialectic blend of Portuguese and German. A developed jargon has a high interest for the scientific linguist: and Max Müller, in his examination of Wilkins' scheme, declared that an artificial language, properly constructed, "might be much more perfect, more regular, more easy to learn, than any of the spoken tongues of man" (*Lectures on the Science of Language*, second series). Now this, of course, is just the sort of new language which the new age wants for all international purposes. It need not be, and one hopes it would not be, a "jargon," and if, when the grammar, lexicography, phonetics, and so forth, had been fairly settled, or well begun, the whole body of rules were controlled by a permanent international committee, what should prevent the new language from going forward and developing itself like any other?

Precisely how many schemes are at present before the public, I will not venture to say. There may be, and I think there are, at least a score; but it is perhaps not imprudent to suggest that few among them will get a serious hearing. Somebody has proposed Chinese as the universal or international language. Greek is not without its backers. There are advocates of the "philosophical" language, in which Νηκα stands for "elephant," Νηκη for "horse," Νηκε for "ass," and Νηκο for "mule," which, as Professor Couturat * observes, is not much better than "Animal No. 1, Animal No. 2, Animal No. 3." Italy, naturally enough, pleads for the revival of Latin.

It may perhaps be taken for granted that the first choice of the Committee will lie between "a real language simplified" and a "new mixed compromise" language; for, as no *living* language will be accepted, the medium must be a neutral one, foreign to everybody. Latin is in a slightly rising market, but it is awkward to ask a dead language to adapt itself in a moment to the scientific, political, commercial, social, and other requirements of the whole of modern Europe. A certain galvanic or voltaic process is no doubt possible. You can wrest out of Latin a word or combination of words to stand for "bicycle," † as you can out of Gaelic for "telegram," ‡ "telephone," or "motor." But this involves little less than the making of a wholly new language out of a wholly dead one. There are, however, Latinised confections, and a simple and graceful one is the Latinesce of Mr. George Henderson, a pioneer in this movement and the author of several systems and many suggestive tracts. The credit is Mr. Henderson's of having attempted to run an illustrated comic paper in Latin.

The solution of the problem by construction of a new and artificial language brings up inevitably the old objection based upon the failure of Schleyer's Volapük. But Schleyer's failure,

* *La Langue Internationale*, a brief, but most lucid and altogether admirable discussion of the whole subject, an English translation of which is in preparation.

† *Birota velocissima*, for instance.

‡ "Story-on-top-of-a-stick."

or rather what has followed from it, is the most interesting example of evolution in this particular field. Volapük (which had its Academy, and I know not how many professors in how many countries of Europe) has been driven out by systems which are better because they are so much more simple. Simplicity should be the rule of rules in this matter. The Lingua Franca of the future must be simplicity itself in its grammar; it should be absolutely phonetic, every letter to have always the same sound; it should have but one form of conjugation for all verbs; pure vowels; no inflection of nouns; no artificial gender; no diphthongs or double consonants; it should be agreeable to the eye and grateful to the ear.

The reader may be interested in examining a specimen or two. Here is an anecdote in Volapük:

"Plofed de literat älialdom vöno in klad funapükati fa Fléchier su Turenne. Mayed stüla e subim tikas älegäloms julelis valik, e bal de oms äsagom kofiko nilele omik: 'Kiüp okanol mekön pükati sümik?' 'Ven obinol Turenne!' votik ägesagom."

Now, with that specimen before him, I doubt whether it would help the reader much to say: "About 40 per cent. of the words of Volapük are taken from English." These words, in fact, are not recognisable. They bear no external resemblance whatever to those of any known tongue. Volapük would be quite as difficult to learn as French or German. Take the same anecdote in Mr. Henderson's Latinesce:

"Une die une professore de litterature essete legente ad sue classe i funebre oratione de Fléchier super Turenne. I majestate de i stile et i elevatione de i sententies delectate omne i discipules, et uno ex illos dicte ad sue proximo: 'Quando potere vos facere une tale oratione?' 'Quum vos esse Turenne!' response i altero."

With an elementary knowledge of Latin one would read that into English as follows:

"A professor of literature was one day reading to his class the funeral oration of Flechier upon Turenne. The majesty of the style and the elevation of the thoughts charmed his pupils, and one of them said to his neighbour, 'When will you make such a speech as that?' 'When you are Turenne!' replied the other."

Here, again, is the anecdote in Dr. Zamenhof's Esperanto:

"Profesero de literaturo legis una tago al sia klaso la funebran laudadon de Flechier sur Turenne. La grandego de la stilo kaj la alteco de la pensoj charmis siajn lernantojn, kaj unu el ili diris ironie al sia najbaro. 'Kiam povos vi fari tian parolon?' 'Kiam vi estas Turenne!' respondis la alio."

Dr. Daniel Rosa, in his Nov Latin, retains for the most part the Latin form of the words:

"Il deber star facilé lege ab omn les doctes sine præparation, aut jam post le lectura da pauc lineas de præliminari explication.

"Il deber star scribe sine difficultát post le lectura de pauc paginas de explication, et sine le necessitát de un nov lexic."

In English: It (*i.e.*, the international language) should be read easily by all educated persons without preparation, or after the reading of a few lines of preliminary explanation. It should be written without difficulty after the reading of a few pages of explanation, and without the necessity of a new dictionary.

The Spelin of Professor George Bauer, of Croatia, is based upon Volapük, but is much simpler and more euphonious. Pasilingua and Lauda's Kosmos are other specimens of purely artificial langauges. Then there is the Blue Language of M. Léon Bollack, who has, I believe, spent a considerable sum of money in seeking to establish it. Take as a single example the word *uspiloru*. *Spil*, the root, signifies "play," "game." The syllable *or* is the actor of the play, so *spilor* means "player." The final *u* indicates the plural, therefore *spiloru* "the players." The initial *u* marks the feminine, whence *uspiloru*, "the lady-players."

But there seems little doubt that Dr. Zamenhof's Esperanto is at present holding the field against many rivals. It is so simple that the grammar (an admirable one has been prepared by Mr. J. C. O'Connor) can be understood in an hour, and after mastering this, and committing to memory some nine hundred words, you may be said to have a working knowledge of the language. Dexterous use is made of prefixes and suffixes. Thus, the prefix *mal* signifies the direct opposite of any idea; the word *bon'a* is "good," so that *mal'bon'a* stands for "not good" or "bad." The suffix *in* marks the feminine gender; *fratŏ* is "brother," drop in the suffix and you have *frat'in'o*, "sister." There are many of these devices which greatly simplify the process of word-making,

No international language will succeed which cannot be learned within a month. Esperantists (there is now an Esperanto Club in London) say that a fortnight is enough; and the cost of the acquisition is eighteenpence. This seems to let Chinese out.

# WHERE FARMING PAYS IN ENGLAND

IN THE BEAUTIFUL FEN DISTRICT THE FARMERS HAVE TAKEN UP A NEW AGRICULTURE AND MADE IT PAY—LABOUR IS IN DEMAND AND THE PRICE OF LAND HAS GONE UP—THE SUCCESSFUL CULTURE OF POTATOES, CELERY, SMALL SEEDS, AND FRUIT

ALL round the shores of the wide bay which is known as the Wash, there stretches a vast, flat plain, level as a billiard table and fertile as all alluvial lands are. It extends from the low sandstone hills of Norfolk across to the foot of the Lincolnshire Wolds, and westward to the highlands of Cambridge and Huntingdon, and it was in geological times a vast bay, of which the Wash itself is only a shrunken fragment. Four rivers—The Great Ouse, the Nen, the Welland, and the Witham—find their way into the Wash; all are sluggish streams, which meander out to sea through ever-shifting channels, and which bring down with them the soil of the high lands to deposit it on the sands of the Wash. Hence, the land is ever encroaching upon the sea.

It is a land of magnificent distances. No one who has witnessed them will ever forget the gorgeous beauty of its sunsets. The old reproach of the land as being the haunt of malarial fevers has long since been removed, and no healthier part of the United Kingdom is to be found. The Fenland will well repay a visit from those who wish to see a piece of old-time England, which has made its mark on the past, and which still retains the stamp of a pure bit of Anglo-Saxondom. Its level roads are splendidly kept, and for the middle-aged cyclist, for whom coasting down hill is but a dangerous joy, it is unequalled anywhere. In winter its long drains are the paradise of skaters.

But it is not of the Fenland generally that we have to speak to-day, but rather of one side of its life which is full of interest, now that the state of our agriculture is causing us so many heart-searchings. A few months ago, we dealt with Mr. Rider Haggard's sombre picture of the state of rural England, which showed what ruin and desolation had fallen upon our fields and homesteads in many counties, or how great was the danger to our national stability and well-being arising from the drift of our people to the towns. And it is now our purpose to show how the people of the Fenland have themselves grappled with this problem.

Sixteen or seventeen years ago, agriculture went through the severest crisis of the last two centuries. Its three great staple products of meat, corn, and wool sank to a lower price than had been seen for nearly two hundred years. The developments in ocean transit, and the opening up of the vast regions of the North-West in Canada and the United States, of the estancias of the Argentine, and of the plains of Australasia, by railways, had flooded this country with a produce which was sold at a price which brought despair into the heart of the British farmer, heavily weighted as he was in rents, rates, and tithes. The new situation was immediately grasped by the farmers of the Fenland; they saw at once that, whilst you could transport with ease a quarter of wheat from the Pacific slope, if need be, and bring it over here in as good a condition as it was when it started, that whilst you might bring a carcase of mutton from New Zealand in the same way, you could not do so with a punnet of strawberries or raspberries or a hamper of potatoes. And so the most far-seeing of the Fenland farmers began to turn their attention to the production of other things besides meat and corn. And in twenty years, they had brought about a practical revolution in the agriculture of this corner of England. It is safe to say that this is one part of the country where farming is made to pay, and pay well.

This new departure has taken many forms. The district is one of the largest potato-growing districts in the country. Some farmers have five, six, and even seven hundred acres of potatoes every year. This means an enormous outlay for labour, for which there is a demand nearly all the year round. And in spite of an exposed situation, the growers had managed to compete, and compete successfully, with

counties which are much more favourably situated so far as climatic conditions are concerned. Round about Kirton a great industry has sprung up in growing early potatoes, which come into the markets as soon as the supplies from Jersey and Cornwall have been exhausted. The seed potatoes are carefully sprouted in boxes in the winter, in barns and outhouses, and when the time comes for planting, they have sprouts four or five inches long. The consequence is that they are out of the ground under favourable circumstances in about a fortnight. The carefully prepared soil is treated with artificial manures, the application of which has been made a study. And now great train-loads leave every day for the markets of the North, of potatoes which have been carefully dug and sorted, and packed in hampers. Prices of course vary, but it is no uncommon thing for farmers to get as much as thirty and forty pounds an acre for their crop: a return which leaves a very handsome profit. Later on, the main crop will come to hand, and all the winter long, potatoes will be pouring into the markets of the great towns. The growers go to immense pains in getting new stocks of the best varieties, and they have almost succeeded in eliminating the disease, which gave this crop such a speculative character years ago.

Besides potatoes, celery is a great crop. The system of cultivation means deep trenching of the soil, and fits it for almost any crop to follow. Here again in favourable seasons good profits are realised, whilst its growth creates a great demand for labour. The plants are grown in frames, and are twice replanted. In many cases, crops of cauliflower and cabbage are taken, the plants being put in whilst the celery is growing, so that when it is ready for digging the green-stuff grows right on.

Another staple industry is the growth of small seeds, such as turnip, rape, mustard, lettuce, and radish. Pretty nearly all the mustard we eat with our beef is grown in the Fenland, and goes to Colman's or Keen's to be ground up and prepared for the table. Turnip-seed for all the farms in Great Britain, and for most of those in the colonies, is grown about here. This is mostly done under contract with the great seedsmen, like Sutton's or Carter's, or Webb's. The firm supplies the seed from their stock, and take the produce at a fixed sum per bushel. On good, deep soils this is a very profitable crop, and not at all an exhausting one. It generally follows a crop of early potatoes.

But besides the growing of potatoes, celery, and small seeds, the most remarkable development of all has been in the production of fruit. A very large acreage of strawberries is to be found around Long Sutton, Wisbech, and Torrington. The soil seems admirably adapted for this crop, and the acreage is increasing every year. Most of the produce goes to the Northern markets, and long fruit trains leave for Leeds, Newcastle, Edinburgh, and Glasgow in the strawberry season. The labour required for picking the fruit when ripe is very great, and in the season there is quite an influx from Whitechapel and Bethnal Green of men and women who come for a few weeks in the country at good wages. Hours are, of course, very irregular, depending upon the weather and the state of the crop, but excellent wages can be earned. Besides strawberries, large breadths of land are laid down to raspberries. As a rule, these are not sent to be sold retail, but are sent away in barrels to the great jam-making firms. This seems a pity, for there is always a large demand for this delicious fruit, which generally keeps at a very high price. Growers tell you that there are difficulties in handling such a soft fruit, which prevent its being on the market in a sufficiently perfect state. But surely this is a question of distribution, which might find a solution somewhere. Besides soft fruits, like strawberries and raspberries, great quantities of other fruit are grown, all of which find their market in the great towns and amongst the jam makers.

But the growth of fruit does not exhaust the energies of the Fen farmers. Nothing indeed seems to be foreign to their enterprise. In one place you may see fields of bulbs: snowdrops, crocuses, narcissi, lilies, and jonquils. The use of glass for the growth of tomatoes and cucumbers is extending. Bee-keeping has become a feature in some places, and great stores of honey are gathered when the hives are placed near fields of turnip-seed and mustard in full bloom. Woad was a crop once largely grown, but changes in the methods of making dyes has curtailed the demand for it. Flax, too, is a crop which does not seem to prosper as it once did.

Now as to the effects of all this revolution in agriculture. They are wholly good. The price of land has gone up. Ordinary agricultural land now fetches sixty and seventy pounds an acre, and there have been cases in which old pasture land has brought over one hundred pounds an acre. There is a tremendous demand for small farms, which fetch

high rents if they are conveniently situated. And the general well-being of the people is extraordinary. Wages for agricultural labour have gone up, and there are many families working together, who are able to bring in two and three pounds a week into the common stock. This has, of course, had a reflex action on the trade of the neighbourhood. Men earning these wages are excellent customers to the local tradesmen. They demand the best of everything; meat, which was formerly only seen on the table of the agricultural labourer at most once during the week, now figures there three times a day. The people are well-clothed, and their cottages show many instances of refined taste in the shape of handsome furniture. Indeed, there is a general appearance of rude health and comfort, which can only come from good food and good conditions of life generally. Pauperism, outside the class of loafers and ne'er-do-weels, which is to be found in every district, is almost non-existent. And what is most significant of all, population is beginning to take an upward turn, instead of, as in other rural districts, showing a decline. Of course, we do not say that the example of the farmers in the Fen country can be followed everywhere. They have exceptional advantages, which are not found everywhere, or even generally. But they have made the most of their advantages, and they have shown the way to a better state of things, when England shall be changed from a ranch to a dairy-farm and a market-garden.

# A SCULPTOR OF THE WILD WEST

THE STRIKING STORY OF AN ARTIST'S LIFE—SOLON BORGLUM, WHO EXPRESSES THE SPIRIT, STRENGTH, AND WILD BEAUTY OF THE WEST—HOW THE RANCHMAN BECAME A WANDERING PAINTER, AN ART STUDENT, AND ONE DAY "FOUND HIMSELF" IN SCULPTURE AND BECAME FAMOUS

BY

ARTHUR GOODRICH

IT was Rousseau, I believe, who said that a man should not work with his brain until he was thoroughly matured, that the boy and the youth should not be allowed to think but should, instead, live in the great outdoors. The idea is of a piece with the thought that genius must come fresh from the soil. While it is not an infallible rule of greatness, it is an interesting theory, a healthy one, and it suggests a story.

Back in the sixties when the Wild West was still an untamed frontier, when the Indians were beginning their last desperate fight, when men's blood ran as red as a prairie sunset and their muscles were like the rocks they grappled with, and when impulse was often law, a young wood-carver named Borglum started from Denmark with his wife to seek a chance in the new country. They followed the Western path over seas and across the continent. From the Mississippi they marched together beside an emigrant waggon until they reached Ogden Utah. For a few years the man worked thriftily at his trade but with constantly lessening enthusiasm. He had not "found his work." He decided to study medicine and turned back across the border to St. Louis. There were four children then, the youngest of whom, born a few months before, in 1868, they had named Solon. They stayed at St. Louis only long enough to get the desired degree, and, turning westward again, settled in Fremont, Nebraska. Fremont at that time was a typical prairie town where people who had become tired of going West stopped to find a home. The doctor's practice, which increased rapidly, extended far out into the wilds, in distant ranches, in lonely cabins lost in the sweep of unpeopled land, and in neighbouring Indian camps. Necessarily he owned a number of good horses.

Meanwhile young Solon grew into boyhood with the breath of the prairie fresh in his nostrils. In appearance he was a typical frontier boy. He was sent to school, but

he cared little for books. Books and study were something artificial and civilised that kept him indoors. The prairie alone was real, and the quiver of the pony under him and the whirr of the wind in his ears. Wonderful holidays came occasionally to him and his younger brother, when their father would take them on one of his long rounds of border calls. Sometimes he would leave them at a friendly Indian camp and push on alone, while they played with the Indian boys and watched the big bucks swagger and heard the old men around the fire tell stories that they half understood. When Solon was still very young he could ride a horse and hurl a lasso with the best. He was never taught to be timid and he feared nothing. He grew up hardy and quick and clear-headed, fit for action and hardship, an integral part of the rough life around him. And, because he was a quiet, sensitive, imaginative boy he was unconsciously akin to it all. His fancy plotted many kinds of adventure. Once with his brother he ran away in a box-car of a new railroad with the avowed purpose of fighting the Indians, but the only enemy they met was a brakeman who conquered them easily, and they walked home in chagrin.

He was a frank failure at school, and when he was fifteen his father sent him and his brother —his partner in many remarkable episodes, real and imaginary—to California to help an older brother stock a ranch. There, for a year, freed from the slight bonds that had held them at Fremont, they lived a life of luxurious action. More than this, he was taught his trade; he became hardened to work by day and night; he learned all the tricks of the cow-puncher, the exciting routine of the round-up. When they came back his brother decided to go into business, on a railroad as it happened. It was expected that they would go together. But Solon shook his head.

"No," he said decisively. "I'd be as bad there as I was at school."

He wished to be free. The plains and the wild things called him. There was only one thing for him to do—to go on a ranch.

It so happened that Dr. Borglum had acquired a stretch of wild prairie in Nebraska, a long sweep of undulating country extending over about 6000 acres. Occasionally the man who owned the ranch which edged the tract crossed it on his way to the nearest small cluster of houses they called a town, or a stray herd of wild cattle thundered over its border. Otherwise it was broad, desolate prairie. Everything about the place appealed to the young man's simple desires. So the two boys separated, the younger one to plunge into the busy new Western civilisation which congregated at the railroad centres, while Solon eager for the plains and the old life struck back farther into the wild life of the frontier.

Up at Loop River he built a shack, stocked his ranch, and surrounded himself with "boys" who threw a lariat or broke a wild horse as well as he did—simple, rough fellows who bunked with him in the little cabin or rode with him on the prairie. Through the long, cold winter months, facing the cutting wind and snow of the blizzards on the plains, around the crackling fire inside the cabin, while Joe Andrews, his right-hand man, or one of the other "boys" told stirring stories of other storms and narrow escapes from death, then on through the spring work, the delight of the true cow-puncher, and the long baking summer, and finally the alert, straining days of the autumn round-up, these men and their horses lived together daily comrades. The plains and their isolation knitted their lives into a single piece. Many a time a pony was unruly in the yard about the cabin, and was caught and controlled only by the most subtle cowboy-strategy and brute force, but once out on the open plain with the long reach of prairie in every direction the man and horse became one in their loneliness, and each toiled in sympathy with the other. It was so with the men as well.

The young ranchman saw no one from year's end to year's end but his boys, his horses, his herds, and the prairie, except when he rode to the nearest town to attend to supplies or sales. The "boys" knew him as a quiet, decided good fellow. He had nothing of the "boss" in him. It was merely part of the day's work for him to tell them what to do. Unconsciously he made his rude estate a typical democracy. He had his duties, and the boys and ponies their work, and with the herds and prairie all were equal in the eyes of the great real world about them. The same storm beat upon each and the same hot sun. Such a philosophy was unconscious and inevitable.

His early sensitiveness to the impressions of the plains and the life that ran wild over them matured into a deep sympathy and manly tenderness. Many a time he would urge or lead his pony up some undiscovered ridge of country, and, reaching the top, he would sprawl on the sand-hill and watch the wind mow paths in the bunch grass below, or, looking over the stretch of silent plain and hill

to the illimitable blue beyond, he would unwittingly know himself a part of a great inexplicable Something that he could not understand or express. Or after a stampede, as he sat in the saddle or stood beside his horse at night alone, with the sweating flank of the herd before him, and the hills and his cabin back of him somewhere in the blackness, the fierce epic of the plains wrote itself into his heart while he knew it not. Across the black ground, where the blizzard swept snow and sleet into his face, he guided the herd past the dry runs and gulleys in which the treacherous snow lay like a quicksand, and when a cow would falter, half frozen and exhausted, with the weird cry of a coyote in his ears, he kept courage in the beast because he disliked to leave her to die. When there was a brawl at a celebration dance in town, attended by all the cowboys of the country round, after the round-up, he was always looked upon as peacemaker, and his quiet fearlessness and the thorough knowledge of his work made him the adviser of many a neighbouring ranchman.

A number of years passed with scarcely a variation from the exciting routine of ranch life, until, in 1890, an older brother, who was a successful painter, visited him. Just before he left he said one day: "Solon, you ought to be an artist."

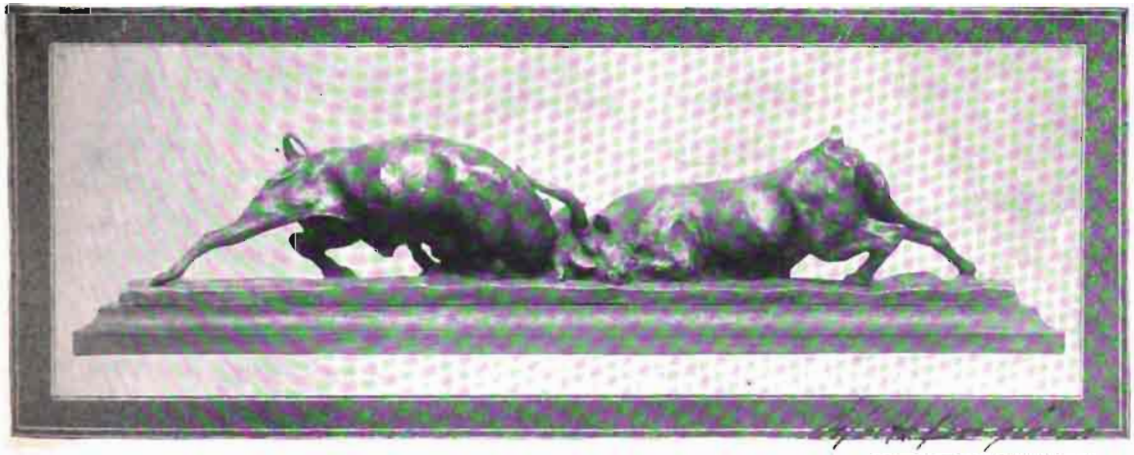
There was no visible reason for the remark. The man who was running a successful ranch had had little time to draw even if he had the inclination. He had never thought whether the life entirely satisfied him. He liked the work and he did it. He had, in fact, never drawn a line.



THE BURIAL ON THE PLAINS

Indian women weeping at the mound. Awarded a silver medal at Buffalo

More out of curiosity than for any other reason he began some rough pencil sketching after his brother had gone, and at odd times he drew the interior of the cabin, the ranch





THE BULL FIGHT

Leaders of the wild herd and thoroughbreds fighting



NIGHT HAWKING

When after a stampede the "boys" watch the herds by day and night until they are quiet

as it was submerged in a blizzard of 1891, and cows and horses, all kinds of horses. The work interested him more and more, and his brother's remark recurred to him with increasing insistency.

In 1893, his people were amazed to hear from him that he was going to sell off the ranch and study art. He did it immediately, without waiting for the best financial return, for he had little sense of the business of things, and a decision was a decision. This done, he struck off West and worked away with his brother in the Sierra Madre Mountains of California. But he soon grew restless and drifted south, taking with him his blanket and an oil-stove. He stopped at Los Angeles for a while, living on a few dollars a month which came to him regularly. He was facing the ragged edge of existence there when, one day, a man who owned a big horse ranch just outside of Santa Anna asked him to go down and live at the ranch while he painted the horseman's portrait.

Once on the ranch he was back in the old life once more, half homesick for the Nebraska prairie. He worked at the portrait, however, and at intervals between sittings he spent hours on the private race track where the man paced and trotted and ran his best horses before him, while he studied their movement, measured their stride, watched the play of their muscles and felt their mood. This union of the old life and the new lasted four months when, having completed the picture, he wandered into Santa Anna. He found a windowless room with a great light hole in the roof above it, and spread his blanket in his first studio. It cost him two dollars a month. He soon found that even simple living of oatmeal and crackers was expensive. His clothes were getting shabby. One day he put a sign on his door, "In studio Saturdays only," and struck off after dusk into the wild country of the Saddleback Mountains, back of Santa Anna. By midnight he was well away from civilisation, and rolling himself up in his blanket he slept till morning. Sunday he toiled farther into the mountains among the old Spanish Indians and greasers. All through the week, living with these lawless people who have been left stranded in the march of civilisation, eating with them, sleeping beside them in the thicket, he sketched anything and everything he saw. Friday he started down toward the town once more, and, getting some sleep on



THE BUCKING BRONCHO

the outskirts, he passed through the streets and into his little room before the earliest townspeople were awake.

The first Saturday he worked industriously and alone all day, and went back to the mountains at night. But the second Saturday he and have just engaged some one else. I'm sorry I didn't find you before."

"So am I," frankly.

In a few minutes' conversation the visitor introduced himself as an Easterner teaching school at Santa Anna. The young artist



LASSOING WILD HORSES

The first group upon which Mr. Borglum worked in Paris, and his first contribution to the Salon

was surprised by a knock at the door. The young man whom he let in looked around the bare room searchingly before he spoke.

"You are an artist, I believe?"

"Yes sir."

"Would you paint flowers?"

"Oh yes." He could and would paint anything.

"I've been looking for some one to help me

listened awkwardly. He never had seen any reason for talking about himself to any one. Just now there was certainly nothing to say that was cheerful. The teacher was going.

"How much would you ask to paint my portrait?"

"I don't know." Business details always staggered him.

"Would you do it for five dollars?"



THE ROUGH RIDER

"Yes."

"Got any money?"

"No," with more humour than embarrassment.

"Well, here's three dollars in advance on the picture."

And he was gone. It was the beginning of a long, close friendship. That night there was a feast of oatmeal and crackers in the "studio," to say nothing of a few potatoes picked up outside a wholesale provender place near by. The next Saturday the school teacher called again,



THE STAMPEDE OF WILD HORSES

Awarded Honourable Mention in the Paris Salon, 1899

this time accompanied by two ladies who, he announced, wished to learn how to paint. Their regular weekly visits brought him a dollar each Saturday, and by continuing his journeys into the mountains he managed to exist for nearly a year. Meanwhile he obtained old copies of art journals, and read and re-read them.

He was becoming impatient for broader experience and more ordered study. He spoke of this to his friend and teacher, and together they planned a sale. He painted in everything he had sketched and when the sale was over he was a rich man. But he needed more than sixty-five dollars, the amount he received, and through his brother—his old-time boon companion—he obtained transportation. It did not take him long to pack his kit, his oil-stove, and his blanket and to start East.



THE LAME HORSE

The same horse who was the model for "Lassoing Wild Horses"

When he reached Cincinnati on a cold November morning he readily found a level spot to spread his blanket in a little room which he rented for three dollars a month. The walls gave him an imprisoned feeling, and the roof cut off the open heavens to which he was accustomed. The next morning, strangely lonely among so many people, he went down to the school and found that he had money enough to pay for both day and evening classes in drawing. He was soon hard at work, but the well-ordered conventional life made him heart-sick for the free plains. It was this more than anything else that set him looking for a stable. The lights at the United States mail stables burned brightly all night, and morning after morning, long before daybreak, he sketched and lived among his old friends, the horses. They became his confidential neighbours as in the West, and even while he studied each movement of their bodies he read secrets that were hid from the men around him.

For variety he began to try modelling in the stables, and finally completed a figure of a horse pawing a dead horse lying on the plain. Anxious to know whether his work had merit, he wrote to Mr. Rebisso, the head of the modelling faculty, asking him to come to see it. For some time there was no answer. He wrote again, and one day the sculptor appeared. He examined the figure carefully, and turning to the student said impatiently:

"Young man, if I'd known you had anything like this down here I shouldn't have waited a minute. It's good work, promising work."

And, after a few questions as to when and how it had been done, he went away. Soon after a letter came asking Mr. Borglum to send the group to the annual school exhibition, although he was not a member of the modelling classes. He was therefore not eligible for the first prize, but the group placed on exhibition brought him a special prize of £10.

At the start of the next year he went back to the same routine, but things began to happen. First of all, he returned one day to find his room transformed. By some stealthy means his landlady had passed the door, which he always locked, and had brought in a cot, a chair, and a table. This sudden luxury had scarcely ceased to be a wonder when Mr. Rebisso to'd him he could use the big studio the sculptor worked in, if he would look after the stoves. He was at the stable as usual every morning, and when the time for the annual exhibition came he had seventeen different pieces ready, all horses, studies merely, but all showing that unusual touch with the spirit, the inner life and instincts

of the beasts, that gave the simplest groups reality and beauty. This year he won the scholarship and prize easily.

By this time he had a new ambition. He looked toward Paris longingly; if only for a few months he must see Paris, with all its wonderful paintings and Old World sculpture. Mr. Rebisso was interested in the idea and another sale was planned, this time of plasters of the work he had done in the school. And



THE BUFFALO

in July, with a few hundred dollars in a letter of credit, he started for Paris. He reached there very much as he would have struck new grazing ground in the West—still carrying his blanket. He expected to look around for a month or two and go back. He wandered about through art galleries, drifting from one museum to another, often getting lost because everything was strange and he could not speak French, until his brain was in a whirl and he was half sick of it all. Finally, after telling two or three men in sign language what he wished, and getting letters of introduction which he could not read, he obtained admission to one of the largest stables in the city, and went to work on a group which he called "Lassoing Wild Horses," partly to cure himself of his homesickness.

He had hired a room for sixteen shillings a month in the Latin quarter and there he lived in his blanket until an opportunity came to sublet a little studio from an American artist in Paris. He grew interested in the group, and the desire to stay in Paris and work came upon him. The friends he had made advised him to do so, a few words of approval from Mr. St. Gaudens, the famous American sculptor, who saw the group one day, encouraged him, as did the kindly enthusiasm of M. Fremiet, the French sculptor. He wrote to Cincinnati, asking if he could not do his year's work in Paris instead of at home, and in a few weeks the matter was settled by a favourable answer. He worked rapidly, and when the time came for the annual exhibition at the Salon, he submitted the "Lassoing Wild Horses" and a figure of a horse in the wind. Greatly to his surprise both were



THE FIGHT OF TWO STALLIONS

While the artist was still at work upon it

accepted, and placed in prominent positions. Quickly following this first real success came the purchase of the latter piece by the Cincinnati Museum Meanwhile he was working at companion groups, "The Bucking Broncho," "The Rough Rider," and "Night-Hawking." In the midst of Old World Paris he was living again in clay his early wild life, expressing in



IN THE BLIZZARD

each group the pulsing, real West, springing with action and vital with that poetic touch that the prairie had unconsciously taught him. M. Fremiet was only voicing Rousseau's idea when he said one day:

"You are lucky, sir. Many young men go to art school, and come out polished with nothing to say. You lived, you had something to say, then you studied art."

His horse model, the one who had served him for "Lassoing Wild Horses," went lame, and "The Lame Horse" was the result. He took some first medals at Paris exhibits. A New York dealer became interested in his success and negotiated for bronzes and marbles of his work. Then he moved into a much larger studio and began the life-size "Stampede of Wild Horses." He took a few weeks' course in the study of figure in the Académie Julien, and spent many hours in the Louvre and the Luxembourg, unconsciously softening under these new impressions. All the years at Cincinnati and Paris his oil-stove had cooked his food, and he lived as simply as he ever had on his ranch.

At the next year's Salon his "Stampede of Wild Horses", and "The Lame Horse" brought him an honourable mention, and the large group was afterwards placed in the centre of the United States pavilion at the Paris Exposition, where his work brought him a silver medal. In the meantime he had married the daughter of a French clergyman, and in the next summer they followed together the old Western trail and he saw the prairie once more. Nothing seemed changed except his own life. He did not separate the punchers now, but studied the Indians and "boys" with a new zeal. His old sympathy was stronger than ever and he understood it all better. He was back at Paris again during the Exposition, and in 1901 he sent a dozen pieces to the Pan-American Exhibition at Buffalo. Here, too, he was awarded a silver medal. Lately he has been living in New York, where he has decided to do his future work.

Solon Borglum to-day is not in any essential way different from the man Joe Andrews and the other "boys" knew in Nebraska. He is a quiet, unassuming, decided man, simple in his habits, ready still for hardship, caring nothing for luxury. He is and will always be,



THE DANCING HORSE

Done in 1900 at the Nouveau Cercle, Paris

I think, akin to the frank, impulsive, just life of the old West. He will tell you that most of the things one reads about the frontier are caricatures, that the " bad man " of the plains is no worse than the " bad man " of New York, and that the cowboy has many points of advantage over the Wall Street banker. He will tell you—for his sympathies are with them—that the Indians are treacherous only when they are dealt with treacherously, that to fight was their only method of guarding their rights, and that most of their massacres were just in intent. He feels as he did when a boy, that a swinging gallop on a Western pony is more real than a year's schooling.

His art is an expression of the man who felt the fierce epic of the West beating in his heart and knew it not, who knew himself a part of a mysterious Something that he could not put into words. And, because it is always unconscious, because it is never the message of a personality, it becomes the great West itself, the history of a picturesque century, the classic of the frontier, with all its virility, its rough tenderness, its rugged rhythm. The swinging rush of the stampeded herd is there, the sway of the wind in the prairie grass, the mystical union of all with the horse and its rider, as vital as the old Norse Sagas.

His work is only at its beginning, and the promise of the next years runs far ahead of his best achievement.

" Let a man but have beauty in his heart and believing something with all his might put it forth arrayed as he sees it, the lights and shadows falling upon it on his page as they fall upon it in his heart, and he may rest assured that that beauty will not perish away out of the world." The saying applies to all art that creates and lives.



ON THE BORDER OF THE WHITE MAN'S LAND

Indian and horse on s me ridge of land looking down at an emigrant train or pale-face settlement. The group for which Mr. Borglum was awarded a silver medal at the Paris Exposition

A CIVILISED CAMP IN THE WILDERNESS

# THE WORLD'S PLAY

## VIII.—OPEN-AIR LIFE AND CAMPING OUT

EXPERIENCES ON THE TUGELA RIVER—ON EATING OUT OF DOORS—TENTS AND TENTING—EXPENSES OF CAMPING OUT—NO TINNED FOOD—MAKING A FIRE—FOREST LIFE IN CALIFORNIA—THE THAMES VALLEY—CANADIAN CANOES—THE TENTED BOAT—ASSOCIATIONS OF THE THAMES—THE KINGDOM OF SOLITUDE—TREES IN THE NIGHT

AN AMERICAN CAMPER
Off for a day's shooting

WE seem to be on the threshold of a warm summer as I write these lines; and as Englishmen are just as unprepared for extremes of heat as they are for extremes of cold, it may be well to give a few hints about life in the open air, based on an experience of climates which know their own mind, and of countries where you may count with reasonable certainty upon the weather of to-morrow's morning. The South African campaign ought to have proved instructive to its soldiers in more ways than that of merely military knowledge. One of them has often told me, with ill-disguised delight, of the joys of camping out on the Tugela with a Government waggon and a troop of his Imperial Yeomanry; of the chickens and the native beer they got from what he vaguely calls "inhabitants"; of the fishing and the buck-shooting and the slaying of bustards; and of the amazing way in which a bullet-scarred lung healed up under the treatment within a few months after its owner had left hospital. But these things are far off. There is a nearer land that can teach the untravelled Englishman yet more, within a week's trip on an Atlantic liner. America is the true land of camping out.

It is strange that there is not a country in all Europe which knows—or cares—even so much as we do about that life in the open air for which the British Isles give, perhaps, the least opportunity of any. It is true that "abroad," as the vague phrase goes, they lunch and dine and breakfast far more in the open air than we do, even in their big cities. It is, I suppose, the dirt of London air that makes it impossible to get a decent meal out-of-doors at a reasonable price from one end of this mighty metropolis to the other. The

hard fact remains; and as a compensation we possess, in the Valley of the Thames, the most ideal stretch of land and water for camping out that all Europe can show. Yet how little we really understand of the possibilities of pleasure in the river which should be the great Holiday Paradise of all London's workers. It is only by slow degrees that we are vindicating our inalienable right to Thames water wherever Thames may flow. Of what can be done on that water and beside its banks we remain lamentably ignorant. Perhaps the Americans can teach us something. There is no stream in the United States that can compare with our tiny Thames for beauty or for that more intimate charm of smaller happinesses which is the birthright of all who dwell in the smaller islands. The vastness of a continent, which still stretches, uninterrupted, almost from the North Pole to the South, is reflected in the large scale of the natural features it contains. So its inhabitants, blessed with every variety of climate they can imagine until they have tried England, are determined to make the most of summer wherever they may be, and from Vermont or Maine down to Florida and the Jekyll Island Club, they know how to throw off the life of cities, and how to rough it in the open, better than any other people in the world. "Roughing it" is not, perhaps, always the word; for growing wealth and the growing needs of luxury have taught them how to choose the best of outdoor life without incurring any of its inconveniences. Still, taking them all round, and looking from one end of the scale to the other, they certainly do it well. At one extremity, you might place such a trip as I once had in the Western States, in which a vast waggon was a prominent feature, and a quantity of tents. The way lay always along a river's bank. The men fished and shot every morning and evening; they swam and slept every afternoon. The ladies cooked our dinner. The unhappy sportsman who had contributed nothing to the Pot washed up, and there were also accommodating niggers. Our camp-fire

A SHELTER-CAMP NEAR CIVILISATION

CYCLISTS IN CAMP

Messrs. G. and L. Primavesi, who won the prize for a double-handed pitched tent in the recent contest of the Association of Cycle Campers

was an institution which became so popular that many gentlemen never sought their beds at all, and one of the youngest of our party nearly burnt down a fine mansion in Fifth Avenue, later on, by determining to keep up that pleasant custom on his return to civilisation.

There seems to be a fine variety of wild food in America. Separately, as we ate it then, it is all excellent. But at Bar Harbor you may save much time by eating it all together in one Gargantuan Clambake. The method of a clambake is as follows. At early dawn you send several handy men out to an island near the coast where there are trees; and if my style drops naturally into that of Mandeville or Munchausen, you must still believe me. Before the sun is too high in the heavens your party should divide up in Canadian canoes, and to each man shall be given a damsel or two. All the *chaperones*, and welter weights, must go by the steam-launch, which is loaded from keel to gunwale with variegated provender, with drinks and ice. As soon as the canoes land, their different cargoes will disappear into the woods, and an instant attack is made upon the steamer's freight by the few strong men who remain. In a sheltered angle of the shore, within a stone's throw of the rippling sea, a big cavity has been lined with huge, flat stones that have been heated white-hot with a continuous bush-fire by the early men. This is now filled with loads of fresh seaweed, whose stinging steam goes up to heaven. Upon it, and above a cloth, are swiftly laid several dozens of the best Maine lobsters. Then more seaweed. Then chickens, also in cloths. Then more seaweed. Then a mass of Indian corn. More seaweed still. Then cloves in vast quantities. More seaweed again. Finally, sweet potatoes and a last layer of seaweed above the last big tablecloth. The whole odoriferous mass is then tightly covered in with canvas, and big stones heaped upon the top. Then the *chaperones* hunt through the woods for the canoodlers aforesaid; and as the game is shy and the trackers carry weight, the whole party is scarcely reassembled, before a row of icy cocktails, when the canvas is removed and the feast begins. But let me now sternly turn aside to the simpler joys of camping out where such Rabelaisian banquets are unknown, and where your very shelter is almost as much a gift of chance as your repast.

I show various forms of tents in these illustrations. The latest owes its form to the Association of Cycle Campers, a new organisation which already has nearly two hundred members. With poles of bamboo, cooking utensils of aluminium, and the lightest of bedding, the complete kit for one cyclist need not weigh more than fifteen pounds. At the exhibition

CYCLISTS CAMPING TENTS ON A LAWN

Association of Cycle Campers

H. W. Taunt, Oxford

ON THE THAMES. CAMPING OUT ON AN EYOT

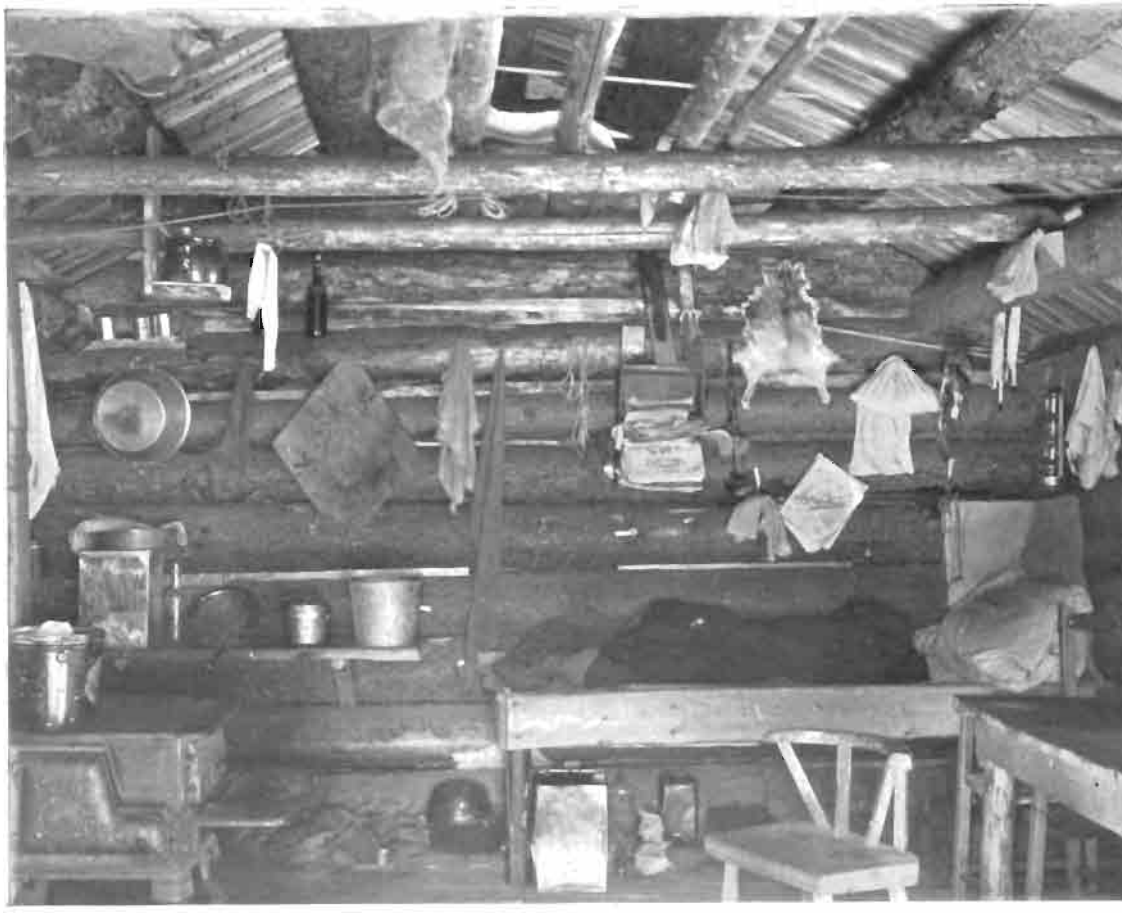
A comfortable tent easily carried in a boat

and camp-pitching contest held a few weeks ago at the house of the president, Mr. T. H. Holding, the two winning tents weighed respectively eleven and a half pounds and thirteen pounds. A cyclist can get his whole kit into a Lucas carrier, and the tent can be pitched or struck in a very few minutes. There be men, both wily and robust, who can live in tents the winter through by enclosing one canvas bell within another, and heating each separate space with its own oil-lamp. But the weather when lamps are wanted inside my tent is not the weather I need for camping out, though I am far from denying any lady who is brave enough to join my party the added comfort of a double tent to sleep in. There is something pleasant and alive about a tent. It is in touch with Nature and the elements. Its walls move responsive to the wandering breeze. Upon its canvas, as you wake, you hear the tapping of the sparrows' beaks in search for early flies. Over its guy-ropes, as you go to sleep, the nervous rabbit turns involuntary somersaults. And at any hour your whole house can fold its wings up and depart for pastures new. On £10 for a month a pair of men can live in tents beside a river and lack nothing. A second-hand one can be bought for some 40s., and it is essential that the piece of straight wall that rises from the ground should roll up all round during the daytime, and fall snug again at night to keep the dew out. A ground-sheet, which is easier to move about than a wooden floor, costs much the same, from £2 to £3. Any sympathetic young lady will sew up one end and one side of an old folded blanket and make you a sleeping-bag. Then you must have either a big Japanese umbrella or an extra piece of canvas for an awning at your tent-door; and it is from Sweden that I have bought the best cooking-stoves which will prepare at least three different things at once. Be not deceived by any who will tell you that "cold things or tinned things" will be sufficient for the day. Remember what the Americans do with their meat. They eat what they can, and they can what they can't. Go thou and do likewise, and cook a large steak or a half-dozen cutlets every night, with the potatoes in the same pan. In earlier hours of a day which will seem shorter than any summer-day you knew before, eat much fruit, and eggs, and green vegetables. Be wise concerning your milk-supply, and carry with you your favourite brands of tea and coffee as carefully as your tobacco, with your own pet coffee-machine. A bag of rice, another of sugar, a third of salt, and a bottle

of curry-powder are almost indispensable additions. Take my advice and buy your bread.

By about the third day you will have discovered how to raise your tent. Considering the circle near the ground as a clock-face, put in a pair of pegs symmetrically at twelve and six o'clock, and the next at three and nine. Tighten the ropes in opposite directions, and leave them with a bit over to tighten themselves with in the night. However many pegs you put in, do it on the same plan, and keep a casual eye on them to see they are not working out of the ground. It is very easy to start a fire when you don't want to. But either a camp-fire or a patent stove takes more wisdom than you may imagine when it is wanted in a hurry. Stifle your pride, and buy a few dozen patent fire-lighters. But if you try camping in the autumn, in a place where you have only your own resources and a box of matches to depend upon, and the weather is damp, find some dry punk under the excrescences of the bark of beech or yellow birch-trees, or get a fine fat pine-knot. If all these fail, pick up any dead twigs or branches you can see; shave your best stick into the shape of a woolly kind of feather, with all its shavings on it; then put your materials and yourself under a big blanket, and light the small twigs first, quickly placing larger ones above them, and making the whole pile loose enough to let the air through easily. You will be able to take away the blanket before the smoke becomes too thick to bear, and you can then put a log on the top that will keep burning all the night.

There are other methods of living in the open air which are almost as charming as a tent, but involve a fixed habitation of some kind, though not what urban authorities could recognise as a house. It is in California that these delightful dwellings are most diverse. There you may see not only such log-cabins as are illustrated in these pages, their cosy



INTERIOR OF A PERMANENT LOG CAMP

interiors hung with weapons, trophies, and an informal but effective *batterie de cuisine;* in the forests of redwood the kindly trees sometimes grow so thoughtfully together that a burlap curtain hung down from one trunk to another makes your house four-square at once, with such a soaring architecture as never man yet builded for himself. Nor are the famous "Swiss Family Robinson" such unblushing romancers as has often been imagined. Their all are excellent; and even on dry land, by the sea-shore, there are worse things than a railway-car as the foundation for a bungalow.

It was with thoughts of our own Thames that I began; and with the Thames I must finish too. Something has been already said in these pages of the strenuous oarsmen racing on its straighter courses. But my pleasure now is along its winding recesses, and among

H. W. Taunt, Oxford

CAMPING OUT DOWN A THAMES BACKWATER

How a boat is converted into a tent at night

"house in a tree" is a well-known thing in California, and many families have known the joy of living like birds among the branches in a human nest of their own making, as Eugene Field did. I am prosaic enough myself to prefer to sleep nearer Mother Earth, unless I am on the water. The houseboats of San Francisco Bay, behind the island of Belvedere, are an extraordinary example of this last. Discarded tramcars, set on a floating raft, make a most habitable and delightful dwelling. Other houseboats have evidently been built for their present use and for none other. But its sheltered backwaters; for it is not of costly houseboats moored on fashionable reaches that I desire to write. Were it not for the sternness of my Editor, I would show you many of the river's beauties that only the true "camper-out" has really loved. I can remember nearly all that pleased me most. The Mill at Iffley, with its perfect setting of tall trees above the pool, its whispering meadows studded with fritillaries, the slumbrous murmur of its streaming wheel; Cliveden Ferry, with its noble frame of splendid trees that slope in multi-coloured masses from the cloudy sky towards

SHELTER FOR THE NIGHT IN AMERICAN WOODS

the mirror of the stream; Temple Island, standing alone above a solitary reach of Henley, a steadfast, gleaming landmark above a race-course that is still. The upper river too; Newbridge, with its massive arches of an older day that feared the ungoverned floods; Water Hay Bridge; Hart's Weir; the Trout Inn at Godstow—how exquisite they all are in their different ways, and how much more fascinating they are to him who lives and sleeps beside them, wrapped in the air that folds their beauty round, than to the hurrying voyager by steam-launch, or the still more misguided traveller by train.

I have been "down the river" in many different ways. The first time, greatly daring, I launched one of the earliest Canadian canoes that ever touched these shores, balanced my thirteen stone with a portmanteau in the tilting bow, and swung a red lateen-sail to the affrighted breeze. We slept at various inns from Oxford even unto Richmond, wherever we happened to have arrived when we were hungry. We drank—I refer, not to the portmanteau, but to my comrade in another craft—good shandy-gaff at every inn we passed. We finished with uproar and merriment at the Star and Garter, and drove in a hansom up to town. But this was very youthful; and I had scarce grown older when, with three reckless spirits, I took a little houseboat down the stream from Oxford as far as Henley, with many unforgettable adventures. Now I know better, and eschew such extremes. I hire a long, light, comfortably broad randan, a boat built to hold at least two scullers and a coxswain, and a modest sufficiency of luggage. At night we roll a tent along the cross-bars that can be fixed above the seats; and underneath we sleep the sleep that comes to just, and unjust too, upon the river. You may behold a similitude of our equipment in the picture, which is from a photograph taken by Mr. Henry W. Taunt, of Oxford, a man who has done more than any one to chronicle the beauties of the Thames from source to tideway. I wondered long ago, and I am wondering still, at the neglect of the Thames Valley by the population of the greatest city in the world. They are as hard-worked as any other population. They live under extremely bad conditions, and will do so until the motor-car brings them back into God's country. Yet they take their holidays by visiting other stuffy cities, or herding together in rows of houses by the sea. The pleasures of living in the open air for a week they never know. The secrets of natural life, the hidden happiness of growing things, are not for them. Yet in a tented boat, twenty-two feet long by

three feet nine inches wide, they may explore a world as new to them as Cuba to Columbus; and on the waters of the river they are on a road that has its origin in the misty heavens, its ending in the wide-watered ocean, and its life a ceaseless orbit in the eternal changes of the universe. The mills and bridges on its course are among the oldest buildings man has left upon these islands. The shells and water-folk beneath its ripples are among the most ancient relics of creation's dawn. Some of the greatest moments in our island-story were mirrored on its waters. In pastures by the infant river, close to Shifford, Alfred held his first Parliament. On Magna Charta island, which lies midway between the Bells of Ouseley and the outlet of the Colne, the liberties of early England were affirmed. "By water to Whitehall" was brought the body of the great Elizabeth, whose fleet had saved the English seas. From Greenwich to the Admiralty they rowed the bier of Nelson, whose last fight laid firm the foundations of Victoria's Empire. We seem, nowadays, to use the Thames, whose very waves are history, as little for pleasure as for business. Yet its valley should be the playground for our busy world.

That playground is still rich in solitude, the common gift of Nature to all her children, and the least recognised. At will, the savage stepped into his quiet kingdom. But civilisation has ringed us round with noisy fellow strugglers. The face of the street-dweller knows no outlook into horizons past the line of brick: his dull, cheap glance betrays no mood he may not satisfy in public, no hope of help from solitary counsels. The essayist (one of the greatest living) whose thoughts are with me as I write of solitude has shown almost as keen an insight into the "spirit of place," which is another of the river's charms; that spirit, "which is to be seen in the shapes of the fields and the manner of the crops, to be felt in a prevalent wind, breathed in the breath of the earth," is heard most deeply and most delicately in the evening bells from churches by the river's side. They are familiar, they are lifelong to the villagers. Though strange to you, you know how homely they must be. They welcome you to greetings unforeseen.

And there is one other sound that is never so perfect as for the "camper-out" who falls a-slumbering by the river: the whisper of the trees. They, too, have been sung by the poet of action, the singer of the sword, the seer of silence:

> ". . . at the word
> Of the ancient, sacerdotal Night,
> Night of the many secrets, whose effect
> Themselves alone may fully apprehend,
> They tremble and are changed . . ."

Those mighty English elms, gold-crested at the setting of the sun, tell to the evening every secret tale that is concealed from staring Day. The poplars sway and murmur. The willows droop and rustle. You hear them tell you, as you lie dreaming in your tent,

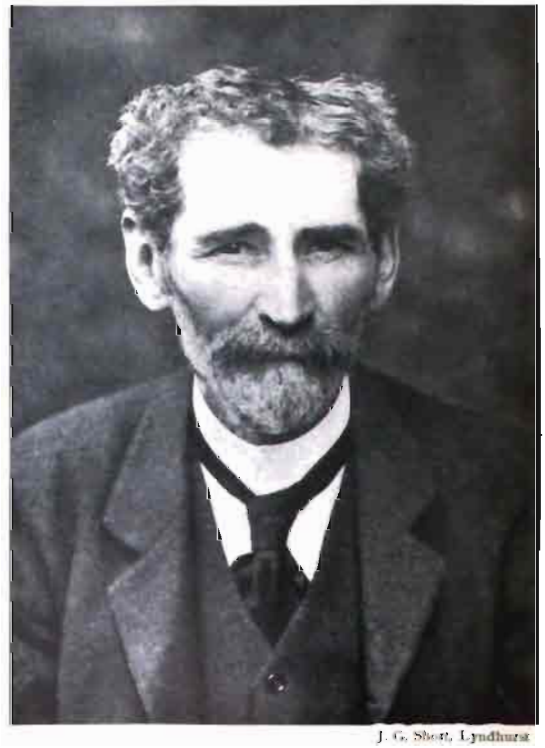
> "Of the old Moon's fitful solicitude,
> And those mild messages the Stars
> Descend in silver silences and dews;
> Or what the sweet-breathing West,
> Wanton with wading in the swirl of the wheat,
> Said, and their leafage laughed;
> And how the wet-winged Angel of the Rain
> Came whispering . . . whispering . . ."

A WIGWAM CAMP IN A CLEARING

MR. G. K. CHESTERTON
("Robert Browning")

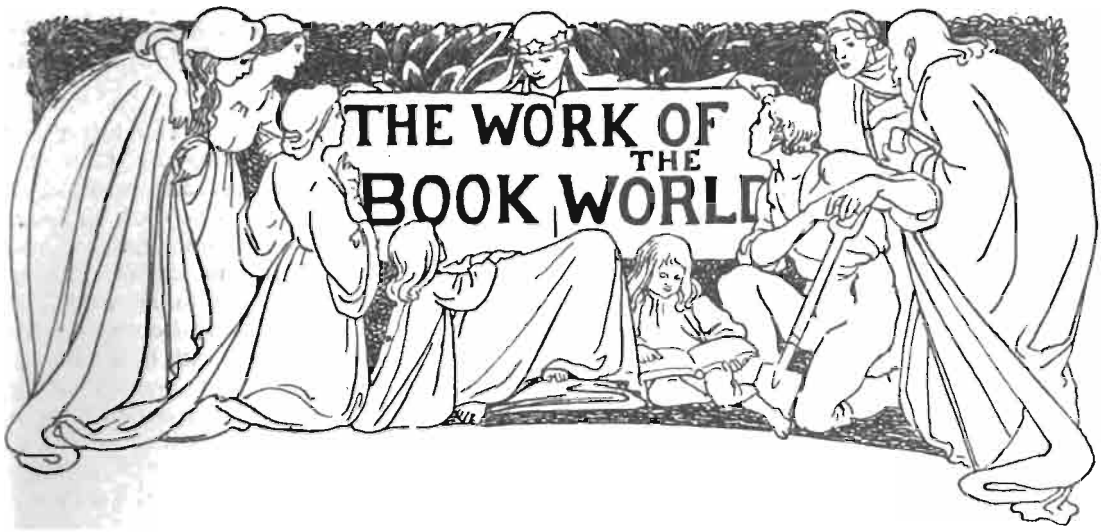
MRS. FLORA ANNIE STEEL
("In the Guardianship of God")

"ZACK" (MISS GWENDOLINE KEATS)
("The Roman Road")



J. C. Short, Lyndhurst

MR. W. H. HUDSON
("Hampshire Days")




LONDON, *June* 10.

THIS is an age of bookmaking. Volumes are written on every conceivable subject, but how rarely one finds a book that can be described as real literature—a book wherein the author has something to say, and says it with distinction, simplicity, and that indescribable flavour, persuasive as the perfume of a flower, that results from temperament. Such a book is Mr. W. B. Yeats' *Ideas of Good and Evil* (Bullen). It is a volume of nineteen essays, not on the obvious subjects that usually go to the making of such a collection, but on those hidden things of the spirit and the imagination that a poet, imbued with Celtic dreams, ponders over in the solitude that he makes for himself even in the busiest streets. Apart from the elusive subject-matter, Mr. Yeats' style has a peculiar interest for the student of letters. It is perfectly natural, the words, often beautiful and arresting words, drop into their places so naturally that to read him is like listening to the rhythmic fall of water. How gently convincing is this passage from the essay called "What Is Popular Poetry?":

"I had a conviction, which indeed I still have, that one's verses should hold, as in a mirror, the colours of one's own climate and scenery in their right proportion; and, when I found my verses too full of the reds and yellows Shelley gathered in Italy, I thought for two days of setting things right, not as I should now by making my rhythms faint and nervous and filling my images with a certain coldness, a certain wintry wildness, but by eating little and sleeping upon a board."

One reason of Mr. Yeats' charm is that so many things that the world considers foolish—magic, occultism, Blake's visions, speaking poetry to the psaltery, "lean and fierce minds who are at war with their time"—are to him so real, so self-evident that he does not even attempt to proselytise. He just gives the impressions of his waking dreams. It is always the poet's view, which is also that of the seer, as in this passage which occurs in the essay on "The Philosophy of Shelley's Poetry":

"I think, too, that as he knelt before an altar, where a thin flame burnt in a lamp made of green agate, a single vision would have come to him again and again, a vision of a boat drifting down a broad river between high hills where there were caves and towers, and following the light of one Star; and that voices would have told him how there is for every man some one scene, some one adventure, some one picture that is the image of his secret life, for wisdom first speaks in images, and that this one image, if he would but brood over it his life long, would lead his soul, disentangled from unmeaning circumstance and the ebb and flow of the world, into that far household where the undying gods await all whose souls have become simple as flame, whose bodies have become quiet as an agate lamp."

Another significant book of the month is Mr. W. H. Hudson's *Hampshire Days* (Longmans). With him the study of nature, of beasts, birds, and insects is not a hobby that, exploited in a chatty book, will earn him a certain number of guineas; it is his life. That he is far more than the ordinary naturalist this volume and his former books, *El Ombu*

and *Nature in Downland*, testify. Like Mr. Yeats he has temperament, and a style that just suits his wistful, sensitive outlook upon life. The strivings and ambitions of man interest him little; but he has the tenderest appreciation for nature and all wild things. Patience, too! His account of the ejection by a fledgling cuckoo of a new-born robin and an egg from a nest lives in the memory; but Mr. Hudson is equally alluring when he gives us the essence of himself, as in the passage where he describes the kinship he feels for "the long, long dead, the men who knew not life in towns, and felt no strangeness in sun and wind and rain." In such a mood he went out one evening to one of those lonely barrows that rise to a height of nine or ten feet above the level heath.

"Sitting there, profoundly sad for no apparent cause, with no conscious thought in my mind, it suddenly occurred to me that I knew that spot from of old, that in long past forgotten years I had often come there of an evening and sat through the twilight, in love with the loneliness and peace, wishing that it might be my last resting-place. To sleep there for ever—the sleep that knows no waking. This miserable sensation soon passed away, and, with quieted heart, I began to grow more and more attracted by the thought of resting on so blessed a spot. To have always about me that wildness which I best loved—the rude incult heath, the beautiful desolation; to have harsh furze and ling and bramble and bracken to grow on me, and only wild creatures for visitors and company. The little stonechat, the tinkling meadow pipit, the excited white-throat to sing to me in summer; the deep-burrowing rabbit to bring down his warmth and familiar smell among my bones; the heat-loving adder, rich in colour, to find when summer is gone a dry safe shelter and hibernaculum in my empty skull."

It is not often that the month produces two such books as these. They are among the few modern volumes that can be read and re-read.

### Biography

"The crimes of the devil who thinks himself of immeasurable value are as nothing to the crimes of the devil who thinks himself of no value. With Browning's devils we have always this eternal interest, that they are real somewhere, and may at any moment begin to speak poetry. We are talking to a peevish and garrulous sneak; we are watching the play of his paltry features, his evasive eyes, and babbling lips. And suddenly the face begins to change and harden, the eyes glare like the eyes of a mask the whole face of clay becomes a common mouth-piece, and the voice that comes forth is the voice of God, uttering his everlasting soliloquy."

I take this passage from the last page of Mr. Chesterton's *Robert Browning* (Macmillan) as it illustrates his style and method, and also that I may borrow two of the words. Mr. Chesterton's strength lies in this: he believes that what he has to say on Literature and Life is of "immeasurable value." He has no doubts; he will write on any subject, buoyantly, dogmatically, and brilliantly, and when he hits the bull's-eye, which is often, you can hear him laugh joyously at his own ebullient cleverness. Brimming over with animal spirits, he has brought gusto into modern criticism, and although he is on the side of the mystics, his fare you are sure is bottled beer and chops. Mr. John Morley showed a fine catholicity in choosing him to write the volume on Browning in the "English Men of Letters" series: the result is not so much an interpretation or a commentary on Browning as two hundred pages of Mr. Chesterton's brilliant thought and talk. "Like every one else, he (Browning) had to discover, first the universe, and then humanity, and at last himself"; "with him, as with all others, the great paradox and the great definition of life was this, that the ambition narrows as the mind expands." These two passages I have chosen at random; here is a pregnant extract that expresses a truth well worth saying, and well said:

"*The Ring and the Book* is the great epic of the age, because it is the expression of the belief, it might almost be said of the discovery, that no man ever lived upon this earth without possessing a point of view. No one ever lived who had not a little more to say for himself than any formal system of justice was likely to say for him."

But Mr. Chesterton does not sift. He is as prodigal of his amusing follies of opinion as he is of his truth-finding shafts; but it is a stimulating book.

Stimulating, too, but in a different way, is the *Life of Father Dolling* (Arnold), by Mr. Osborne, who for seven years worked with that spiritual genius at Landport, and who was his friend for twenty. The life of this worker-saint, who lived for others, whose religion was so integral a part of his life that he uplifted and comforted, unconsciously as well as consciously, all with whom he came in contact, was well worth telling. His superiors in the Church recognised, for the most part,

his great services to humanity; but he was a thorn in the flesh to them. How could it be otherwise with one who hated the compromises and timidity of the academic Christian? Two years before his death Dolling wrote:

"Why cannot the Church get young men from our public schools or universities to answer to the call? It is because there has been no demand upon their enthusiasm. It has been a nice, easy profession, in which they could live comfortably, settle down and marry, and live very like their brother the squire, only on a poorer scale. . . . Though to-day nearly all the things which the bishops condemned twenty years ago they recognise and approve, still they have but one opportunist canon of conduct: Be commonplace, be respectable, after the sober manner of the ritual of the Church of England. On the day of Pentecost it was said of some that they were drunk with new wine. Would to God we could see our prelates thus inebriated! . . . On no question of any importance, religious or social, have the bishops given any leading to their people unless they have been driven to it by the man in the street; and the advice they invariably give is *festina lente*—very wise, indeed, when you occupy the whole position, but fatal when you are leading a forlorn hope."

Another good biography is Mr. C. L. Graves' *Life and Letters of Sir George Grove* (Macmillan). His was a life of friendships and hard work, but the book is also a history in little of the Victorian era, teeming with quaint stories, witticisms, and stories of the eminent men with whom Grove came in contact. His life was full and varied. He was at different times editor of *Macmillan's Magazine*, the *Dictionary of Music*, the *Dictionary of the Bible*, secretary to the Crystal Palace, organiser of the Palestine Exploration Fund, and director of the Royal College of Music. Once he tried to write a "Life of David":

"I can understand what you say about literary creation being engrossing work. The only try I ever had at anything of the kind was my David, and I can recollect well that when I got him on to the slope leading down into the valley where Goliath stood roaring, my heart beat so that I could not write."

There speaks the emotional man, and Grove was certainly that. He was one of a family of ten—a Clapham family—and it is delightful to read of those early days when they went in a body to a sacred concert at Exeter Hall.

"The house-key was hidden under the gate, and supper left out for them on their return, which was seldom before eleven, for they footed it both ways. To secure good places in the three-shilling reserved seats they had to be there long before the doors were opened, and there was a regular hurdle race over the benches to the front row.

"The interval before the performance began was spent in examining the score, or watching the players come in—Perry, the leader, Lindley, and old 'Drag' (Dragoneth), the famous double-bass player.

"Throughout the oratorio 'G' acted as expounder and commentator, never failing to signal attention to his favourite passages. Those were golden evenings of halcyon days. They used to sing nearly the whole way back to Clapham."

Mr. C. E. Black's *Life of the Marquess of Dufferin* (Hutchinson) could not fail to be interesting, but it is rather an official record than a personal memoir of a gifted man, on whose brilliant career the clouds fell darkly at the end. Oddly enough, one of the most vivid sketches of his personality is contributed by a correspondent who met him on the top of an omnibus.

"'I once got on top of an omnibus,' he writes, 'running from Kensington towards Piccadilly. By my side there sat a middle-sized man, with a very intelligent countenance. We had a good deal of conversation. He was particularly interested in America, and showed such intimacy with its politics that he might have been mistaken for an American, especially as there was very little of the Englishman in his appearance.

"'He had a face more Celtic than Saxon—a fine intellectual forehead, a light soft eye—in all, a face of delicate beauty, but at the same time vigorous in expression. We discussed Tennyson's poetry, and also that of Robert Browning.

"'By the time we reached Regent-circus cigars were ended. My new acquaintance alighted and disappeared among the millions of London.

"'A few evenings afterwards I happened to be in the strangers' section of the House of Lords. A voice struck me as one I had heard before. When I looked in the direction of the peer who had begun to speak I could not be mistaken. It was my friend of the omnibus top—Lord Dufferin.'"

I must record one of Lord Dufferin's witty sayings—that he was obliged to be a water-drinker because his predecessors had overdrawn the family account with Bacchus.

### History

The important event of the month in literary history is the publication of Vols. I. and III. of *English Literature: An Illustrated Record*, by Dr. Garnett and Mr. Edmund Gosse (Heinemann).

The present volumes deal with "From the Beginnings to the Age of Henry VIII." by Dr. Garnett, and "From the Age of Milton to the Age of Johnson" by Mr. Gosse. It is impossible here to do more than draw attention to this important undertaking, which does for the student of English Literature what J. R. Green's well-known work did for the student of English History. The volumes are lavishly illustrated with hundreds of illustrations in the text, photogravure plates, and pictures printed in colours. Three types are used—one for the history proper, another for the biographies of the authors, a third for quotations. Vols. II. and IV. will be published in the autumn. Every Englishman interested in the literature of his country should find this informing and attractive pictorial record indispensable.

It is said that the Duke of Wellington and Lord Palmerston "clamoured for a sight" of the letters dealing with the events in Paris in 1848, written by an English lady, the late Baroness Bonde, to her friend Mrs. Ashburnham. They have now been collected in a volume by Mr. Warr—*Paris in '48* (Murray). Unpretentious, unaffected, the history of those terrible months has never been more vividly told than in these letters. "The revolution of 1848," says the writer, "was far more fearful, far more wonderful than July 1830; there, there was a party, an organisation; here, we have the spirit of the people, and it has blown Royalty to the winds." This is Madame de Bonde's description of the Provisional Government:

"Cassidiere and Courtais have taken to drinking, and the former was picked out of a gutter by his own Montagnards the night before last. Ledru Rollin is over-eating himself, and George Sand makes tea for him at three o'clock in the morning. Louis Blanc has other resources, but the worst of all is Lamartine, who, as a forlorn hope, has sent for D'Alton Shée! Imagine the ex-peer, who always was mad, the mouthpiece of democratic societies under the Monarchy, the avowed friend of the Socialists, taken into the private councils of the Minister of Foreign Affairs."

But it is the details of daily life of the time that make the chief interest of these letters. Here is a picture:

"If you pay a visit you find a lady with very dirty hands who has just been grubbing a hole in her garden for her diamonds; in the street you meet a ruined man in a cab; he stops to explain this apparent extravagance, and to say he was taking his forks and spoons to the Mint. We all wear thick shoes, carry an umbrella, and try to look as much like our own *portières* as we can."

The general reader, who seeks his recreation in gossipy books, will find plenty to his taste in Miss Godfrey's *Home Life under the Stuarts* (Richards). Miss Godfrey does not pretend to original research: she has read the books of the period, and has jotted down anything she found of interest. For example, here is her comment on a primer published in 1636 by Edward Coote, who was master of the Free School at Bury St. Edmunds. It is called *The English Schoolmaster*:

"The rules for religious observances are somewhat lax; forms of private prayer for morning and evening are given, and very long graces before and after meat. Metrical psalms for learning by heart follow, and the book concludes with a glossary of hard words and a specimen of black-letter. The copy of this book, which is preserved in the British Museum, bears marks of having been well-thumbed, as the early pages are much more brown and worn away at the corners than the more advanced ones. The children who used it have, moreover, scribbled their names again and again in the margin, as idle children to this day love to do. Frank occurs many times over, also Elizabeth, Anne, and Richard. On the fly-leaf is written: 'Can any one tell what age i look?' and just below, 'Soe wan, soe pale.'"

## Fiction

Periodically a cry of protest against volumes of short stories is raised, but they continue to be issued, and apparently to be read. Seventeen short stories are contained in Mrs. Steel's new collection of Indian stories, issued under the name of the title-story, *In the Guardianship of God* (Heinemann). Most of them are impressions rather than stories, and they show all Mrs. Steel's gifts of imagination and poetical suggestion, and also her occasional inability to make her meaning quite clear to the reader. One of the best stories is "In a Fog," the account of a ruse by which fifteen convalescents, cripples mainly, in a hill hospital, routed the rebels under the leadership of the doctor. The convalescents shouted their commands as if each was leading a company, and when the fog cleared, the rebels were seen to be in flight. It is an original idea, and the story has atmosphere.

The lady who writes under the pen-name of "Zack" is so fine an artist, and has shown such promise in her former volumes, that a new book by her always arouses a thrill of expectation. The impressive idea worked out in *The Roman Road* (Constable) might well

have formed the basis of a considerable work. But "Zack" has made it little longer than a short story, and two other tales are included in the volume. What there is of *The Roman Road* is masterly in a direct, unemotional way: it is the work of a strong intellect, and the symbolism of the Roman road driving its course sternly through the decaying village, calling on all to go out into the world beyond and work out their destiny, is well imagined, and well wrought.

The appearance of a new humorous writer is an event in the literary world. At least, it can be said that Mr. W. S. Jackson in *Nine Points of the Law* (Lane) has begun well. His style is clear and brisk, and he shows no signs of fumbling in the narrative. It is the story of a youth who acquired by chance the spoils of a burglary during a holiday, and what he did with the treasure. The best things in the book are the character sketches of the burglars, but the whole story is told with point, and with considerable humour. Another first book is *The Flame and the Flood*, by Rosamund Langbridge (Fisher Unwin). The heroine is an actress with an abiding friendship for an ill man, and a great passion for a singer, who is presented with considerable power. Indeed, the whole book has spontaneity, and that quality known as full-bloodedness. It should be a favourite with those readers who like to have their emotions stirred. For a first book it is quite an achievement.

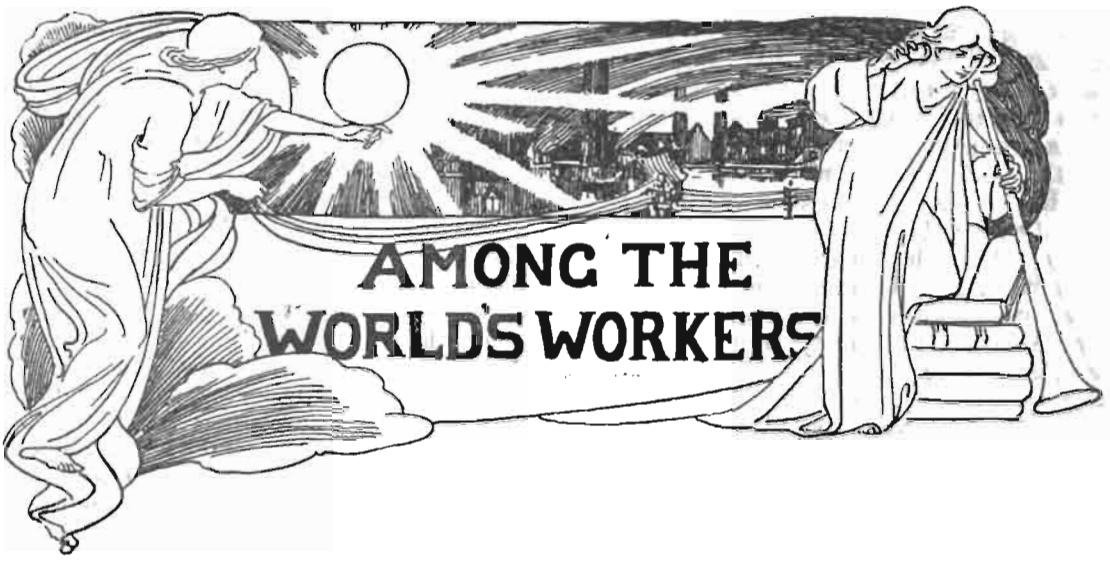
*The Way Back*, by Mr. Albert Kinross (Constable), is very readable, although the tone is occasionally too strident. The opening chapters give a bustling account of yellow journalism in London, and the rest of the book is devoted to the final incident in the life of one of these "strong men" of "yellow journalism" who sought out an old love, and found he loved her still—too well.

### Miscellaneous

The first volume of the collected edition of the works of Charles and Mary Lamb that Mr. E. V. Lucas has been preparing for some years has just been published (Methuen). The edition will be completed in eight volumes, including the Letters and a Life. The first volume contains the Miscellaneous Prose with a quantity of new matter collected from magazines, and here first identified as Lamb's work; but the great feature of this edition consists in the editor's notes. They fill one hundred and fifty pages of this volume, and they make in themselves a most readable commentary on the literary history of Lamb's age. This edition promises to be not only the most complete, but also the most scholarly and readable edition of Lamb.

It is not often a member of the Royal Academy writes and illustrates a book; and when one does so I can hardly imagine that it could have a greater value than Mr. W. L. Wyllie's *Nature's Laws and the Making of Pictures* (Arnold). The subject of the book is the science of perspective, and it is treated in such a way, with the help of illustrations—a pleasure to look at in themselves—that the amateur, as well as the professional painter, on reading it will be ashamed that he has ever allowed himself to call perspective a "one-eyed science." Mr. Wyllie need not apologise for writing "as though the reader were a child." Not only has he made his meaning clear: he has also made a dry subject most attractive.

At the right time for the British holiday-maker comes *Danish Life in Town and Country*, by Jessie Bröchner (Newnes), a worthy addition to the most useful series of little volumes on "Our Neighbours." *The Work of Botticelli* (Newnes' Art Library) consists of an essay on the painter by Mr. Richard Davey, forming an introduction to sixty-five pages of illustrations. Those who do not know the American metropolis will gain a better idea of it from Mr. Jesse Lynch Williams' attractive *New York Sketches* (Newnes) than from a host of guide-books. Those who do know, will find in it all the pleasure given by a vivid impressionist portrait of a friend.




## UP-TO-DATE FIRE APPLIANCES

THE lack of initiative of British manufacturers of fire appliances during the last decade has lately been the subject of a controversy in the columns of *Engineering*. One correspondent states the case against them in this fashion.

"When the British fire-appliance maker has once made up his mind to put a certain class of appliance on the market, he not only holds his own opinion against all comers in design and make, but generally beats them in mechanical efficiency. But why should he take so long to make up his mind? Mentioning an instance, the horsed chemical first-aid engine has been in use in the United States for many a long year, and has been found a boon to all concerned. The Viennese Metropolitan Fire Brigade has over thirty of such large chemical engines, while in Germany the professional fire brigades have apparently been using them since 1890. Why must we needs wait to see the Yankee maker actually placing these appliances here, in order to bring about their manufacture in London some full ten years after they have been proved so useful in two other continents?

"Similar instances could be given regarding other appliances. Why should the French capital, and the provincial towns of Germany, also a number of American cities, introduce motor fire-engines quite a couple of years before English makers really start thinking of them? Why should they only seriously tackle the 80-ft. ladder question after the rest of the world has had the telescopic ladder in hand for a number of years, and the United States has actually imported them, in spite of the tariff question, from the continent of Europe? Why do they not push the interchangeable coupling when the world's brigades—England's fire-service excepted—has been using them for a decade? Why has the smoke-helmet been so neglected by the fire-appliance makers?

"The introduction of all such appliances rests primarily with the makers in England, seeing that their influence among most of the fire chiefs of this country is of such a curious—we might say, exceptional—character, as to be able to practically control the nation's fire equipment. But, perhaps, the absence of healthy outside competition has made our fire-appliance makers apathetic, as is the case in several of our other trades. Having this wonderful influence, they prefer to keep to their old lines as far as possible, and to limit their improvements to their old special lines, *i.e.*, the steamer, the manual, the hose-cart, and the hose-reel. If our makers had only taken time by the forelock, the fire service generally in the country would have been in a somewhat advanced state of equipment. Their output would have been a greater one, and England's position as an exporter would not have been encroached upon."

## METEOROLOGICAL KITES

THE usefulness of the ordinary kite has been greatly extended of recent years. Not long ago in this department there was an account of the life-saving kite and its work on the French coast. Now Mr. W. N. Shaw, of the Meteorological Office, comes forward in the *Times* with an appeal to yachtsmen on behalf of the scientific kite. He suggests that the fortunate owners of steam yachts might add a kite equipment to the appliances on board their vessels, and that they should use it to send up self-recording apparatus to register the temperature and humidity of the upper air when suitable occasions

arise. Last summer, from the deck of a tug steaming off the west coast of Scotland, Mr. W. H. Dines reached heights of upwards of 12,000 feet successfully, and obtained very interesting results, that will be duly presented to the Royal Society. He has arranged the driving power and winding gear in so compact a form that they do not occupy more than about ten square feet of deck space, and the kites which he has designed are such that they can be packed flat and do not require much room for storage. To run out five or six miles of wire with a kite and instruments at the end and other kites attached at intermediate points and to get them all back again without mishap, is of course, not quite so easy as dropping an anchor and winding it up again; but with suitable apparatus and a little practice, the difficulty is not more than enough to add pleasant excitement to the operation.

Mr. Shaw makes this request by considering how much could be added to our knowledge of the atmosphere by a ship equipped for and devoted to atmospheric research, a floating experimental observatory. But the kite observations are of peculiar interest and importance, and they can be organised without serious difficulty. The cost of the equipment is not by any means prohibitive; indeed, in making plans for continuing the experiments off the west coast of Scotland in the present summer, the cost of a ship to carry out apparatus makes all the other expenses appear almost ridiculous. For the very best of reasons he cannot offer, on behalf of the Meteorological Council, to defray the cost; but, if any benevolent yacht-owner would make the attempt, Mr. Shaw promises him not only the gratitude of meteorologists all over the world, but as many interesting hours as he is willing to devote to the experiments. The meteorological observations will only add to the interest which attaches to the sending of a kite up to, and beyond, the clouds.

There need be no limitations of the locality of the experiments. Records from anywhere over the sea, from the Antarctic ice to the Arctic ice, would be gratefully welcomed. The equator, the tropics, the British or any other seas offer suitable localities. This country is sadly behindhand in its knowledge of the upper layers of the air over its many lands; that knowledge may come in time; but even if it be unattainable, we shall make up our leeway and take the position that we ought to take in such matters, if we present to the scientific world a knowledge of the upper atmosphere of the sea.

## THE KING'S PETROL MOTOR-LAUNCH

THE application of petrol-motors to the propulsion of launches and other craft has been generally adopted and the demand for petrol-engines for this purpose is rapidly increasing, the high state of development to which they have been brought by motor manufacturers rendering them particularly suitable. His Majesty the King has purchased a petrol-launch—a fact which cannot fail to give a very considerable impetus to this type of craft. It has been built for his use on the Thames and is now in the Royal boat-house at Datchet. According to a description in the *Automobile Club Journal*, the hull is built of cedar, and has three skins. It is 32 ft. long; the beam is 6 ft., and the depth 2 ft. 9 ins. The propelling mechanism consists of a standard four-cylinder twenty horse-power motor, and of a special reversing gear of the epicyclic type. The reversing gear, which is very compact, is built to the design of Professor Hele-Shaw, whose patent form of friction clutch forms an important part of it.

The seats are arranged forward of amidships, and accommodate twelve persons. The machinery is fixed aft of them, and the steering wheel is in the stern. The engine, the reversing gear, the propeller-shaft, the stern tube with its stuffing box, and the propeller are all finished and fitted with excellent workmanship. The circulating pump is gear-driven, and forms a part of the engine. The governor and half-speed gearing is entirely enclosed, and the petrol is fed to the carburettor by gravity. All the moving parts are readily accessible, and the two clutches of the reversing gear are operated by a single lever.

## THE TRAINING OF WOMEN

THE Women's Industrial Council is taking up the question of the proper training of women workers. The Battersea Polytechnic is doing work of this kind, but more such technical schools are badly wanted for the training of future housewives, laundry-maids, parlour-maids, cooks, nurses, dressmakers, milliners, makers of artificial flowers, upholsterers, and trained workers in many other industries which are open to women. The Women's Industrial Council, with the object of showing where England stands in the matter, has issued a report on the "Technical Training of Girls at Home and Abroad." It says: "We cry out against unskilled, often purely mechanical occupations pursued by women: we say, 'teach them skilled trades; let them take a pride in their work.' Here is a calling which requires skill, which will bring the pride and satisfaction that follow work well done. We want in every district a school for the training of such women; we want the public to see that such an experiment meets with success by employing this band of skilled housewives as their domestic helps. Could not a school of this sort be attached to every polytechnic? The machinery is there; the teachers are there; and the pupils will certainly not be lacking."

## SOCIAL REFORMERS AND POVERTY

MRS. BOSANQUET recently published some criticisms of Mr. Seebohm Rowntree's book on *Poverty: A Study of Town Life*, maintaining that Mr. Rowntree's results do not admit of fair comparison with those obtained in London by Mr. Charles Booth; that his investigations as to incomes are untrustworthy; and that the standard of living on which his "primary" poverty line is based is inaccurate. Mr. Rowntree has now replied to these criticisms by a pamphlet entitled *The "Poverty Line."* He quotes, in the first place, a letter written to himself by Mr. Charles Booth, the point of which lies in the phrase used by the latter, that "our estimates are fairly comparable." Secondly, Mr. Rowntree describes the manner in which his inquiry into the social and economic conditions of York was conducted, and how the information collected by the investigators was carefully checked. And thirdly, he justifies the standard of food requirements adopted in his book. Mr. Rowntree adds that the difference between Mrs. Bosanquet and himself goes deeper than anything represented by the criticisms considered in his pamphlet, and that "Mrs. Bosanquet, as is well known, belongs to the extreme wing of the Individualistic school." In conclusion he writes: "There needs on the part of social reformers the frank recognition of the two great departments of human effort which may be brought to bear upon the problem of poverty. All history speaks of the enormous and far-reaching influence of *law* upon the character of a people. It is the merest commonplace among the deductions of historical inquiry, and of social investigation, that national character is immensely affected by the laws under which men live. The poor laws which existed in the thirty years preceding their reform in 1834 sapped for the time the self-reliance of the English labourer. The habit of thrift may be destroyed if a people are subject to arbitrary extortions, or it may be developed almost to excess under a system of peasant proprietorship. You may insist upon the need for a wider intellectual outlook, but you will look for it in vain if national education is neglected. You may speak of the need of a strong physique for our town workers, but their physique will deteriorate in the absence of sanitary laws. It is well that the views of the Individualistic school should have due recognition, but I venture to think that its advocates weaken their position by an unwillingness adequately to recognise the influence of law in affecting the formation of character, and in modifying social conditions. It is surely by the union of strenuous personal effort on the part of the poor, in combination with wise laws, that the problem of poverty will ultimately find its solution."

## BRITISH SHIPPING AND THE SUEZ CANAL

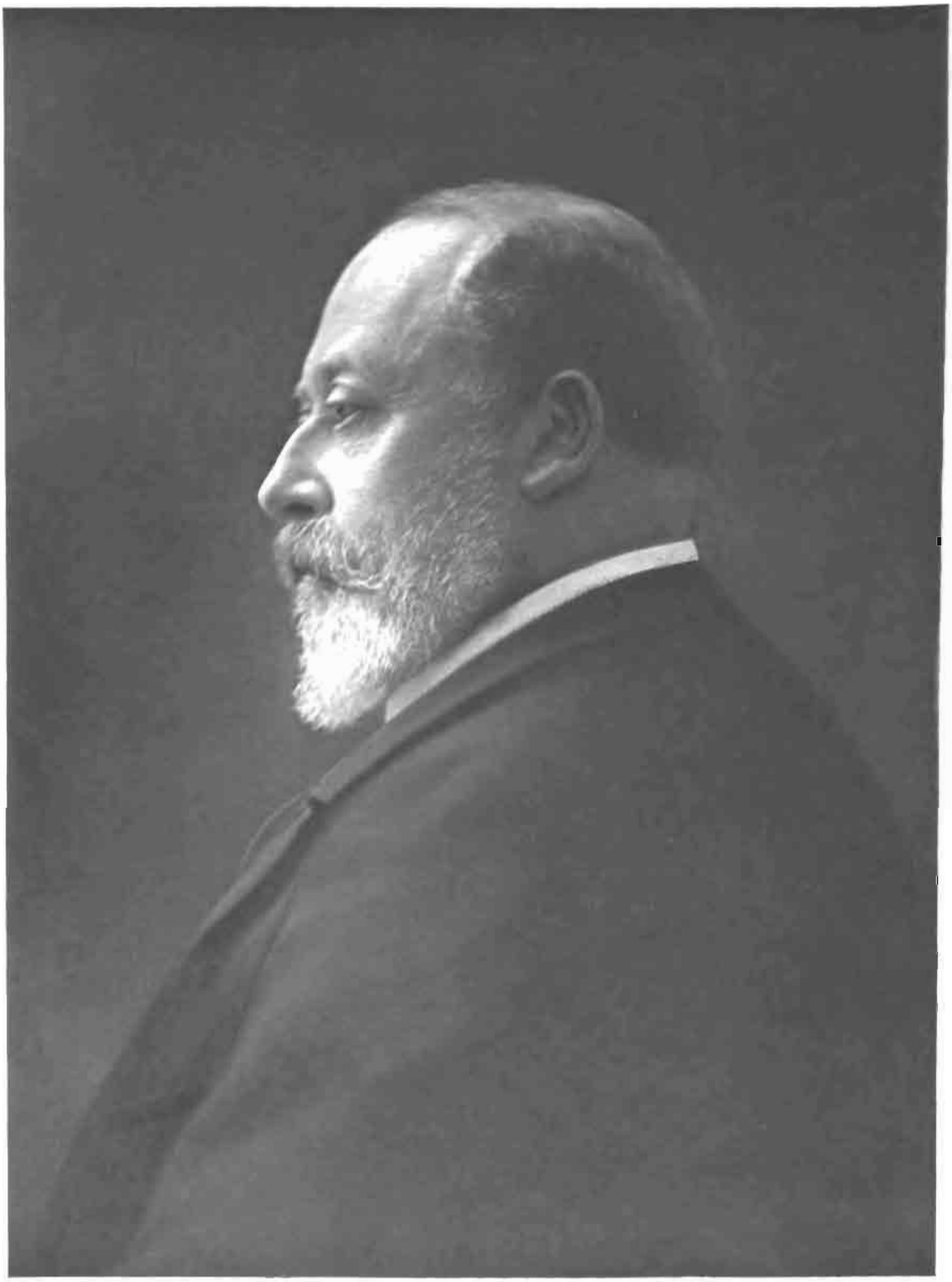
THOSE alarmists who are constantly foretelling the doom of Britannia's rule on the sea would do well to read the Returns of Shipping and Tonnage in the Suez Canal for 1902, made by the British Directors of the Suez Canal to the Marquess of Lansdowne, and published by the Government. This shows that British shipping is not only holding its own but actually on the increase in the world's sea highway. No one spot on the ocean offers a better or fairer chance for comparison than Suez. The report shows that in 1902, 3708 vessels passed through the canal as against 3699 in 1901. Of these 2165 in 1902 carried the British flag, and 2075 in 1901. Of other flags there were in 1902 480 German, 274 French, 218 Dutch, 139 Austrian, and 110 Russian.

There has been an increase last year as compared with 1901 in the tonnage of British vessels, which amounted to 5,605,421 tons in 1900, 6,252,819 tons in 1901, and 6,772,911 tons in 1902. During the same period, the tonnage of German vessels has fluctuated from 1,466,391 tons in 1900 to 1,762,624 in 1901, and 1,707,322 tons in 1902.

## THE TREND OF INVENTION

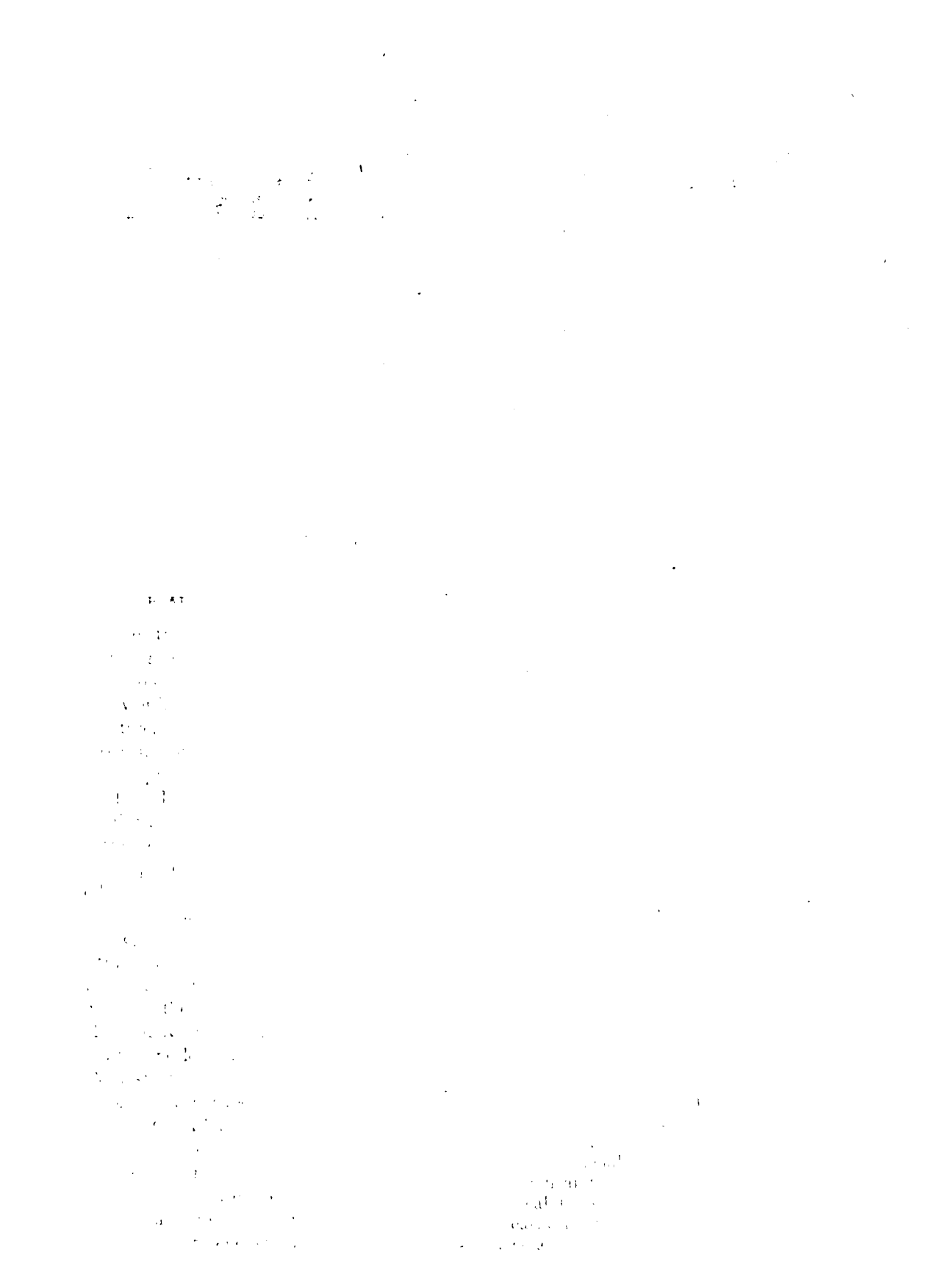
THE recent report of the Comptroller-General of Patents, Designs, and Trade Marks gives interesting testimony as to the effect of current opinion and events upon invention. People do not often remember, for instance, that the rise and fall of the Ping Pong craze leaves an impression in Governmental circles as well as in suburbia. The report says:

"In 1902 the development, noticed in previous years, of inventions relating to electric traction was continued, though not so rapidly as in 1901. There was again a large increase in the number of applications for motor-cars, especially motor-cycles. Much attention was given to wireless telegraphy, and among other favourite subjects of invention were golf balls and clubs, and reversible seats for tramcars. In the early months of 1902 the popularity of the game of table-tennis produced a large number of applications for racquets, nets, &c., but the increase had nearly disappeared at the close of the year. The disastrous fire in the City of London (on June 9) at which ten lives were lost owing to the insufficient length of the escapes, led to a large increase in applications for fire-escapes, but this also only lasted for a short time. So far as can be judged by the titles of applications, the Coronation, with its accompanying events, did not appreciably affect the course of inventions. Among the few cases connected with it was one for arranging incandescent lamps for outlining buildings in illuminations."



H.M. KING EDWARD VII.

*From a new photograph by Baron A. Meyer, now published for the first time*



The
# World's Work

AN ILLUSTRATED MAGAZINE OF
NATIONAL EFFICIENCY AND SOCIAL PROGRESS

Edited by Henry Norman, M.P.

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## The March of Events

### H.M. THE KING

WE have the greatest pleasure in presenting our readers this month with the portrait of King Edward which faces these words. It is a photogravure, from a new negative, made public by his Majesty's gracious permission, taken by Baron A. Meyer, an amateur photographer deservedly famous for his technical skill and artistic taste; and we are making no claim for ourselves in expressing the opinion that it is the most life-like photograph of his Majesty that has been published.

This portrait will be doubly welcomed, we are sure, at the present moment, when the country is feeling a new debt of gratitude to the King for the happy effect of his influence and tact upon the relations of Great Britain and the French Republic. Two months ago we discussed at some length the great significance of his Majesty's foreign visits. The most welcome cordiality between the French people and ourselves, which has found in the exchange of visits between the heads of our two States an invaluable opportunity for its expression, owing in great measure to the King's unrivalled diplomacy, will constitute in future one of the happiest events of his Majesty's reign. If we had placed the title, "Our Best Ambassador," under this portrait, we should have stated no more than the bare fact.

### A STIFLED PARLIAMENT

IT is difficult, without the use of the strongest language, to characterise the attitude of the Prime Minister and the condition of the Government, in respect of Mr. Chamberlain's fiscal proposals. That these have brought our Parliamentary institutions to ridicule is the simple truth. The situation, however is no less tragical than comical, and serious, people will not be able to regard it without deep indignation. The Unionist party, beginning with the Cabinet, is split by a clean division from top to bottom by the issue of Free Food *versus* Taxed Food. More than fifty of its members, led by Sir Michael Hicks-Beach, the late Chancellor of the Exchequer, and including many of the best men within it, have formed themselves into a Free Food League for the purpose of fighting the proposals of the Colonial Secretary. There has been no such political schism since the Home Rule split, and when among the schismatics are to be found financial authorities like Sir Michael Hicks-Beach and Sir Edgar Vincent, respected and typical Conservatives like Mr. W. F. D. Smith, earnest reformers like Sir John Dickson-Poynder and Major Seely, thoughtful and

brilliant debaters like Lord Hugh Cecil and Mr. Winston Churchill—to name only a few that come at once to mind—it is sufficiently obvious that the first effect of Mr. Chamberlain's raid has been to turn a very considerable proportion of the ability and conviction of the Unionist party in Parliament against itself.

All this, however, concerns the Unionist party more than the country. Of urgent national importance are the grotesque and unprecedented efforts of the Government to stifle discussion in the House of Commons. On the one hand, we have all the talk about a "grand inquest of the nation"; the "great inquiry"; the assurances, many times repeated by Cabinet speakers, that their sole and earnest desire is that all the facts shall be collected and fully considered before any policy is adopted; and the remark of Mr. Chamberlain in Parliament, "It is because the question is of immense importance that I ask the House to join eagerly in its discussion." On the other hand, we have the flat refusal of Mr. Balfour, screening himself behind the technical forms of Parliamentary debate while Mr. Chamberlain hastily slips out of the House, to allow the issue to be debated at all, except under conditions which would completely obscure the opinion of Parliament. Mr. Balfour declares that the question has already been debated several times. This is not true. It was freely debated only on the afternoon before Parliament rose for the Whitsuntide recess, in the absence of many leaders of opinion in the House. On other occasions when it has been raised, debate has been confined by the Speaker's ruling to more or less remote aspects of the question, and at the last debate the subject was only mentioned at all by open and repeated defiance of the rulings of the Chair. Mr. Balfour has declared that "it would be ridiculous to make fiscal opinions the test of Party loyalty." Yet when an opportunity for debate is asked by Sir Michael Hicks-Beach on behalf of the whole body of Unionist Free Traders, under conditions in which no question of Party loyalty could arise, the Prime Minister, with unconcealed temper, avails himself of the flimsiest excuses to refuse the request.

The object of this refusal is obvious. In the first place, Mr. Balfour and Mr. Chamberlain desire that the Opposition should move a vote of censure upon the Government on this issue, knowing well that the result would be that many of the Unionist Free Traders would not vote against the Government at this juncture on a question of confidence, that the Irish would probably support the Government in order that the passage of the Land Bill should not be imperilled, and that the big majority which the Government would have under those circumstances could be trumpeted forth to the Empire and the world as a vote of the House of Commons against Free Trade. Earnestly as all Liberal members must desire to discuss the issue, it can hardly be expected that they will fall into this palpable trap if any other method can possibly be devised. In the second place, Mr. Balfour clearly desires—acting on behalf of Mr. Chamberlain, for, in spite of doubts and assertions to the contrary, the Prime Minister is heart and soul with the Colonial Secretary in the matter—that discussion should be stifled in Parliament until the session is over and Mr. Chamberlain's unrivalled electioneering abilities can be let loose upon the platform.

Moreover, while Parliament is throttled on the plea that an "inquiry" is on foot, Mr. Chamberlain's agent is flooding the country from Birmingham with millions of leaflets advocating "Mr. Chamberlain's policy."

Everywhere, therefore, except in Parliament itself, the matter can be freely debated. As Mr. Winston Churchill has pungently said in a letter to the *Times*:

> "The great question of the day may be argued in the Palace and in the coal-hole. Every Chamber of Commerce may debate it. Every public body may pass a resolution. It is on the agenda of the Eton Debating Society. It is in order in the Parliament of Peckham. But there is one place in the British Empire where it is 'taboo.' The House of Commons, most interested, most concerned, most responsible, is to be gagged and smothered by a cynical and ingenious abuse of its own procedure."

Unless the British people have lost their customary political sense, Mr. Balfour's unscrupulous treatment of Parliament and the country, and Mr. Chamberlain's leaflet-manufacture in Birmingham, will prejudice their own cause. The "inquiry" obviously becomes a farce under such circumstances.

In fulfilment of our promise last month, this issue of THE WORLD'S WORK will be found to contain a series of articles upon the chief aspects of the great controversy. We hope and believe that these are written without Party prejudice or passion, and that they discuss the issues fairly and squarely upon their merits, and not in reliance upon shibboleth or tradition. We believe they will be found to be a storehouse of information and guidance in the coming political struggle, in which the

prosperity of the people and the future of the Empire will be at stake. We may add that if any important side of the issue has been overlooked, and our readers will signify to us their desire for discussion of it, we will do our best to meet their wishes in future issues.

## THE SPIRITUAL PULSE OF LONDON

ON the question of non-churchgoing in London almost everything has been said many times over. One knows exactly what to expect when the discussion recurs in the morning papers. False sentiment or effeminacy in the pulpit; the rarity of doctrinal or expository teaching; the expense; inconsistent conduct on the part of church officials; the more urgent need for an excursion to the country or the seaside at the week's end; the bicycle ride; the newspapers; the decay of faith—all these and other explanations and excuses are brought up to explain the Londoner's absence from church. One thing, however, remained to be done really well, namely, to discover how many people do go to church in London. Thanks to the enterprise of the *Daily News*, which has been engaged, with a large staff of enumerators, for nearly seven months in taking a census of the churches, we now know the worst that can be proved against the capital of the Empire in this matter. No one who reads the very complete statement of results in the *Daily News* of July 9 will hesitate to accept the claim Mr. R. Mudie-Smith makes when he says that those returns approach as closely to perfect accuracy as is possible in an inquiry of the kind. Mr. George Cadbury, the chief proprietor of the *Daily News*, who has borne the heavy cost of the census, and Mr. R. Mudie-Smith, who has superintended it, are to be congratulated on the successful conclusion of an admirable work. The total number of places of worship visited was 2600, consisting of 2538 Christian and 62 Jewish. According to the census of 1901 the population of the twenty-nine boroughs into which London is divided is 4,536,541. From this total must be deducted 68,492, the number of those dwelling in institutions such as hospitals, workhouses, prisons, &c. This leaves 4,468,049. The number recorded as having attended a place of worship throughout the census is 1,002,940, which gives a ratio of 1 in 4.45 of the population. But it has been ascertained that no less a proportion than one-third of these go twice; the grand total of worshippers is thus reduced from 1,002,940 to 850,205, and the aggregate attendance for the whole of London, instead of being 1 in 4.45, or 20 per cent. of the population, becomes 1 in 5.25, or 16 per cent. of the population. It is estimated that 50 per cent. of the population can, if they wish, attend a place of worship on Sunday. That is to say, 2,268,270 persons might have been present, instead of only 850,205. In London therefore, the number of persons who can attend church, but who do not attend, is 1,418,065. In the words of Mr. Mudie-Smith, "60 per cent. of the available population is apparently either apathetic or antagonistic as regards attendance at a place of worship on Sunday." As was to be expected, the men are worse attenders than the women, who are in the same proportion as the children; and it is interesting to note in this connection that the Free Church has a larger number of men attending her places of worship than the Established Church, which is attributed to the fact that in the Free Church the emphasis is laid on the sermon, whereas in the Established Church it is laid on the service. "Men are attracted by the former, women by the latter."

It is possible, of course, to attach undue importance to statistics of churchgoers when estimating the influence of churchgoing. A preacher whose church is crowded to the door, may really be imparting less valuable guidance to the lives of his hearers than another who insistently gives only the best teaching, and is content to see in a comparatively small body the witness of great things.

It is easy to criticise ministers of religion; it is not so easy to measure the great difficulties of their work in London. "I have got into all my London feelings," wrote Sydney Smith, "which come to me immediately I pass Hyde Park Corner. I am heartless, selfish, insolent, worldly, and frivolous. Pardon the vices inevitable in the greatest of cities." In a city of such manifold occupations for eye and ear, it requires all the study, all the zeal, all the brilliance that the best men are capable of to make the average man take thought of his spiritual welfare. Considering these things, we venture the opinion that the census shows no such bad record. "A little leaven leaveneth the whole lump," and the 16 worshippers per 100 are the salt of London life. To increase the number—and in the effort they must not hold the intellect of the working man too cheap—is an immense task for our churches, but with the above results before them, the outlook is hopeful.

## LORD ROSEBERY'S SCIENCE COLLEGE SCHEME

LORD ROSEBERY'S letter, published in the newspapers of June 29, has met with a reception which shows how keenly alive the people of this country are becoming to the right kind of educational proposal. The statesman who more than any other public man commands the attention of all sections of the public has been authorised to offer a fund for the establishment in London of a school of technical and applied science, on the lines of the famous *Technische Hochschule* of Berlin, and whatever may be said in praise of the work already being done by University College, King's College, and other centres of instruction, there is no doubt of the need of some institution here resembling the technical high schools of the Continent. Lord Rosebery states that the well-known millionaire firm of Messrs. Wernher, Beit, and Co. undertakes to provide £100,000, with an assurance that a further gift of a like amount will be forthcoming hereafter on certain conditions. There is reason to believe that an excellent site may be placed at the disposal of the trustees by the Royal Commissioners of the Exhibition of 1851—namely, about four acres of land adjoining the present buildings of the University of London at South Kensington, and close to the Royal College of Science and the Technical College of the City and Guilds of London Institute. This site is valued at £200,000, and the cost of the construction and equipment of a building suitable for the immediate needs of London and capable of expansion hereafter is estimated at £300,000. It may be confidently expected that the London County Council, to whom, through their chairman (Lord Monkswell), the offer is made, will be able to secure the endowment of £20,000 a year which is necessary in order that the institution may begin its work. Lord Rosebery has consented to act as Chairman of the body of trustees who are to carry the design into execution, and amongst those who will assist him are the Duke of Devonshire, Mr. Balfour, Sir Francis Mowatt, Mr. Julius Wernher, Mr. R. B. Haldane, and the Vice-Chancellor and Principal of the University of London. Aided by the liberality of London citizens—or indeed of manufacturers in the country at large—the success of the project in those hands may be taken as assured. It is designed to train the skilled lieutenants and confidential assistants of our great manufacturers, and will take up such subjects as chemical technology, mining and metallurgy, electric traction, electro-chemistry, railway and marine engineering, naval architecture, &c.

The scheme is understood to be largely due to the energy of Mr. Haldane on this question, and readers who turn to the address the member for Haddingtonshire delivered under the auspices of the Council and Senate of University College, Liverpool, on October 22, 1901, will readily recognise therein the germ of the idea. In view of the present interest in the British Charlottenburg that is to be, the following passage may be quoted from Mr. Haldane's address on that occasion. Referring to the school at Charlottenburg, he said:

"Here there are six departments manned by professors of university rank. Architecture, civil engineering, marine engineering, mechanical engineering, chemistry, and general technical science are, mainly at the cost of the State, taught on a scale which has no parallel in this country. So great has been the public appreciation of this institution that the magnificent buildings which were erected in 1884 are already quite inadequate to the needs of the three or four thousand students who attend the lectures and work in the laboratories. The studies of these students, who are of university age, and can only enter on production of proper certificates of competency from the secondary schools, are directed by a great staff of professors and privat-docenten of university rank. . . . This kind of alternative university has taken firm root in Germany. There are ten of them (including the one in course of establishment at Danzig, eleven), in addition to the twenty-two universities of the ordinary kind. They have been established because the Government has thought it a good investment to pay 70 per cent. of the cost of equipping and running them. They are not free, but the fees are low, and the students appear to make no difficulty about finding these fees. When people in this country talk of the remarkable decrease of the attendance at the Scottish universities and ask whether the remedy is not to find the fees of the students, they would do well to study what has taken place in Germany. It is evident that the popularity of the universities and technical schools there is not that they are free, for they all charge fees, but that they help the student to a position in life. In Berlin I was told that the manufacturers regularly watch the careers of the promising students and offer them employment as they leave in the great chemical and engineering establishments. How little inducement do we here offer to our manufacturers to act similarly!"

It is with peculiar pleasure that THE WORLD'S WORK, which has devoted so much space to urging the necessity for reform in our educational methods, welcomes an establishment that will at least go some way towards removing a reproach and a disability under which we have too long lain.

# THE GREAT QUESTION

## A GUIDE FOR THE COMING CONFLICT

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## MR. CHAMBERLAIN'S PLAN: ITS RISK TO THE EMPIRE

AN IMPERIAL RETURN TO PROTECTION WOULD BRING FRICTION BETWEEN COLONY AND COLONY, AND BETWEEN EACH COLONY AND THE MOTHER COUNTRY

BY

THE RIGHT HON. THE EARL OF CREWE

AMID the confusion and disarray which have stricken the Government ranks since Mr. Chamberlain spoke out at Birmingham on May 15 last, the figure of the Colonial Secretary himself stands forth hard and clear. With others it may befall as it did "on the sunset bound of Lyonesse,"

> "Nor ever yet had Arthur fought a fight
> Like this last, dim, weird battle of the west.
> . . . . . and even on Arthur fell
> Confusion, since he saw not whom he fought,
> For friend and foe were shadows in the mist,
> And friend slew friend, not knowing whom he slew,
> And some had visions out of golden youth,
> And some beheld the faces of old ghosts
> Look in upon the battle."

But Mr. Chamberlain, to do him justice, has no dread of old ghosts, whether they answer to the name of Adam Smith, or of Cobden, or of Bright, or of his former Liberal self. His harshest critics will not deny that he is intensely actual, though his actuality may be of that most dangerous type which rears a structure of apparently solid logic upon a foundation of fiery impulse.

In this campaign, then, Mr. Chamberlain's attitude is distinct: he fights as Colonial Minister, or, rather, as a kind of Agent-General for all the self-governing protectionist colonies. The interests of the United Kingdom, and of the other colonies and dependencies, are to be the concern of others. His colleagues, hard pressed as to the existence of Cabinet responsibility, sedulously encourage him to maintain this posture. "It may be true," they say in effect, "that Mr. Chamberlain, in his personal inquiry, adopts the unusual procedure of condemning free trade to death before charging the jury, and of charging the jury before hearing the evidence; but you must remember that he is Colonial Secretary, and that in many of the colonies the prisoner is as good as hanged already." Herein is at once the strength and the weakness of Mr. Chamberlain's position. It is a weakness, because such early and exclusive use of a partisan's tone widens the gulf between him and some of his fellow Ministers. It is a strength, because it enables him to return a single answer to those who assail his policy from fifty different standpoints. Colonial preference, he is told, necessarily means protec-

tion at home, and think of all the well-known vices of protection! The very poorest citizens, for one thing, are the most cruelly affected by dear food. Again, think of the degradation of our political life, now flowing in a limpid stream, by the introduction of lobbying and log-rolling! Picture, too, the risk of disturbing our relations with foreign Powers by aiming hostile tariffs against them! To all these and other objections Mr. Chamberlain, in his character of the Great Colonist, can reply: "Granted to a certain extent. I lament the probability of even a small rise in the cost of living. I admit the possibility of some, though I hope not a general or serious, pollution of the political brook. I should deplore any embittering of our relations with foreign countries. *But* I have one simple answer to all. A system of preferential tariffs is the only system by which this Empire can be kept together."

Mr. Chamberlain's argument comes to this—that to save the Imperial ship from wreck it may be necessary to jettison some part of the cargo. Some might reply that the cargo is worth more than the ship, that any union of the Empire would be too dearly bought at the price of distress and disaster to the United Kingdom. It would, however, be useless to examine this extreme proposition of despair, so long as another line of rejoinder is open. Assume, if you please, that the maintenance of the Empire is the absolutely paramount consideration. What if Mr. Chamberlain's plan contains the germ of the one danger we dread, the danger of disruption? Dismiss for the moment the question whether more or less cargo, the property of the United Kingdom, has to be cast overboard; first consider whether in sacrificing any, you are not after all bringing the ship closer to the deadly reefs.

Here, at any rate, is a perfectly simple issue: Mr. Chamberlain's one object is to link the various provinces of the Empire by the bond of preference. Now preference must mean protection; and if it can be shown that the re-introduction of protective duties into our fiscal system will tend to split rather than cement the Empire, the whole scheme stands condemned, without further regard to questions of revenue, or of advantage to this and that industry. Things may be going badly to-day, but in no case would Mr. Chamberlain regard them as going better if the tie of Empire is weakened.

This, then, appears to be the fatal flaw in Mr. Chamberlain's calculation, apart from all general objections to his plan, that he entirely ignores the far-reaching effect upon the United Kingdom and our dependencies of the abandonment of free-trade principles.

It is not necessary for the purposes of the argument to hold what some would call a hidebound belief in the universal application to every period and every society of the propositions which were accepted in this country under Cobden's inspiration and Peel's leadership. But it is imperative to forecast the result of a national recantation of those propositions. And it is important to observe that the recantation need not be explicit. Protection will be none the less protection because it may wear the mark of colonial preference: it will be none the less welcome to a favoured industry, even though its authors aver that Imperial unity, and not support of home trade, is the true goal at which they are aiming. The acutest of all our practical economists, Bagehot, reminds us * that "experience shows that no belief is so difficult to create (as a belief in free trade), and no one so easy to disturb. The protectionist creed rises like a weed in every soil." Nowadays the *Times* asserts that "we are all favourable to free-trade principles."† Are we? The statement may be disputed even as regards free-trade principles *in vacuo*: it would be safer to declare that in actual practice every industry has a hankering after some measure of protection applicable to itself.

Now the chief interest attaching to the whole subject consists in forecasting as closely as possible what will actually occur in the event of Mr. Chamberlain carrying the day, and securing acceptance of his colonial preference policy in a definite shape. By common consent corn and flour will be the first objects of attack. Assume that by a 5*s.* duty (and the amount can hardly be less if the ultimate object is to be achieved) the annual importation of £22,000,000 worth of wheat and flour from the United States to the United Kingdom is seriously checked, and that this huge total is added to the sum of rather over £4,000,000 worth of those commodities which Canada now sends us. The transfer must necessarily be gradual, and during the period of transition, be it short or long, the wheatgrowers and millers of Great Britain must inevitably profit by the enhanced price. In the counties of Lincoln and Essex, and other favourable districts, much of the land which has found its way into rough pasture will once more be found profitable for wheat-growing. The duty on £9,000,000 or £10,000,000

* *The Postulates of Political Economy.* 1876.

† July 11, 1903.

worth of Russian wheat, and £2,500,000 worth from the Argentine, will be an additional safeguard to the home producer. The industry will be in a distinct measure protected.

But a preference on wheat will be of little use to Australia and eager New Zealand. It is difficult, indeed, to see how a really valuable preference can be extended to those colonies without imposing duties on foreign wool. But we are assured, or at least encouraged to hope, that the raw material of our manufactures may escape a penalty. Failing this measure, which would also, be it remembered, act *pro tanto* as a protection to British wool, recourse must surely be had to a tax on the foreign meat which we import. This will strike at the £3,000,000 worth of Argentine meat and at the £9,000,000 worth from the United States, leaving out of the question the £18,000,000 worth of "hog products" imported from the latter. Again the preference will react agreeably on cattle and sheep breeders in the North-west of England, in Scotland, Ireland, and Wales, and upon the graziers of Leinster, the Lowlands, the Midlands, and East Anglia.

Canada, with its export of £3,000,000 worth of cheese, may fairly demand a preference against the £1,500,000 worth sent from the United States, when British cheesemakers will profit in due proportion. The colony of Victoria sent us nearly £1,000,000 worth of butter in 1901, and may require a preference against Holland and Denmark, of which Ireland and the Midlands will secure their share.

Setting aside the unhappy consumer, whose interests are not here under consideration, the prospect for the agricultural classes in Great Britain, especially the landowners, is certainly roseate. Their joy will only be tempered by the reflection that other classes who obtain nothing but high prices, must surely demand protection for their industries in turn. But we must look further ahead. The Colonial Secretary's dream contemplates a great self-supplying, self-supporting Empire, with a steady flow of food-products and raw materials from one part to another. Realisation may be gradual, but to satisfy him it must come at last. Where will the British producer be then? Once again, apparently, he will be impoverished by free imports. Meanwhile retaliatory duties will have been placed on various manufactured articles, in pursuance of the second half of the scheme, but he will have borne with them in consideration of his own gains under the system of protection. Soon those gains will be shrinking, and finally vanishing, by the stress of colonial competition, while the duties on foreign manufactured goods remain. Here is the real question at issue. Will the British producer be content to see his industry swamped by colonial imports, or, if he is compelled to submit to the process, will the result tend to the closer amity and unity of different parts of the Empire? To answer yes is to expect too much from the Imperial sentiment, to lay too heavy a burden on the Imperial faith. The British producer will have tasted, by accident if you will, the blood of protection; he cannot be asked to return tamely to his present milk diet. He will not even be lured into acquiescence by the prospect of a free-trade Empire; for nobody supposes that Mr. Chamberlain's process will lead to the abandonment by the colonies of all duties directed against our manufactured goods. All experience shows that the longer such duties are maintained, the more hopeless it is to attempt their removal. Consequently the British producer will argue, not without force: "I observe that the colonists, who by general admission are good Imperialists, impose for their own advantage certain duties against us. I too am a good Imperialist, and I propose on similar grounds to institute certain duties against them. I shall be delighted to give them a preference over foreigners, but I have to live, and I must respectfully decline to be ruined by them, friends and cousins though they are. So long as England was a free-trade country, I submitted to all competition, whenever it came, because I was subject to a principle: now that the principle has been given up, I submit no longer." Is it then prudent, from Mr. Chamberlain's point of view, to drive a large and powerful body of British opinion against the horns of this dilemma? Producers at home will either find that the colonies have become their most severe, successful and unassailable competitors, and so their idea of the Empire will be coloured with a sense of grievance; or if they succeed in securing some measure of protection against the dominions beyond the seas, we shall be further removed from inter-Imperial free trade than we are at present, and all hope of the consummation of that ideal will be finally dissipated.

The probable effects of the plan upon India, a trifling factor in the Empire which Mr. Chamberlain seems to have ignored, were ably presented in the House of Lords on July 10. It was asked with much point how India, with her strong existing bias towards protection, can be denied what she considers a boon, when once the principle of free trade is given up at

home. No attempt was made to answer the question, and Mr. Chamberlain is left to face the prospect of a serious demand from India for a duty on imported cotton goods, or at the very least for the abolition of the excise duty now imposed on their manufacture in India. The Colonial Secretary must settle the matter with Lancashire as best he can.

Such are the prospects of an Imperial return to protection. It can scarcely be argued that a system under which different areas of the Empire impose protective duties against each other, to a vastly increased extent, can lead to a closer bond of sentiment between them. It stands to reason that tariffs so multifarious and so hostile must induce a thousand occasions of friction between colony and colony, and between each colony and the Mother Country. Beyond all this, the whole scheme of protection is vicious in itself. Its attraction is parallel to that of gambling, in that it offers a prospect of personal gain without personal effort. And as in gambling, the method is essentially anti-social. It is a part of Mr. Chamberlain's fallacy that it is possible to gratify an entire community by enforcing protection of one of its industries. The precise contrary is the case. For just as when on the turf the favourite wins an important event, and the public are said to have "had a good race," satisfaction is confined to those who have actually backed the winner, so when a protective duty is imposed, the community remains cold, when not positively averse, to the success of the favoured interest, and only those who personally profit are excited to any glow of contentment. Thus it becomes impossible to place a limit on the practice, once the principle is admitted. But in any case a system of inter-Imperial protection would be destructive of Mr. Chamberlain's object, which is understood to be as close an approximation as possible to the free-trade unions of Germany and the American commonwealth.

Unhappily, some part of the mischief has been done already. Inquiry is an admirable practice in itself, and so far as inquiry tabulates economic facts for general information, everybody will welcome it. But Mr. Chamberlain's inquiry would be more fitly described as an inquisition, in the sense in which the Holy Office conducted its proceedings in the sixteenth century. Writs *de heretico comburendo* are already issued with great freedom. Apparently rhetoric and passion, appeals to prejudice, and, alas, even to cupidity, are to be among the weapons of the reciprocity campaign. When the fight begins in October it will be found that many vague hopes have been awakened, and some deliberate expectations have been framed, on the strength of the Colonial Secretary's proposals. It is useless to blame people for accepting encouragement in the direction towards which their private interests lead them to look. The misfortune is that the shattering of their day-dreams may involve a distinct set-back to the noble cause of Imperial union.

# PREFERENCE AND AUSTRALIA

AUSTRALIA IS CONTENT WITH THE BLOOD TIE AND DOES NOT DESIRE "IMPERIAL FREE TRADE"—THE PREFERENTIAL POLICY IS INAPPLICABLE TO IT—WHY ANY SUCH POLICY MUST FAIL

BY

THE RIGHT HON. SIR CHARLES W. DILKE, BART., M.P.

CAREFUL perusal of the speeches of Mr. Chamberlain and of the first article of a series which, professing to represent Mr. Chamberlain's exact views, has appeared in large type, as "Contributed," in the *Birmingham Daily Post*, leads us to assume that the reason for raising *the fiscal* question at the present time is connected with the maintenance of the fabric of the Empire. In two of his speeches Mr. Chamberlain has emphatically declared that only by trade preference can the Empire be kept together.

In the first of the articles named, which is headed "The Imperial Problem," we are told that trade preference is a necessary step in "our progress towards federation." It has been shown that there is no evidence that either the Dominion of Canada or the Commonwealth of Australia had expected that we should reverse our fiscal policy to suit the Colonies. Neither in the case of the Commonwealth is there any reason to believe that federation of the Empire is desired by authorised exponents of Australian opinion. The legislatures, for example, of the six colonies and of the Commonwealth are opposed, as regards Governments, regular Oppositions, and third parties where such exist, to everything in the nature of imperial federation. If a demand is made on Australia for what are commonly called "closer relations," other than military and naval relations, that demand in itself will wreck for Australia any trade proposals which are treated as a portion of it.

As for closer defence relations, a mistake was made when it was attempted to treat them here. Those of us who, basing ourselves upon the history of the sacrifices made by the Colonies for the Empire in war since the imperial nature of the colonial connection was laid down by Parliament in the reign of Henry VIII., felt sure that efforts similar to those of the West Indies in the seventeenth and of the American colonies in the eighteenth century would be freely repeated in every war, pressed for years in Parliament that steps should be taken in Australia in time of peace to provide for the event. Here, indeed, the purpose could not be effected. The attempt was made too late and in the wrong place: and harm, therefore, was done by the proposals, as Mr. Chamberlain's speech in South Africa, addressed to the Australians, testifies. We are now repeating with regard to imperial federation, which in face of Australian opposition is unattainable, the mistake which had been made with regard to military union. We are pressing forward the discussion of a question which must have a disintegrating effect upon the Empire, as we pressed our military suggestions in a manner calculated to have the same result.

In the first article in the *Daily Post* it was suggested that unification of the Empire can be brought about by fiscal union. Here we are on still more dangerous ground, for as Mr. Chamberlain himself has told us, a Zollverein is out of the question. The Canadian manufacturer and the Victorian manufacturer at least think that they are protected against us. We know by the declarations of the Commonwealth Government that they are not only violently opposed to anything like imperial free trade, but are pledged not at present to propose even a moderate preference. In the words of the Governor-General's recent speech, "The urgency of questions of domestic importance prevents Ministers asking you to give immediate consideration to the question of preferential trade." When such changes come to be proposed, to judge from every declaration that has been made, they will take the form of a small preference to us in a tariff which remains protective and which may, as in Canada, be first raised in order afterwards to be lowered.

It has been pointed out that India is again forgotten, as it was forgotten in the Colonial Conference. It is only professed that the wishes of eleven millions of white colonists are considered. But it is also the case that the preferences suggested are based entirely upon Canadian considerations, and are inapplicable to Australia. That able writer "Diplomaticus" has shown that the system of colonial preferences which it is proposed to revive was a total failure, from every point of view, commercial and imperial. Since we put an end to it in this country, it has been a stupendous failure in the case of the colonies of France. It is, however, perhaps more useful to leave general arguments, and to concentrate our efforts on the practical details of the scheme.

The clearest case to examine is that of Australia. While it is bad enough to neglect the seven-eighths of the population of the Empire who live outside the self-governing colonies and the United Kingdom, it is impossible to maintain a policy which can be defended only by possible benefit to Canada and New Zealand. South Africa is a food-importing country, and for a long time to come the fiscal question raised cannot concern South Africa. Canada and New Zealand can be helped in their already rapid development by means which will be costly to ourselves. But the case of Australia must be scrutinised with the strictest care, inasmuch as if the preferential policy is wholly inapplicable to it, it must, as an imperial policy, fail.

On what is it proposed that we are to give Australia a preference sufficient to induce Australia to give a preference to our manufactures, and also to come to such a military and naval arrangement as may be beneficial to the Empire?

Australia sends us, above all things, wool. We are the wool market of the world, and import twice as much wool as we use; selling and making our profit upon the rest. We use mainly Australian wool. Almost the whole of the Australian wool passes through our hands. We mix it with other wools for use. We sell it to the French and other customers. Mr. Balfour and Mr. Chamberlain have both repudiated the placing of duties upon raw material; and I assume that the average of eleven millions sterling of trade which represents our annual receipts of wool from Australia is not to be interfered with in any way: and that no benefit is to be offered to the Australians upon that head, inasmuch as it cannot be done without violating the promise of Mr. Balfour and Mr. Chamberlain, without raising the still more dangerous question of duties upon raw cotton, without infuriating the West Riding, without interfering with our position as the wool market of the world. Then come the ores and precious metals, which also cannot be touched. Skins and furs are also raw materials. So is tallow. But wheat, which in some years is sent to us in considerable quantities from Australia, and in other years hardly at all, wheat may indeed be benefited by special duties which would raise the price of our food, coming as it mainly does from the United States and other countries outside the Empire, and it is possible upon the article of wheat, by raising the price of our food, to offer an advantage, not indeed to all parts of Australia, but to some particular districts. The only other figures in the returns which are sufficiently important to be worth considering are those which concern meat, butter, and wine. The import of butter, which was rapidly increasing, and of beef, which had been large, has been heavily hit by recent droughts. This fact is worth notice, because it indicates how dangerous for us and especially for our working people is taxation upon foreign food. The United States and South America alone present us with a field of food-supply so vast as to be unaffected by the seasons or by climatic change. We always obtain grain from the United States and meat from South America. We do not always obtain grain from our other feeders, and while we always obtain beef, not only from South America, but also from the Continent of Europe (returned as "Dutch," because it comes to us through Dutch ports from Southern Europe)—we do not always obtain beef from Australia. Australia is and always will be subject from time to time to drought, and, while irrigation may do something, it cannot, in the case of a country without a river system depending on permanent snows, do everything to remove this difficulty.

There is one item of Australian export, which the decline in the export of Cape wines and brandies, once so hopeful, bids us beware not to exaggerate, of which some Australians believe that much might be made by a fostering preference. I am one of the greatest admirers of Australian wines, and have frequently written upon their merits. But the Australian wines are wines which compete with the stronger wines of the Italian and Iberian peninsulas and with the Hermitages of the Rhone, and when the Australians try to suit the taste in lighter

wines they are less successful in quality. There is no finer Hermitage in the world than Australian. With the exception of the Constantia of the Cape, there is no finer Tokay than the Australian. But, while by manipulation of our wine duties it would be possible to do something to help some districts in Australia, there is not, in my opinion a prospect under any circumstances of a great export trade. Moreover, by such alteration of the wine duties as would suit Australia, we should indispose our Portuguese ally and lose the benefit in France of most-favoured-nation treatment. The rich, no doubt, will pay any duty and any price to get their Champagne from Rheims, and the gouty rich to get their still Moselles from Germany, but, as successive chancellors of the exchequer have told us, the general wine trade will not stand high duties, the effect of which would be decline in consumption rather than preference to Australia.

For the sake then of a doubtful and a varying trade, which at the present rate of growth of labouring hands in Australia it will take a prodigious period to increase, in the three articles of wheat, beef, and butter, we are to tax our beef from South America, which feeds our navvies, and our bread from the United States which feeds our poor, and our butter from Denmark, and are to offer, by heavy taxes it must be, some advantage which will induce the Australians, in certain parts of Australia where wool is not the dominant crop, to increase their export of wheat, of beef, and of butter. It is not a hopeful prospect.

Here then is the chance as regards Australia: a most problematical increase in the small trade in wheat, beef, and butter already done, bought by heavy sacrifices in the shape of duties upon all our food. There is no such opening for Australia as would be likely to affect Australian opinion and to improve the prospects either of imperial federation or of what we call military arrangements and what the Australians describe as militarism: and the insignificant advantage to our trade which is offered in return would be bought by the increase of the cost of our production upon the whole bulk of our exports.

Australian opinion was content with the "allied nation" point of view, proud on the whole, and by an overwhelming majority, of the connection, and not at all inclined to look forward to its termination: but totally unwilling to accept any practical evidence of the subordination of the Parliament of the Australian Commonwealth to any imperial Council or other device for governing the Empire from a distance. The situation was one with which, as Mr. Chamberlain well pointed out shortly before the South African War in the House of Commons, it was dangerous to interfere.

Detailed examination of the question enforces in the case of Australia the truth of Sir R. Giffen's phrase, "There are not the elements of a deal," as what "we can give to the Colonies is too small to be of any real value to them, and what bonus they can give us in return is infinitesimal," yet at the same time a reflection upon the history of the colonial connection shows that the true ties are those of blood and tongue and tradition, and that were it not for the unhappy raising of a dangerous question and for the holding out of hopes of personal interest which cannot be gratified, the link of the Crown would have continued to be as it has been in recent years a sufficient tie of Empire.

# LANCASHIRE AND PROTECTION

BY

ALFRED EMMOTT, M.P.

(MEMBER OF PARLIAMENT FOR OLDHAM)

"WHAT Lancashire thinks to-day, England thinks to-morrow." So said a great statesman in the seventies, and the remark was true of the Free Trade movement sixty years ago, as it was true of the Conservative reaction which has been a marked feature of the last thirty years. Will Lancashire again lead the way in giving a decisive verdict on the new Protectionist movement?*

* On Saturday, July 4, the United Textile Workers' Association, representing 170,000 organised textile workers of Lancashire and adjacent counties, passed (unanimously) a resolution entering a "strong protest against the proposal of the Colonial Secretary to tax the food of the people."

So far the new movement is vague and shadowy in outline, and lacking in logical connection in its parts. Appealing to the Imperial tendencies of the moment, it asks the workers at the heart of the Empire to submit to a small tax on food for the sake of expansion of trade with the Colonies, whilst arguing that the tax in question will keep down the price of food by stimulating the growth of wheat in Canada, and raise wages by some unexplained process to compensate for the increased price of food that is not to take place. Again it argues that England is being shut out of foreign markets and ignores the fact that the raising of the price of food must either reduce the purchasing-power of wages, or by leading to an increase of wages handicap us still further in those markets. It lays great stress on England being the " dumping-ground " for the surplus manufactures of the world and asks for retaliatory powers, but fails to recognise that if retaliation is used against foreign food and raw material it must handicap our export trade and if it is directed against foreign manufactured goods only, it can do no good to the Colonies.

From all the welter of confused and conflicting arguments and tendencies there are two things which stand out very clearly. The first is that Protection must always appeal to selfishness and inefficiency, that the ultimate benefit of the mass of consumers is easily sacrificed to the clamour of specially affected interests, and that therein lies a great danger. The second is that the present-day protagonist for Protection, whilst asking others to inquire calmly is himself *acting*, and that the calm investigations of his friends will be cut short by a general election called at a time most convenient to himself—a general election in which calm inquiry will yield to invective, and cool consideration to passionate appeal.

What is important then for the moment, and during the period of calm inquiry is that every portion of the country, every industry great or small, and especially every industry dependent on export trade, should carefully examine what the effect of Mr. Chamberlain's proposals would be on them; and it is even more vital that all who desire to take a wider view " to see life steadily, and see it whole," to regard the interests of the country and the Empire at large should devote themselves to an attempt to grasp the effect of these proposals on the very complicated mechanism of trade and finance under which we live.

In such a spirit I turn to the proposals. Here they are:

(1) That it is desirable to have preferential trade with the Colonies.

(2) That you cannot have preferential trade with the Colonies unless you tax food.

(3) That if you tax food the working man will get higher wages.

(4) That unless you have preferential trade with the Colonies (and tax food), the Empire will not hold together.

Let me deal then with the proposals as they affect Lancashire. We are to put a tax on food in order to stimulate imports from our colonies and possessions. They are to give us a preference by admitting our manufactures at lower rates than foreign manufactures. The chief trade of Lancashire is the cotton trade. We possess 40 per cent. of the spindles and half the looms of the world. Mr. Macara, the President of the Federation of Master Cotton Spinners Associations, estimates the contribution of the trade to the national income at £55,000,000 (£90,000,000 of manufactured products less £35,000,000 worth of raw cotton), of which £10,000,000 to £15,000,000 is due to the manufactures consumed at home, and £40,000,000 to £45,000,000 is the profit on what we send abroad. Fifty-six per cent. of our export of £72,000,000 goes to foreign countries, 8 or 9 per cent. to our self-governing colonies and 35 or 36 per cent. to our other possessions.

Where is that trade to be increased? At home? We consume £18,000,000 of cotton goods of our own manufacture, and import only £6,000,000 of which two-thirds are " unenumerated " in our customs returns, and are therefore probably special or artistic confections which education rather than customs duties would help us to make.

In foreign countries? Is it probable that any system of retaliation would induce Protectionist countries to reduce their tariffs on cotton goods? Why should it? Already the effect on the United States of our new movement is marked. The ultra Protectionists are rejoicing in it, alleging it as a proof that they must keep their tariffs high in order to have something to bargain with; the Free Traders, on the other hand, find it an obstacle to their demand for lower duties. Countries which believe in protection, want to make their own cotton goods, not to buy ours.

Will our self-governing colonies take more?

I have taken some trouble to find out how much of cotton manufactures they buy from foreign countries. Taking such figures as I can obtain, I find it not more than 15 per cent. of the whole —roughly £1,000,000 sterling per annum. As to our other possessions we already enjoy Free Trade with them, and have the bulk of their trade ; there is little or nothing to be gained by preferential duties.

We are thus able to gauge the effect of Mr. Chamberlain's proposals on the Lancashire cotton trade. An increased cost of food must reduce the spending power of wages. It is impossible to see how any such scheme can raise wages. The immediate effect of preferential trading might be to make all other countries treat us as Germany has treated Canada. If so, our cotton exports to foreign countries would be in immediate and imminent peril. If, on the other hand, I am wrong, and wages were increased, we should be handicapped in competing with other nations for trade in foreign markets. We could not sell more to our dependencies and possessions. We could only capture a part of the £1,000,000 of goods sent by foreigners to our self-governing colonies. Mr. Chamberlain has not yet suggested taxing our manufactured imports, except under special conditions ; but if the £6,000,000 we import to the United Kingdom be added to the £1,000,000 sent to our self-governing colonies, there would still be a huge disproportion between jeopardising £40,000,000 trade with foreign countries (of which £24,000,000 is national profit quite independently of shipping charges), and the possible gain of a part of £7,000,000 which we and our self-governing colonies import from foreign countries.

Under these circumstances the answer of Lancashire should be clear and decisive enough against these absurd proposals, not only because of its own interests, but because its great trade is an asset of national importance, and because the same considerations which apply to it, apply also to our great export trade as a whole.

One word in conclusion on the suggestion that unless we have preferential trade with the Colonies, the Empire will not hold together. It is strange reading. What has become of the " cement of the war " ? What of the view that the present Colonial Minister has been the first to increase the strength of the ties that bind the Colonies to the Mother Country ? What of Mr. Chamberlain's own statement in 1896, " That the full opening of the colonial ports must be an indispensable condition " ? Now we are to put taxes on foreign food in order to give the Colonies a preference, whilst they are to retain at their own sweet will high protective duties against our manufactures, otherwise they will cut the painter ! Of course it is not true. If it were, it would be an absolute condemnation of the Colonial Secretary. I venture to repudiate the whole idea, for the sake of *his* reputation ; but is not his use of the statement a striking example of the parochialism of his present standpoint as well as of the spirit in which he advocates calm inquiry to others ?

# THE TRUTH ABOUT CANADIAN PREFERENCE

A CONDITION OF THE PREFERENCE TO OUR GOODS IS THAT IT SHALL NOT ENDANGER CANADIAN INDUSTRIES—BUT CANADIAN LOYALTY DOES NOT DEPEND UPON PREFERENTIAL TARIFFS, AND CANADIANS DO NOT DESIRE TO ADD TO THE BRITISH TAXPAYER'S BURDEN FOR THEIR SAKE

BY

## HAMAR GREENWOOD

THE commencement of the Canadian Preference is found in the Reciprocal—not Preferential—Tariff of April 23, 1897, under which Canada provided, (1) for a reduction of one-eighth from the general tariff rates on British goods; (2) for a similar reduction on the goods of any other country willing to admit Canadian goods on fairly reciprocal terms.

This Reciprocal Tariff was repealed and superseded on August 1, 1898, by the British Preferential Tariff, which provided for a reduction

of one-fourth of the general tariff rates on all goods except wines, malt liquors, spirits, spirituous liquors, tobaccos, cigars, and cigarettes imported, (1) from the United Kingdom; (2) from the British West Indies; or (3) from any other British possessions, granting Canada reasonable reciprocity. Under this third provision, British India, Ceylon, New South Wales, and the Straits Settlements are now entitled to the benefits of the Preferential Tariff. To be entitled to this reduced tariff, at least 25 per cent. of the completed cost of manufactured articles must represent British labour.

The preferential reduction was increased from one-fourth to one-third on Dominion Day, 1900, and at one-third of the general tariff rates it now stands.

The motives prompting Sir Wilfrid Laurier and his colleagues in the Canadian Cabinet in granting preference to British goods must be known to understand the Canadian position. In the first place, there is the desire, practically unanimous, to favour the products of the motherland when they come into competition in the Canadian market with similar products of foreign countries, and when—and this must be noted—neither the British nor the foreign products seriously compete with Canadian manufactures. In other words, the Preferential Tariff was never intended to open, even to the motherland, the tariff door wide enough to endanger any growing Canadian industry. Canadians are now agriculturally great; they intend to become industrially great as well. The Manufacturers' Association of the Dominion, probably the most influential organisation politically in the colony, has declared itself in favour of a British Preference *compatible with the perfect security of the Canadian manufacturer.*

Let me take a case in point. Canadians do not manufacture cutlery to any extent. England, Germany, and the United States are all trying to sell cutlery in the Dominion market. Now the Canadian merchant, for sentimental reasons, would prefer to buy English knives, &c., providing the qualities and prices of the three competing sellers are the same. Hence, he gladly agrees to the British Preferential Tariff which gives the British manufacturer the advantage of the one-third preference over his foreign rivals. As a matter of fact, the designs and prices of the Americans and the Germans in cutlery as in many other products are so much more attractive than the English, that even with his preferential advantage John Bull often fails to book the Canadian merchant's order.

The second motive that undoubtedly actuated the Canadian Cabinet is largely personal. Owing to the Premier's Roman Catholic and French-Canadian extraction, and to the Canadian Liberal party's alleged leaning to the United States, Sir Wilfrid Laurier and his followers were called everything opprobrious, from traitors to Canada and to the Crown to papal helots, by the more violent members of the Canadian Conservative party. Sir Wilfrid's promulgation of the British Preferential Tariff was at once an answer to his and to his party's slanderers and an historic earnest of his attachment to the motherland.

The third motive represents probably the most general, as it is one of the strongest feelings among Canadians, namely, a desire to resent American aggressiveness, both tariff and oratorical. The markets of the United States have been largely closed to Canada since the day of Bill McKinley with his great McKinley Bill. And not only largely closed, but every pin-prick conceivable to the ingenious Uncle Sam and every mean speech deprecatory of Canada that the Yankee orator could deliver on July 4, these and more have been aimed at the Canadians until they are exasperated beyond endurance. Shut out of the nearest and most natural market, Dominion products found and are finding their way in increasing quantities to the free marts of the homeland. Sentiment has followed the trade route. Twenty years ago, there was a considerable annexationist feeling in the Dominion, but to-day there is the strongest antipathy towards the United States. One of the avowed objects of the high American tariffs against Canada was to compel the Canadians to sue for favours, possibly for admittance to the American Union. But Canadians are not built that way, and the high tariffs have happily had the very opposite effect intended. The people of the Dominion have hardened their hearts and clenched their fists against the citizens of the Republic.

Let it be noted here, that when the Preferential Tariff was granted, there was no expectancy on the part of Laurier and his government that the United Kingdom would change her fiscal policy to benefit Canada. The Dominion needs no artificial help in the markets of the realm. She can and does meet the sellers of the world there and her increasing exports to England show with what success. And further, the Canadian Government has never asked for any preference for her products. I venture to think no Canadian Cabinet ever will ask for fiscal

favours from the hands of the sweating millions of this country, worse fed, worse housed and worse clothed than the Canadian workers. But when the Home Government put a tax on corn, then Laurier felt justified in intimating to the Colonial Office that a preference in Canada's favour would be acceptable to Canadians. A good bargain is acceptable to most people, and Canadians are in business for business, and not for altruistic halos. His argument was, if the English consumer accepted the corn tax, granting a preference to Canadian corn to the amount of the tax would not further affect the price of corn or of bread. As the English consumer presumably will not accept the corn tax, depend upon it, the Canadian Government will not ask him to tax his loaf for the Colony, at this day and hour, probably the most prosperous nation in the world.

The Preferential Tariff has, the Canadians believe, been an element in arresting the decline of English imports into Canada, a decline from forty-four millions of dollars in 1887 to twenty-nine millions in 1897. From 1897 the volume of imports has increased to forty-three millions in 1901. No doubt the preference has also tended to stimulate John Bull to build up his trade with the big Dominion. The phenomenal prosperity of the colony during recent years, and hence her enhanced capacity as a buyer, accounts much more for the increase of English imports into Canada than the one-third preference.

To sum up, the British Preferential Tariff was granted by Sir Wilfrid Laurier's Government, and largely, but by no means unanimously, endorsed by the country, without expecting any preference or other favour from the Homeland. It was, and is, an earnest of goodwill approaching gratitude for the "grateful burden" of Empire so long borne by the people of the United Kingdom. There is not the slightest probability of any Government of the Dominion granting any preference to the British manufacturer that would endanger the success of any similar industry in Canada. In that category of industries not yet established in Canada, the British have an improved opportunity to successfully compete with the foreign manufacturer.

It must never be forgotten by the Englishman at home that while the Canadian loves the motherland much, he loves his Canada more. His loyalty to the Empire does not depend upon any system of preferential tariffs, and if it did it would be but little worth. The Colonial Secretary's extraordinary language about the Colonies breaking away from the motherland unless his as yet unknown system of preference be accepted, is not endorsed in Canada, and is indeed but sorry compliment to the Canadians. There is not even a thought about cutting the painter. On the contrary, there is a growing desire to find a method of contributing to the Imperial defence of the Empire, and not a desire to add to that burden now practically wholly borne by the man at home, an intolerable tax on food to benefit the already phenomenally prosperous farmer of the Canadian prairies.

# WHAT WILL YOU PROTECT?

PROTECTION COULD ONLY BENEFIT A MINORITY OF THE POPULATION, AND THE RESULT OF COMPETITION AMONGST MANUFACTURERS TO SECURE PROTECTION FOR SPECIAL INDUSTRIES WOULD INEVITABLY BE POLITICAL CORRUPTION

THERE are two types of protectionist, the honest and the dishonest. The honest protectionist has a sincere belief that it is somehow possible to secure some great benefit for a nation by taxing it. The dishonest protectionist merely wants to protect his own industry at the expense of his fellow citizens. The present writer recently came across an excellent specimen of this type. He was an out-and-out Radical and a rabid pro-Boer. But his enthusiasm for political reform and his humanitarian zeal for oppressed nationalities were not proof against the temptation to "make a bit" for himself. He was a paper-maker, and he wanted a duty on foreign paper, and therefore he was in favour of Mr. Chamberlain's scheme. To such men as these it is useless to address any argument. One might as well attempt to argue with a burglar. They can only be restrained by force, and the force to restrain them is the opposition of all the persons whose interest it is to obtain cheaply the thing which they want to sell dear. Even Mr. Chamberlain would hardly risk the opposi-

tion of every newspaper proprietor and every printer in the kingdom in order to secure the support of an ex-pro-Boer paper-maker.

These men then may, for argumentative purposes, be left aside, though doubtless their votes will tell at a general election and their purses will tell still more in preparing for it. The only man to be reasoned with is the honest protectionist who really believes in protection, not as a gain to himself but as a benefit to his country. And the first question to put to such a man is this: "What will you protect?" Generally he replies that he wants protection all round. It has never occurred to him that there are many industries that no tariff can possibly protect. Boot-blacks, for example, and chimney-sweeps both perform useful functions, but no tax can be proposed which could possibly be of the slightest service to them. In the same category are railway porters and city clerks, governesses and typewriters, soldiers and policemen, and all the vast army of civil servants, municipal servants and domestic servants. Among others to be added to the list are all the professional classes, doctors, lawyers, parsons, stockbrokers, artists, actuaries, accountants, and journalists. In addition must be reckoned most of the men employed in the building trade, all the men employed in coal-mining, and the enormous number of men and women and boys employed as shop assistants.

Even these names do not complete the list, but they will suffice for the present. If the number of persons covered by these occupations be roughly reckoned up, it will be found that more than half the population is accounted for. Thus at the very outset we find that protection can only benefit a minority of the population. The men and women who make up the majority are to be deprived of the enormous advantage of buying the things they want at the lowest cost in order that some persons in the minority may be able to sell some things dearer.

That is a primary defect of protection that cannot be spirited away by vague talk of protecting home industries. Bricklaying is just as much a British industry as silk weaving, and gives employment to far more people. But the bricklayer can only be injured by any tax imposed to give protection to the silk weaver. For if silk is made dearer, the people who buy silk will have less money left to spend on building houses, and there will therefore be less employment for bricklayers. The same consideration applies far more strongly when it is proposed to protect not an article like silk, which comparatively few people use, but an article like wheat, which everybody uses. For if wheat is made dearer the bricklayer, and the railway porter, and the shop assistant, and all the other "unprotectable" classes are doubly injured. They are injured, first, because their own food is made dearer, and secondly, because everybody in the country, except the corn-growers, has been made poorer, and therefore less able to give employment to them.

This consideration ought by itself to be sufficient to convince any honest protectionist of the injustice of trying to protect any industry by means of a tax that must fall on other industries. But before again repeating the question, What will you protect? it is well to emphasise one of the most striking facts with regard to England's position in the world—the fact that England is a great creditor country. All the world owes us money, and is under contract to pay us interest upon it. What that interest annually amounts to nobody precisely knows, but, taking the income-tax returns as a basis, the total may be fairly calculated at nearly £100,000,000. That is the tribute that other nations have to pay to England, and it grows greater year by year, for we are always investing fresh capital abroad. This tribute is not paid to us in gold, for gold is useless except for certain very limited purposes. Our net imports of gold are about £5,000,000 a year, and this suffices to keep up our gold coinage and to provide stopping for all our teeth. The rest of the tribute has to be paid to us in goods, and it is paid, not in those goods that foreigners want to send to us, but in the goods that we want to have from them. We have the call, and we call for and obtain corn and wine and oil, cotton and wool and silk, butter and cheese and bacon, iron and copper and silver, sugar and tea and tobacco to the value of nearly £100,000,000 a year without having to give a penny in return. Only a madman would wish to refuse this gigantic tribute that other countries are legally compelled to pay us. It would be as reasonable to try to shut out the sunshine in order to make more work for the gas companies. Every one in this country is richer because of this foreign tribute than he would be if there were none. It is true that only a minority among us are actually receiving incomes drawn from abroad, but those who receive these incomes spend them here, and in so doing give employment to every class in the community. The whole nation benefits.

Our national gain would be even greater if we could thus gratuitously obtain all the good things that we want from foreign countries. But we cannot. As soon as the interest due to us has been paid, the rest of the world is for that year quit of its debt. Anything else we want we must pay for. And our only means of payment is to give our goods or services in exchange for the things we want. For convenience the exchange is expressed in terms of gold. But, as a rule, no gold passes. If by chance the people from whom we buy should want gold, of course we let them have it, but we instantly replenish our own stock by buying gold from some other country, giving our goods in exchange. In the ordinary course of trade we pay for foreign goods by means of bills, which represent an equivalent value in British goods. Thus the real exchange is foreign goods or services against British goods or services. The money, whether it be paper or whether it be gold, is merely a go-between. When once this is realised it will be seen that the more we buy abroad, the more must we sell abroad in order to pay for what we buy.

It is now possible to repeat the question, What will you protect? If you cease buying foreign silk in order to encourage the development of a British silk industry, you are simultaneously checking some other British industry that was previously engaged in producing goods with which to pay for the foreign silk. Why should the Government be permitted to elevate one industry and abase another? If the permission once be granted, political corruption is inevitable. The manufacturers who want protection will find it worth their while to pay hard cash to obtain it. Sometimes the money will be given to the war-chest of the party that is advocating protection; at other times shares in the protective industries will be given to members of Parliament whose votes are doubtful; in extreme cases banknotes will be discreetly exchanged for pledges of support. These are the things that are done in every country where protection has established itself, and they create no scandal because they are too common. They are not done in England, because here the Government is not yet permitted to interfere between one industry and another. Its sole duty, so far as taxation is concerned, is to raise the necessary revenue in the most equitable manner. If ever we depart from that principle, if once we permit the Government to use the taxation of the people as a means for conferring favours on particular interests, the corruption from which other parliaments suffer will invade our Parliament also. Votes will be bought and sold, and in reply to the fundamental question, "What will you protect?" the final answer will be, "Those industries that can afford to exercise the greatest pressure upon Cabinet Ministers and other Members of Parliament."

# WOULD RETALIATION WORK?

NOBODY CAN SAY IN ADVANCE THAT IT WOULD BE A FAILURE, BUT THE PROSPECT OF SUCCESS FOR THIS POLICY OF "FREE TRADE ALL ROUND" IS NOT HOPEFUL

THE object of retaliation is to secure Free Trade. That sounds paradoxical but it must be true, for every speaker or writer who asks for retaliation always prefaces his demand with the statement that he would be in favour of Free Trade, if only he could get Free Trade all round. It is impossible to assume that the advocates of retaliation are all untruthful, and consequently there is no escape from the conclusion that retaliation is only demanded in order to secure wider Free Trade. Clearly then it would be waste of time to argue the case for or against retaliation on protectionist lines. The only question to be considered is whether there is any reasonable hope that retaliation will secure what the retaliationists desire, namely Free Trade all round.

That is not a question to be answered offhand. On the surface there is much plausibility in the retaliationist position. Germany at present taxes our goods, although we do not tax hers. Suppose we were to say: Unless you cease taxing our goods we shall begin to tax yours! It is at least possible that this threat might be effective, and that the injustice of which we now complain might disappear. That is the retaliationist position and there is much to be said for it.

Let us, however, look a little deeper into the matter. Underlying the whole argument is the assumption that England has only one interest,

namely, to sell to Germany, and that Germany has only one interest, namely, to sell to England. But, as a matter of fact, each country has many interests. One of the most important of English interests is to buy from Germany, and this interest is not in the least affected by the question whether Germany buys from England. The people who buy German goods buy them because they want them, and for no other reason. They would be clearly injured by the shutting out of German goods, whatever the motive of that shutting out might be. Therefore we cannot place a retaliatory tariff on German goods without injuring a large number of our own people. So that instead of asking whether it would benefit England to retaliate on Germany, the real questions to ask are: What Englishmen would be benefited by such a tariff, and would their gain compensate the nation for the loss inflicted upon other Englishmen?

It is very difficult to answer these questions, because nobody knows what would be the practical effect on Germany of any system of retaliation adopted by us. Just as English interests are divided, so are German interests. It is not to the interest of the great mass of the German people to shut out British goods. On the contrary the mass of the people in Germany, as in all countries, have no greater economic interest than to buy what they want wherever they can obtain it of the best quality and at the lowest cost. The reason why Germany excludes British and other foreign goods is because certain German individuals want to make money for themselves by taxing their fellow citizens, and have succeeded in obtaining permission from their Government to do so. Some of these individuals are iron-masters, others are cotton or woollen manufacturers, others are landowners. These are the people who are the joint authors of the German tariff. By what means are they to be induced to abandon that tariff?

Take the iron-masters. It is solely in their interest that the German Government levies a heavy series of duties on British and other foreign imports of iron and steel. On the other hand German iron and steel goods are free to come into the United Kingdom without any duty at all. That may be unfair to our own iron-masters, but in spite of the unfairness we continue to sell to the Germans a much greater value of iron and steel goods than they sell to us. Consequently the German iron-masters have a greater interest in the further protection of their home market than in keeping our market open. If, then, we were to put a duty on their iron and steel, it would be to their interest not to lower their duties in order to buy off our tax, but further to protect themselves by raising their own tax. They would so advise the German Government, and it is reasonable to assume that in such a matter their advice would be taken by a Government which is avowedly protectionist. But if this were the effect of putting a tax on German iron and steel, clearly nobody in the United Kingdom would be benefited. All the people who for any reason wanted to buy German iron and steel—for example, ship-builders—would be obviously injured, and the very iron-masters in whose interest we had acted would also be injured, because their market in Germany would be even more restricted than before.

It may be replied that although in this case retaliation would almost certainly fail, there are other cases where it might succeed. Doubtless there are, but a little reflection will show that in order to find a case where retaliation would possibly be successful we must find some commodity in which the Germans possess such marked superiority that they can send to us very much more than we send to them. Almost the only article which falls into this category happens to be sugar. Whether the German superiority in the production of sugar is due to artificial or to natural causes does not matter for the purposes of the present argument. Indeed the whole distinction between artificial and natural is one that it is difficult to maintain in a world where men have for some thousands of years ceased to live in a state of nature. But the important point for the moment is that, whatever the cause may be, Germany sends us many million pounds worth of sugar every year and we send her none at all. Here is a glorious chance for retaliation. The mere threat of a British duty on German sugar would frighten the German sugar producers into the abandonment of their tariff on British sugar. But as we send no sugar to Germany, such a surrender on their part would be of little use to us.

The astute retaliationists will, however, reply by the suggestion that we should use our whip-hand over German sugar in order to force the Germans to abandon their tax on British iron. That is an ingenious suggestion, but will it work? In the first place, it is obviously unfair to the British people who buy German sugar. In addition to the great body of consumers who are only anxious to obtain a useful food as cheaply as possible, there are great industries in the United Kingdom which use German sugar as their raw material. They

would be grievously injured if this sugar were taxed. Why should they be made to suffer this injury on the chance that a benefit may be conferred upon another industry? For note well that there is only a chance of a benefit to the British iron industry whereas the injury to the British confectionery and allied industries is certain. It is clear that if we imposed a tax on German sugar, the Germans connected with that industry would be willing to make short work of the whole German tariff in order to meet our wishes. But they are not the sole authors of the German tariff. It exists also to benefit the German iron-masters, and the latter would be quite unaffected by the clamourings of the sugar people. Therefore our little plan could only succeed if the sugar people in Germany happened to be politically so powerful as to be able to bear down the opposition of the iron and steel people. Failing this chance, a retaliatory tax imposed on German sugar could only injure us, without effecting any reduction of the German tariff. It is not a hopeful prospect.

The above argument is of course based on abstract reasoning, but in the absence of precise facts that is the only guide we have. Nobody can say in advance that retaliation would or would not be a failure. Nobody can even say that it always has failed, for the causes which determine tariffs are so various that it is impossible to disengage one particular factor and say this has been the cause of such or such a change. Two things, however, can be said with certainty: first, that Sir Robert Peel abandoned the policy of retaliation, even before the repeal of the Corn Laws, because he was convinced by twenty years of practical experience that the policy was a failure; and second, that foreign nations which continue to indulge in the policy of retaliation do not draw any nearer to Free Trade, but draw further away from it.

# PROTECTION AND WAGES IN GERMANY

## GERMAN FACTORY INSPECTORS ON THE CONDITION OF WORKPEOPLE UNDER PROTECTION—A LOWER STANDARD OF LIVING THE INEVITABLE RESULT OF PROTECTIVE TARIFFS

BY

WILLIAM HARBUTT DAWSON

So long as political economy is regarded as an exact science the assumption is natural that in the treatment of economic questions the first business is to be sufficiently confident about your theories, after which facts may safely be left to take care of themselves. According to the latest exposition of Mr. Chamberlain's attitude towards the working classes on the question of Protection (I quote from the *Times*), "He does not ask them to submit to it unless he can convince them that they will gain far more than they will pay." It is, of course, conceivable that Mr. Chamberlain may so convince even the hardest-headed of working-men electors, but what then? Not one fact will be altered one way or the other. Protective tariffs will work towards their inevitable end however "convinced" Mr. Chamberlain and those whom he carries with him may be that dearer food and higher wages are convertible terms. And in Germany, where Protection has now been in operation for a quarter of a century, the plain and indisputable fact must be faced that wages are far lower, the hours of labour are far higher, and the general conditions of industrial life are far less humane than in the "classic country of Free Trade." Upon this subject some remarkable evidence is afforded by the reports of the German Factory Inspectors for 1902, which have just been published. There are lighter (or at least less dark) spots in the picture of industrial depression and decline which these reports present, but the conclusion to which an unbiased mind will be forced to come is that in Germany, at any rate, Protection has lamentably failed to secure for the working classes in general an even tolerable standard of life.

Taking Prussia first, we find that in the Berlin factory district there was during the year a decrease in the number of industrial workpeople employed of 10,150, equal to 4.3 per cent. of the whole, while the short time introduced in the previous year had not been discontinued. It is noticeable, also, that this decrease was chiefly of adult workpeople, viz.,

8744 or 5.7 per cent. of the whole, that of female employees being only 636 or 0.9 per cent. of the whole, proving that the dearer form of labour had to go. An enumeration of the unmarried female factory employees of Berlin and of their wages, made by the Factory Inspector, showed that 75.7 per cent. earned between 8*s*. and 15*s*. per week, while the average earnings were only 11*s*. 4*d*. The number of hours actually worked was found to be seven and a half to eight daily, for six days in the week, in 3.2 per cent. of the total enumeration, eight to nine in 37.2 per cent., nine to ten in 4.9 per cent., and ten to eleven in 11.9 per cent. In the Frankfort on the Oder district wage reductions to the extent of 15 per cent. have taken place in the machine and timber industries, and reductions of 10 per cent. in the building trades. According to the culculations of the North German Textile Association, there had been an increase in the yearly earnings in the woollen industry between 1898 and 1901 of just 10*s*., namely, from £34 11*s*. to £35 1*s*. per year (or 13*s*. 3*d*. and 13*s*. 6*d*. per week respectively), but it is stated that this small increase has "unfortunately been neutralised by the increase in the price of food, and here and there by a rise in house rents." From the Magdeburg district it is reported that want of work increased in the industrial towns during the winter of 1902, especially in the machine industry. Owing to a lack of commissions a number of machine works had to reduce the hours of work, in some cases very considerably, even to the extent of half a day, and even the most skilled workpeople in this industry had difficulty in finding employment. An enumeration of the "out-of-works" taken at the end of the year gave a total of 3352 for this town alone, 406 of these belonging to the machine and metal trades. In addition, 2480 workpeople were working short time, the average reduction of hours being three a day. At the Municipal Labour Bureau there were 17,310 applicants for 8673 offers of employment made during the year, while at the Labour Registry conducted by the Union of the Metal Trades there were 12,212 applicants for 2266 offers of employment. The report from Merseburg is to the same effect, and it is remarked in addition that the high cost of food has "fallen heavily upon working men's families." In the Düsseldorf district there was a slight increase in the number of workpeople, due chiefly to the holding of a large industrial exhibition, which created extra work, but the admission is made that both day wages and piece wages were throughout still lower than two years ago. The same tale is told by the Labour Bureaux of that district. At Essen, for example, there were 8250 male applicants and 4109 female applicants for 2364 and 1759 situations respectively; in other words, there was work for only one out of every three of the unemployed who applied for it. From the Arnsberg district of Westphalia it is reported: "The wages of the workers present no satisfactory picture, for though here and there small improvements have taken place these isolated cases have no effect upon the general condition of things." "Play shifts" have largely had to be introduced, and wages have been reduced in various branches of industry. At two large works, where there was a reduction in 1901 of 1.56 and 1.8 per cent. respectively, there was a further reduction in 1902 of 4.18 and 5.28 per cent. At one large iron foundry, employing between fourteen and fifteen hundred workpeople, the average wages fell during the year 6.5 per cent. (that is, 1*s*. 3*d*. in every pound); at twenty-eight smelting-works in the Hagen district the average wages decreased £1 2*s*. per head for the year; at eighteen smelting-works of the Bochum district they fell £2 6*s*.; at twenty-one smelting-works in the Dortmund district they fell £3 6*s*.; and at fifty-three smelting-works in the Siegen district they fell £3 15*s*. per head, or nearly 1*s*. 6*d*. per week. It is noticeable also, that hand in hand with the reduction of the wages of adult workpeople and the reduction of their hours of employment, there has been a greater employment of juvenile and child labour, often contrary to the law. A report from the Schleswig district states that on the whole the incomes of the working classes have decreased and "a further fall of wages in the near future is possible."

From the Eastern Provinces comes the same story. The large industrial works in Pomerania were compelled, owing to the unfavourable state of trade, to dismiss large numbers of workpeople, to discontinue night work altogether, and even to run short time by day. The shipyards reduced to nine hours a day with no night shifts. In the province of Posen the number of industrial workpeople decreased by 2019, and the Factory Inspector reports that "there has been no progress in the industrial development of the province."

Coming to the South of Prussia, it is reported from the Breslau district that "not only have there been no increases of wages, save in isolated, fortuitous and temporary cases, but,

on the contrary, in a number of works there have been direct reductions in money, or indirect reductions in the form of shorter hours of work." Again, in the Reichenbach district, though no falling off in wages is reported, "the standard of life of the working classes has been worsened owing to the increase in the prices of food." From the Liegnitz district, also in Silesia, it is reported that "numerous reductions of wages, reductions of hours, and discharges have unfortunately greatly depressed the economic condition of a multitude of workpeople." In the linen industry of Jauer, women could only earn from 6*s*. to 10*s*. per week, though they worked ten, thirteen, and even fifteen hours a day at home.

Taking Saxony next, the burden of the reports is fewer workpeople, reduced wages, and dearer food. The Factory Inspectors candidly admit that "the economic condition and the standard of life of the working classes have seriously suffered." Thus it is reported from Chemnitz that "many male workpeople have suffered a considerable decline of wages owing to reduced work. Furthermore, the increased prices of many articles of food have had an unfavourable influence upon their standard of life," and the same thing is reported in almost the same terms from the Annaberg district. The Leipzig Inspector writes: "The economic condition of the working classes has not improved during the year, for the income of many workers has been further decreased by direct reduction of wages or by a reduction of the hours of employment, while the prices of the most important articles of food have also increased. The endeavour to save shows itself in a decreased consumption of meat *and an increased demand for horseflesh.*" In the machine industry of the Chemnitz district the male workpeople decreased from 23,719 in 1900 to 20,799 in 1902, a decrease of 3620 or 15 per cent. In the same industry in the Leipzig district there was a decrease of 3943 adult workpeople, and there were similar large decreases in other industries, with an increase in but few. It is noted that while the number of adult male workpeople decreased, that of female workpeople increased, employers finding female labour cheaper. The significant remark appears in a report from the Lausitz district that the workpeople there have endeavoured to make up for the reduction of their incomes and the increase in the cost of food by buying their necessaries more than hitherto from the neighbouring Bohemian districts, where they are cheaper because the duties are less heavy.

It would not be fair to regard as typical of German industrial life the conditions prevalent in the house industries of the mountain districts of Saxony, where life is even at the best a hard struggle against adverse fate. Where a whole family, husband, wife, and children, working at home the week through, probably fourteen hours a day, can only earn a miserable pittance of 6*s*. a week, the proverbial pinch of poverty becomes the grip of the iron vice. There is food for reflection in the statement made in one report that in the making of a particular kind of toy the united exertions of a household can produce goods to the outside value of £1 2*s*. weekly, of which amount over two-thirds go in raw materials. Yet the duties upon these raw materials are to be increased under the new Tariff! One wonders if one *should* wonder that Saxony has voted almost solidly Social-Democratic in the late election.

In the Grand Duchy of Baden, likewise, further reductions of wages are reported in the metal, machine, watch and clock, and other industries, while a reduction of output has also taken place. The Inspectors report that infractions of the Factory Act were repeatedly attributable to the fact that workpeople took with them to their work, without the express consent of the employer, children whom the law either did not allow to work at all, or only allowed to work for a limited time, in order that they might supplement their own earnings, diminished as these were by the reduction of wages or of hours, or both. Here, too, the observation was made by these officials that the depression of trade had led to the substitution of women's for men's labour. From some towns there had been quite a migration of population owing to the number of workpeople who had to seek occupation elsewhere. The number of applicants for employment who reported themselves at the various Labour Bureaux in the Grand Duchy increased from 143,268 in 1901 to 188,553 in 1902, seven-eighths being men, while the offers of employment decreased from 79,397 in 1901 to 72,582. In other words for every 100 positions offered, there were 260 applicants last year against 186 the previous year.

Such is the present condition of German industry under Protection. And the moral is to be found in that axiom of Bishop Butler's, which Matthew Arnold was never weary of quoting as a gem of superlative common sense: "Things are what they are, and the consequences of them will be what they will; why, then, should we desire to be deceived?"

# WHAT IS RAW MATERIAL?

BY

JOHN W. SANKEY

(*Joseph Sankey and Sons, Albert Street Works, Bilston*)

AS a manufacturer of sheet metal stamped goods in iron, steel, brass, and copper, I regard the proposals for the protection of British industries with the greatest dismay, and mainly for two reasons.

First, because the chief industry to be protected is that of agriculture, and the consequence of that protection will at once be to put a heavy burden on all other industries by raising the price of food; and second, because the idea of recovering our industrial supremacy by protective duties, takes us right away from what is after all the main cause of our recent failure to hold our own in the world's competition.

Every expert inquiry as to our industrial position has resulted in the conclusion that the primary cause of our losing ground is the lamentable backwardness of our people in technical and scientific education, and in some industries a deplorable lack of enterprise on the part of our manufacturers.

If instead of facing the facts, and turning our attention to equipping our people to meet them fairly and squarely, we are deluded by the hope that we can shut out of this country the better and cheaper goods other nations have learned to produce, and compel our people to buy the worse and dearer articles of our own manufacture, the latter state of our trade will be worse than the present. I have made it a point for some years, not to copy, but to match any special line of goods of German manufacture that threatened to compete with our own productions, and so far with some success. If, however, the Iron and Steel trade is to be protected at any point short of my manufactured goods, I shall be handicapped by having to pay more money for my material. I use sheet iron or steel as my raw material, but sheet iron is the finished article of a large industry for which bar iron is the raw material, and the manufacture of bar iron again is a large industry for which pig-iron is the raw material.

It matters not, therefore, whether you protect pig-iron or bar iron or sheet iron; you handicap the manufacturer of sheet-iron goods in every market of the world. There is another point, namely, that freedom to purchase foreign goods sometimes enables us to establish an industry in this country which would not be possible if we taxed these imports. I know this from actual experience in a department where such a possibility would be little suspected.

I much prefer freedom to protection. To hark back to protection is to my mind to "throw up the sponge," and to acknowledge defeat. There is nothing to justify this. There is every reason for us to "wake up." Protection would, I fear, act as a sleeping-draught on our manufacturers, and indefinitely postpone the great educational advance by which alone we can either hope or deserve to maintain and improve our industrial position.

# AN OVERLOOKED POINT IN THE CONTROVERSY

BY

FRANK LLOYD

(*Edward Lloyd Ltd., "Daily Chronicle" Paper Mills, Sittingbourne*)

I REGARD Mr. Chamberlain's proposals as utterly impracticable, dangerous to this country, and a sure source of future discontent in our colonies. In plain English, the scheme resolves itself into the payment by this country of a bonus, comparatively small at first but growing annually, to be divided, very unequally, between our colonies, inevitably leading to a demand by each for a fair share of the benefits conferred by the

Mother Country, a result impossible of attainment considering the divergent interests of the various colonies. The danger to this country lies in the dislocation of our trade with foreign countries, who would most certainly withdraw from us the benefits of the "most-favoured-nation clause," and in increased competition by them in all the neutral markets of the world.

I think it will be generally admitted that a tax on food, falling on those least able to bear it, cannot, by any stretch of imagination, lead to an increase in our consumption of food-stuffs but will rather tend to diminish it. A preferential tariff cannot therefore increase our imports, so how can we expect to increase our exports? It can only result in a change in the *direction* of our exports and not an increase in their volume. Manufactured goods now going to foreign countries in exchange for their food-stuffs would simply be diverted to the Colonies (either directly or indirectly) in payment of their wheat and meat. How then can we expect the promised development in our manufacturing industries, and how can a mere change in the direction of our exports possibly bring about a rise in wages?* Mr. Chamberlain and others have assumed that we should produce more manufactured goods to send to the Colonies in exchange for their food-stuffs. What evidence have we that this would be the case? It is highly probable that we should pay them in great part indirectly, as we now pay the United States and other protectionist countries, in articles which we do not produce ourselves but which would be sent to them, on our account, by India, China, Japan, South America, &c., in exchange for the manufactures we now send to those countries.

So far there has been no definite proposal to impose import duties on foreign manufactures, but should this be added to Mr. Chamberlain's plan, as seems likely, we should have a still greater danger to face. A return to protectionist principles would strike a blow at the vitality of this country from which we should never be likely to recover. In a word, we should be bolstering up sickly industries at the expense of vigorous ones; we should be facilitating the formation of trusts and combinations, now largely held in check by our policy of free imports; we should be paving the way to a decline in our shipbuilding industry, the loss of our maritime supremacy and a serious diminution of our entrepot trade —a very profitable business to this country directly resulting from our Free Trade policy— and we should be doing serious injury to many healthy industries whose success in the home and foreign markets is largely due to the use of manufactured articles now received from countries with natural advantages unknown to us. We should be increasing the cost of living to everybody not directly or indirectly engaged in the protected industries, whose spending powers would be correspondingly curtailed, and we should be inflicting a direct loss on the more enterprising British manufacturers who have invested capital in foreign countries on account of the natural advantages they possess for the production of articles which cannot be produced here under economical conditions. Finally, by increasing the cost of everything we manufacture, we should be seriously handicapping ourselves in every branch of our export business, in the vain hope of stimulating certain home industries which are now unable to hold their own against their foreign rivals, in spite of their advantages of being on the spot and the protection afforded them by the cost of delivery from abroad.

* Mr. Chamberlain and his fellow Protectionists are assuring the country that a higher rate of wages would be possible under a system of Preference or Protection than under the present Free Trade system. A decisive answer to this plea has just been made by Sir John Brunner, Bart., M.P., head of the great manufacturing firm of Brunner, Mond and Co., in a letter to the *Times*. He writes: "Will import duties on food raise wages? Such import duties obtain over nearly all Europe. Are wages higher there than with us in consequence? I am able to give, and hope you will permit me to give, the facts as to the wages paid in my own trade, as a contribution to the materials for our study. I am a manufacturer of alkali, by what is called the ammonia process, a raw material in the manufacture of soap, of glass, and of paper, and the total make of alkali by this process in the world is over a million tons a year. The average daily wage paid to the workmen employed in this trade is in Germany 78 per cent. of the English rate, in France 77 per cent., in Austria 56 per cent., and in Hungary 43 per cent. To earn these wages in Germany, in France, in Austria, and in Hungary the men have to work twelve hours a day, whilst in England the men work only eight hours a day. We give our men a week's holiday annually without stoppage of pay. The German, therefore, has to work fifty-two weeks twelve hours a day to get 78 per cent. of the wage of the Englishman working fifty-one weeks eight hours a day; and the others get less in the proportion shown. No; the taxation of food does not produce high wages."—ED.

# MR. CHAMBERLAIN'S RECORD

## A COMPARISON OF PROMISE AND PERFORMANCE

THE LEGEND AND THE FACTS—MR. CHAMBERLAIN SAYS HIS PROGRAMMES HAVE BEEN CARRIED OUT—THE TRUTH IS THAT HIS RECORD AS A CONSTRUCTIVE STATESMAN IS ALMOST BLANK

MR. CHAMBERLAIN is fortunate in being the possessor of a "legend." The Swazis, by way of expressing their admiration for his businesslike qualities, called him Moatlhodi, the "man who puts things through," and though this particular title is not exactly a household word, the idea it connotes is widespread enough. Mr. Chamberlain is looked up to as a Statesman who gets his own way. It is no exaggeration to say that thousands of Unionists are to-day in favour of Protection, because they think that with Mr. Chamberlain "up" the old horse is likely this time to prove a winner. These are days of "inquiry" however, and it may be well to investigate Mr. Chamberlain's career to see what his record is. The object of the inquiry is not, let it be said at once, to discover whether Mr. Chamberlain is a good electioneerer. That may be at once conceded. But that is a small point relatively compared to the question whether he is as good at carrying out programmes as by common consent he is at inventing them. "I observe," he said in an election speech in 1895, "that Lord Rosebery is always sneering at me as an inventor of programmes. There is only one thing I will say, and that is, that my programmes have *a happy knack of being carried out.*" Apart altogether from the intrinsic merits of the programmes, let us see how the facts correspond to this appreciative view of his own record.

Mr. Chamberlain's career up to 1880 may be passed over lightly since until that year he had not held office. He took a leading part in the Education struggle in 1870, at that time a strong advocate of a complete system of popular education on secular lines. He is to-day a member of a ministry which has actually given rate-aid to denominational schools. It may be parochial to get "excited" over this, but it is at all events clear that Mr. Chamberlain has abandoned the educational ideal with which he started out. For the rest, up to 1880 he took a leading part in democratising the organisation of the Liberal party (to his energy we largely owe the "Caucus"), whilst he urged the adoption in this country of some such licensing system as that associated with the name of Gothenberg. He can point to nothing actually achieved in that direction.

In 1880 he became a member of Mr. Gladstone's Cabinet, going to the Board of Trade. His departmental record from 1880 to 1885 contributes nothing to the "legend" which in 1903 depicts him as a great constructive statesman. Who thinks the better of him for the Bankruptcy Act which is on the Statute Book, or the worse of him for the Shipping Bill which is not there? As a member of the Government he was their spokesman on at least two notable occasions—the first when, with great skill and fervour, he defended the peace made with the Boers after Majuba, and the second when, in resisting a Free Trade motion, he scouted the idea of a tax on the people's food. It is unnecessary to point out that these are cases to which the doctrine of "what I have said I have said," does not apply.

When the Liberal Government was defeated in 1885, Mr. Chamberlain used the opportunity which freedom from office gave him by preaching what was known as the Unauthorised Programme. This was his second considerable effort in Programme making, his first having been made as far back as 1872. This earlier effort was summarised into "Free Church, Free Schools, Free Land," to which was added adult suffrage and equal electoral districts. Free School is the only item that has been carried out, and it appeared again in the Unauthorised Programme of 1885 which (as set out in the book the *Radical Programme*, published in that year with a preface by Mr. Chamberlain), bears a strong family likeness to the Newcastle Programme, of which Mr. Chamberlain can find no word strong enough in condemnation. It is true that the

Histed

THE RIGHT HON. JOSEPH CHAMBERLAIN, M.P.

SECRETARY OF STATE FOR THE COLONIES, WHOSE PROTECTIONIST PROPOSALS HAVE DIVIDED THE

1885 programme does not include Home Rule, and that in resisting Home Rule Mr. Chamberlain has played a very considerable part. But as he has boasted that he was " a Home-Ruler before Mr. Gladstone," his Irish record can contribute nothing to his claim to constructive statesmanship.

The Tory Party from 1886 to 1892 passed a good many small measures dealing with social Reform, but Mr. Chamberlain constantly assures us that historically the Tories are the Party of Social Reform, and the only Act, the credit for which can definitely be accorded to Mr. Chamberlain, is that which gave Free Education in 1891. Although he was not a member of the Government he may fairly be credited with this measure—it is the solitary dividend out of the two programmes of 1872 and 1885, since what was accomplished in the direction of Small Holdings and Allotments bears so little relation to " Free " Land that it can hardly be reckoned in any serious calculation.

From 1892 to 1895 Mr. Chamberlain was a leading opponent of the Liberal Government, and in October 1894 he launched at Birmingham the famous Social Programme. His main thesis was that Home Rule could not be averted unless the working classes were offered an "alternative policy of social reform." That he proceeded to do. Here it is as summarised in an official Liberal Unionist publication:

(1) Improvement of the houses of the working classes. Purchase of their houses by artisans on favourable terms, giving them the same advantages as Irish tenants enjoy.

(2) Power given to the Government to deal with alien immigration.

(3) Old-age Pensions.

(4) Shorter hours in shops.

(5) Compensation to workers for every injury they suffer, whether caused by negligence or not.

(6) An experimental eight hours' day, in the mining industry.

(7) Temperance reform.

(8) Creation of a judicial tribunal in all industrial centres for the settlement of disputes.

THE DIVIDED UNIONIST PARTY—TWO PEERS

Russell

VISCOUNT GOSCHEN
*Formerly Chancellor of the Exchequer*
FREE TRADER

Mills

THE MARQUIS OF LANSDOWNE
*Secretary of State for Foreign Affairs*
PROTECTIONIST

In the eight years in which Mr. Chamberlain has held office since in 1895 he won on this programme, nothing at all has been done towards carrying out four of the eight items—(2) Alien Immigration; (3) Old-age Pensions; (4) Shorter hours in shops; (6) Miners' eight hours. As to three next to nothing has been done—(1) Little progress has been made as to housing; (7) The only contribution towards Temperance reform (in 1894 the "most urgent" of all social reforms), is last year's Licensing Act; (8) The Conciliation Act of 1896 is a purely permissive measure which the Government do not even use (*e.g.*, in the Penrhyn dispute). The Workmen's Compensation Act of 1897 is really the only part of the 1894 programme carried out. And even here the programme is very far short of the promise. The Act of 1897 gave compensation for *some* accidents to *some* workers. Yet Mr. Chamberlain, in opposing Mr. Asquith's Bill in February 1893, said:

"I beg the House to consider whether it is worth while to deal with this subject in a partial way, and whether it would not be possible once and for all to settle the right of *every* workman to compensation."

A year later he said:

"We believe that every man who in the course of his employment meets with an accident is unfortunate, is deserving of consideration, and ought to be compensated, and we want to secure that—FOR EVERY MAN FOR EVERY ACCIDENT."

THE DIVIDED UNIONIST PARTY—TWO EX-CABINET MINISTERS

Russell

THE RT. HON. SIR MICHAEL HICKS-BEACH, M.P.
*Ex-Chancellor of the Exchequer*
FREE TRADER

Russell

THE RIGHT HON. HENRY CHAPLIN, M.P.
PROTECTIONIST

The Compensation Act, weighed in the scales Mr. Chamberlain used for Mr. Asquith's Bill, is only a very partial measure, whilst as to Mr. Chamberlain's further promise of compensation "without the risk of litigation," a study of the law reports show that it has been the most litigated measure of modern times.

Mr. Chamberlain in his later manner is apt to dismiss all these considerations as "parochial," but his Imperial record is hardly more calculated to recommend him as a man who always succeeds in getting done what he wants. No one disputes that he has brought to the administration of the Colonial office a businesslike energy

that has been popular both in the Colonies and at home. He has undoubtedly given the Colonies a good show. But he will stand or fall by his success or failure on the larger questions of policy. Whether the war with the Boers was just or unjust, its very occurrence prevents Mr. Chamberlain's South African Policy being a success. For in the year 1896 Mr. Chamberlain said:

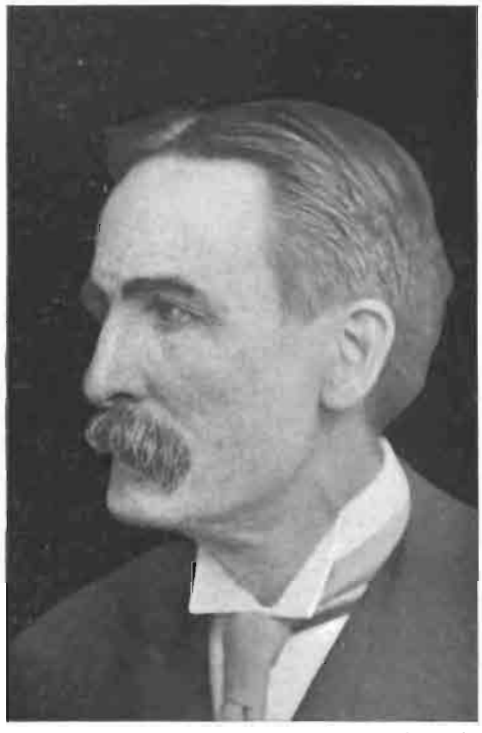
"A war in South Africa would be one of the most serious wars that could possibly be waged. It would be a long war, a bitter war, and a costly war, and, as I have pointed out already, it would leave behind it impressions of strife which, I believe, generations would hardly be able to blot out; and to go to war with President Kruger to enforce upon him reforms in the internal affairs of his State, in which Secretaries of State, standing in their place, have repudiated all right of interference, that would be a course of action which would be immoral."

That was a very clear-sighted estimate of the situation. Even those who absolutely acquit Mr. Chamberlain of responsibility for the war can hardly plead it as a positive fact to be placed to Mr. Chamberlain's credit in estimating his record.

Now we have yet another programme. After he has been Colonial Secretary for eight years Mr. Chamberlain comes forward to say that the continuance of the Empire depends upon our taxing the food of the forty millions in the Mother Country. If this be so, could more damning proof of Mr. Chamberlain's failure be imagined? At home, as we have seen, of all the causes he has espoused the only things he can show on the Statute Book are the Free Education Act, and the half-and-half Compensation Act. And now, on his own showing, our Imperial position is so insecure that the Empire can only be saved by what Lord Goschen calls "a gamble with the people's food."

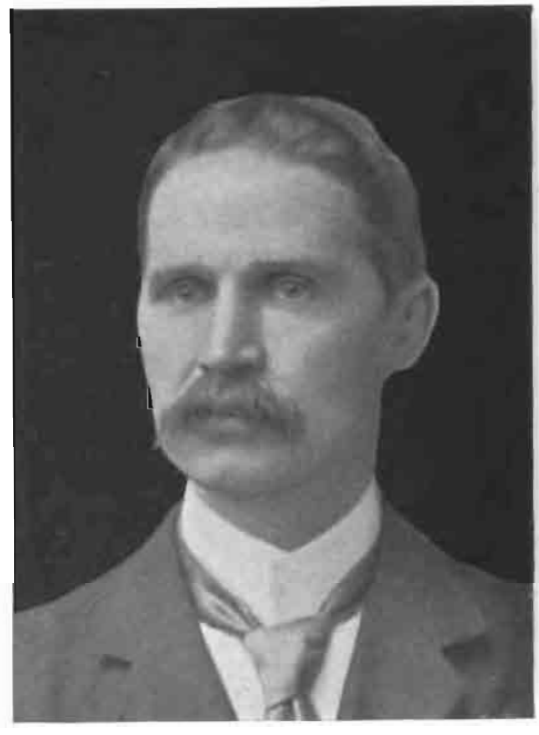
It is admittedly difficult to dissipate a legend, but this summary—necessarily brief as it is, though it would be easy to illustrate and illuminate it by Mr. Chamberlain's "previous con-

THE DIVIDED UNIONIST PARTY—TWO UNDER-SECRETARIES



Beresford

THE HON. ARTHUR ELLIOT, M.P.
*Financial Secretary to the Treasury*
FREE TRADER



MR. A. BONAR LAW, M.P.
*Under-Secretary to the Board of Trade*
PROTECTIONIST

victions," as his old and discarded opinions have aptly been called—ought easily to dispel once and for all the notion that Mr. Chamberlain is a constructive statesman. A good fighter, an expert electioneerer, a good judge of his fellow countrymen—all this he is beyond a doubt, but a statesman whose programmes have the "happy knack of being carried out," that he is not. For if his record were to be taken as a " successful " system of education would be in the fullest sense popular and undenominational as well as free ; the House of Lords would have been deprived of its present power of veto ; old men or women over sixty-five would enjoy an old-age pension ; the miner and the shop assistant would have a shorter working day ; our differences with the Boers would have been settled without a war, which instead of lasting a few weeks and costing

THE DIVIDED UNIONIST PARTY—TWO PRIVATE MEMBERS

MR. WINSTON CHURCHILL, M.P.
FREE TRADER

MR. ARTHUR H. LEE, M.P.
PROTECTIONIST

carrying out of his ideas and ideals, we should be forced to the belief that he promulgated programmes with no intention save that of securing votes. We are not, be it remembered, concerned with the question whether it is a good or a bad thing that Mr. Chamberlain has promised so many things that he has failed to perform. No one denies that to have fulfilled all he has promised or " proposed " (since promise is a word he does not like) would have been an arduous undertaking. Had he in fact always succeeded in living up to the Moatlhodi level Land would be free, and the Church disestablished ; Capital would be paying its " ransom " to Labour ; our ten millions went on for $2\frac{2}{3}$ years and cost two hundred and fifty millions.

Whatever reason there may or may not be for backing Mr. Chamberlain in his new Protectionist departure, let no one imagine that they are following a statesman whose programmes have a " happy knack " of being carried out. All the evidence is absolutely in the other direction, and if we only knew the Swazi word for " the man who, judged by his own proposals, fails to put them through," that would be the title which would have to be applied to Mr. Chamberlain in once and for all pricking this " happy-knack " bubble-legend.

THE HOPE OF ENGLAND: MR. EDGE'S START

Biograph Studio

# THE GREAT MOTOR RACE AND ITS LESSONS

A GREAT SUCCESS, DUE TO PERFECT ORGANISATION—MARVELLOUS FEATS OF SKILL AND ENDURANCE—THE STORY OF THE RACE—CARS AND THEIR QUALITIES—THE LIMIT OF SAFETY IN ROAD-RACING

BY

HENRY NORMAN, M.P.

THE Gordon Bennett race on British soil has been run—and lost. Our disappointment is perhaps greater than our surprise. But we should be better satisfied if the British cars had been beaten in a straightforward contest of speed, rather than left out of the race because of two break-downs and one blunder. That Mr. Stocks, who had been rehearsing on the course for many weeks, should have taken a wrong turn, is hardly sufficiently explained by the excitement of the contest, as the foreign competitors had only seen it for a few days. The failure of Mr. Jarrott's steering-gear was an unhappy repetition of the accident which happened on the same make of car to Mr. Mark Mayhew in the Paris-Madrid race. Finally, it seems clear that Mr. Edge's hundred-and-ten horse-power car, the most powerful motor in the race, was not ready for the struggle, while, to add to his discomfiture, his tyres stopped him no fewer than eight times.

It need not be said that Dublin was seething with motorists and cars, that there was no other subject of conversation than the coming race, and that the Irish people displayed all their usual geniality and charm. Over two hundred cars alone, with motor bicycles far beyond counting, left Dublin soon after midnight on July 1 for the course, to say nothing of all the cars that arrived from other directions. At the little station of Kildare, three thousand constables arrived on the day preceding the race, and some thirty-six special trains ran from Dublin on the Thursday morning, all crowded with people.

I had the pleasure of spending the previous night in a delightful camp on a little hill-top, a quarter of a mile from the Grand Stand, in such quietude as to recall many nights in camp far away from motors and cities and police and even white men. The eventful day broke bright and cool, and by five o'clock a host of spectators had arrived on the Ballyshannon cross-roads, where the Automobile Club enclosure was situated, and where the great gaunt Grand Stand of bare boards straddled the course. For upwards of a mile the road was visible from the Stand, and had been oiled to prevent the view of the cars being obscured by dust. The two pilot cars were duly despatched and warned the spectators round the hundred miles that the race was about to begin. With deafening roars of their exhaust pipes the great racers drew into line down the road, one behind the other; the time-keepers finally compared their watches; the crowd focused itself on both sides of the starting-line; and at five minutes to seven, Mr. Edge, on his big Napier, came up to the post. When Major Lloyd, R.E., the starter, announced "three minutes," the great engine was started, the Cup-holder and his mechanician, who was also his cousin, settled themselves into their seats, a score of hands were thrust forward in cordial farewell, at the words "thirty seconds" the two men—who by the way presented a picturesque appearance in their green caps and white coats—pulled down their masks, Edge touched the accelerator pedal, the engine responded with a deep roar, the starter leant forward to shout into the driver's ear the warning words, "ten seconds, five, four, three, two, one, go!" and with unsensational steadiness the big car moved off amid a little hurricane of cheers. In a few yards Edge was on his second speed, and by the time he passed the Grand Stand, a hundred yards away, he was going at racing pace.

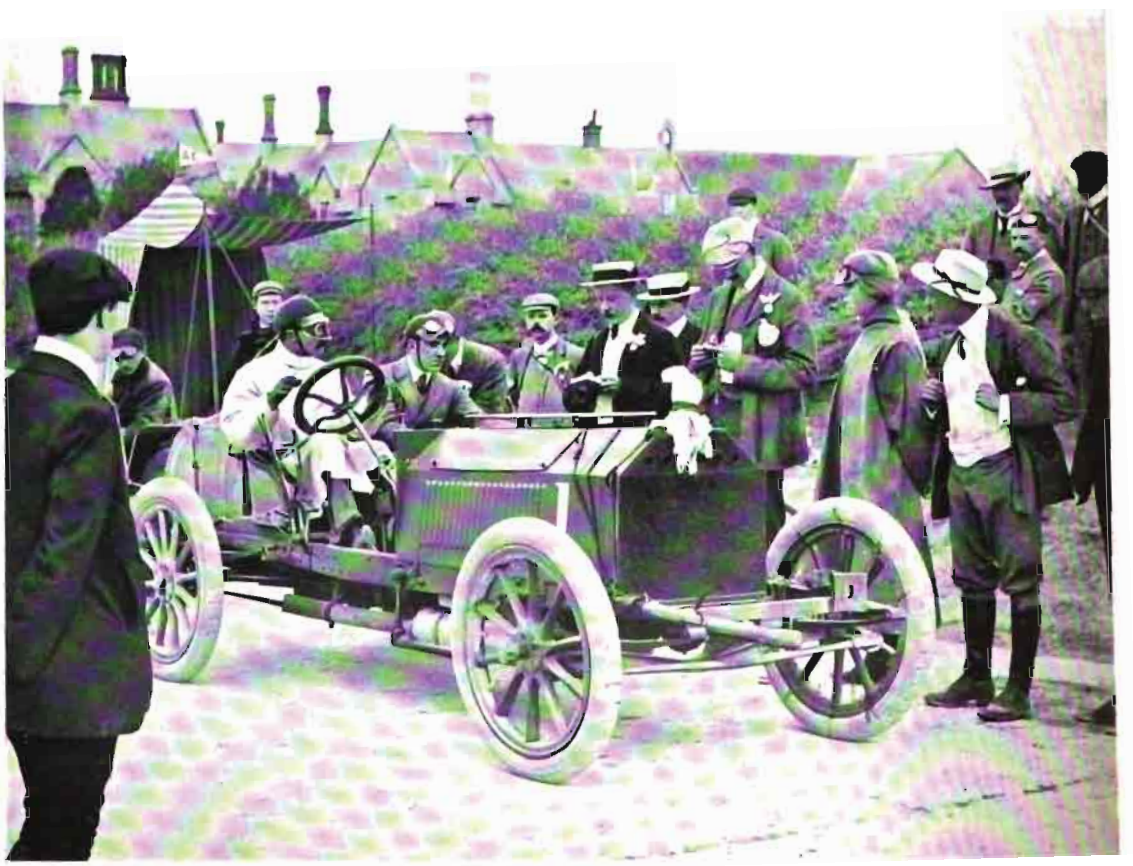
Seven minutes later, the veteran driver, the Chevalier Réné de Knyff, bearded and burly, genial and impassive, the hero of motor races without number, embarking on what is said to be his last contest, was despatched amid the cordial cheers of British and foreigners alike. The smaller of the two red American Winton cars next drew up, the car itself looking almost alarmingly flimsy, and its driver young and frail for such a task. Jenatzy, the famous Belgian, next appeared on the first of the white Mercédes German cars. Sallow of face, yellow of straggling beard, with a thin, aquiline, Eastern countenance, enveloped from head to foot

Lafayette

BARON DE CATERS WISHING M. JENATZY GOOD LUCK

Campbell & Gray

THE CHEVALIER DE KNYFF ABOUT TO START



in a black india-rubber smock strapped at the waist, with a sailor's sou'wester hat of the same material on the back of his head—the whole, backed by his reputation as the most dare-devil driver in Europe, making him an extraordinary figure. I cannot refrain from translating the word-picture of him by the correspondent of the leading French automobile newspaper, *L'Auto* :

"When with a start of vertiginous rapidity, which rooted us all to the spot in amazement, he disappeared like a bird taking flight, one had the vision of some fantastic Satan, some Mephistopheles escaped from the imagination of Goethe, some child of German legend astride a mysterious hippogriff on the slopes of the Brocken."

Jarrott, with his usual coolness, made an excellent start. Gabriel, in the torpedo-shaped blue Mors car in which he made the marvellous record from Paris to Bordeaux I described last month, next flew up the hill. Gabriel, by the way, and Jenatzy, were the only two of the foreign competitors who did not speak English, and for them therefore the services of the official interpreter to the Club—a post I had the pleasure to fill—were requisitioned. When the first of the American competitors presented himself, some wag in the crowd produced a general laugh by calling out, " Send for the interpreter ! "

Mooers, driving the American Peerless car, unintentionally introduced a comic passage into what was becoming an almost painfully tense experience. At the word " Go ! " he let in his clutch, but his car—especially noticeable for his ingenuity for reducing weight and increasing coolness by substituting wire gauze for the ordinary metal bonnet over the engine—merely heaved and did not start. The little circle of experts round the starter, appreciating instantly what was the matter, shouted with one voice, " Take your brake off ! " Needless to say the advice was instantly followed, and Mooers started, having, however, lost eight seconds by his momentary forgetfulness. Baron de Caters caused his Mercédes literally to jump from the starting-line, and before he reached the Grand Stand there had occurred one of the two little incidents which ultimately made him the popular hero of the day. Just as he passed the Stand he waved his hand twice in salute to somebody in the middle of the front row. It was his wife, and all day long the Baroness remained fixed to that spot, waiting in the deepest and most obvious anxiety the periodical appearances of her husband as he flew round the course at full speed, and not once did he fail to salute her as he passed.

Next came the last British competitor, Stocks, on his green Napier, dressed like his colleagues in green and white. He made a bad start, losing several seconds, as did Henry Farman, who actually stopped his engine. Twenty yards back, by the side of the road, Alexander Winton was standing with his carburator in his hand, while his mechanician lay flat on his back under the bigger Winton car. Something had checked his petrol supply, and some time before he had anxiously inquired how much more time he had. His car was pushed to the starting-line, but it was impossible for him to overcome his difficulty, and as, of course, he had to be formally started at the precise moment whether ready or not, it was pathetic to hear Major Lloyd saying softly into his ear, as he leant over his partly dismantled engine, " Five, four, three, two, one, go ! " As a matter of fact he did not leave for forty minutes later. Finally, Foxhall Keene, the dashing American sportsman, came to the mark on the last Mercédes, but he, too, was nervous, and stopped the engine, and it was eighteen seconds before it sprang away as only the Mercédes cars do.

Thus all the competitors had started, and a long pause ensued while they travelled the forty-five miles of the smaller circuit. When an hour and a quarter had passed, we all gathered anxiously on the Stand or along the fences at each side of the road, for of course the race-track itself was now absolutely clear. In a field by the side of the road, half a mile away, was a traction-engine, and suddenly a shriek of its whistle thrilled us with the signal that a car was in sight. Would it be Edge ? Had he kept his position ? A speck appeared upon the hill-top and flashed down the oiled road. The white coat of the driver showed who it was. It was Edge, going at a truly appalling speed. Without exaggeration, one may say that most of the spectators had the most thrilling moment of their lives as his car flew between the posts, roared under the Grand Stand, and was out of sight up the opposite slope in a few seconds. So enormous had the speed seemed, and such a terrific spectacle was the car as it bounded along in a whirlwind of dust, tearing up the surface of the road, and flinging stones behind it like a discharge of grape shot, with the one figure clinging as it were for life to the steering-wheel and the other crouching behind the engine, that for a moment the spectators looked at each other in silence. The French experts were the first to speak, and their words were of astonishment and alarm at a British performance wholly unexpected.

As Edge passed, stop-watches were started, and the question of questions became, would De Knyff be here before seven minutes had elapsed—would he have gained on Edge, or lost? It seemed an age as the hand recorded the minutes. At last it touched seven, and the Frenchman was not in sight, eight minutes, nine, ten, and then a blast from the whistle announced another car in sight. It was the blue Panhard, and the big bearded man was at the wheel. His speed also seemed appalling, but he had done forty-five miles with its stoppages in four controls in 3 minutes 24 seconds more than Edge, whose time was 1 hour 23 minutes 23 seconds. Our joy was great at this time, for if Edge could gain 3½ minutes in a fraction of the race upon his great competitor, it was evident that he was possessed of a car of tremendous speed, and that, barring accidents, he might hope to win.

After De Knyff had disappeared, instead of seven minutes, fourteen passed. That is, Owen on the first American car had lost at least the seven minutes he had in hand over Jenatzy, who followed him. The whistle blew, then to the astonishment of all, and perhaps a little to the alarm of the knowing ones, it blew again immediately, and a few seconds afterwards two cars came flying down the hill only about a hundred yards separating them. Opposite the starting-post, Winton's car, at which he was still working, had been pushed to the side of the narrow road, and it looked for a moment as though Jenatzy would overhaul Owen just where Winton's car made passing absolutely impossible. Every spectator held his breath, especially those who realised both the inexperience of Owen and the reckless daring of Jenatzy. The latter, however, when within thirty yards of the American slowed down and the two passed under the Grand Stand with this distance separating them. A few hundred yards up the opposite slope, Owen drew on to the grass on one side, and Jenatzy pushed by him on the grass on the other, both cars wavering alarmingly as they left the smooth road. Jenatzy told us afterwards that this was his only moment of anxiety in the whole race. Jarrott next passed, going well, and Gabriel, who followed, was electrically timed over the mile before the Stand as travelling at the rate of sixty-nine miles an hour. De Caters and Farman passed, but Mooers and the Peerless car were out of it. The final surprise of the first circuit was the appearance of Foxhall Keene, who passed like lightning and had done the fastest time, beating Edge by twenty seconds.

Then for the whole long day—which seemed short enough—the racers appeared and disappeared and re-appeared. We strolled about, chatted, looked up old acquaintances, sent telegrams, had lunch, had tea, grilled in the sun and sheltered from the rain, till twilight came. And all this time these men drove their cars at headlong speed round and round the hundred-mile course. Their brief passage through the controls just enabled them to eat a biscuit or get a cup of tea and a cigarette, while a gang of mechanics replenished their cars with petrol and water, and emptied buckets over their tyres to cool them. Virtually for eleven hours they were at the intensest strain, and one need not be an alarmist to say that all day a moment's forgetfulness or want of skill would have plunged them headlong into catastrophe, and possibly to death. I cannot think that the history of the world shows a more superb feat of physical endurance, or one calling in equal measure for the union of vigour, courage, and skill. It was stupendous—a feeling renewed each time one stood by the road and saw one of the great cars tear by at considerably more than a mile a minute, its wheels leaping into the air as they struck the least inequality of the surface.

Incident after incident diversified the day—each thrilling us with mingled interest and fear. The first result to be clear was that the American cars were out of the running. The Peerless broke down, the big Winton would not start, the little Winton was not nearly fast enough, though Owen pluckily finished the course, and was visibly touched by all the marks of goodwill shown him when he reached the weighing enclosure. But the Americans have learned a great deal, and I fully expect they will profit by the lesson, and give us a very different exhibition in some future European race. Then Stocks failed to appear, and we learned that his car was disabled by running into the wire fence which blocked a cross-road. De Knyff had previously run through the same fence, but without injury. Next, Jarrott, who had passed at the end of his first circuit, going very well indeed, failed to re-appear, and our anxiety grew deeper and deeper as the minutes passed. At last a telegram arrived from Police-Sergeant Brady, at Stradbally, saying, "Jarrott knocked out—send surgeon at once," apparently confirming our worst fears. The race had not more than begun—and already one bad accident! The President of the Royal College of Surgeons of Ireland was despatched in the official car. It was an hour before we learned that Jarrott had

had a marvellous escape, having only broken his collar-bone, and his mechanician having escaped with severe contusions. The good news came in a thrilling manner. A car was signalled and, as it came rushing down the hill, it was identified as the Mercédes of Baron de Caters. To our amazement he was slackening speed, and at the time-keepers' tent he stopped, shouted, "Jarrott's car smashed—Jarrott not hurt," and speeded on his way, followed by the enthusiastic cheers of all who understood what a truly chivalrous and sportsmanlike way he had risked his own chance of victory to relieve our feelings. Later we learned that he had stopped by Jarrott on the roadside and proffered help, till the latter, gathering his shaken wits together and grasping the situation, had with equal sportsmanship peremptorily ordered him on. An interesting reflection: a professional driver had passed Jarrott's smashed car and merely reported the fact at the next control; a gentleman driver stopped twice, once to offer help, once to relieve the anxiety of others. *Noblesse oblige.* The name of De Caters will long be remembered by all motorists as that of a very gallant gentleman.

The next to fall out was Mr. Foxhall Keene. By pure accident, while examining a back tyre for a moment in one of the controls, he discovered that his axle was cracked. With characteristic recklessness, he ran on to the next control, doing a marvellous speed, although he must have been conscious that Death might tap him upon the shoulder at any instant. Arrived at Kilcullen he pointed out the crack to the official in charge, and remarked, "Do you think I should risk it?" The reply was, "For heaven's sake, no!" So the Mercédes was pushed to the side of the road till the race was over. Looking at it afterwards, so minute was the crack that I could not find it until the mechanic pointed it out to me. Truly this was another marvellous escape.

A long, long wait for Edge, while car after car which had started after him rushed by, had also caused us anxiety, though somehow in his case we never feared that harm had come to him. At last he came at full speed, his engine audibly misfiring, his companion holding up two fingers to signify that two tyres had gone wrong, and a cloud of steam pouring from his radiator, showing that his fan was not working, and that his water was boiling hard, and therefore letting the engine over-heat. As a matter of fact, the leather belt driving the fan would not stay on the pulley, and the colossal drive of the back-wheels had simply torn off tyre after tyre. It was clear he was out of the race, and all hope of keeping the Cup in England at an end, since of the three English cars two were smashed by the roadside and one was falling hopelessly behind.

Thus, three English cars, three American cars, and one German were *hors de combat.* It soon became clear that, barring accidents, Jenatzy would win with his Mercédes. He was doing better and better, passing us hour by hour like a mechanical whirlwind. De Knyff on his Panhard, Farman on his Panhard, and De Caters on his Mercédes were all going in first-rate style, but Gabriel, on his Mors, from whom so much had been expected, was falling behind, and made a gesture of despair as he flew by. Then, a few miles from the finish, fortunately just as he was entering a control, the gallant De Caters broke an axle and retired. All the remaining cars had passed us for the last time, and a steward with a red flag was posted in the middle of the road a few hundred yards from the winning post to stop them, and we waited for the winner. It *was* Jenatzy, and he seemed to be going faster than ever. He had many minutes to the good, but there was uncertainty as to the second till next day, when all the auditing of the control-times had been done, and passed by the International Commission. The following were the official figures:

| Country. | Driver. | Make. | Total. | Average Miles Per Hour. |
|---|---|---|---|---|
| Germany | Jenatzy | 60 h.-p. Mercédes | 6 39 0 | First 49.25 |
| France | De Knyff | 70 h.-p. Panhard | 6 50 40 | Second 47.85 |
| France | Farman | 70 h.-p. Panhard | 6 51 44 | Third 47.72 |
| France | Gabriel | 80 h.-p. Mors. | 7 11 33 | Fourth 45.33 |
| England | Edge | 110 h.-p. Napier | 9 18 48 | Fifth 35.10 |

But Mr. Edge's figures do not go on official record, for he was disqualified for a trifling technical reason—that his car had once been pushed in a control, M. de Knyff having lodged a protest.

The great race thus took place without misadventure of any kind, save one personal injury which is common in the hunting-field every season. All the hysterical alarms that were raised by certain newspapers were shown to be mere sensation, and those of us who were, in varying degrees, responsible for the organisation, and who had asseverated that the spectators were absolutely protected, and that the drivers' risks were minimised, were proved to be right. The *Velo*, the French automobile journal,

pays us this tribute: "The organisation was extraordinary; incomparable; the best ever seen." The best arrangements, however, might have been futile but for the care and good sense of Colonel Neville Chamberlain and his splendid body of Royal Irish Constabulary. Of the officers and men of this force it is impossible to speak too highly. They knew exactly what they had to do, and they insisted upon its being done, making no exceptions, and their courtesy and good-nature disarmed all opposition. If I were a millionaire, I would offer the Surrey magistrates, and Chief Constable of police, a free trip to Ireland to learn their business. Ireland, indeed, taught one lesson unmistakably. During the days before and after the race there was practically no speed-limit for motor-cars. Everybody drove as fast as he could. In the towns and at dangerous corners the police warned drivers and checked speed. Elsewhere they let drivers alone. Yet, though people and animals alike were unaccustomed to motors, and though hundreds of cars were concentrated for a week in a small area, not one single accident to any human being was caused by a car.

A word of praise is due to *Motoring Illustrated*, which brought out in Dublin a special number containing a well-illustrated account of the race twelve hours after it was over—a fine piece of journalistic enterprise. Any one who wishes to read a trustworthy and detailed account of the contest from first to last will find it in the *Automotor Journal* of July 11. *Per contra*, let it be put on record that the Post Office telegraphic arrangements broke down disgracefully—many messages taking hours from the Post Office tent to London—a further example of inefficiency in our public departments.

What, now, of the cars themselves? The American cars need not be further discussed, and one of the English cars was disabled by bad driving, while a second failed in a vital part of its mechanism. The enormous driving-power of Edge's Napier seemed to tear the tyres from the wheels. The Dunlops themselves seemed, an eye-witness has stated, to have stood perfectly, and certainly these tyres have borne the strain of many fast races with marked success. The fault lay in adjustment between tyres and wheels. If the fan on this car had been gear-driven instead of belt-driven, and the tyres had been properly fitted and attached to the rims of the wheels, there seems little doubt that the car itself was fast enough to win. Indeed, I believe that, as it was, Mr. Edge reached the highest speed of any car in the race.

The French cars came out best—the three finishing second, third, and fourth, with only twenty-one minutes in eleven hours separating the first and last of the three, while so extraordinarily level were the two Panhards that one averaged 86 kilometres 634 metres an hour, and the other 86 kilometres 424 metres. The French cars won Mr. John Scott Montagu's trophy for the best team, and this is really almost more valuable than the Gordon Bennett Cup itself.

Germany has won, and, indeed, the makers of the Mercédes deserve success, not only because their car proved the fastest on this occasion, but because they have done more, during the last year or two, than any other firm to introduce new methods and new ideas into the construction of motors. There was not a European car in the race that had not some part copied from the productions of the Cannstadt firm. It is, of course, absurd to say, as some commentators have done, that the Mercédes won the race with a touring-car. The three Mercédes in the contest were racers pure and simple—constructed for the utmost speed and nothing else. Moreover, two out of their three cars broke down from faults of construction—a very different record from that of the French cars. But nobody grudged victory, either to the dare-devil driving of Jenatzy or to the admirable Mercédes car. It was a magnificent and well-won victory.

Finally, as to the future of road-racing. Already, we are told, challenges have been sent in for the Gordon Bennett race of 1904, in Germany. My own opinion, however, is that the permissible limit of safety for races under these conditions has been reached. I can but repeat what I wrote in the *Westminster Gazette* after the race. Human nature, at its most courageous, is such a splendid thing that there is no risk men will not willingly run; but, personally, I do not wish to be a party to inviting men to incur even greater risks in future road-races of this kind. Of track-racing we shall doubtless have plenty in future, and the dangers of that are infinitesimal; but racing motors are now too fast for contests on roads with irregular, often slippery surfaces, corners, curves (more dangerous than corners), and gradients. That road-racing has accomplished for motor manufacture in a few years what, without racing, it would have taken a

generation to achieve, is certain, but there is nothing more to be learned under present conditions. Therefore I hold that the time has come to call a halt. The feeling I had when Mr. Jarrott was an hour overdue, and then the telegram came saying that he was "knocked out," is one that I do not wish to experience again. Apart from track-racing, where there is no reason why a speed for a mile at the rate of a hundred miles an hour should not be achieved, the motor-racing of the future must be a test of the ability of makers to get the highest results from a limited power—expressed probably in terms of cylinder capacity, or in a combination of bore of cylinder and length of stroke of piston, in cars of a fixed minimum weight. This will be extremely interesting, it will be of the utmost value in the development of the motor and the methods of power-transmission, and it will produce contests at once both sporting and safe.

Nobody, I may repeat, who saw the great race will ever forget it. Many people who saw it would not care to see it again. It was almost too exciting—it was too near the spirit of *morituri te salutant*. The crust between courage and catastrophe was too thin. Ireland was a perfect country to hold it in. Officials, police, people—all were enthusiastic, intelligent, charming. Even the animals were beyond reproach—I only saw one horse shy at a motor. In anticipation, participation, and retrospect there is no room for regret or reproach. Foresight was complete and Fortune was kind. But it would not be advisable to tempt her again.

# THE TESTING OF SEEDS

THE NATIONAL IMPORTANCE OF SEED-TESTING—PRIVATE ENTERPRISE STEPS IN WHERE GOVERNMENT WILL NOT MOVE—MR. REMINGTON'S EXPERIMENTAL STATION AT AYNSOME—WILL LORD ONSLOW IGNORE HIS OWN REPORT?

BY

D. EDWYN THOMAS

THREE years ago, Mr. Walter Long, then President of the Board of Agriculture, appointed a Departmental Committee to inquire into the conditions under which agricultural seeds are sold in this country. That Committee reported in the year 1901, and almost unanimously recommended the establishment, under Government auspices, of a central seed-testing station, available for seedsmen and farmers in all parts. The case for the seed-testing station was fully made out, and while justice was done to the admitted excellence of the goods sold by the more reputable seedsmen, it was stated by the Committee that "a quantity of inferior seeds is sold throughout the country, seeds of low germinating power, old seeds, and seeds that have not been properly cleaned"; these, for the most part, find their way into the hands of small merchants, such as corn chandlers, ironmongers, publicans, and others, whose main business is of an entirely different character, while a considerable amount of seed is sold by farmers to each other. In the West and South of Ireland particularly the inferiority of the seeds sold is very marked. The Committee was also of opinion "that the existence of a public testing-station would probably lead to an increase in the number of seedsmen willing to guarantee their seeds, inasmuch as it would supply a ready court of appeal to which both vendor and purchaser could refer." The only dissentients were the Director of the Royal Gardens, Kew, who did not consider the case for a seed-station a strong one, and a member of a well-known and highly respected seed firm, who did not think the establishment would secure the object which the promoters had in view, and who discovered, in the recommendation to buy seeds on guarantee, dangers which are, to say the least, not very obvious to the impartial outsider.

In face of the strong recommendation of the Committee, one would expect that by this time an institution involving only a comparatively small annual expenditure would have been given a trial, but, as a matter of fact, nothing has been done in the matter since, and nothing seems likely to be done, notwithstanding that the Chairman of the Departmental Committee (the Earl of Onslow) is now himself at the head of the Agricultural Department, and able to give effect to his own Report if he desires to do so. But it is characteristic of our Departmental methods to be apprehensive of the results of new departures, and to be actuated by a blighting economy in regard to them, while at the same time spending money freely in other directions; and the establishment of a seed-testing station at the cost of a fewthousands a year is apparently considered too outrageously extravagant to be entertained even in a country in which agriculture is still the greatest of all industries.

The consequence is that, although a few of the leading seedsmen carry out seed-testing for themselves, very many of our samples have to be sent abroad for the purpose. The neglect of the British Government is all the more strange when we remember that little Belgium has as many as nine stations, that Austria-Hungary has nearly a score, and that even countries such as Norway, Sweden, Switzerland, and Denmark can devote money to the same end.

That some benefit would be derived by the farmer from the facilitating of seed-testing will be obvious if the tricks of the dishonest vendor are borne in mind. It is not only that seeds of inferior varieties are mixed with those costing more money, though this form of adulteration has been brought to a fine art; there is the possibility of the presence in the sample of injurious weeds, such as dodder in clovers, which is a parasite capable of destroying an entire crop, and further, there is the far too common practice of using old and "dead" seeds. A sample of Swedish turnips that recently passed through the writer's hands showed on examination the following results: purity, 99 per cent.; germination, *nil!* Two unfortunate farmers had sown a sample that contained not a single live seed, and had no suspicion of the fact until it was too late to remedy matters.

But what the British Government has neglected to establish has at length been provided by private enterprise. At Aynsome, Grange-over-Sands, Lancashire, on the fringe of the beautiful Lake district, an experimental station, of a kind altogether novel in this country, although familiar enough to American farmers, has for some time been in operation. Mr. J. Stewart Remington, a graduate of the Royal Agricultural College, Cirencester, who is a local landowner keenly interested in scientific and agricultural pursuits, has built laboratories in a convenient position on a farm a large portion of which is set aside for cultural experiments, and these laboratories have been fitted up in a most comprehensive fashion for dealing with chemical analysis, milk-testing, dairy work, and seed-testing. There is also an experimental malt-kiln, while other interesting features are a plant for experiments, on commercial lines, in paint- and colour-making and another dealing with brick manufacture. These are admirably compact and complete, but as they are a little outside our subject, we make no further reference to them here.

The seed-testing and germination establishment, which will be eventually housed in a fresh range of buildings now being erected, already contains nearly every known description of seed-testing apparatus. When a sample of seed comes in, the first process is to mix it up thoroughly. It is repeatedly poured from one vessel to another, and while this is being done small portions are abstracted, great care being exercised that the sample thus obtained for analysis is representative of the bulk. But there are also ingenious appliances for sampling, with mechanical impartiality, and several are in use at Aynsome. For the purpose of germination, porous tiles, sterilised sand, asbestos cloth, and blotting-paper are used, the choice of material being decided partly by the character of the seed to be tested, and partly by individual preference. At Aynsome, at the time of our visit, the staff were busily engaged in the testing of mangel seed, germinating in sterilised sand, with water circulating around. The best-known seed-testing stations in the world have been drawn upon for germinating apparatus, and there is a complete representation of the different systems, from the Jacöbsen incubator, used by the Danish stations, to numerous small ones that are in favour in different stations, as well as two which are designed by Mr. Remington himself. One feature in which Aynsome will be decidedly in the front is in the variety and character of the incubators. The germinating seed is peculiarly liable to injury, and its development easily arrested, and therefore the character of the heating apparatus is of great importance. Variations in temperature and noxious fumes

will quickly interfere with the process of germination, and make a test untrustworthy, and to avoid both Mr. Remington decided to have all the incubators heated by electricity, so that the risk of injury and error is reduced to a minimum. During the last season (from September 1 to May 30), between 800 and 900 samples of seeds were tested here, and when the new building is completed, Aynsome will be capable of dealing with 5000 samples in the season. It should be mentioned that every test is duplicated, and that the system adopted is such that no one but the head of the establishment is aware of the identity of the individua. for whom the test is made.

One of the objects set before himself by the Director of the station is to supply information to local farmers, and bulletins on various subjects are issued from time to time. The first of these, dealing with seeds, treated of Clover and its Impurities; it contained well-executed illustrations, and was issued in a style worthy of the American official establishments, whose enterprise in this direction is apparently not hampered by financial considerations. These bulletins are issued free to farmers in a certain area around Cartmel, and may be obtained by agriculturists in other districts at a nominal charge.

The meteorological station affords an example of the useful work that might be done by experiment stations in different parts of the country. The harvest forecasts sent out by the Meteorological Office are too often found unsatisfactory, because of the large district covered; local variations are important, and can hardly enter sufficiently into the calculations. At the Aynsome station, telegrams from the Meteorological Office are received, checked by the observations taken there, and a modified harvest-forecast is then sent out to the parishes around. How accurate a result may be arrived at is shown by the fact that last season, out of eighty forecasts, only four were falsified, and the farmers in a circle of about eight miles around learnt last year that it was safe to regulate their arrangements for hay and corn harvest by the bulletins issued from Aynsome.

If the Government does not care to take in hand the establishment of seed-testing and experiment stations on its own account, it may be inclined to afford encouragement to private individuals who have shown more enterprise. There can be no doubt whatever of the value of the work that may be done, and there can also be no doubt of the fact that it must be a long time before such an undertaking can be made commercially successful. Indeed, there is much of the work done that cannot be based on commercial considerations. The issuing of meteorological notices, and of bulletins or pamphlets containing reports of experiments, as well as the carrying out of the experiments themselves, are things that involve heavy expenditure, but for which no money return is possible from the recipients of the benefits.

# DISEASE AND ELECTRICITY

A NEW ERA IN SCIENTIFIC RESEARCH—THE TREATMENT OF MALIGNANT DISEASE BY HIGH-FREQUENCY CURRENTS OF 100,000 TO 500,000 VOLTS—THE TRUTH ABOUT WHAT HAS BEEN ACHIEVED AND WHAT IS HOPED

BY

KATHLEEN SCHLESINGER

*Illustrated from photographs specially taken for* THE WORLD'S WORK

THE treatment of disease by means of electric currents of great frequency and high potential inaugurates a new era in scientific research, which may lead to developments of the utmost importance to suffering humanity. The fact that high-frequency currents are being used for the treatment of malignant disease is sufficient to account for the interest aroused by the subject. Much has been written about it without either accuracy or authority. The present account possesses both.

This treatment for cancer must necessarily be still in an experimental stage, as it is less than two years since it was first suggested by Dr. Horace Manders (*Lancet*, September 1901). There is at present no absolute ground that warrants our regarding the treatment as a *cure* for any but the form of cancer known as rodent ulcer, which has been healed both by Roentgen ray and by high-frequency current treatment; yet in other forms retardation, temporary arrest, and amelioration of symptoms have been gained. When any new remedy is discovered, and some successful cures are reported, there seems to be a tendency to regard it as a specific for the disease in question; then come a few inevitable failures, a reaction sets in, and the method is thrust aside before it has had time to develop.

One great difficulty stands in the way of attempting to establish a new treatment for cancer; the only cases on which it is likely to be tested are those which cannot be operated upon surgically, and are therefore considered practically hopeless. It is obviously not wise to allow a patient to run any risk—and delay in removing the tumour by surgical means is at the present time considered a risk—therefore the treatment by high-frequency currents is now chiefly tested upon those cases which, from severity or locality, are beyond the help of the more orthodox surgical treatment.

One question at present being thoroughly investigated and tested by the medical profession is whether the high-frequency treatment will serve to prevent the recurrence of the disease which so often follows an operation for cancer. Very favourable results have been arrived at in a number of cases, but the history of the treatment is too young to furnish reliable data as yet. The workers in the field, however, believe we are on the brink of valuable discoveries.

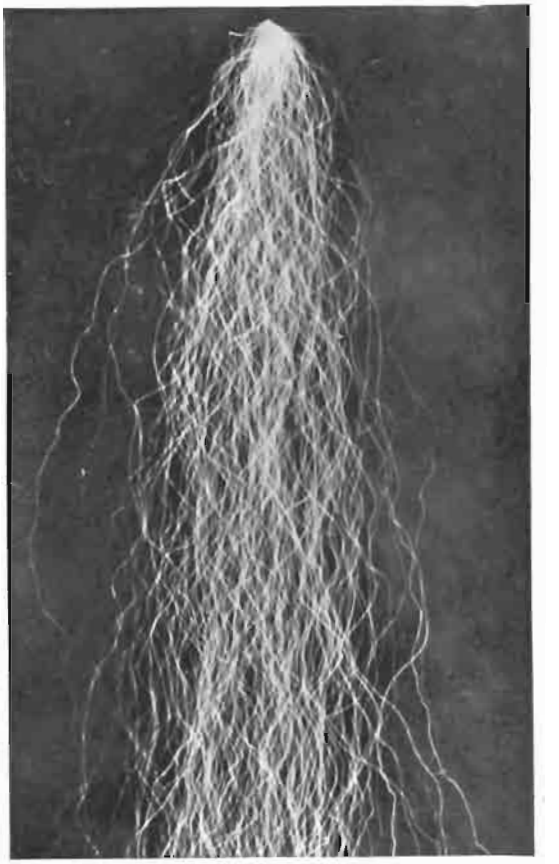
The history of the therapeutic use of high-frequency currents is briefly as follows: In 1881, Dr. W. J. Morton, of New York, made use of what is called a *static induction current*. He brought the balls of the exploder of a Holtz machine into proximity until the sparks appeared between them, and he intercalated his patient in a circuit running from the external plates of the condensers. Morton was thus the first to produce therapeutic high frequency, but almost without knowing it. After Hertz in 1887, and Lodge in 1888, had published their remarkable works, Morton recognised that he had been using oscillations of enormous frequency and relatively short wave length, and this he explained in his treatise of 1891 on "The Interrupted Franklinic Current." Researches were, it seems, being carried on independently meanwhile by Professor Leduc, of Nantes, who, when announcing his results in 1893, thought he had the priority. The high-frequency and high-potential alternating currents of Tesla and the work of Elihu Thomson in 1891 were taken up by d'Arsonval, who was the first to point out their physiological effects. Since then he has been followed by such investigators as Bergonié, Doumier, Oudin, Bordier, Apostoli, and others in France;

and in our own country by Horace Manders, Chisholm Williams, Bokenham, Allan, and others.

To produce the high-frequency currents used in medical science, the electric current from a dynamo, familiar to us in its applications to lighting, to electric traction, and as motive-power generally, is used as a supply, but the currents are of an entirely different nature; for the electricity, instead of flowing in a continuous steady stream, consists of a charge which swings up and down, radiating myriads of waves in a direction perpendicular to that in which the charge is travelling. A clothes line fixed at one end and moved up and down forms a series of undulations which illustrate those of induced high frequency, the movement of the hand holding the rope representing the travel of the charge of electricity. The oscillatory current is the outcome of nature's effort to restore an equilibrium of forces after disturbance, to prevent an electrical vacuum or undue concentration; it may best be produced by the discharge of some such condenser as the Leyden jar. This consists of a glass bottle coated half-way up on the inside and outside with tin foil, the glass conferring a good insulation between the two layers of foil called armatures. The external coating is connected to earth and the inner to some electrical machine. As fast as the inner armature is charged with electricity, an exactly equivalent quantity escapes from the outer coating to the earth. When the jar is charged we have undue concentration or high potential on the inner coating while the external armature is at low potential. When these two coatings are connected by some conductor, the high-potential electricity on the internal armature rushes with such enormous speed into the outer that it is not content with replacing the quantity conducted out of it to earth, but being, as it

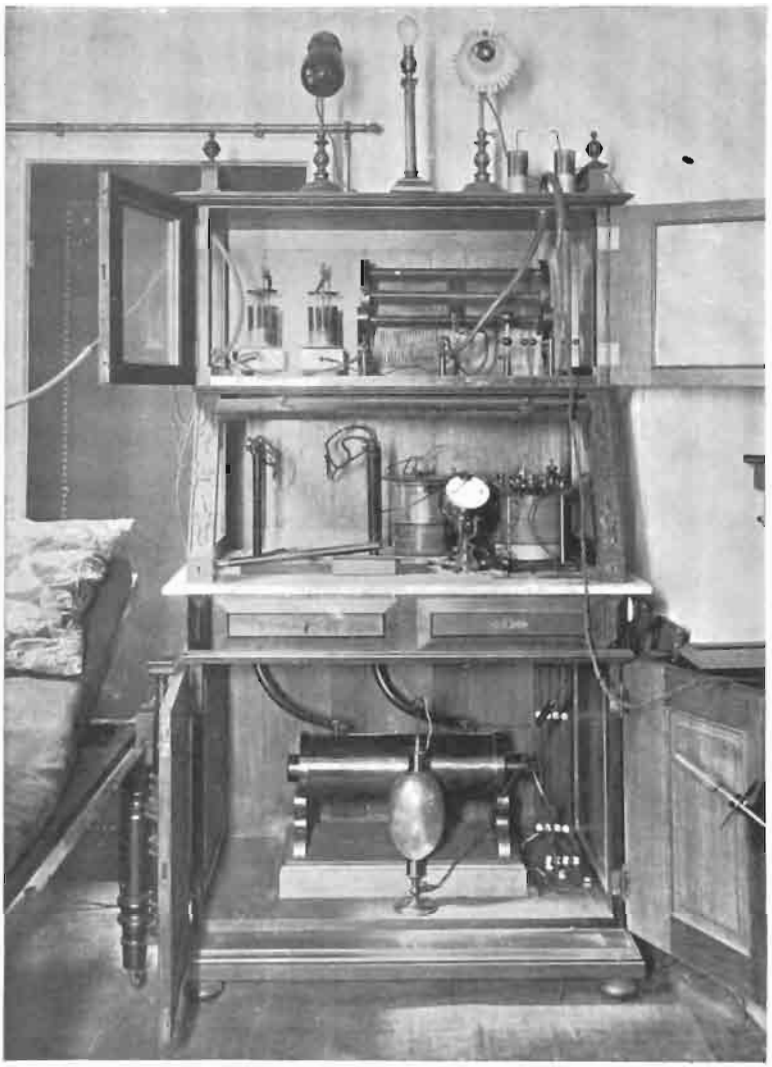
A CROOKES VACUUM TUBE

Photographed glowing while held near a patient under treatment



SPARK OF A DISRUPTIVE DISCHARGE

From the Ruhmkorff coil



THE COMPLETE ELECTRICAL APPARATUS FOR TREATMENT BY HIGH-FREQUENCY CURRENTS

were, unable to pull up in time, far more electricity gets into the outer coating than is required to bring back the potential to the original amount. As the coatings remain connected, the charge of electricity swings backwards and forwards between the two again and again until the energy of the swinging charge is gradually dissipated and the jar is said to be discharged. This violently swinging charge is moving at a very great velocity; it will in fact travel 188,888 miles in one second along a straight wire, so that it swings backwards and forwards millions of times in every second. This is called an electric oscillation.

In passing along a wire these electric oscillations set up currents, which are not steady streams of electricity but electricity making violent and spasmodic attempts to go first one way and then the other, continuously changing its direction with an enormous frequency.

The source of energy is for most practitioners the electric light mains, or secondary batteries, namely accumulators. The electrical energy of high potential obtained from a Ruhmkorff induction coil is connected by its secondary terminals to the inner coatings of the Leyden jars, which are so disposed as to produce a spark gap between them. The current is discharged from the outer coatings through an impedance coil between them and, as a shunt, to the patient, at an enormous and perfectly safe frequency.

There are three principal methods of treatment, all of which are here illustrated. The photograph on this page shows the large cabinet containing the whole electrical apparatus; the two Leyden jars to the left of the shelf, the resonator to the right at the back, and a small solenoid or coil of wire in front. The treatment of a patient by the auto-condensation method is shown on page 271. The couch on which he reclines is covered with insulating material, and underneath this is a sheet of metal to which one end of the wire conductor from the solenoid is fixed, while the patient holds in his hand an electrode connected to the other end of the solenoid. It is the Leyden jar process that goes on here. The plate forms one armature and the patient the other, therefore oscillatory currents of electricity from the circuit of induction are impelled into the patient, who is in turn charged and discharged, just like a condenser, with virtually the same frequency as at the Leyden jars.

And the patient, what does he feel while currents of the enormous potential of from

100,000 to half a million volts are being passed through his system? He feels absolutely nothing at the time, except that if he be in pain at the beginning of the *séance*, it gradually diminishes in violence and generally disappears. He might imagine that the whole treatment was a myth, but to show how highly charged with electricity his body is, a Crookes vacuum tube is held near him, and it immediately glows with an intense radiance, showing beautiful green and violet colours due to the presence of uranium and carbonic acid gas respectively; or else electrodes brought into proximity with his feet or his body produce sparks which give him a pricking sensation.

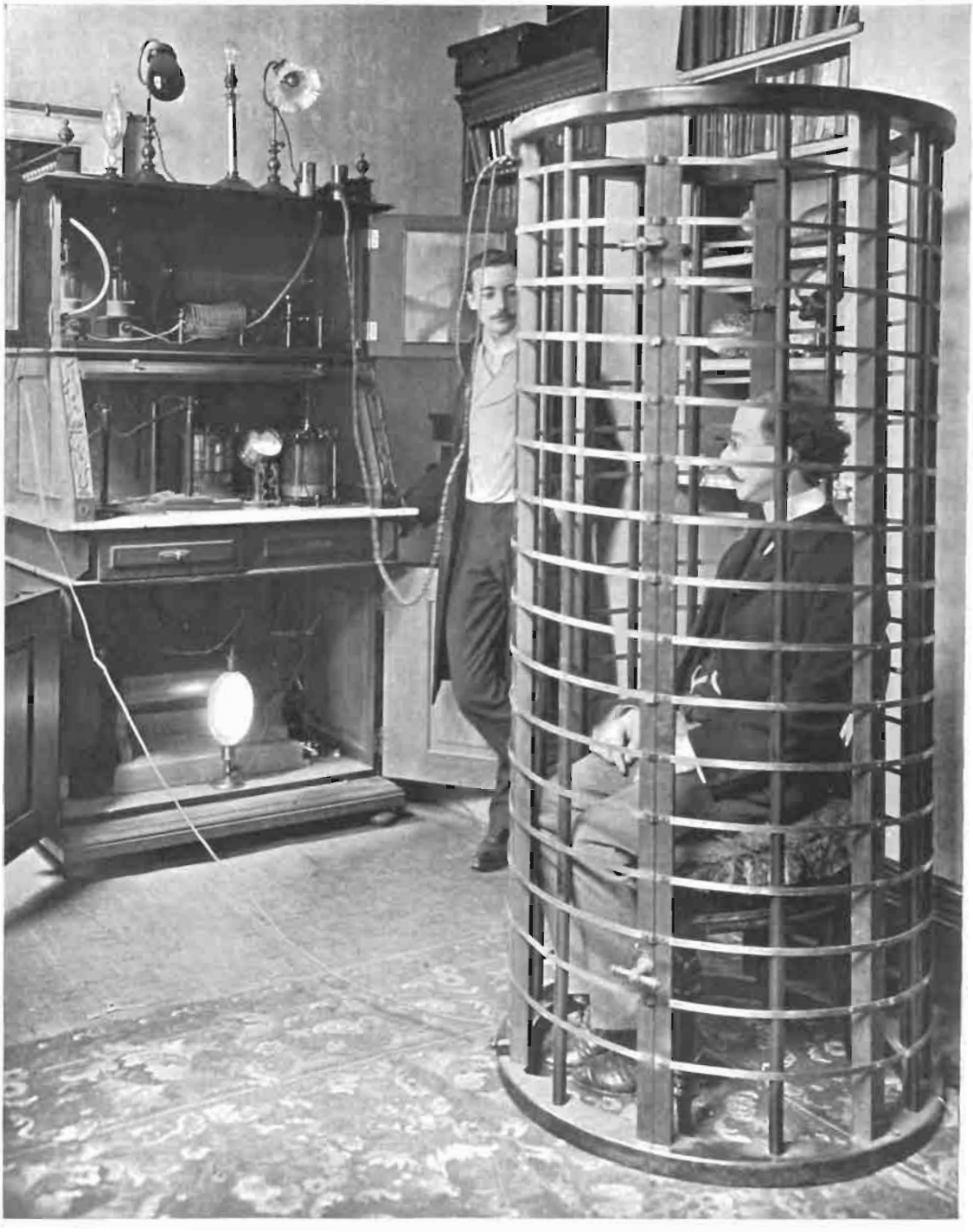
In the second method, by means of so-called auto-conduction, after d'Arsonval, the patient is seated inside a large solenoid, the two ends of which are connected to the outer armatures of the jars. No currents are directly passed through his body in this case, nor does the patient come in contact with any part of the solenoid, but he is immersed in the field of force radiating from it, which sets up currents of great intensity in his body by induction. Again he feels no definite sensation; but if he felt tired or brain-fagged before entering the solenoid, he will derive benefit from the electrisation and be conscious of a distinct sensation of *bien-être* and increased vitality. The operator's finger drawn along the flat copper bands of the solenoid produces a series of sparks which are the only evidence that a powerful current is passing through the apparatus. This *séance* generally lasts from five to twenty minutes.

The third method is illustrated on page 273, where the patient, who was suffering with violent neuralgia, is being treated locally by means of a brush discharge or *effluve*, as it is technically termed, from the free end of the resonator. In this way we get an intensely revulsive stream of electricity or a long brush discharge or *effluve*, similar to the static breeze, but absolutely painless and having a phenomenal frequency. The application of the brush discharge gives a similar sensation to that experienced during a mild sand-storm. We have known patients arrive in an agony of pain and find almost immediate relief.

The currents may also be applied by the bi-polar method, an electrode being connected to each end of the small solenoid and held by the patient or brought in contact with him.

These high-frequency currents possess wonderful and valuable properties. The cells of the body are composed of protoplasm which, in different situations, is endowed with various properties. One of these properties possessed by the white cells of the blood is resistance to disease. They resist it by actually attacking and devouring any invading microbes, and by secreting substances which neutralise their poisons or toxines. High-frequency or oscillatory electricity stimulates all protoplasm. Under its influence the cells of the digestive tract exert their various functions, the skin is stimulated to transpire noxious and effete material through its pores, the kidneys throw out the used-up nitrogen, and other matters are exhaled by the breath. The white cells are re-equipped for defence, the whole body is set in working order, and consequently in a state of resistance to disease, or in what we call health. Although there is no evident response on the part of the muscular fibres or

THE TREATMENT BY AUTO-CONDENSATION



THE SO-CALLED "AUTO-CONDUCTION" TREATMENT BY MEANS OF A LARGE SOLENOID

of the motor or sensory nerves to the action of the high-frequency currents, these seem to exert a powerful influence on the arterial system. By reason of the marked increase of nutritive activity to which these currents give rise, they act powerfully on diseases

caused by feeble or perverted nutrition. Besides forming a particularly beneficial treatment in the hands of the gynæcologist, high-frequency currents are being used in this country at the present time with encouraging results for the treatment of various diseases, such as phthisis, tuberculosis, skin diseases, diabetes, gout, rheumatism, chronic neuralgia, hæmorrhoids, and finally cancer.

The physician who was the first to call attention to the use of high-frequency electricity as a possible cure for cancer informed the writer that it is too early yet to give any definite statement that this malignant disease can eventually be conquered by means of this powerful therapeutic agent; but in some cases of cancer—and it must be remembered that the disease assumes many forms—recurrence after operation has been prevented and the growth of the disease arrested, but whether permanently time only can show; in all cases relief from pain and discomfort has been obtained, and sometimes markedly so. This earnest worker's opinion is that a cure for cancer may be found eventually in the application of carefully selected wave lengths and amplitudes of high-frequency currents; perhaps in conjunction with other remedies which have as yet proved only partially successful. All treatment must be empirical until the cause be found. In these currents the medical profession possesses means hitherto unknown of stimulating the vital energy of the cells, and of enabling them to utilise certain remedies and to absorb them into their protoplasm. "It is quite probable," he says, "that the earliest manifestations of life consisted of synchronous vibrations occurring in chemical molecules, and that life as we know it is but a congeries of electrical oscillations. Electricity alone is capable of directly and profoundly affecting molecular changes in cells, of acting as a powerful tonic and restorative to the protoplasm itself, whereby metabolism is promoted and resistance to adverse influence is greatly augmented. The immediate effect of this is to restore the lost equilibrium."

A NEURALGIC PATIENT UNDER TREATMENT

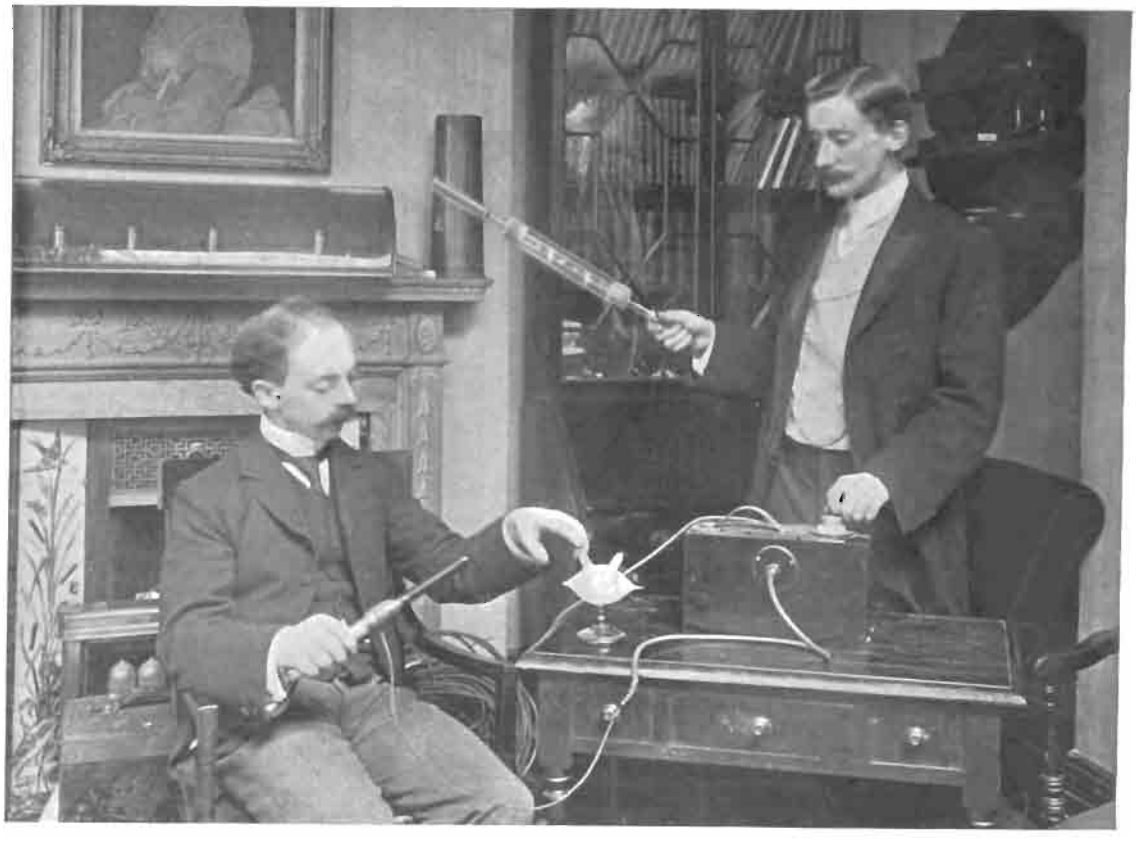
By means of a brush discharge

The photograph on page 274 shows a portable high-frequency apparatus, which actually does produce an oscillating current, and exhibits an amount of energy perfectly marvellous considering its small size. The energy and character of the oscillations fit it for any cases which demand this form of electricity; there is no need here to use electric mains or accumulators; the small and compact box contains absolutely all that is required. In order to earth the current, a wire provided with the

apparatus is fastened by means of a clip to a gas- or water-pipe. This clever invention we owe to Mr. Alexander William Sharman, an electrician who has already distinguished himself by several other clever inventions in wireless telegraphy which enable him to go as far as Marconi by entirely different methods. The apparatus will be the means of rapidly popularising the knowledge and practice of the high-frequency treatment, by enabling general practitioners, who would find the usual apparatus too cumbersome and too costly, to bring this new form of electricity to the bedside of their patients. To those who are under treatment, and who perhaps live in the country, and yet wish to carry on in their own homes the good effect set in motion by the larger apparatus, the portable oscillatory current producer will prove invaluable, as its cost is only one-tenth that of the larger one shown on page 270. Moreover, the treatment can be administered to the patient by any adult of average intelligence, once he has received professional instructions. The current is set in motion by means of an ordinary switch. Certain cases can be treated entirely by means of the portable apparatus alone.

The patient represented in the photograph was so full of electricity that the vacuum tube glowed when held a foot or more away from him and a potential of many thousand volts was indicated.

This new treatment has received a wide application; its influence on nutritional activity has been satisfactorily proved, and a large number of good results have been obtained in various directions. It is to be hoped that its capacity for good may not be neutralised by premature reports of phenomenal cures, or by too ready acceptance of statements which are not based on scientific accuracy, but are too often used for trade purposes by irresponsible and unqualified persons.



THE PORTABLE OSCILLATORY CURRENT PRODUCER

Enables doctors to bring this new form of electricity to the bedside of their patients

READY FOR ACTION

# THE DAY'S WORK

## VI.—THE MAKING OF A FIREMAN

TIME IS MONEY AND LIFE — TRAINING RECRUITS — THE FIREMAN AS GUARDIAN ANGEL—MIDNIGHT AT THE HEADQUARTERS OF THE LONDON BRIGADE—"MONOTONY OF THE BUSINESS"—A SPLENDID SET OF MEN

*Illustrated from Photographs specially taken for* THE WORLD'S WORK

"THERE'S heaps of people that don't know where the nearest fire-alarm is, and wouldn't know what to do with it when they found it," remarked a fireman to me as I watched the response to a false alarm, and condoled with him on the unnecessary trouble to which he had been put. "Thing is," continued the fireman, tilting his helmet, "smash the glass with your elbow and pull. And mind you wait there till we come. Else how do we know where the fire is? We go for the alarm."

For myself, I have a very clear idea as to the button that should be pressed, and I have always expected the fire brigade to do the rest, without any very serious reflection as to the little army that is in readiness to fight the big foe. The foe is always ready, and the bigger the city the greater the possible devastation. Every lucifer-match is a scheming traitor. Any man in several hundreds of thousands may try in vain to light a study-fire which a foolish housemaid has laid badly. He may throw away the final match in a fury, and it may burn down a street. No one can tell whether any sudden appearance of the enemy is a reconnaissance or an attack in force, whether it is a sputtering match neglected or a flaming city. It is the little army that stands between. And the little army has

IS HE STRONG ENOUGH FOR THE BRIGADE?

to be quick and skilful. The ratepayer sees little of the fire brigade beyond the occasional fireman lounging at the door of a station, or now and then an engine pelting through the streets while its passengers shout hilariously the war-cry that heralds the approaching conflict, the traffic pulls in to the kerb, and people wonder vaguely "where it is." Here I may remark that the fire-engine has no more legal rights than an omnibus in the matter of speed. It is only the good sense of the community that gives it easy passage at its best pace; for here time is not only money but life. Now and again, when the lurking foe picks off a few citizens, the newspapers turn on the fire brigade. A small failure blazes in the Press; a victory gets at best an obscure paragraph.

Therefore I was impelled to find out what manner of man it is that enables me to keep a roof over my head and sleep soundly on a hundred million to one chance—almost any number of millions you please—against being burned in my bed. Whence comes he? How is he trained? How am I thus guarded?

"Matthew, Mark, Luke, and John,
Guard the bed I lie upon."

So prays the Kentish labourer's child still. The Londoner should address the fireman.

The address is Southwark Bridge Road, the headquarters of the fire brigade. Here one may get a bird's-eye view of London as a burning city. For in Southwark Bridge Road three departments are housed. The building is the training-school for recruits; it contains a fire station for its special district; and it holds the brain which directs the stations and fire alarms in all the five vast sections into which the metropolitan area is divided. Let us take the recruit, and watch him; the man who may be rejected, or may become a station officer, or something even greater in the great work of protecting London. On a morning he comes in to the headquarters to be tested. Already his record has been placed before the chief of the brigade. He is of good character; that lies at the base of his appointment. Then comes another test. Physical strength is necessary. Out comes the fire-escape; it is realistically pinned by ropes to the flags of the great square at headquarters, and the candidate has to mount and drag the escape into position. It is a task just beyond the strength of the soft man, and forms a good test of muscle. When this has been done to official satisfaction the recruit has to pass a medical examination. Then, having proved himself of good character, strong and healthy, if there is a vacancy among the men in training—there are usually nearly forty of them—the candidate is admitted.

As a general rule, the fireman is a man who has followed the sea. He has served in the navy or in the merchant service, sometimes for a dozen years, sometimes for only a year or two. For here and there a brigade officer knowing the ropes, sends his son for a spell at sea, and introduces him as a recruit for the brigade at the earliest possible moment—when he is twenty-one—with a view to an early start and a final triumph. He knows the official preference for seamen—and its reasons. There are several. First, there is the obvious advantage with which a sailor starts in being accustomed to keep his head and hands with nothing but a rope between his feet and death. That advantage is shared, of course, by those who are engaged in the building trade, and the "fear of height" may be overcome speedily by any young man who means business. But the sailor has another advantage—several, in fact, but the chief is his training in being always on duty. No such thing as an eight hours' day is possible in the fire brigade. The fireman must be always available, and his hours of duty—as one of themselves jocularly expressed it to me—are a hundred and sixty-eight a week. A scaffolder is not accustomed to this; he wants his regular hours. But the sailor has been educated to snatch his sleep at odd hours, and regard himself as never off duty so long as he is on board. And that is why, though many call at Southwark, few are finally chosen. The most enthusiastic landsman, excited with the romance of the brigade, soon finds the romance to be written in the sternest of prose. He chafes at the unending chain of control. And when the recruits are weeded you will find few but sailors left. Water and fire are crafty and dangerous foes, and the conditions of the fight with both are the same. There is no such thing as truce between six in the evening and eight in the morning.

For three months our recruit undergoes his training. He receives 24*s*. a week, and hands back one of them for his lodging on the premises. He and his fellows look after themselves, paying 7*s*. a week each for weekly board, electing their own caterer from among the number, and telling off a couple of men each day to act as cooks. The quarters are clean and ship-shape, looking over the big square. And each recruit has this prospect before him. After three months he will be a fourth-class fireman, and rise to 26*s*. a week. Another three years will bring him an extra 4*s*. Then his mental education begins to tell over his capacity for gymnastics, and examinations lead him by gradual advancements up to a post as station officer at £2 12*s*. a week.

Meanwhile, these young sailors, strong, healthy, of good character, are learning their business, paddling about in the heelless boots that are the only wear for climbing. In the morning you will find a batch of them in the instruction-room, wherein are all the things with which a fireman has to deal. Here are

TRAINING RECRUITS FOR THE LONDON FIRE BRIGADE

An imaginary fire

PRACTICE WITH THE SMOKE-HELMET

lengths of hose, here are the mysterious underground pipes and screws that make a hydrant, here are helmets—the smoke-helmet among them—and specimens of all the mechanical means of fighting fire. With these the young fireman must be so familiar that he can deal with them in the dark. And for inspiration, at the end of the room are hung the helmets of men who have been killed or injured in the fight. Battered and smoke-marred, they bear each the name of the wearer and a short record of his heroism. Other of the recruits are in the workshop behind the stables, where workmen are repairing engines, polishing helmets, and furbishing the armour of the brigade. Here they see the inside of the instruments of their calling, and learn the art of tinkering at a pinch—an art which a sailor very easily learns. In the big square outside there is a class under instruction in the art of putting an unconscious person over the shoulders for rescue with the least possible waste of trouble and time.

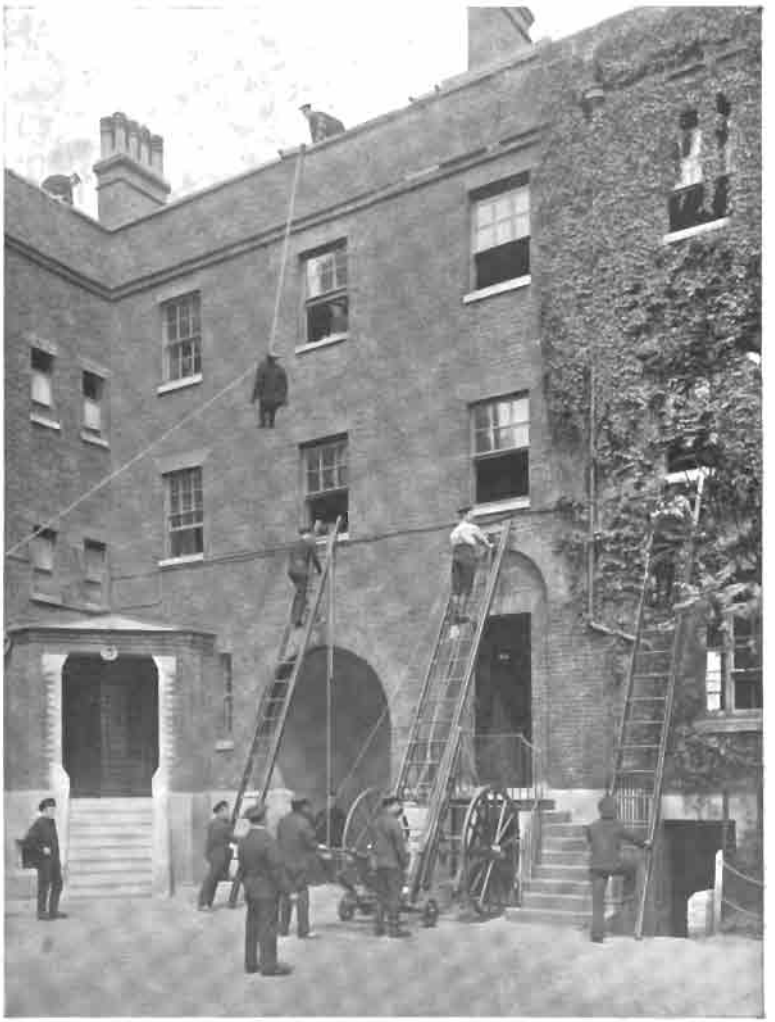
Then the recruits have to handle their implements as though they were facing the enemy. The drill instructors take their place in the square, while escapes and fire-engines wait without. Imaginary fires break out, and the recruits must be taught exactly what to do in every circumstance that can be anticipated within that square. In the square there is a tower, eighty feet high. There an imaginary fire starts, and a calm recruit sits at a casement, waiting for rescue. At the sound of alarm, the horsed-escape goes off at once. (In practice the horses are excused.) The escape is run in, and wound up till its nose digs at the sill of the window where the unconscious victim sits scraping his chin and watching his rescuers. Below, the instructor criticises freely the waste of a second, and shows how it may be saved. Up runs the recruit, hands and feet in unison. The unconscious victim disappears for a moment (for he must act his part), and lies down on the floor. In a second or two he is on the fireman's back, slung with due regard to the law of gravitation over the shoulders, and the fireman, with two hands to feel the way, brings him down. And the rescuer, for most of the awful descent, never has two feet on a rung at the same instant. Here is the sailor-training. For all ships maintain the same distance between the steps of the ratlines; and every fire-escape ladder is built to the ratlines scale of one foot between the rungs. The builder's ladder differs by five inches. No man could run up a builder's ladder. And this is another reason why the sailor has the advantage of the landsman in the fire brigade. He can run up the ladder without looking at his feet. The position of the rescued demands nerve. To lie passive

on the shoulders of a comrade who is running down a ladder at death's distance from the ground cannot be pleasant. But a surreptitious clutch at the stock of the fireman's trousers brings a stern rebuke from the instructor.

There may be a victim higher up; eighty feet in air. There is—far beyond the reach of any fire-escape that can be run through the London streets and raised in time for rescue. Out come the hook-ladders, and men run up with these slung over an arm—they are each about ten feet in length, with a hook at the top that will catch a window-sill, a parapet, or any such projection. One after the other the men mount, and pass up the ladders, while one after the other fixes the ladder and runs up it. At one difficult point one man holds the tail of the ladder while another climbs, with a rope slung about him. At eighty feet he finds a dummy, realistically unconscious. This he knots into his rope—and to a sailor all knots are open—and in a second or two (or the instructor wants to know why) the dummy swings in air, is caught by the waiting man below, is carried to safety, and pitched into a corner, looking horribly dead, in readiness to be rescued another day. Down comes the fireman, picking off the ladders as he comes, and handing them to those next in order. The whole thing must be done quickly, and practice must make it automatic. In case of fire it is not well to trust to improvisation.

In another part of the square an imaginary fire breaks out in a basement, which is full of smoke. This is a case for the smoke-helmet. Out comes the helmet and is placed on the head of the recruit, while another takes his station at the air-pump. Hose in hand, and dragging the air-pipe after him, the fireman descends to the basement. Here the traditions of the diver are observed, and the man in the smoke-helmet is taught to signal by pulls on the air-pipe, while the man at the pump varies his pumping accordingly.

But perhaps the flames from the lower windows make it impossible to use the fire-escape directly. An imaginary victim is in an upper chamber, with all apparent means of egress cut off. Here is scope for the ingenuity of the fireman. He has to select a point at which he can mount to the roof, or whence he can reach the roof of the burning building by clambering over adjacent houses. On the instructor's word the escape is reared at the selected spot, and the men run up, one of them carrying a coil of rope. Along they swarm, until they reach a point over the window at which the victim shrieks for rescue. A



AN INGENIOUS RESCUE

"SHEET TAUT—JUMP!"

sailor will always find something to which he can hitch a rope, a chimney is the first thing sought, and in a trice a fireman is lowered to the window on the rope, and enters. Meanwhile, others of his comrades seize the lower end of the rope and hold it several yards away from the building. It takes but a second or two to tie the now helpless victim into a sort of rope-chair and to swing him out and down in a simple but perfectly safe twist of hemp, which I believe is called a bowline on a bight. And when the rescue is effected, the rope-chair is drawn up again and the rescuer is swung into safety. Here, again, the advantage of the sailor's training is obvious in his early familiarity with the knotted rope.

But, after all, this is regarded as the merely elementary drill, designed to fit the fighter's hand and foot and brain to the weapons he must use. As in all warfare, the fight with fire is full of surprises, and nothing but service in the field can prove the competent fireman. Now and then the recruit may get his chance to see the work at a real fire. For he is liable to be turned out on an emergency, and is utilised on the outskirts of the conflict. But it is seldom that such an emergency occurs, and, usually, his three months' training is spent in the continual task of making friends of all the instruments of his future calling.

Let us see the finished fireman, the guardian angel who is waiting for our hand on the fire-alarm. At Southwark the most impressive time is midnight, when the danger to London ascends its climax. The station, which opens, of course, right upon the roadway, is very quiet as the door is opened by the man who listens for the alarmed footfall. Only an occasional tinkle from the telephone-room in the rear breaks the silence. Two fire-engines and an escape stand in readiness behind the sliding doors. Just behind are the stables, where horses wait with harness — not upon their backs, but suspended for their comfort so that the touch of a finger will drop it as they are unloosed. At present the motor fire-engine is regarded as upon its trial, and the general feeling in the brigade seems to be that no motor-force is so trustworthy as a pair of horses to drag the weighty engine loaded with men to its destination. But firemen, like others, have much to learn about motors. The room to the right of the entrance, a waiting-room by day, is a sleeping-room by night, and here are the men, lying down in their boots, who are in readiness for the first alarm. One or two are smoking peacefully: another is sleeping. One sits on the end of his couch and reads, a well-knit sailor-man, who had been twelve years in the navy, three years in the brigade, and radiates vigorous youth. Romance? Excitement? No, there was little of that about the brigade, he assured me; though just above his head was the roll of honour, the emblazoned names of the men who had died in the service in the last five

and thirty years. Nineteen in all. And a fireman dies very hard. It was the monotony of the business that most impressed him. Here you were, all day and all night, with nothing to do but wait for a call. You can read and smoke, and there were amusements on the premises. The gymnasium, for instance. And he spent part of the day in the gymnasium. On winter evenings, too, there were smoking-concerts and dramatic entertainments, and the best music-hall artists of the day would come and perform on the stage that the gymnasium contains. The men could do a bit of drama themselves, too. But it was a monotonous business. I suggested that he must be glad of a fire—just a little one—now and then. And he admitted that he was glad of an occasional run. How often did he get his run? Well, fires come in shoals, like fishes. Sometimes a fortnight passed without a station call, and sometimes four calls came in a single night. One fire brought another, that was his belief. As to running up ladders and clambering about roofs, that was natural exercise to a sailor, he had no fear of height to overcome. The only thing that really bothered him was broken glass. If it had not been for his helmet he would have been dead three times over. For water alone is of little use in extinguishing a fire. You must knock the fire out. And when the hose begins to spout with an engine behind it, every skylight goes and the fireman underneath has to look out for his hands. He was returning to his complaint of monotony when the call came—a ringing of electric bells in a circle of alarm. It was a street fire call. And the response seemed to me to occur all at once. Sleepers, smokers, the genial and bored sailor, were snatching their helmets from the engine and clambering up, while doors back and front gaped miraculously. Horses leaping forward were hooked on, and the escape plunged into the street, followed by the fire-engine which had suddenly burst from silence into a snorting and furious desire for action.

But this did not exhaust the resources of the station—for there is always a reserve engine in readiness, and above the sleeping-room, now deserted, were the mess-quarters and dormitory of the men who for the third time in a week might sleep in bed, though an alarm would bring them in boots, trousers and shirt sliding down the pole to find their coats hanging at hand and their helmets and appliances on the engine. Their sleep or their waking—the sleep and the waking of firemen from Hampstead to Woolwich and as far as the County Council casts its protecting arm—depends on the decision of the room with the telephones, which is just behind the sleeping-room of the men who have just had their run. Here are the firemen who have graduated, tried by fire, with the officer in charge. One man is talking to Notting Hill, and announces that Notting

READY FOR A NIGHT CALL

"NOTTING HILL ALL QUIET, SIR"

On the right is shown the folding fire-map of London

Hill is quiet. Another is listening for news of what is happening a street or two away. He has stuck a little red flag on the point of local danger on the big fire-map of London that stretches across the side of the room.

That fire-map is the chart of the brigade. Every station, every street escape, every street fire-alarm is marked on it. The circles that divide it indicate the circumference that is within the limits of each station. And the fire districts are carefully planned and marked. At the alarm of fire anywhere the news is transmitted to headquarters, and a little flag is pinned to the danger point. If it is a big fire the local officer in charge will send off his reserve engine. Then the officer in charge at headquarters has to organise. He knows where the danger areas are. His duty is to move up his engines and men to the central point, which is now perhaps a huge city fire, and yet leave no district out of reach of

THE HOSE ROOM

help. There are times when the fires come in shoals, and four dangerous outbreaks are announced in the same night. Then the resources of the brigade are tried to the utmost, and the outlying stations are drained of their men and engines to act as reserves in the more crowded districts, when the Chief Officer is pelting across London from one point in the battlefield to another, and the telephones at the central office are singing with calls. For every fire-engine carries among the axes and other implements stowed in sailor-like ship-shape an apparatus for tapping the street-alarm, and there is always a fireman to send the demand for more assistance.

But the dramatic happens only now and then to the fireman, and the alert men who sit at the telephones under the eye of the officer in charge show no excitement, though two red flags of danger mark the big fire-map. At the moment there are two fires in London. Notting Hill has lost its interest and its flag. Hounsditch is out, but the engine is standing by. Headquarters notes that there is one engine engaged, but available at greater need. On the house in the street hard by, the map still confers the flag. But the men still sleep in their dormitory above, and no sudden message had disturbed them. Presently the engine returns, and the escape. The men hop off, the horses, anxious for more, are unhitched. My genial sailor was in even better spirits than before. "There wasn't no fire," he explained, "but we got a run."

THE RESERVES RESPONDING TO A CALL

The London Fire Brigade is composed of a comparatively small body of men. The total force numbers 1264, including officers, firemen, coachmen and pilots. On an average there are but about six and thirty men taking their three months' course of training. But they are picked men. They are subject to no restrictions as to drink beyond those restrictions they impose on themselves. And those restrictions, as I learned from a high official, are stringent and adequate. A drunkard or a loafer, if by any strange chance he were accepted as a recruit, would speedily find himself unpopular; for the essence of the training, as I hope I have shown, is the perfect confidence in the men above and below on the ladder. And even the rank and file would weed out the undesirable. But the brigade scarcely ever has to shed the recruit who has passed the test and stood his three months' training. And there is probably no set of men in England —not even the House of Commons—that can show a police-court sheet so clear.

THE BEEFOLDS MINIATURE RIFLE RANGE

# RIFLE-SHOOTING AS A SPORT

A FASCINATING SPORT THAT NEEDS TO BE BETTER KNOWN IN OUR VILLAGES, FOR ITS OWN SAKE AND AS AN AID TO NATIONAL EFFICIENCY AND SECURITY—HOW TO START A RIFLE CLUB ON TWENTY POUNDS

BY

BRYAN HOOK

(Hon. Secretary of Beefolds Rifle Club, Farnham)

OF the many lessons of the South African War none seems more likely to produce lasting results than that which is prompting us to teach our population the use of the rifle. It is the one lesson of the war which should be taken to heart by civilians, for while questions of army reform must be left to be dealt with by the military authorities, the formation of rifle clubs must be conducted by private enterprise and with as little interference as may be from Government.

The authorities have so far acted wisely in the matter. The vexaticus gun licence has been remitted in the case of rifles used solely for target practice, and with a view to bringing rifle clubs under some control, advantages have been offered to such as are willing to affiliate to the National Rifle Association, and to contribute a guinea annually to the body which affords them beneficent government.

The advantages offered are (1) the privilege of obtaining service rifles at the cost price—£3 4*s.*; (2) the privilege of obtaining ammunition at cost price—£5 per 1000.

Of these advantages the first is usually found highly desirable, as the rifles obtained would cost double the price if bought else-

where; but as to the second, the case is different, for the cost price of Government .303 ammunition is over £1 per 1000 more than that charged by the dealers. True, the Morris Tube ammunition is cheaper than it can be obtained elsewhere, but that is of a make which no rifle club that I know of cares to use.

The bed of the rifle club promoter is not as yet one of roses. He is probably entirely in the dark as to how to set about promoting it, and having started will find himself assailed by objectors. Strange as it may seem there are still those who hold that there is no necessity for a soldier to use with accuracy the weapon which he is employed to carry and discharge; that so long as he pulls the trigger in obedience to the word of command nothing more is desirable. Had the Boers held these views as to marksmanship would they have rolled back the bravest soldiers in the world at Colenso and Spion Kop? More reasonable objection to rifle clubs arises from some who think that their formation will injure the Volunteer movement. Those who hold this view probably imagine that the ordinary course of class firing is enough to teach shooting, and that because a volunteer is classed as a "marksman" he is a good shot. Further knowledge of the subject would probably modify this view. In fact there are very few, if any, good shots who have not made themselves so by belonging to a rifle club. It is the volunteers who stand in the greatest need of rifle clubs, and any idea of an opposition of interests is mistaken and should be carefully avoided. The bogey of civilian competition has in some cases prompted the adoption of a regulation to the effect that only men past the volunteer age should be admitted to rifle clubs! Such short-sighted policy could only end in failure, the absurdity being obvious of rejecting the very men in whom the training and practice would produce the best results.

The early promoters of rifle clubs were carried away by their enthusiasm into making such proposals that the critic's task was easy in laughing them to scorn. Let us not start with the idea that we are producing a military force, but only that we are fostering a pleasant form of sport. Let us divert some of that energy and skill so freely lavished upon cricket, football, and golf, to another sport no whit less fascinating and much more practically useful. Rifle-shooting has charms which are little dreamt of by those who are strangers to its practice. The quiet pleasure that the "shooting man" derives from the signal that tells him that his bullet has sped true to its billet is not less keen than that of the man who sees the effect of his skill upon the living bird. No golfer is more keen to improve upon his record than is the rifleman to better his best score. The allowances that must be accurately made to meet varying conditions of wind and weather to ensure even moderate success are of the greatest interest. A bullet aimed straight at the bull's-eye at 600 yards may by a moderate breeze be blown wide of the target altogether. Variations of light and atmospheric conditions affect elevation. To estimate the amount of alteration so as to produce the desired effect calls forth qualities which any man is the better for cultivating.

A thoroughly good shot with the rifle is, of course, not made in a day, nor in a year, and to teach shooting in the army must be the most disheartening task a man can undertake. If our soldiers are ever to be decent shots, something to this end must be done before they join at all. If the lads in our villages and towns can be induced to make themselves efficient shots with miniature ammunition, the work of the military instructor will be brought within the bounds of possibility.

The Society of Working Men's Rifle Clubs is doing excellent work to this end under the chairmanship of Major-General C. E. Luard. Their practice is with miniature rifles and in shooting galleries, their ranges being usually only 25 to 50 yards long. Proficiency with a small weapon at a short distance is one step towards becoming a good service-rifle shot, and is, for town workmen, the only step available. But dwellers in the country may carry their training one step—a long step—further, by using the service rifle fitted with Morris Tube at ranges up to 300 yards in the open air.

Actual practice with service ammunition is a sport that can only be indulged in by the man of means and leisure, and it is quite hopeless to expect working men to "finish" their shooting education at their own expense. But if a good Morris Tube range of 300 yards or even less be provided and a club formed, the Briton's love of sport may be trusted to do the rest.

Sir Arthur Conan Doyle, than whom none has done rifle-shooting better service, has a range of 100 yards in his grounds, which is available to all the men in the neighbourhood. Following this excellent example other clubs have been formed, so that there is now a considerable body of men in the Hindhead district who can use the service rifle with probably

better effect than an organised military force. Tommy Atkins is not the best marksman in Europe by a very long way, if one may believe what is said of the marksmen of foreign nations, yet he is obviously capable of learning to shoot uncommonly well if he is taught before he dons the red coat—and red tape.

The Morris Tube is used in the army, and still more used by the volunteers, but in both cases the conditions of practice are such as to deprive it of half its advantages, and the ammunition used is a long way from the best obtainable. It has remained for civilians to demonstrate the usefulness of miniature practice. For in clubs such as those which flourish in Surrey, and where the Morris Tube is used under reasonable conditions with the best ammunition, a rifleman may carry his education very far; and when he tests his skill upon a service range will find that he has little to learn. Shooting at 100, 200, and 300 yards with the Morris Tube forms a capital imitation of the ordinary first stage of "the King's," and the scores made upon the regulation match targets* will not be very different from what the same marksman would make with service cartridge at 200, 500, and 600. Our best shots get frequently into the thirties at 300 yards (out of possible 35), and even 34 has been made.

The tiny Morris Tube bullet is of course deflected by very light winds at the longer distances, and thus gives most valuable lessons to the novice, for the estimation of wind force is one of the most difficult problems that the rifleman needs to master. The ammunition at present obtainable, though often showing remarkably good results, is not quite so even in quality as could be wished, but it is probable that if more attention were bestowed upon long distance Morris Tube shooting, the makers would soon supply the demand for a more perfect cartridge. In the meantime, there is no means of miniature practice that can show nearly such good results as a training in the service weapon. In the club of which I am secretary, we have tried every contrivance by which the service rifle can be adapted for short range practice, and have found the Morris Tube far ahead of all others, not only in accuracy but also in the cost of working. We issue ammunition to our members at 2*d.* per round of eight shots, this being a trifle below the cost price, the deficiency (2*d.* per 100) being met by the club funds.

I would refer those desiring information upon the subject of Miniature Rifle Shooting, to a little handbook recently published by L. R. Tippins, who writes with an expert's knowledge of the subject. From this little work, and Freemantle's *Book of the Rifle*, published some two years ago, an intimate acquaintance may be formed with the theory of rifle shooting, which will, in all probability, lead the reader on to a desire for its practice. A handbook giving plain directions for the starting and working of rifle clubs has yet to be written, and the task will be no easy one, but a few hours spent upon a range where practice is going forward will teach more than many pages of print.

Certain it is that the formation of village rifle clubs is a necessity if our army is ever to reach a high standard of efficiency in marksmanship. Open air ranges, extending to 200 or 300 yards, can be cheaply constructed within easy access of any town or village. The use of land for this purpose need not interfere with its agricultural value. Such a range is in constant use upon my own land in a field that is cropped for hay, and with the exception of a narrow path and the necessary spaces required for firing-points the crop is in no way interfered with. In the accompanying illustration, which shows shooting proceeding at the 150 yards point, it will be seen that the men firing are raised upon a box to enable them to see over the crop.

I have invented a simple form of lowering target which has been adopted by Sir Arthur Conan Doyle's club and others in this neighbourhood, which can be made by any carpenter with three target frames for 20*s.*, and answers all the purposes of the ponderous iron structures which cost large sums.

The target frame (all targets nowadays are of paper pasted upon canvas) is slung within another frame which, working on a hinge at the bottom, may be allowed to fall forward. As it falls, or rather is lowered, the target frame which is slung well above the centre of gravity retains the perpendicular, and is thus lowered into the marker's pit in a position for patching. Two or three such targets, with butt and marker's pit, should be constructed for £10 or £15; a pair of rifles will cost £6 8*s.* if obtained from Government; two tubes, £2 10*s.* Thus £20 should buy the actual necessaries for starting a rifle club. To this must, of course, be added a further sum to meet such charges as rent of land (if not given gratuitously), the wages of an armourer to keep the rifles and tubes in

* 100 yards 4 in. bull, 200 yards 7 in. bull, 300 yards 12 in. bull.

good order, &c. This last is a most important item, involving very little work, but constant, unremitting care. The post of armourer should, if possible, be undertaken without payment by some person whose interest in the weapons is sufficient to ensure them against the neglect which would be fatal to their efficiency. To the above may be added, if funds allow, £10 for a telephone to connect the marking-pit with all firing-points, which will be found most useful and almost a necessity at 200 and 300 yards.

From the above it will be seen that the expense of starting an efficient rifle club is not great, and from my own experience I can say that the hat that goes round for a rifle club will be well filled. Witness the magnificent donation of £10,000 made by Mr. Astor, a share of which I believe any newly formed club may hope to obtain by complying with the conditions of the Trust.

The Commander-in-Chief's influence is doing much to improve the shooting of the regular forces, and he has repeatedly enlarged upon the importance of marksmanship in the soldier of the future, but if the sport of rifle shooting were placed within reach of all the lads and men of England—if they learnt to handle the rifle with the skill and enthusiasm with which they handle the bat—a military strength would be added to the nation greater than that of many army corps.

# PEOPLE AND POLITICS IN AMERICA

GREAT CHANGES IN AMERICAN FOREIGN POLITICS—RUSSIA AND AMERICA—THE CONFLICT BETWEEN CAPITAL AND LABOUR—LAWLESSNESS IN KENTUCKY—THE TREMENDOUS PENSION ROLL OF THE UNITED STATES

*From an American, the Correspondent of* THE WORLD'S WORK

WASHINGTON, *July* 1.

FOREIGN affairs at the present time are occupying the attention of the American public more than domestic affairs. With the exception of the labour struggle, of which more shall be said later, there is no great topic before the American people, and they are more interested in the future of the relations between Russia and the United States than they are in any purely domestic matter.

Until quite recently the average American seldom if ever gave a thought to the relations of his country with Russia because there was no "Russian vote," and there was no necessity for politicians doing anything to cater to American citizens of Russian birth or descent, as they do to our Irish or Teutonic friends. It was a tradition which had become history that Russia and the United States had always been on the most intimate terms, and that if ever the occasion arose when the United States really needed a friend she could rely upon Russia for assistance. Great Britain, France, Germany, had all more or less in turn been the cause of friction with this country, but never Russia. The Spanish war taught us many things, but nothing more valuable than who were really our friends and who were our enemies. We discovered that Russia was no more our well-wisher than some of the other countries that we had regarded as being especially desirous to remain on amicable terms with us, but were secretly hoping for our downfall, and it was after the American occupation of the Philippines and when our attention was directed to the importance of the Chinese trade that it was unmistakably shown that Russia instead of being our friend was likely at any time to be a determined and violent enemy.

The negotiations that have been carried on during the last few months, by which the Secretary of State hopes to preserve the principle of the "open door" in Manchuria and obtain unhampered trade privileges for the American merchant in the Chinese Empire, and the Kishineff massacres, have focused American attention on Russia, and have made it clear that in the future the United States may clash with Russia at many points. That there is a powerful anti-Russian sentiment in this country, a sentiment rapidly growing, comes as a painful surprise to the politicians, because they dare not disregard it, and it

constitutes a new factor in the political equation which must be taken into consideration. This discovery is of extreme importance, as it may have a serious bearing in the future on the relations between the two countries. In the past Russia has always assumed as a thing not to be even questioned the traditional friendship that has existed between the two countries, and has used it for her own purposes, these purposes being mainly to try to prevent closer and more intimate relations between the United States and Great Britain, and to use the United States to oppose British policy. Now the papers are full of articles and communications exposing the fallacy that Russia has always been such a good friend of the United States, and it is pointed out that it is for the advantage of this country to join hands with England and Japan in Chinese affairs. The public is learning at this late day that for years Russian diplomatic agents have been on the closest terms of intimacy with Irish agitators in this country and have used them to keep alive the opposition to England. If the secret history of Russia's relations with the Irish malcontents could ever be published the world would marvel at the amazing revelations, and it would be seen that in all the wide circle of Russian diplomacy having for its object the thwarting of English plans and fostering national hatred of England, no small part of the success of that diplomacy is due to the labours of Russian ministers and ambassadors in the United States.

If any man had said a few years ago that there was even a remote possibility of war between the United States and Russia he would have been laughed at for being crazy. And yet it was only the other day that one of the most important men in the Government said in the course of private conversation: "What has impressed me more than anything else in connection with the feeling aroused in this country by the Kishineff massacres, which has found its expression in public meetings, in private conversation, and in letters which I have received from men of standing and reputation in all parts of the country and of both political parties, is the spirit which shows itself in favour of not permitting Russia to do whatever she may want to do without regard to morality or to the rights of other nations. I do not say that we shall fight Russia, but I do say that if this same spirit continues to increase, then, not this year, or next year, or even the year after, but within a measurable time, we shall fight Russia because the interests of Russia and the interests of the United States will come in conflict, and when they do the United States is not a country and the Americans are not a people who will tamely submit and allow themselves to be trampled upon."

I am not prepared to say that the year 1903 is to be regarded as an epoch-making year, in that it is the beginning of a new foreign policy on the part of the United States, but I know enough of the situation and of the feeling of leading men to feel confident in asserting that the place which Russia formerly held in the affections of the American people has been lost and probably will never be regained, unless Russia's great political rival, Great Britain, commits an act of crass stupidity (as stupid as the alliance with Germany against Venezuela), and literally once more drives the United States back into the arms of Russia.

The conflict between capital and labour continues with increasing bitterness. New York is the centre of agitation, and there the employers, especially those engaged in the building trades, have leagued themselves together and have determined at all costs to crush the unions, or at least force them to adopt a more reasonable policy in dealing with their employers. Investigations made by the masters have shown that the "walking delegate" has been principally engaged in blackmailing employers and inducing the men to strike, so as to be able to make a fee for declaring the strike off and ordering the men back to work. The arrest of one of these walking delegates shows that he has made a very handsome living for years out of this nefarious traffic, but although the evidence adduced leaves no question as to this man's guilt, the men are so much under his influence and are so tainted by the strike microbe that they refuse to believe in his treachery, and, on the contrary, look upon him as a martyr, and as a victim of capitalistic oppression. In Chicago an almost equally deplorable state of affairs prevails. One of the unions there ordered all the men working in the restaurant and lunch rooms to go on strike, and when a committee representing the proprietors of these places asked for an interview with the union, the union loftily replied that it would have nothing to do with the committee but would treat with each proprietor as an individual. In nearly every city of any size there are from one to half a dozen strikes in progress at the present time, and employers are compelled

to yield to the demands of the strikers or else see all work brought to a standstill.

The labour situation is causing the Republican politicians a good deal of concern, because they fear it will be very much worse next year during the presidential campaign, and they dread a strike attended with disorder, which might compel President Roosevelt to order out the federal troops to suppress it, which would cause him to lose the support of the labour vote. As indicative of the quickness with which labour takes offence, witness this. A few weeks ago there was a strike of miners in Arizona, and as the governor of that territory found himself powerless to quell the disorder he appealed to the President for troops and they were immediately sent to the scene of trouble. President Roosevelt is an honorary member of the Brotherhood of Locomotive Firemen, and at a meeting of the Western Federation of Miners last week, Mr. Roosevelt was severely condemned for having ordered federal troops to Arizona and was declared to have been guilty of treason to the principles of organised labour. The resolutions adopted appealed to working men " to array themselves on the political battleground in 1904 and use the franchise of citizenship to overthrow at the ballot-box a system that demands for its maintenance and perpetuation the murderous employment of barbarism." The President's unfortunate position is that he is between two fires—labour on one side and capital on the other. You have heard what labour says. What capital says is that the President is chiefly responsible for the existing state of affairs, because by his settlement of the coal strike last year he encouraged labour to make unjustifiable demands, and by accepting membership in the order of Locomotive Firemen he has " pandered " to the labouring element. And yet, despite this hostility, President Roosevelt stands without a rival in his own party, he is as good as assured of the nomination, and unless the Democrats put up an essentially sound and Conservative candidate, and the chances are they will do nothing of the kind, he is assured of election.

When a few years ago Mr. Bayard in the course of a public address spoke of the American people as being unruly and not extremely law-abiding he incurred the abuse of hundreds of American newspaper writers, but he possibly had in mind the great State of Kentucky, and more especially the County of Breathitt, where civilisation, such as it is, savours of the seventeenth rather than of the twentieth century, and where killing seems to be at once the main occupation and the favourite amusement of the able-bodied men of that delectable community. The law does not exist there. If the member of a rival clan offends, he is promptly killed. The old Mosaic law prevails of an eye for an eye, a life for a life. When a bullet from a Winchester does its work then there is no peace until another Winchester has sung its story and another life has gone out. There is always a feud in progress; there is always some member of a clan who has a wrong to avenge, and who in the fulness of time does avenge it. Men are shot down for the most trivial causes. Murderers do their cowardly work of assassination at all times and in all places, wherever they think it is safe, and can be done without detection.

Recently a man was shot down in the Courthouse, and that crime was so unspeakably brutal and coldblooded that the State was bound to take notice of it; martial law was established and the murderers were brought to trial. But, of course, they were not convicted; that would have been contrary to public opinion. There were some most extraordinary incidents during the progress of that trial, which cannot be detailed here, but the most remarkable of all was the bravery of a man, a hotel keeper, who swore that he had been offered a thousand pounds to perjure himself, and was threatened with assassination and the destruction of his property if he told the truth on the witness-stand. Disregarding consequences, he did tell the truth, and while his life was saved, because he was surrounded night and day by a guard of soldiers, his hotel was burned down, every dollar he had in the world was lost to him, and he was forced to flee the county. The whole ghastly story of crime is a horrible revelation of the lawless conditions prevailing there, and when they are officially exposed, no one any longer wonders that the South lynches the negro, or that the Southern gentleman resorts to the revolver and the bowie knife to revenge a fancied insult.

It is, perhaps, fortunate for the American people that the war with Spain was of such brief duration, and that it was not a war in the real sense of the word, otherwise the burden thrown on the country would have been enormous. Although Spain was so easily defeated, and the whole campaign was practically over

in three months, and, all told, not more than 25,000 men were engaged in active military operations, more than 57,000 men have availed themselves of the generous pension laws of the United States, and have filed applications for the charity of the nation, while 8390 widows and dependents have applied to be supported by the Government as a result of the war. The pension system of the United States has commanded the admiration of many foreigners, and has been denounced time and again by Americans as a scandalous and pauperising system, because it encourages men to apply for pensions who are not properly entitled to them. Already almost 10,000 " Spanish war veterans " have been placed on the pension rolls, and 3160 widows and children have had their claims allowed. Some 18,000 claims have been rejected, but 34,000 claims are still pending, and new applications are coming in daily. The indications are that before the record is completed one-half of all those who enlisted will have applied for pensions, not one-half of the 25,000 who saw active service, but one-half of the quarter of a million men who were enlisted, but who saw no more active military duty than guard-mounting in the depôts and camps which were established at the outbreak of the war.

Any man who enlists in the military or naval service of the United States, and, as a consequence of that service, incurs physical disabilities, is entitled to a minimum pension of £2 8s. a month, and the allowance rises according to the nature of his disability. Judging from the number of applications for pensions, it might be assumed that the American is physically so weak that a short war and a few months of military service in camp are sufficient to wreck his constitution and leave him incapacitated for the ordinary duties of life, and make of him a charge on the country for the rest of his days. No one, of course, believes this to be true. The majority of men who enlisted were in the prime of life, full of vigour and activity, and capable of withstanding fatigue and hardship without danger to their health ; but the great majority instead of being subjected to any extraordinary hardships or danger merely enjoyed a change of vocation, which came as a pleasing break in the ordinary routine of their lives. The mortality in Cuba from wounds and disease was not high, and although some lives were lost in the camps from typhoid and enteric fevers, owing to defective sanitation, certainly the mortality was not anything in proportion to the number of applications filed. The explanation is simple, and is part of our political system of which Americans are not proud. For years past politicians have fostered the granting of pensions to cater to the " soldier vote," and no politician had the courage to fight against a scandalous abuse. The average man is perfectly willing to draw a pension of £2 8s. a month, and when it can be obtained so easily, he thinks he is rather foolish not to avail himself of the country's generosity.

# THE OSAKA EXHIBITION

A SUCCESSFUL UNDERTAKING IN THE CITY WHICH IS THE CENTRE OF JAPAN'S WEALTH AND INDUSTRY—THE LARGEST EXHIBITION EVER HELD IN JAPAN, AND HOW IT TYPIFIES THE PROGRESS OF THE NATION

BY

ALFRED STEAD

AN exhibition is by no means a new event in Japan, but that held this year, from March 1 to July 31, at Osaka, was so much in advance of any previous shows that it merits special attention. First and foremost, Japan has made such great strides in every department of national life, notably in the commercial and industrial branches, that it was only natural this exhibition should far excel either the three held at Tokyo, or the one held at Kyoto, in the past. Although it had many of the features of an international event, it was in reality a national exhibition. Foreign countries were able to exhibit in a special building, known as the Foreign Samples Hall, and in their own special buildings, erected on the grounds later. The hall was all too small for the demand, containing as it does only an area of 23,332 square yards, while England alone applied for a space of 60,000 square yards. The size of this one building gives some idea of the relative size of the exhibition, the total area occupied being 419,504 square yards.

To foreigners visiting it, the city of Osaka is almost more of an exhibition of Japan's progress than the exhibition itself. The second city of the empire, with 922,000 inhabitants, and covering nearly twenty-two square miles, Osaka is the centre of Japan's wealth, commerce, and industry, and no site for an exhibition to show the progress of the country could have been better selected. Ten or fifteen years ago there was scarcely a factory in the place; now it is approached through regiments of tall chimneys, and afar off the smoke of 5000 factories blackens the sky. The 2000 great chimneys mark the position of buildings sheltering over 60,000 men and women workers. Besides these factories there are some 20,000 weaving establishments, with over 30,000 handlooms, turning out over 3,500,000 of pieces of cotton cloth yearly. Of the cotton spinners of Osaka, an eminent authority has said that, whereas in England it used to be considered necessary for the trade of spinning to pass through one or two generations of experience before the workmen were capable of really excellent work, the Japanese weavers have in ten or fifteen years' time been able to excel in skill the best English workmen.

Osaka has been called "the Venice of the East," being divided in all directions by canals, whose waters are crowded with boats of every description, carrying merchandise to and fro between various factories and the port. For this great commercial city is also a port, and when the new harbour works are completed, they will be one of the most perfect constructions of their kind in the world, some £2,500,000 having been expended on them. Over 20,000 steamers come and go every year, and some 6,000,000 tons of merchandise are handled annually in Osaka. The city would seem to promise every prospect of prosperity, and it is without doubt the future nerve-centre of the Japanese Empire, although Tokyo will remain the seat of Government.

The 875 streets and the 400 bridges—among the latter three great iron bridges of between 700 and 800 feet in length—might have proved too difficult an order for the average visitor to the exhibition, and every care was taken to provide English-speaking guides and interpreters, somewhat on the plan of the guards in the American sections at the Paris Exhibition. Many students served in this capacity. In Osaka is also to be found the Government Mint, fitted largely with English machinery, and modelled on the British Mint, and a great Commercial Museum, an institution found throughout Japan and believed to be of the utmost value in spreading commercial knowledge. There are also numerous historic places and buildings, many of which have been thrown open for the first time to foreigners armed with the necessary permits.

Coinciding with its commercial growth,

Osaka's old-time wooden houses are giving way to modern brick and stone edifices of several stories. The telephone, electric light, and both the police and the fire brigade systems would do credit to any European town. Taking it as a whole, Osaka presents to the foreign visitor a most marvellous proof of the growth of Japan along the lines of Western commercial progress.

The exhibition found a pleasant situation on the southern side of the city, with a delightful background of evergreen-clad hills, through which a high pagoda stretches upwards to the blue sky. The Industrial Hall, besides occupying most space (26,000 square yards), was the most important of all the buildings, and typified in itself the change that has come over Japan, which so few years ago was almost purely an agricultural country. In this building were to be seen modern lacquer-work, the porcelain and the *cloisonné*, which were among the great and original industries of the country. The last thirty years, alas! have brought about a sad change in their excellence, much having been sacrificed to increased speed of production, and an endeavour to please the Western market. In respect of the lacquer-work it would seem that the sacrifice had been made in vain, for the Germans, with their paper-board lacquer, "made in Japan," have practically monopolised the market in Europe and America. Although less attractive, the display of matches, mats, strawplates, fans, &c., was very complete. In the Mining and Metallurgy section the visitor might receive the greatest surprise. Here he saw working models of the great Japanese mines, like Ashio, and the coal mines of Kyushyu, revealing hitherto unknown resources of the Japanese character. After seeing the exhibits of coal and copper, silver, and gold ore, it is not difficult to realise that Japan is one of the greatest copper-producing countries in the world. There were also exhibits of petroleum, an industry worked in connection with the Standard Oil Company. With this exception, the entire building was one continual reiteration of the capacity of Japan to do her own work, and to do it as well as other countries could.

The Agricultural Building was not strikingly remarkable, though it certainly possessed an interesting feature in the great glass jars containing locusts and locusts' eggs, collected by children in various parts of the country, who, for rewards offered, thus helped to prevent this pest from increasing. Rice and silk exhibits abounded in this building. The Fisheries, or Marine Products Building afforded an insight into one of the great industries of the country, where fish is one of the staple foods, and much used for manure. The most interesting exhibits were the specimens of pearls artificially "hatched" by a Mr. Mikimoto. This is the only invention of the kind ever patented in Japan, and the inventor is able to produce real pearls artificially, at a much lower rate than pearls are ordinarily obtainable for.

The Forestry Building recalled the fact that formerly the forests were all in the hands of the feudal lords, from whom they passed to the Government. To-day, therefore, the Government owns the bulk of the forest lands. An interesting feature of the exhibits here was the Japanese method of soft polishing of natural woods, a method much more beautiful than the use of any varnish. In the Educational Building was an exhibit of the working of seismological scientific instruments, the study of earthquakes being one in which Japan excels.

The five thousand or so exhibits in the Machinery Hall (covering 4000 square yards) were such as demonstrate the progress of Japan in this direction. The growth of the use of steam-power in the workshops of Japan is very remarkable. In 1895 there were 1287 workshops, with 2031 machines aggregating 49,773 horse-power. In 1901 there were 2278 with 3593, aggregating 82,092 horse-power. Patented machines for the weaving and spinning industries, special apparatus for the silk and tea industries, and new patent steam-pumps reminded one that if the Japanese can imitate, they can also invent. The largest piece of machinery constructed in Japan to be found in the exhibition was a gigantic crane of 200 horse-power, to be used in coal mines. There was also a model of a water-tube boiler, invented by a Japanese naval constructor.

The Foreign Samples Building contained exhibits from fourteen foreign countries, amongst them China and Korea. The Canadian Building attracted universal attention, and received the highest medal, its arrangement being excellent and the quality of its exhibits unequalled. Canada was the only part of the British Empire to have a special building. There were two buildings belonging to American firms, two to Germany, and one to an Austro-Hungarian firm.

The Transportation Building afforded visitors an opportunity of learning that lines of Japanese steamships run to all the ends of the earth, and that Japanese railways are daily becoming

THE EFFECT OF THE ILLUMINATIONS IN THE CENTRAL COURT

more like the best type of English and American lines. The Fine Arts Building contained works partly in the Japanese, partly in the European style, but on the whole was rather disappointing.

Perhaps the most interesting buildings in the exhibition were those containing the Formosan exhibit. First, as representative of the one external possession of Japan, and, secondly, because of their artistic appearance. Whatever arguments may be advanced on the score of utility, there is no doubt that Japanese-built houses are far superior artistically, and more architecturally symmetrical for the country, than are European. Among the 4000 exhibits the majority were of native industries. A model of a pagoda formed of refined camphor called to mind in an effective manner the fact that Formosa supplies 80 to 90 per cent. of the world's camphor consumption. The exhibits of sugar marked the growth of that industry, towards which the Japanese Government have devoted much attention. Amongst the exhibits were also Formosan straw hats, closely resembling the costly Panama, but obtainable for less than half the price.

The exhibition drew on its first day some 25,000 visitors, and there were seldom fewer

A GENERAL VIEW OF THE EXHIBITION

The Fine Art Building is shown on the left

visitors than this. There were not many foreigners to be seen except the Chinese, of whom a surprising number have visited the exhibition. The grounds and buildings were frequently illuminated, and a most fairy-like effect was occasionally created by the release of hundreds of thousands of the great Japanese fireflies, specially brought for that purpose. Competitions among the Japanese firework makers have given to the visitor a variety of these nocturnal exhibitions, supplementing excellently the illumination of the white buildings.

Outside the exhibition was the Aquarium of Sakai, about eight miles south of Osaka, and close to the seashore. The aquarium was situated on the site of a ruined fortress constructed in the fourteenth century. The gardens around the building were laid out in the French style, which seems a mistake when the excellence of Japanese gardens is considered. The main building contained several special tanks, so constructed as to represent as nearly as possible the real appearance of the bottom of the sea or the river-bed, as the case might be. The centre tank was divided into two, an upper and a lower, the former being provided with real rocks of various shapes and sizes, while the latter was dug into the ground to be the temporary home of waterfowl. The lower tank was darker than the other, and arranged with natural stones, which lend a very realistic appearance to it.

From every point of view the exhibition has been a success, and although comparatively few foreigners have visited it, a great number was not expected, since, as has been said, it was really a national exhibition. There were 320,325 exhibits and 153,799 exhibitors. Special bazaars close to the entrance of the exhibition were devoted to the sale of goods from the various prefectures, and exhibitors inside were also allowed to sell their exhibits. In a little over a month the sales had reached the respectable total of £42,000, the figures for the last week being £11,000. The effect on the Korean and Chinese visitors was as great as had been hoped for, and generally the committee in charge of the arrangements are to be congratulated upon their success. It is quite probable that the success of this national exhibition will pave the way for a really international exhibition in Japan in the near future.


A CORNER OF THE MACHINERY SECTION

A SAILING-MATCH ON THE THAMES

# THE WORLD'S PLAY

## IX.—YACHTING

DEVELOPMENT OF LINES IN HALF A CENTURY OF YACHT-RACING—THE SKIMMING-DISH AND THE BOARD-ON-EDGE—THE SCHOONER "AMERICA"—THE "VALKYRIES"—DEATH OF THE CENTRE-BOARD—THE "SHAMROCKS"—TEMPORARY DECAY OF FIRST-CLASS SPORT—SMALLER YACHTING—THE HUNTRESS OF THE SEAS

IT is of course the America Cup which turns the thoughts of so many thousands on both sides of the Atlantic to yachting at the present moment. British yachtsmen have spent over £300,000 to get back to this country a cup which originally cost £100, and which would fetch about sixteen sovereigns at the present value of silver.

Having inherited the earth in the days of his meek childhood, Man naturally has been trying ever since to become equally familiar with its sister elements. From Daedalus to Santos Dumont, the conquest of the air has slowly claimed the hard-won knowledge of each successive failure. From Noah's less ambitious predecessors to Herreshoff and Fife and Watson, the conquest of the sea has year by year produced a greater triumph of human ingenuity and art. At no period of that eventful history has the tale of victory been so pronounced as in the half-century since every English yacht was beaten by a Yankee pilot-schooner. Yachting has, no doubt, done more than anything else to foster, even to make possible, those countless, costly experiments which alone can teach us a few points in the problem of movement upon water. Long before the *America* came over, yachting was a favourite sport in this country. One of the original founders of the Yacht Club at Cowes was Lord Uxbridge, whose intimation to the Duke of Wellington: "By G—, I've lost my leg," is as well known as the Duke's reply: "Have you, by G—." Such men as he did much to make yachting the sport it very soon became, but their very virtues involved the defect of not moving very fast in the direction of development. Though their craft were certainly finer in line than the yachts which Pepys has described in the days of Charles II., they still retained the bluff bows and round bellies which meant slow sailing and heavy pitching in a choppy sea. The idea that a salmon gave the true lines for a yacht took a long time to die: it seemed so natural. If you could look nowadays at the outline of a salmon from above and at the deck of *Britannia* from a similar position, you would see that the fish's head has become the yacht's stern, and the fine lines where the salmon's tail joins on to his body are similar to those from which the bowsprit springs; for now we know that a fine entry with slightly fuller delivery aft gives greater speed when a vessel's hull is

RACING ON THE THAMES
Fourne Fnd

forced through and over the water by wind-pressure from above the water, than the bluff shoulders and tapering tail with which the fastest game-fish speeds through the enveloping element by his own energy.

The extraordinary changes in the build of yachts have been due to more causes than one. The rules laid down to regulate measurement, by which classification is decided, probably provided the first reason for a skilled designer. He had to build his boat in spite of them. When his boat was only to be of a certain length, he had to squeeze the biggest, fast-sailing boat possible into that length. He began by cutting away portions of the hull that were merely dead-weight and sticking them on again where they would add stability, and therefore power, to carry more sail. Then he became more crafty still. When yachts ceased to be measured over-all or "between perpendiculars," and under a new rule the length was taken at the water-line, the length that was officially measured was from stem to stern at the water level when the yacht in racing trim lay in calm water ready for the fray. But when she was off, and heeling over to the pressure of the breeze upon her sail, the immersed length was greatly altered. The wily designer then gave his model a long overhanging bow and stern so that when heeled over, the actual water-line was perhaps half as long again as the measured one. The game went on a little further. As soon as it was possible to widen the hull, in order to carry more sail, the hull was widened to the limit at which increased sail-surface was unable to increase its speed. Then a loaded hull, however narrow, was found to carry more sail than an empty one, so the underwater bulk of the racer was increased to carry the enormous loads of lead possible with a waterline of ninety feet, until the limit approached when no increase of sail could drive it faster. On this side we have always favoured a deep hull with large displacement. The Americans have long preferred a wide hull with a moderate cargo of lead. Known, in their extreme forms, as the "board on edge" and the "skimming dish," these two types have been the natural outcome of the difference in harbours, in seas, and in climates of the two nations. Worked out in modified shape as they will be seen in *Shamrock III.* and *Reliance*, these two types are to fight what must be the last battle

"IMATRA"
West, Southsea
Type of the old-fashioned cruiser

between the highest development possible to each.

The Americans, whatever may be the result off Sandy Hook this summer, can certainly claim to have been the first to design a shape both with the deliberate idea of increasing speed and with the successful result of doing so. Their *America* finally abolished the "cod's head and mackerel tail" of British designers. A little consideration will show why the mere gain in swiftness of turning derived from rejecting the old ideal would have been alone sufficient to stamp their clever innovation as better. The bluff, powerful old bows smashed through the waves fairly fast when the wind was fair. Against the new design they were hopelessly outpaced directly the wind was contrary, because they could not zigzag along their course quickly enough; they could not sail so close to the wind; they lost valuable time by pitching; while the foreigner (the first yacht that ever crossed the Atlantic) took the seas more quietly and not only sailed faster but nearer to the wind. She also had a great advantage in her sails, which were cut flatter than the English pattern of the time and were of cotton.

The *America* cost Commodore Stevens and his syndicate £8600 to build, and about £15,000 for her racing trip across the Atlantic. She sailed across here, and she won a good deal more on her return home, was used as a blockade runner in the Civil War, was sunk by a Federal ship off Florida, was raised and fitted afresh, worked as a trading-schooner for many more years, and actually helped to defend the Cup at New York in 1870. Our own *Arrow* has almost as good a record. It is worth remembering that *Valkyrie III.*, our challenger of 1895, was broken up six years afterwards, and that *Shamrock III.* was towed all the way across the Atlantic at the end of a hawser, for the outcome of the special measurement rule, under which the Cup races are sailed, is certainly not a good, wholesome cruising yacht.

It was nineteen years before we challenged for the *America's* Cup, and in that period much had been developed in each country along the lines she introduced. In October 1871, Mr. Asbury, whose *Cambria* had been defeated by *Magic* the year before, brought his *Livonia* over to New York, but the only race she won was against *Columbia*, when the American clipper was disabled after beating the visitor twice. The *Sappho* (schooner, of 300 tons) was then substituted for her and beat the Englishman twice again. Each challenge had cost a total of some £40,000. The Canadian efforts, with *Countess of Dufferin* and with *Atlanta*, in 1876 and 1881, were unsuccessful, and each involved greater expenses still to both sides. It was not till 1885 that we produced on this side something radically different to anything we had tried before in our search for the right shape for speed. Four years before "single-stickers" had permanently come into fashion for the Cup, and it is with the development of the cutter which resulted that I have most to do.

Scientific discovery had, as usual, resulted

Robertson, Gourock

"SHAMROCK III." IN OCEAN RIG

in a similar progress on the part of sporting designs. Before 1870 very little had been known of the real laws which governed the resistance to bodies in water. Colonel Beaufoy had, indeed, experimented in this direction at the end of the eighteenth century, but it was not until 1866 that Macquorn Rankine developed the theory of the surface-friction caused by the rubbing of water against the sides and bottom of a ship, and it must have been a good eight years afterwards that William Froude proved the correctness of this theory by delicately accurate experiment, and published a law of comparison between ship and model which, combined with his own lucid explanations, assisted shipbuilders to understand what they had hitherto scarcely dreamed of. Mr. Bentall's brilliant and revolutionary models of *Jullanar* and *Evolution* were one immediate result; for, though, by occupation, an Essex plough and agricultural-implement maker, Mr. Bentall loved yachts enough to realise the

logical outcome of Mr. Froude's principles when applied to what was then the tonnage rule, and the double taxation upon beam. of the true fin-boat, and actually used (in 1875) the bulb fin keel of lead which is usually thought to be so modern a development. It

Wm. U. Kirk & Sons, Cowes

"SHAMROCK III."

CHALLENGER FOR THE AMERICA CUP

Length meant speed, and was boldly used in *Jullanar;* draught was untaxed, and was equally boldly employed for stability. The deadwood fore and aft was cut away in more daring fashion than was shown again till *Thistle* was designed. *Evolution* had the profile will be seen that since beam counted in English tonnage measurement, while depth did not, the "plank on edge" was the obvious deduction. *Genesta* was of that type, and in the choppy seas of the Channel she proved a flyer, slashing through the waters with great

power. She had not developed that peculiar shape underwater which *Valkyrie II.* showed first, and *Shamrock III.* has developed still further; but those who have all the series before their eyes can see easily the development which *Genesta* scarcely foreshadowed to any but a very few of her contemporaries on this side. Over there, the different problems they had to face produced a different model, and it must not be forgotten that we were then sailing in New York boats adapted to our English seas against boats adapted to American conditions. Those conditions off Sandy Hook were usually light winds and long smooth swells. They evolved a shallow boat that would skim over the surface like a dish without dragging any weight with it; and since the boat could not be allowed to drift sideways

"RELIANCE"

DEFENDER OF THE AMERICA CUP

"BRITANNIA" West

when she was "beating" with the wind on her bow, the centre-board was invented, and she gripped the water when she turned to windward with a triangular plate lowered through a slit in her keel which was pulled up again to lessen all resistance when she ran before the wind. That was the idea which gave the American *Puritan* her victory; but in one case only by a hundred seconds, and after Sir Richard had refused to claim a foul that must have been given in his favour. In 1895 Mr. Oliver Iselin must have forgotten this in securing the disqualification of *Valkyrie III.*, which had been terribly hampered by the accompanying fleet of steamers. To Lord Dunraven's plucky efforts I must now turn; for they mark the next crucial point in the development of design on both sides of the Atlantic. In America, yachtbuilding, which began with John C. Stevens, and was carried on by George Steers and Robert Fish, was brought to the point where *Puritan* was possible by Edward Burgess, and it is significant that her design was really only a refinement of *Shadow*, built in 1872 by N. G. Herreshoff. It was Burgess who designed both *Mayflower*, which beat Lieutenant Henn's *Galatea*; and *Volunteer*, which proved superior to Sir James Bell's famous *Thistle*. This latter was designed by Mr. Watson, who laid the lines of *Shamrock II.*, and was the first boat built in secret. The old tonnage rules had vanished, and she was the result of an attempt to build a boat right up to the length of ninety feet allowed; with enough breadth to carry all possible sail, without being tubby; and with as much depth as was permitted by the problems of resistance under water. She was beaten by the shallow centre board; and her defeat produced G. L. Watson's magnificently daring experiment, *Valkyrie II.*, the first of the modern type which influenced American design as much as it did our own makers; for *Vigilant*, designed to meet her by N. Herreshoff, though she kept her centre-board, was an obvious compromise between the skimming dish and the board on edge. We had really frightened them at last.

*Valkyrie II.* was worthy of the most splendid year in yachting annals; for then first the Prince of Wales' *Britannia* took the water, and this yacht, though not more than a match for Lord Dunraven's, eventually avenged him by beating *Vigilant* in English seas. The English challenger of 1893, black with a gilt line, sailed the first match against the white *Vigilant*, with her brilliant under-body of yellow Tobin bronze, on October 5, in a very light breeze. She blanketed the American and was twenty-five minutes ahead when the Committee stopped the race—if race it could be called. The second day Lord Dunraven lost by just under six minutes in a light wind, and on the third day by ten minutes thirty-two seconds. But October 13 was full of the most exciting incidents, and in the end *Vigilant* tore for home at all risks, and got there just in time enough to win. Lord Dunraven was by no means disheartened, and brought back no increased faith in centre-boards. His next effort unfortunately ended in a controversy, with which I have here no concern. He was so hampered by the attendant steamers that he withdrew his yacht. But the great expense of building and racing her had produced yet a further development. *Valkyrie III.* showed a further attempt to cut down resistance under water by putting a rake on her keel which concentrated the depth in one point without paying

the penalty of carrying weight all along it. Herreshoff's answer in *Defender* proved that the day of centre-boards was over, and showed Lord Dunraven was right in preferring the greater power of a deep keel. Sir Thomas Lipton's first *Shamrock* was built of manganese bronze underwater with aluminium above the waterline, and spars of rolled steel plates. She cost £43,000 to build and sail. The constant delays caused by calms made it almost inevitable to have the races at a different time another year, and they will probably come off this year in August. The second *Shamrock*, designed by Watson, cost over £20,000 in building alone. She sailed just three times as fast as *Aurora*, which came in nearest to *America* in the first race for the Cup at Cowes; she carried thirty hands instead of ten; her topsail alone was bigger than *Aurora's* mainsail. For his third effort Sir Thomas Lipton has gone back to Fife, the designer of his first, and *Shamrock III.* is the narrowest (next to *Valkyrie II.*) and the longest boat over all we have sent across. Herreshoff, on the other hand, has seen the good of Crowninshield's ideas in *Independence*, and has built *Reliance* 141¾ ft. over all (with a waterline of 90) and a beam of 25¾ as compared with 22½. The draught is slightly greater also in the American model, which carries the enormous sail-area of 16,000 ft., and must, therefore, concede time allowance to the 14,500 ft. of *Shamrock III.* Fife's lines, while thoroughly British, are some of the most beautiful ever seen. Their centre of buoyancy is much further forward than in his first boat. The curve of the stern into the fin is much longer, and furnishes an exquisite example of Hogarth's line of beauty; and again the fin is raked so that the heel is two feet deeper than the toe, and the lead at the forward end is blunt and flat-bottomed. *Shamrock III.'s* great deadrise and her bulk under water make her exactly opposite to *Reliance*, whose broad and shoal body is very clearly seen when she is out of water. A man could hardly stand erect between her decks. In *Shamrock* there is ample room for any purposes a cruiser needs. The combination of practical work with magnificent sport produced by the meeting of these two, would be difficult to beat. No one dreamt some twenty years ago that such a speed as fourteen knots could be got out of racing-cutters of some 200 tons. What would happen if a 10,000-ton vessel with steel masts and spars were built for speed, on the design which the coming Cup race will show to be the best? Even the new turbine engines would have to look to their laurels. But many are of the opinion that we have already gone too far; and when you consider the terrific strain on a single mast

"VIGILANT" West

"AILSA"

excited by 15,000 square feet of canvas, it is no wonder that accidents have happened. Spars have already broken both in *Reliance* and *Shamrock III.*, and life has been lost in consequence. In 1901 the King was on board when *Shamrock II.'s* mast went, and her whole sail-plan slowly melted to the water's edge. There is a good deal of justice in the hope often expressed that after we have won the Cup, it will be arranged that the competing yachts shall be about the size of *Britannia.* When *Shamrock III.* is in dry dock, if the base of Nelson's column in Trafalgar Square were placed level with the lead at the bottom of her keel, the highest point in her canvas would tower above the statue of the Admiral. The racing-machine has reached extremes of construction which are becoming dangerous. But the extravagant dimensions of the present "Cup" yachts are not accountable for the undoubtedly stagnant condition of first-class yacht-racing in England this season, apart from the "America" contests. It is not that we have no yachts, or that we do not care for yachting. That the state of the sport as a whole is prosperous is shown by the magnificent steam-yachts constantly being built, the unceasing contests between the smaller sailing craft; the ever-growing popularity of cruising, one of the most delightful and health-giving pastimes in existence. To "bad times" and the counter attraction of motor-cars the depression is probably due as much as to any other causes. We have now a splendid rule of measurement introduced by the Yacht Racing Association two years ago. It produces a fine, wholesome yacht in all the classes. But new rules will not work wonders at once. It was some years before the season of *Britannia*, *Satanita*, *Valkyrie*, *Navahoe*, and *Ailsa* was produced by reformed regulations. But when the example then set by the Prince of Wales and Lord Dunraven is followed by others with equally firm and independent ideals, we shall see just such a revival again as they produced ten years ago. Meanwhile, we have the fever of the Cup races hot upon the body politic of yachting, and temperate health can scarcely be expected till the problem the Cup races exist to solve is settled. In spite of all such temporary drawbacks, however, Cowes week remains one of the smartest functions of the year, and every reader of these pages will, no doubt, be there soon after he has read them. One great reason for the

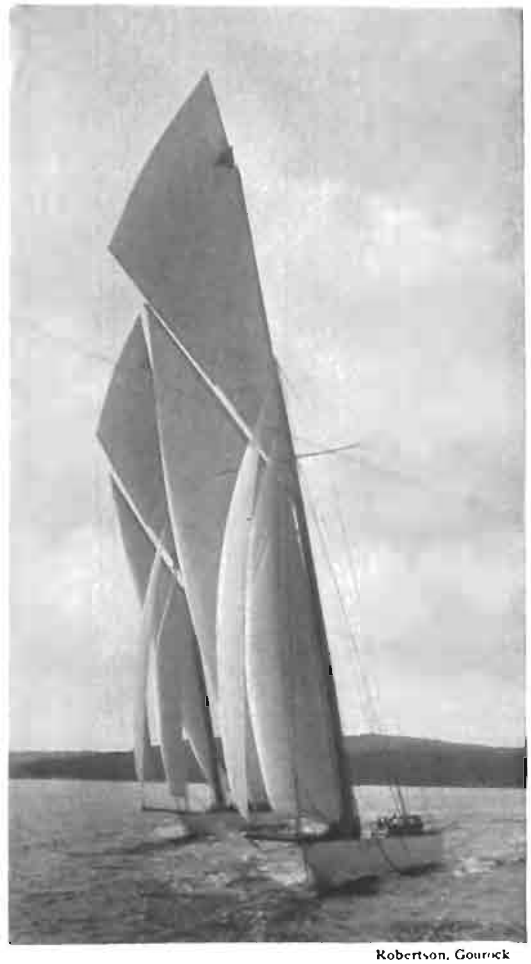
THE SAILING-CANOE

The cleverest of all small craft

popularity of the events presided over by the Royal Yacht Squadron is the exclusiveness of that famous club, an exclusiveness of which old William Caldwell, its faithful waiter, was so rigid a guardian. Seeing a stranger in undress uniform on the sacred platform one day, William asked who he was. "I'm Deputy Master of Trinity House," replied Sir Richard Collison, K.C.B. "Then you can walk about here," announced William, "and as far as Mr. Myers' box." *Sir R.*—"But I want some luncheon." *W.*—"Then you can't have any." *Sir R.*—"But I thought we had the *entrée*." *W.*—"You won't get no *entrées* here."

But neither Cowes nor the Solent is the yachting world. I know no more charming view than that from the old Club House in Queenstown Harbour, though Scotchmen tell me there are half a dozen better north of Tweed. I know few things more beautiful in its way than the Sailing Barge match from Gravesend to the Mouse Light and back; and few things more delightful than a trip across the Norfolk Broads in a wherry that is as comfortable as a houseboat and as handy in a breeze as a pilot-cutter. I know few holidays more splendid than a cruise round the British islands in a fifty-tonner, and no racing more exciting than that between a little fleet of sailing canoes on Bourne End reach. But I am a modest man; and even my dull pulses moved a little quicker as I saw *Shamrock III.* on a trial trip just before she crossed. Then I realised that she is a huntress of the seas indeed, a very Diana of the ocean; and the North wind, her huntsman, fresh and spacious from his wholesome fastnesses, halloos her white hounds over the roaring ocean, "the chace of the world," as Henley wrote, whose death it is still hard to realise:

"Hark to the peal
Of the pack in full cry,
As he thongs them before him
Swarming voluminous,
Weltering, wide-wallowing;
Till, in a ruining
Chaos of energy,
Hurled on their quarry
They crash into foam!"



Robertson, Gourock

"SHAMROCK I." AND "SHAMROCK III."
The last spin on the Clyde

ALL SPINNAKERS SET

YOUNG BOTANISTS AND ENTOMOLOGISTS AT WORK: LEA BOARD SCHOOL, MATLOCK

A scheme of Nature Study has been carried out here for ten years (W. J. P. Burton, Headmaster)

# LEARNING FROM NATURE

FIELD NATURALISTS HAVE REVIVED THE METHODS OF GILBERT WHITE—NATURE LORE IN BRITISH SCHOOLS—HOW THE CHILDREN ARE MADE ACQUAINTED WITH LIVING ANIMALS AND PLANTS—THIS MUST NOT BE CONFUSED WITH SCIENTIFIC TECHNICALITIES—FALSE TEACHING AND TRUE

BY

R. HEDGER WALLACE

IT is now many years, practically a generation, since the teaching of science in our schools was advocated, and after much discussion, to a large extent introduced and accepted. In response to this demand for science teaching, object-lessons in science have, for many years past, been given in the lower classes of our schools, the presumption being, when they were introduced, that such lessons would be observational rather than informational, but unfortunately it is the latter type that has been most general. Again in the higher classes in the schools, science teaching has also ranged from the teaching of elementary general knowledge about the leading facts and principles of many co-related sciences, to the teaching of specific sciences as distinct subjects. It is obvious that the science teaching in our schools, whatever be the standard, has necessarily during this period reflected the views and copied the methods of specialists. These experts, unfortunately, be the science they profess physical or biological, have only been able seemingly, in the past, to appreciate results that have been elaborated in laboratories, so that whatever be the subject, the developments have been toward ever-increasing analytical esoterism. A popular writer has recently said that the science of the present day seems to be chiefly occupied with the examination of entrails, and that this statement figuratively conveys the tendency of current professorial teaching cannot be gainsaid. This all-absorbing devotion to the dissection of structures, separation of fibres, enumeration of feathers, and examination of constituent

A GARDENING LESSON AT WESTBOURNE ROAD SCHOOL, SHEFFIELD

composition, has brought about a reaction; with the result that the amateur or field naturalist, as opposed to the professional botanist and zoologist, has been thrown back on older

LEEDS CHILDREN ON A BOTANICAL EXCURSION

Bramley Broad Lane Board School

LOOKING FOR CREEPING THINGS
Students of the Horticultural College, Swanley

ledge," it offers an alternative to the science teaching that is according to academic syllabi and official codes.

"Nature Study" is an expression which has lately become familiar through frequent use, but it has been so mis-applied that practically it is meaningless. We shall therefore discard it in this article and in its place employ the expression "Nature Lore," or as it might also be called "Country Lore." Either of these terms implies that the outlook is on living Nature at work rather than Nature dead. Through "Nature Lore" the attempt is made to get children acquainted with living animals and plants, their habits and ways, both in the wild state and under control; and it has nothing to do with technicalities as to their structure and

methods of natural history. Failing to be attracted by the methods of the professional worker, and not appreciating the results elaborated by him in his laboratory, field naturalists, who may be taken to represent the majority of nature-lovers, have returned to the methods of Gilbert White. This new revival of Natural History methods which have never failed to attract and which appeal to the instincts of Englishmen has now also reached the schools, and under the terms "Nature Study" and "Nature Lore," or even as "Nature Know-

CORNISH BOYS SEARCHING FOR CRYSTALS OF QUARTZ AND FELSPAR
After having a lesson on granite (Wm. Boxhall, Treverbyn School)

A GROUP OF GARDENERS
Sompting School, Sussex (Miss Harriet Johnson)

classification. It is the acquisition of that natural knowledge which Emerson so well indicated when he wrote that "the best part of a boy's schooling is that which he gets on his way to and from school." This knowledge is not science—which concerns itself with the analysis and classification of facts—yet it is as important, for the external world of a living thing is as much part of it as its histological character.

The fact must not be lost sight of, that the cry for "Nature Lore" is due to a reaction, brought about by science assuming a severely rigid and academic dictatorship; and that through Nature Lore an attempt is now being made to revert to the outlook of earlier and simpler times. Our forefathers

FISHING FOR TADPOLES
Coombe Hill School, Westerham (H. Clark)

so carefully watched the connections between natural objects that the fields and lanes, and their animal and plant life, became the pages of their yearly almanac. The present generation and more specially our children have learnt to look upon the outside world as something to be taken for granted, with the result that they look upon the wide realm of Nature idly and aimlessly. To revive the lost or vanishing interest in the surroundings of a child's home and school is the chief and the practical aim of the Nature Lore movement.

To get children interested in Nature Lore experience shows that the subject must be placed before them in an informal and incidental manner. All children have certain Nature instincts or a Nature hunger, but according to their individuality, their interest in Nature differs widely. For this reason a teacher cannot give lessons in Nature Lore, and therefore all he can do is to find for children appropriate opportunities and conditions for the exercise of their own activities. Eggs may interest one, moths another, grasses a third, shells the fourth, an aquaria the fifth, and rabbits the sixth, and so on; each has to be stimulated and directed, but to ask all to make collections of grasses, for example, would at once be imposing a task on those whose natural inclination is to exercise their activities in another direction. Again, in respect to Nature Lore, a teacher is not a

A LESSON ON THE SUN-DIAL
Bedales School, Petersfield (Theodore W. Grubb)

purveyor of information, but stands rather in the position of an elder brother who is personally and keenly interested, and who—unofficially—stimulates, advises, and directs; thus ever widening the outlook of each child.

Nature Lore teaching in schools is a very recent movement, but it has already made some progress in English schools, generally, however, as voluntary work done by the pupils in their leisure time and holidays. Three distinct types of Nature Lore work can be traced, firstly, when it is accepted as part of the general teaching, that is, its value as an educative influence is recognised, and the regular school curriculum is so organised that children are given the opportunity and are induced to make out-door observations; secondly, when, though left to the voluntary efforts of pupils, yet the school authorities directly give to it both encouragement and recognition; and thirdly, where it is dependent upon the enthusiasm of the members of School Natural History societies and Field Naturalists' clubs.

Much that is usually regarded as Nature Lore work is, however, nothing more than simple observational lessons in natural science. A lesson, for instance, given in the class-room on some natural object, be it a slug or a primrose, is simply a natural science object-lesson. Should the specimens used in the class-room have been obtained by the pupils themselves out of doors, then the opportunity for acquiring Nature Lore has been added to the science lesson. In studying Nature, of course, both its physical and biological aspects can be considered, and through field-work the attempt is made to study "Wild Nature"; but animals and plants can also be studied when under control, that is, we can through garden plots and glass frames, germinators and breeding-cages, aquaria and terraria, hutches and pens, and by many other means study closely animal and plant life, yet the life so studied is not "wild."

SCHOOL GARDENS AT BRUTON, SOMERSET

Each boy has a plot of about a perch and a half. Vegetables, &c., are grown under the direction of a skilled gardener, and prizes are awarded for the best garden. Sexey's Trade School (Wm. A. Knight, Headmaster)

In many schools the acquirement of Nature Lore is stimulated (and it must not be forgotten that Nature Lore requires personal, direct, first-hand contact with Nature) by recording in the school-room the observations made by the pupils out-doors, and generally out of school hours. These records take many forms, it may be meteorological, noting simply the form and colour of clouds, sun's point of rising and setting, &c., or it may be a Nature calendar, wherein all classes of Nature observations are noted with the name of observer, or it may

be a Migrant Record wherein the arrival and departure of birds are recorded, or it may take the form of a Bud and Blossom Record. When school geography is taught as an out-door study, the record may take the form of a Nature survey map, which will indicate where, in the area surveyed, specific plants and animals can be found.

In many of our schools the children are encouraged to keep Nature note-books and diaries, and here again it is found that teachers will confuse Nature Lore with elementary science object-lessons, or rather they turn what if it was entirely informal and incidental would be Nature Lore into a science lesson. Many kinds of Nature note-books are encouraged, in some the children make a daily note about something they have noticed, in others they keep in their notes to their own special hobby. To call on a class to make daily observations and notes on a set subject, say, on the germination of beans, is a lesson and is elementary science work, not Nature Lore. The case is different when a class is called on to keep their own individual Nature note-books; one may then find that one note-book is taken up with observations made on the habits of Hermit crabs, another is on nest-building, another on the development of toad spawn, another on the shapes of leaves, and so on. The introduction of formalism in any shape in the relationship that ought to exist between the teacher and the children is contrary to the spirit of Nature Lore, so that if the movement is to be popularised and developed, the methods employed must always be informal and incidental.

In some schools what is really the object-lesson or elementary science teaching in the school, though it usually is not so called, is given out of doors. The classes in such schools go out into the garden and there, with the appropriate objects around them, have a lesson, say, on the parts of a flower, or they are taken to a common or to woodlands or farm-lands and there get, with suitable surroundings, the special lesson which the teacher desires to give; or they may be taken to a quarry or a railway cutting, the sea-shore or the hill-top, according to the predilection of the teacher. Of the same type are the lessons given on such subjects as spiders, moles, earthworms, ants, &c. When the teacher, having previously and privately gone over the ground, leads his class to the spot and there exercises them in a pre-arranged programme, giving what is really an observational lesson, yet does not restrict the inquiries of the children, their outlook will be widened. There can be little doubt that much of this outdoor work would foster Nature Lore if the lesson-giving element was excluded. Again, in a few of our schools, the science work is so planned as to be a preparation for the pupil's voluntary participation and activity in Nature Lore, but this science preparation really means that the Nature Lore work of the pupil will be restricted, and the outlook contracted, to such things as have an illustrative bearing on the variety and amount of classified knowledge imbibed. If it be botany, for example, that is taught in the school, the out-door voluntary work done in term time or out, will be that of a systematic field-botanist, and this, though excellent in its way, is not the type of work that appeals to a student of Nature Lore, whose point of view finds expression in Hæckel's definition of the term "Œcology."

In some schools the above type of teaching is to be found practically reversed. The children, in this case, are first taken out of doors as a class to some pre-arranged spot, and by the direction of the teacher look at certain specified things, gather what they are told, and make the observations they are desired to do. Subsequently in the school-room one or more science lessons are given, based entirely on the data obtained during the walk. These walks are in fact the introductory part of a series of science lessons.

In a select number of schools, especially those for girls, an effective combination of elementary science teaching and the making of Nature Records is to be found. The girls get the science teaching common to higher grade and secondary schools, but they are also called upon to complete School Nature Calendars, Bird Records, &c., and to keep personal Nature Diaries. The endeavour is made in most of these schools to keep the two things—Elementary Science and Nature Lore—distinct, yet the science teacher judiciously takes advantage of the Nature Lore work done and recorded, and also makes suggestions without in any way appearing to do so. The botany taught, for instance, is not systematic, but what might be termed popular, and as the interest of the children deepens in the subject their outlook widens. At first they note the more common and well-known plants, then those less well known, next the more humble types and then those that associate together perhaps in definite areas or spots, and so on. The Natural History teaching on these lines also tends in the same direction, especially

in respect to the observation of animal life when under control, from bees, rabbits, and ferrets, to snails, butterflies, and bugs.

In all the instances that have so far been mentioned, Nature Lore does not play a dominant part in the school. There are, however, two or three preparatory and secondary schools where it influences the entire teaching given in the school. A boy in such a school is encouraged to have Nature hobbies and to carry them out, not as a leisure-time pursuit, but as part of the ordinary school work, for it is through his nature leanings that he gets instruction in the three R's, there being little class-work of the ordinary type. Being thoroughly unconventional it is, of course, a most difficult type of school to conduct, each boy learns or picks up "schooling" in his own way, and satisfies to the full during the process his nature hunger, passing out, at the same time, from the ranks of the dull. There are also a few schools which while keeping to a set number of studies carried on in the usual manner, yet encourage and support to the utmost of their power, voluntary studies in Nature Lore. This is done in the boy's leisure time, but every facility and assistance is given, all the teachers participate in the work of the school Natural History Society and the Field Club both being definitely recognised and supported, while walks, rambles, journeys, or visits are organised by the school authorities, who also hold yearly School Natural History Exhibitions, awarding thereat prizes and even school exhibitions or scholarships. In these schools the ordinary school curriculum is carried out in what may be termed the usual school hours, so that the Nature Lore work affects it indirectly only, yet it is valued and appreciated for its influence.

There are many varieties to be found of what we have called voluntary Nature Lore work. Sometimes pupils are encouraged to have a Nature hobby so as to bridge over the gap between pure science work and play, the encouragement given taking the form of indulgences. In other cases rambling-clubs are formed, the members of which go out as collectors, and return home laden with spoil which they arrange and compare. Often the voluntary work undertaken is nothing more than pot or box gardening or perhaps the control of a garden plot. Sometimes the voluntary Nature Lore work is only done by the children during the holidays, and in such a case the work is usually of two types. In the first a definite piece of work is set for all who care to enter, such as making a collection of grasses or of wild flowers; but in the second children follow their own inclinations, some skeletonising leaves, others collecting fossils, butterflies, or shells, a few painting or photographing natural objects, and so on.

Nature Lore succeeds best we find in those schools which regard it as a rest exercise (a relief from the ordinary school work), or as a pastime. Even if regarded as the promotion of a child's hobby and encouraged, its pursuit means that during their most receptive years children will be steeping themselves in Nature's sights and sounds. The proper teaching of botany, zoology, or entomology is a matter quite outside the scope of Nature Study or Nature Lore, it being purely a question of school science teaching, be it advanced or elementary. The use of the term Nature Study has led many to believe that the problem to be solved is How to study Nature; but it is not so. The aim and object of the whole movement is to get children into sympathetic contact with Nature. We must first of all get familiarity with Nature, and this can only be gained through actual experience. Habits of observation, when acquired, soon lead to a correct perception of relations. Teachers who are imbued with the true spirit of Nature Study or Nature Lore, and who under the terms Nature Study, Nature Lore, and Nature Knowledge, encourage their children to make direct, individual, independent outdoor observations in the various ways that have been outlined, do so to cultivate and strengthen the perceptive powers of children, to fix in them habits of accurate observation, and to develop in them certain natural faculties and instincts, irrespective of any questions as to whether they acquire knowledge or not in the process, and entirely removed from any attempt to popularise science teaching.

# "ZION, WHENCE COMETH MY HELP"

THE GREAT ZIONIST CONGRESS AT BASLE—THE LIFE ROMANCE OF ISRAEL, HIS FALLS AND HIS RECOVERIES—ZIONISM AS A POLITICAL RATHER THAN A SPIRITUAL MOVEMENT—THE POSSIBILITIES OF JUDAISM

BY

ISRAEL ZANGWILL

## I.

THIS month the Sixth Zionist Congress meets at Basle, and gathering strength with the years, and quickened by the horrors of Kishineff, this international Jewish parliament, numbering envoys from "the four corners of the earth," will, for the first time, grapple with practical political proposals for the solution of the Jewish question. Delegates of South African millionaires will take counsel with representatives of the rich American Jewry, and with these modern spirits will confer caftaned Rabbis from Russia and sages from India and Persia. In the mere coming together of such an assembly the promised re-gathering of Israel is already literally accomplished. Eighteen centuries of dispersion have not succeeded in breaking the cohesion of the race; eighteen centuries of exile have not eliminated the passion for Palestine.

Here, surely, is a phenomenon unique in history. It may be profitable to examine briefly into the causes and conditions of this apparent miracle.

## II.

There is a many-sided symbolism in the dramatic picture of Jochanan ben Zakkai escaping from Jerusalem in a coffin, what time Titus and his legions hovered at the gates of the Holy City. For Jochanan bore in his own breast the seeds of the future, saved Judaism from the fall of the Jewish State. The zealots of nationality preferred to meet the conquering Roman with grim suicide: Jochanan founded a school at Jamnia, under the protection of Titus. That disentanglement of religion from a *locale* which Jesus had effected for the world at large was in a minor degree effected, a generation after Him, for the Jews themselves, by the mailed hand of Titus and the insight of the prudent sage. Possibly Jochanan had already outgrown "the burnt offerings" which tied Judaism to the Temple; he may have felt already that Israel's greatness was spiritual, belonged to a category of force that could not, and should not, be measured against Rome's material might. However this be, his reconstruction of the Synhedrion, even in the absence of the hewn-stone hall of the Temple for it to meet in, and the subsequent conversion of the substantial sacrifices into offerings of prayer, made the salvage of Judaism more spiritual than the original totality. The unifying centre was no longer geographical, and the Jews became "the People of the Book" in a far profounder sense than when they were the people of a soil, too. The law was never so obeyed in Bible times as it was when the record of these times became the all-in-all.

But this transformation was not achieved in one generation, nor without violent reactions. Scarce half a century after Jochanan ben Zakkai, the great rebel, Bar-Kochba (Son of a Star) beat back for a time the whole might of Rome, even the great general, Severus (hastily summoned from his task of quelling the less important revolt in Britain). And in the monstrous *régime* of religious persecution by which Hadrian avenged the difficult suppression of the uprising, the transformation of Judaism might well have been into paganism.

Nor was the transformation into mere spiritual Judaism ever effected radically. Two reactionary influences remained. Palestine still retained a certain authority over the Diaspora. Babylon, indeed, soon asserted itself as the peer of Jerusalem, and later, with the movement of history and the great teachers, the spiritual hegemony shifted to Spain, to Cairo, to Poland. But underneath all this flux Jerusalem was still the Holy City. Secondly, the literary ritual, substituted for the literal sacrifices, did not profess to be more than a temporary necessity. The stubborn national spirit clung to the hope of glorious restoration. Rachel wept for her children, and comforted herself by the belief that they were not dead but sleeping. As little as possible was changed of a liturgy enrooted in the Holy Soil, and thus it came to pass that in the narrow, sunless, stony streets of European ghettos shambling students and peddlers offered metaphorical

first-fruits in ingenious lyrics, and celebrated the ancient harvest-festival of Palestine in pious acrostics. Never was there such an example of the dominance of the word. Life was replaced by Literature. What wonder if the love of Zion grew mainly literary, so that even the passion of a Jehuda Halevi for Palestine has been dubbed more the passion of a troubadour for a visionary mistress than a patriotism with its roots in reality.

Fantastic and factitious though this love of Zion was, yet, supplemented by eschatological superstitions, it made Jerusalem still the mystic City of God, still the capital of the Millennium, still the symbol of Israel's misery and Israel's ultimate regeneration. And, to this day, in the ghettos of New York and Philadelphia, the "messenger of Zion" may be met on the cable-car, going his rounds, collecting the humble cents which enable greybeards to pore over moth-eaten Talmuds in the Holy City.

Thus, although Jerusalem has remained throughout the entire Christian era in the hand of foreign conquerors, the Jews have always retained some sense of being colonists, whose mother city was in Asia. Some day it would be their own city again—but in God's good time, in a whirl of miracles! Hence, except under the ephemeral inspiration of pseudo-Messiahs, Zionism was never a matter of practical politics; it was a shadowy, poetic ideal, outside life; a romantic reminiscence. Old men went to Jerusalem to die—not to live. Its earth was imported—but to be placed in coffins. In practice Jews have always been ardently attached to the country of their birth, and if they have seemed to remain apart, Ezra and Nehemiah are largely responsible, those zealots (more Mosaic than Moses) who stamped out marriages with other peoples, even when the strangers accepted Judaism. The very Rabbis of the Talmud could not endorse this principle of compulsory mutual intermarriage, yet in practice it became the rule, and an institution designed in the fifth century before Christ to preserve the religion, served in the Dark Ages of Christendom to preserve the race. Religion and race had, indeed, come to seem one and the same thing. And against this people, already doubly cut off from mankind, the Christian raised his material wall of separation, and created the ghetto.

But the ghetto fell at last, and separatist legislation tottered, and emancipation brought another development. With the liberal movements of the eighteenth century, Jews began to form part of the general life. The aspiration for Palestine was felt to be incongruous, even as a far-off religious ideal. Again it was proclaimed—by Moses Mendelssohn this time—that Judaism is larger than a land: that its future realm must be that of spiritual conquest. But in America, whither this doctrine spread in its broadest form, it was not followed by its logical outcome—by exogamy and the welcome of converts. Jewish life in the States instead of becoming expansive and spiritual, has drawn itself together in secular clubs. In Australia, on the other hand, where orthodoxy is still the professed creed, exogamy has become frequent. In Germany, social advantage or the notion that modern Judaism and Christianity are not very far apart, has led many to baptism. A large minority everywhere—cultured or rich, or callous—has succumbed to the general indifferentism of the modern world.

Thus, to-day, Israel is face to face with a menace of disintegration more formidable than the legions of Titus.

To read the history of Israel is like reading a romance of perilous adventure written in the first person. Again and again the hero may be divided from death by a hair's breadth, yet we know that he will always come through safely, since is he not here, narrating? During the thirty centuries or so of his national existence, Israel has been perpetually stumbling on the verge of the abyss of annihilation, yet always he has recovered his footing. So Israel's serial is "to be continued," and who can say it will not "end happily" after all?

## III.

As the century of Israel's disintegration closes, a new phenomenon meets our astonished eyes. It is "Zionism."

With this new and strange thing quite a number of Parliamentary candidates at the last General Election professed sympathy. The Zionists were, indeed, too few in number to influence the results at any point, but the audacity of their interference marks a new spirit in Jewry: the preference of self-assertion with all its risks, to self-suppression with all its evils.

Zionism, in its latest official exposition, aims at securing a public legally assured home in Palestine for those Jews who are unable or unwilling to assimilate. It is not the movement that George Eliot's Mordecai dreamed, nor that which Rabbi Mohilewer of Russia initiated. The advent of Dr. Herzl has stamped Zionism with "modernity." In the Austrian

journalist's first published scheme of a *Judenstaat*, indeed, Palestine played no necessary part. Herzl, whose instrument of national regeneration is the bank for dealing with the Sultan and subsidising the selected immigrants, was never, despite the date of his advent, *fin de siècle* (which seems to imply a certain flippancy), but prophetically twentieth century. He would, if it were possible, lead back his people to Palestine by the *pavé roulant* of the Paris Exposition. Withal a charming, magnetic even poetic personality, a more diplomatic and domesticated Lassalle.

But the deeper issues and sequels of the movement will develop themselves with the material success, and the present leaders might quite conceivably be swept away by spiritual floods they have themselves let loose. The Orthodox Jewish Congregational Union of America, at the Convention of June 8, 1898, while maintaining that "the restoration to Zion is the legitimate aspiration of scattered Israel," likewise declared, "we re-affirm our belief in the coming of a personal Messiah." The agents of political Zionism—men like Max Nordau, or Mandelstamm the great Russian oculist, or Marmorek of the Pasteur Institute—can no more control the religious future of Judaism than they can control the mystical interpretation which Christendom would put upon their success. Men are only instruments. And each must do the work he sees to hand.

At present, though orthodox Rabbis are working amicably with ultra-modern thinkers, the movement is political, and more indebted to the pressure of the external forces of persecution than to internal energy and enkindlement. Yet in truth could any but a political cause unite the Jew of the East with the Jew of the West? And, viewed merely on its prosaic side, Zionism is by no means a visionary scheme. The aggregation of Jews in Palestine is only a matter of time—already they form a third of its population—and it is better that they should be aggregated there under their own laws and religion and the mild suzerainty of the Sultan than under the semi-barbarous restrictions of Russia or Roumania, and exposed to recurrent popular outbreaks. True, Palestine is a ruined country, and the Jews are a broken people. But neither is beyond recuperation. Palestine needs a people; Israel needs a country. If, in regenerating the Holy Land, Israel could regenerate itself, how should the world be other than the gainer? In the solution of the problem of Asia which has succeeded the problem of Africa, Israel might play no insignificant part. Already the Colony of Rishon le Zion has obtained a gold medal for its wines from the Paris Exposition—which was not prejudiced in the Jew's favour. We may be sure the spiritual wine of Judæa would again pour forth likewise—that precious vintage which the world has drunk for so many centuries. And, as the unscientific activities of the Palestine colonisation societies would have paved the way for the pastoral and commercial future of Israel in its own country, so would the Rabbinical sing-song in musty rooms prove to have been but the unconscious preparation of the ages for the Jerusalem University.

But Palestine belongs to the Sultan and the Sultan refuses to grant the coveted Judæan Charter, even for dangled millions. Is not this fatal? No; it matters as little as that the Zionists could not pay the millions, if suddenly called upon. They have collected not half of a million (in English pounds) from the poor. But there are millionaires enough to come to the rescue, once the Charter was dangled before the Zionists. It is not likely that the Rothschilds would see themselves ousted from their familiar headship in authority and well-doing. Nor would the millions left by Baron Hirsch be altogether withheld. And the Sultan's present refusal is equally unimportant because a national policy is independent of transient moods and transient rulers. The only aspect that really matters is whether Israel's face be or be not set steadily Zionwards—for decades, and even for centuries. Much less turns on the Sultan's mind than on Dr. Herzl's. Will he lose patience? For leaders like Herzl are not born in every century.

## IV.

Apart from its political working, Zionism forces upon the Jew a question the Jew hates to face.

Without a rallying centre, geographical or spiritual; without a Synhedrion; without any principle of unity or of political action; without any common standpoint about the old Book; without the old cement of dietary laws and traditional ceremonies; without even ghetto-walls built by his friend, the enemy; it is impossible for Israel to persist further, except by a miracle—of stupidity.

It is a wretched thing for a people to be saved only by its persecutors or its fools. As a religion, Judaism has still magnificent possibilities, but the time has come when it must be de-nationalised or re-nationalised.

# GERMANY AND THE SOCIAL DEMOCRATS

THE STRIKING GROWTH OF SOCIALISM AS SHOWN BY THE RECENT ELECTION —HOW THE WORKING POPULATION ARE OPPRESSED BY MILITARISM, AND RESENT THE KAISER'S INTERFERENCE IN POLITICS—DEAR BREAD AND DISCONTENT

*By the German Correspondent of* THE WORLD'S WORK

BERLIN, *July* 15.

WERE it not for the striking successes of the Social Democrats, the recent General Election in Germany would have failed to attract the general attention of the civilised world. There was no burning question before the country, no great questions of national defence or of international politics. The late Reichstag was dissolved and a day fixed for the new elections without a word of light or leading from any member of the Government. Count von Bülow and Count von Posadowsky both refrained from supplying a watchword either to Press or public, doubtless for the sufficient reason that their watchwords in the past have been rather a source of strength to their enemies than to their friends.

But without any Government pronouncement to aid them, and without any momentous questions to excite the electorate, the Social Democrats have made an unparalleled leap forward, and are now, next to the Clericals, the most numerous party in the Reichstag. At the dissolution they went to the country fifty-eight strong; they return after their remarkable campaign eighty-one strong, and backed by nearly 3,200,000 voters—over a quarter of the entire electorate of the Empire. A fair and proper Redistribution Bill would give them 120 seats out of a total of 397.

It is instructive to turn for a moment to look at the striking and almost uninterrupted growth of this remarkable party since the proclamation of the German Empire in 1871. In the following table their onward progress is shown with sufficient clearness:

| Election. | Social Members Returned. | Socialist Poll. |
|---|---|---|
| 1871 | 2 | 101,927 |
| 1874 | 9 | 351,670 |
| 1877 | 12 | 493,447 |
| 1878 | 9 | 437,158 |
| 1881 | 12 | 311,961 |
| 1884 | 24 | 549,990 |
| 1887 | 11 | 763,128 |
| 1890 | 35 | 1,427,298 |
| 1893 | 44 | 1,734,000 |
| 1898 | 58 | 2,206,000 |
| 1903* | 81 | 3,200,000 (?) |

These are startling figures, testifying to the fact that Socialism has struck deep roots in Germany, that it has come to stay, and that its panaceas for the redress of grievances are meeting with ever-increasing favour among the people. The early struggles of the party till 1890 were for simple toleration; since 1890 its struggles have been for power. How will it use its victory?

There is no country in Europe where the working population is more discontented than in Germany. Driven to the consolations of politics, they find themselves hampered in every way, bound in by a rigid and irritating system of police government. If there is one official in Germany more hated than another it is the policeman. His power is especially seen and felt among the workers. He galls them with his little brief authority exercised in offensive and overbearing military style.

The political working man is also an object of suspicion to the *Landräthe* and *Junkers* in the country, and to a large extent also to the manufacturers. These potentates cannot reconcile themselves to the workers combining in self-defence, and numerous and ingenious are the measures taken by them to hinder organisation and to set organised and unorganised workers at loggerheads. Between employers and employed in Germany there is little of the general good-feeling prevailing in England, and the workers well know that much of the vaunted social reform legislation introduced by Bismarck is regarded by employers as a hardship, and that its stipulations would be constantly evaded were they not enforced by the most drastic sanctions.

The oppressive burden of an army fronting towards both France and Russia, and the still

* The exact poll will not be known for some time.

more detested expenditure on the navy, are rapidly filling up the Socialist ranks. The workers are taught by their leaders that this heavy drain comes out of the pockets of the poor, that they not only give their sons to the army and navy, but pay for them as well. Added to this is the often intolerable attitude to the civilian of officers wearing the " Kaiser's Coat " and the cruelty so often exercised on private soldiers by their superiors. Every case of this kind is carefully noted and commented on by the Socialist press. Militarism is held up to ridicule and contempt in a number of oblique ways, its arrogance, unproductiveness, and its powerful influence in keeping nations apart and armed to the teeth which would otherwise only contend together in the wholesome rivalries of peace.

An important element in the growth of Socialism is the attitude of the Kaiser himself. A prominent Socialist leader once said that every speech made by the Emperor costs the " parties of order " one seat. The Socialist leader doubtless meant every speech against his own party, as without this limitation the Reichstag would have been depleted long since of every member of the " order " parties. These anti-Socialist speeches coming from a man whose position should make him neutral in politics are resented throughout working-class Germany with an indescribable resentment. The Socialists have been told by this high authority that they are not worthy of their fatherland, that they are grumblers, that they should leave the country if they are dissatisfied. The soldiers of the Prussian Guard have been told that when they are ordered out againt the " enemy at home " they are not to hesitate even though fathers and brothers are opposed to them. Lately the workmen of Breslau and Essen were warned against the Socialists in no measured terms, the Kaiser advising them to " cut the tablecloth " between themselves and Socialist demagogues. Then there is the Kaiser's singular exercise of his prerogative of mercy. Men like Lieutenant Brusewitz, who ran a mechanic through the body in a public restaurant, or men like the numerous officers who kill their man in a duel, or disgraceful barbarians from Africa, are pardoned after only a short portion of their sentences has expired; but the unfortunate Socialist editors, and old women, and drunken men, and Polish schoolgirls who for a foolish hasty word are convicted of *lèse-majesté* sit out their terms of imprisonment to its bitter close. These are only a few indications showing the substantial basis on which the vast seething mass of German discontent rests.

It is most difficult to gauge with any degree of accuracy the influence of the recent tariff law on the growth of German Socialism, but I am inclined to think that the more moderate leaders of the party are justified in saying that the raising of the duty on imported breadstuffs and other articles of food has profoundly moved the working classes, and has contributed in no small degree to add the additional million votes to the Social Democratic poll. No soft promises of Government aid in other directions —for example, a bribe in the shape of a bill to make the existing scheme of old-age pensions more favourable—would have altered in any degree this feeling of universal discontent. Dear bread and beef touches the workman immediately and directly. An increased old-age pension only benefits him remotely. An eminent Socialist writer said lately: The inevitable consequence of dear food is discontent, and a discontented proletariat is an element of great weakness in the State.

The Socialist leaders have two programmes, one remote, the other immediate. Shorter hours of labour, better inspection of workshops and the employment of female inspectors, improved factory sanitation, the abolition of child labour, the complete secularisation of the schools, better and cheaper railway facilities, the abolition of the *lèse-majesté* paragraphs of the penal code are among those items in their immediate programme with which every British Radical can sympathise.

I do not believe that any immediate change in the attitude of the German Government will follow, on the Socialist victories. A measure often urged as likely to curb the march of Socialism is the repeal of that paragraph in the constitution guaranteeing universal suffrage. But no Government will be foolish enough to attempt this. If Count Bülow can manage to struggle along with the Reichstag as at present constituted he will do so. He is not the man to provoke a great constitutional crisis. But it is just possible that the Socialists, conscious of their strength, may resort to obstructive tactics on some important national issue which the Government may raise with the very object of courting their opposition. A dissolution would, of course, follow, and with such an issue before the country it is not at all likely that the Socialists would return to Berlin with anything like their present strength. Parliamentary tactics in the Reichstag for the next year or two will be an interesting study.

# HUNTING WITH A CAMERA

ITS SUBSTITUTION FOR THE GUN—THE FASCINATION OF PHOTOGRAPHING NATURE FOR SCIENTIFIC STUDY AND FOR SPORT—THE EQUIPMENT AND INCIDENTAL ADVENTURES OF MANY OUTINGS

BY

FRANK M. CHAPMAN

A WELL-KNOWN sportsman, whose success in pursuit of the game of many lands has won him renown, said to me recently: "I want your advice in purchasing a camera outfit for photographing wild animals. I've killed many a game animal," he added, "and my house is filled with heads and rugs, but I believe I would give the best one in the lot to have made a magnificent picture I recently saw of elk."

This man is not an exception. He is one among the many converts to the ranks of camera hunters, and a study of his evolution as a sportsman presents some extremely interesting problems.

Like many another man, he was a "born hunter," and circumstances permitted him to develop his innate love of the chase. This development, we should find, was along certain conventional lines. He simply adopted an existing code of sport. Some animals were considered game, and as such were worthy the sportsman's attention, while others were esteemed beneath his notice. The desirability of any animal was determined by its size, its wariness, its courage and powers of defence or offence, its rarity, its edibility, and individually its horns, fur, and other physical conditions.

Primarily, then, this man hunted because he had inherited a love for the chase; but custom determined for him what, as a sportsman, he should hunt; and his ambition to kill a given animal was not inspired by murderous motives, but by the place of that animal in the sportsman's scale.

It follows, then, that any change in the current valuation of a game animal by sportsmen will be attended by a corresponding change in the degree of pleasure with which that animal is captured.

Among sportsmen a photograph of a wild animal in its haunts is beginning to be more highly prized than the animal itself. When this sentiment becomes universal the camera will have replaced the rifle.

Camera hunting more than fulfils all the essential requirements of true sport. It is infinitely more difficult than hunting with the gun, and makes far greater demands on the patience, perseverance, strength, and ingenuity of the hunter. The apparatus is interesting in its manipulation; its use implies no restrictions of place or season, and once its results become as desirable as those to be obtained with rod or gun, the latter will be used by sportsmen only to supply the larder.

This doubtless sounds Utopian, but it is not. Can all the mounted deer and deer's heads in existence compare for a moment in beauty with Mr. Shiras' photographs of these creatures in their haunts? Lives there a sportsmen who would not gladly exchange the glass-eyed effigy which for years has been staring from the wall of his den for one of those living records from the very heart of Nature? As for the pleasure of making them, try it!

Rig your canoe with a jack-light, and in front of it arrange a stand on which to place one or two cameras. Use a lens with much depth of focus and set it for a distance of about twenty feet. Your paddler takes his place astern, while you, with flashlight pistol loaded, seat yourself immediately behind the jack-light in the bow.

Can there be a more delightful way to enter a forest than over its water-paths in a canoe? No cracking twig or rustling leaf betrays one's presence. The guide directs the way, leaving you wholly free to look and listen. How the rays from the jack-light glisten on the wet leaves and penetrate the blackness of the forest! How startling the slightest sound! The bark of a fox might be a lion's roar; an owl's hoot is blood-curdling. I recall a night on an Adirondack stream, when we were rigid with the excitement of expectancy; a swimming



A FLASHLIGHT PHOTOGRAPH OF A FAWN FEEDING

musk-rat struck the bow of our canoe and, jumping, splashed the water like an exploding mine. Only the guide's skill with the paddle saved us from a bath!

Assuredly jacking is a fascinating method of *hunting*, but with a rifle it is as surely a murderous one. Substitute the camera, however, and we have one of the most enjoyable forms of sport. Mr. Shiras has been following

Frank M. Chapman

A TERN IN MID-AIR

it for the past sixteen years and his enthusiasm increases with his successes.

The eyes which reflect the light of the "jack" may not always be those of a deer; Mr. Shiras secured a wonderful picture of a wildcat this past season. When, on reaching an estimated distance of about twenty feet, the flashlight was exploded, a creature was seen to leap five feet or more into the air, but the developed plate shows only a gigantic pussy seated on her haunches watching with calm curiosity the glaring eye out over the water.

Mr. Shiras also hunts with what, in effect, are spring-gun cameras, so arranging a charge of magnesium powder that it may be ignited by an animal which encounters a trip-line set on its runway.

On the plains, and in mountainous regions above timber-line, the telephoto lens or attachment can be used to advantage. In telephotography a focusing glass is essential. It not only adds to the sharpness of definition, but permits one to place one's head nearer the ground glass and thereby increases one's reach; the last a matter of no small importance when the bellows of one's camera may be extended for a length of thirty inches.

Too great length of bellows, however, is undesirable. It increases the size of the image but also the possibilities of vibration, and vibration is the cause of nine out of every ten failures with the telephoto. Be content with a smaller magnification and leave enough front-board before the lens-board to serve as a support for a brace on which to rest the telephoto tube.

Under favourable conditions one can make sufficiently rapid exposures with a telephoto to employ it in a hand camera; but prolonged experience convinces me that far better results may be obtained with a fourteen- to eighteen-inch lens which admits of exposures of a two-hundredth part of a second or less and can be readily focused.

It is not only the big-game hunter who turns to the camera as an adjunct to or substitute for the rifle. His brother of the shot-gun is also finding that the lens brings equally definite and far less perishable rewards of the hunt, while the number of species of birds which may be pursued with keen pleasure and excitement is greatly increased.

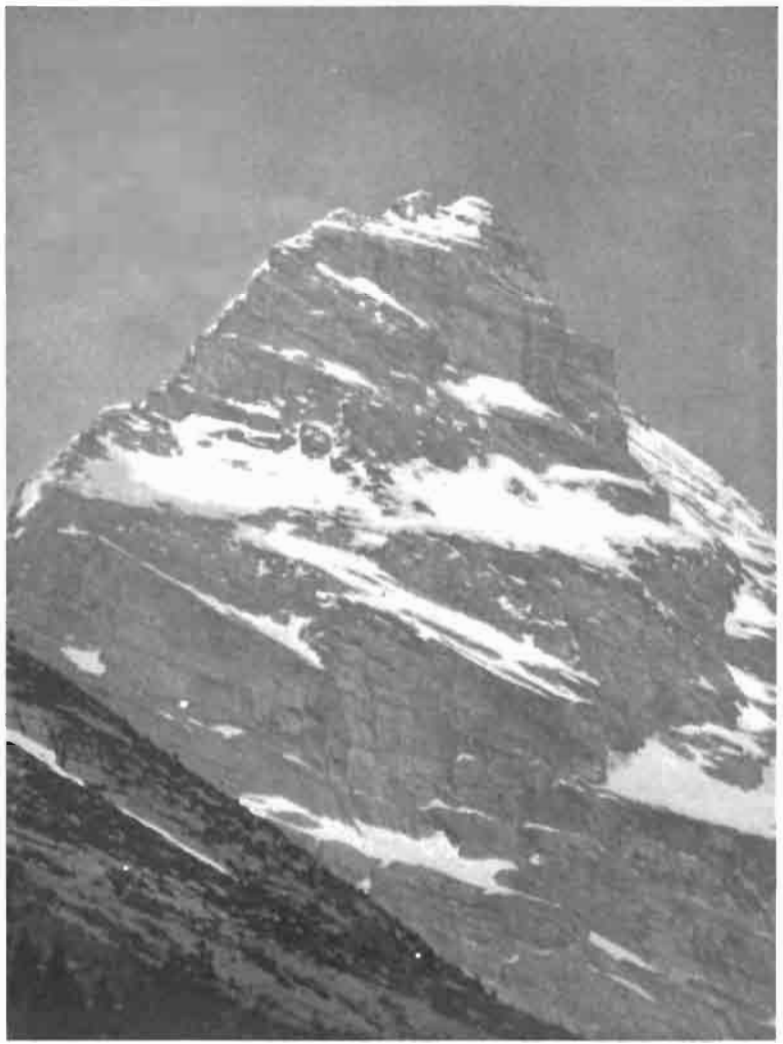
Nor will the wielder of the rod be denied this newer, higher form of sport. Leaping salmon and tarpon afford rare marks for the camera, and the pictures thus far obtained in this direction merely hint at the possibilities of this kind of camera-hunting.

The camera is so much a necessity to the naturalist and botanist that no course in biology is complete which does not include instruction in photography. In no department of out-door nature-work has it proved more useful than in the study of birds; and the variety and number of pictures of bird-life which already exist are a tribute to the attractions of bird photography, as well as to the activities

A FLASHLIGHT PHOTOGRAPH OF A DOE WITH TWO FAWNS

Frank M. Chapman

MT. SIR DONALD GLACIER, BRITISH COLUMBIA



Frank M. Chapman

MT. SIR DONALD FROM SAME POINT OF VIEW AS IN THE OTHER PICTURE, TAKEN WITH A TELEPHOTO LENS

of bird photographers. These pictures of a bird, its haunts, nest, eggs or young, convey an impression of reality so much more convincing than that produced by description alone that long-known facts possess, when pictured, all the charm of novelty. How few of nature-lovers ever have had or ever will have the pleasure of seeing a woodcock on its nest, giving, through its apparent insensibility to one's presence, a remarkable exhibition of its faith in the protective value of its coloration! But assuredly the next best things to the woodcock itself are Mr. Dugmore's beautiful photographs of a sitting bird of this species. A woodcock of which I knew actually permitted itself to be stroked on the nest before giving evidence of life; but when, a few days later, after an unseasonable April snowstorm, which whitened the leaves, the bird became a conspicuous dark object against a snowy background, it left the nest as soon as one appeared upon the horizon.

If the camera so successfully introduces us to nature's secrets at our threshold, consider its power in portraying the bird-life of remote regions, whose very inaccessibility has made them favoured haunts of the fowl of the air. Here the naturalist and sportsman meet on common ground, but the former is inspired by the enthusiasm of the scientist as well as by the zeal of the hunter, and the results secured are proportionately more prized. What an unending source of satisfaction is a picture of the gannet rockery of Bonaventure Island, off Gaspè Peninsula, which it was my fortune and privilege to make some years ago.

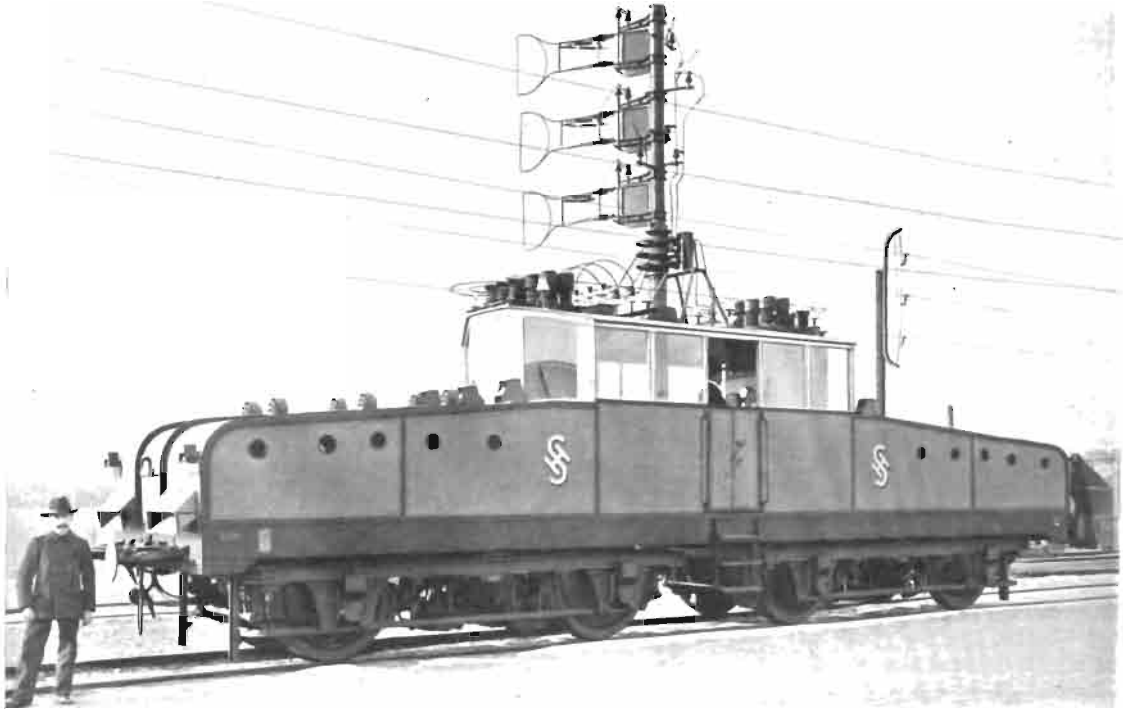
These noble birds are now so near the verge of extinction in America that they are known to nest in only two rocky islets in the Gulf of St. Lawrence. Such a picture has both historic and scientific value as a truthful, accurate record of conditions which shortly may cease to exist.

With what satisfaction I recall my visit to Bird Rock, that famous resort for birds just within the passage between Newfoundland and Cape Breton. Audubon, in a wave-tossed schooner, lay off the rock for hours in the vain hope that he might effect a landing; and one could therefore appreciate weather which permitted one safely to run a boat on to the hand's breadth of beach beneath the bird-inhabited walls towering more than a hundred feet above. The top was reached by means of a crate, a rake, and a windlass—apparatus subsequently found most useful in reaching points of vantage whence to photograph birds nesting on the face of the cliff.

I have not always been so fortunate, however, and a trip to study a small colony of white pelicans was attended by far from satisfactory results. Size and colour combine to make these birds exceedingly conspicuous, and an opportunity to test a rifle upon them is rarely lost. Where man and gun are found, therefore, the birds nest in only the most isolated places. This particular group of about forty birds had selected an islet, or, locally, a "reef," so far out in Shoal Lake, Manitoba, that it was wholly invisible from the shore. But reach them we must, and the trip of four or five miles was made in a twelve-foot punt, the bottom of which could be wisely trod on only with great caution. The reef was reached, and the splendid white birds were found sitting on their nests of sand and gravel. At our approach they arose, and, with characteristic dignity of flight, disappeared far down the lake. In awaiting their return, concealed in a small patch of weeds, a sudden change occurred in the weather and soon we found ourselves prisoners in pelican-land. Fortunately we had a tent-fly, which with a push-pole, a pair of crossed oars and a camera tripod would have made a passable shelter under ordinary circumstances. But in the end the circumstances proved to be extraordinary. The storm became one to date from. Not only were we forced to ballast our tent with boulders, but, sitting in a pelican's nest, the only available, unflooded position, I passed a good portion of the night with my hands clasped around the ridgepole of our improvised shelter to prevent the whole affair from blowing into the lake. Eventually we reached the mainland, none the worse for the experience, but the pelicans, alas! refused to share their home with us, and in their absence their eggs were devoured by the western gulls that nested near them.

The most peculiar bird colony I have ever visited was that of flamingoes in an uninhabited and, indeed, almost unknown part of the Bahamas. Within a space approximately one hundred yards long by thirty yards wide a partial count and careful estimate showed two thousand of the little adobe, concave-top cones which these singular birds build as nests. Unfortunately it was not occupied, but the fulfilment of my cherished plan will take me back to this part of the earth some July when the domestic affairs of flamingoes have reached their most interesting stage.

ELECTRIC LOCOMOTIVE FOR A HIGH-SPEED RAILWAY



# HIGH-SPEED ELECTRIC RAILWAYS

THE CONTEST BETWEEN STEAM AND ELECTRICITY—100 MILES AN HOUR ON A PRUSSIAN MILITARY LINE — A CRITICAL STAGE IN RAILWAY LOCOMOTION

MENTION has been recently made in this magazine of the constantly increasing use of electricity by railways, notably in America, where truck lines are being paralleled with light construction tracks and local traffic turned over to electric trains. Now comes news from Germany that on the Prussian State railways between Hamburg, Hanover, and Berlin, a highly interesting competition is at present being conducted between steam and electrically hauled trains. All the leading locomotive builders and electrical firms in Germany have been invited by the State to submit designs and specifications both for high-speed steam locomotives and also for electric locomotives or motor-cars capable of attaining a speed of 100 miles an hour with a light load and ninety miles an hour in ordinary traffic. The present tests are to be a continuation of the recent trials of high-speed electric trains on the Prussian standard gauge military line between Berlin and Zossen, and they have been arranged in view of the fact that it has been decided to increase the speed of the trains of the Prussian State railroads running between Hamburg, Hanover, and Berlin. According to a recent correspondent in the *Times*, elaborate reports on the Berlin-Zossen tests have been published quite lately by Geheimer Baurat Lochner and Chief Engineer Walter Reichel. In the first trials a car built by the firm of Van der Zypen and Charlier, of Cologne, and electrically equipped by Messrs. Siemens and Halske, of Berlin, actually attained, for a very brief period, a speed of 160.2 kilometres (nearly 100 miles) an hour, but the high-speed tests were abandoned owing to the permanent way

giving way, the rails being too weak and the substructure proving not solid enough to bear the weight of the heavy electrical car, which exercised a great wear and tear upon the rails; the total weight of the fully equipped Siemens and Halske car was over ninety-two tons. The second series of tests were made with an electric locomotive designed by Mr. Reichel, who, in order to reduce weight, abandoned transformers on the engine and supplied the line voltage of 10,000 volts directly to the motors; in the case of the motor-car the current was transformed down to 1150 volts; the former weighed twenty tons less than the latter. So far the new electric locomotive has not made higher speeds than sixty-five to seventy miles an hour. No doubt, when the track and the road-bed have been strengthened to bear the heavy concentrated and rigid loads of the electric cars and locomotive, higher speeds will be possible, but even then no light will be shed on the problem of express passenger traffic, as the fourteen-mile line on which the trials took place was practically straight, having no curves of less than 6560 ft. radius, and no gradients steeper than 1 in 200.

Engineers are agreed that mean speeds of over sixty to sixty-five miles an hour are practically and commercially impossible on present two-rail tracks, owing to existing curves and the mixture of speeds. There is no train in the United Kingdom with a booked speed of sixty miles an hour, and, though the "Atlantic City flyers" between Camden and Atlantic City and the Nord expresses betwen Paris and Calais have booked speeds of sixty-six and sixty-three miles an hour respectively, the average speed of express trains as a whole in America and in France is no higher than in this country.

This is due to the impossibility of running round the curves at 100 miles an hour without grave fear of derailment, and to the fact that expresses and slow passenger and goods trains are all run over the same metals. Every year the companies spend more and more in increasing their shuntage areas to allow express traffic to pass, and, though all the present tracks should be doubled, it is quite clear that no great increase in speed will be possible. A critical stage has been reached in railway locomotion, and all travellers will witness with the liveliest interest the working of the mono-rail which is to be built between Manchester and Liverpool, on which speeds of 110 miles are promised with no fear of derailment. Doubtless some special form of track is the true solution of the problem of high-speed travel.

Siemens Electrical Appliances Co., London

A GERMAN TYPE OF CARRIAGE

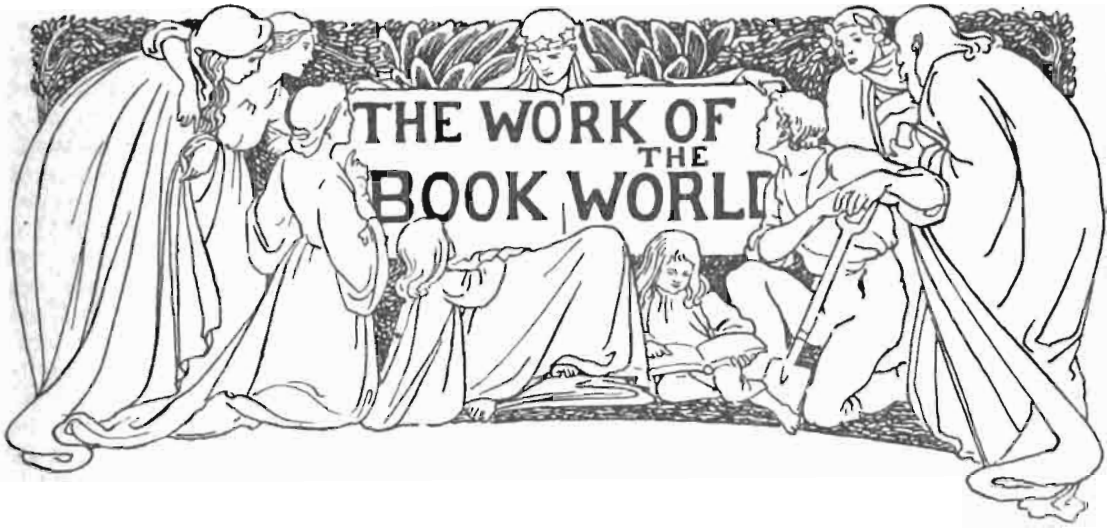
MR. HILAIRE BELLOC
("Caliban's Guide to Letters")

Elliott & Fry

MADAME WADDINGTON
("Letters of a Diplomat's Wife")

MR. F. B. MONEY-COUTTS
("The Poet's Charter")

MR. R. MURRAY GILCHRIST
("Beggar's Manor")




LONDON, *July* 13.

THE past month has been fruitful in works of history and biography, and the seven volumes that I propose to notice range widely, from the monumental Cambridge Modern History, planned by the late Lord Acton, to Mr. Millar's outspoken and vivacious *Literary History of Scotland.* The new volume of Lord Acton's history, the second in order of publication, the seventh in the scheme, deals with *The United States* (Cambridge University Press). Here is the history of America from the days of the British pioneer colonists down to the present time, told by men who are authorities on the various periods, and authors of standard works on those periods; men like the late Mr. Nicolay, who have an inside knowledge of the events they describe. Mr. Nicolay, who writes on the war between North and South, was one of Lincoln's private secretaries. The section allotted to Mr. McMaster, author of a *History of the American People*, is written in a way that should hold the attention of the laziest reader. On the eve of the election of President Harrison in 1840, some anonymous writer in an opposition newspaper remarked the old soldier, who had been living humbly, in retirement, would be more at home in a log cabin than in the White House. Mr. McMaster gives the following vivid description of the effect of this sneer:

"The Whigs had no platform; but this sneer at Harrison's poverty gave them just the cry they needed. Nothing was dearer to the heart of the American people than the log cabin. That humble abode, with its puncheon floor, its mud-smeared sides, its latch-string, its windows in which greased paper did duty for glass, was then, and had ever been, the symbol of American hardihood. It had been the home of the pioneers, the home of the commonwealth builders; and round its hearth had been reared millions of men and women then living. No insult could have been more galling than this sneer at the early home of the makers of the nation. The log cabin at once became the Whig symbol. On vacant lots in every city and town in the North, on ten thousand village greens, the log cabin, with a coon-skin on its wall, the latch-string hanging out in token of welcome, and a barrel of hard cider close beside the door, became the true Whig headquarters. Mounted on wheels and occupied by speakers, it was dragged from village to village; log-cabin raisings, log-cabin meetings, medals, badges, almanacs, songs, pictures were everywhere to be seen. Mass meetings were held, at which enormous numbers of people were present. Weeks were spent in getting ready for them. In the West men came in covered waggons, camped on the ground, and for days listened to stirring harangues. At Dayton, Ohio, 100,000 people attended and covered ten acres of ground. In the Whig prints Van Buren was stigmatised as an aristocrat; and the White House was represented as a gilded palace with damask sofas, satin chairs, porcelain vases, magnificent chandeliers, and golden spoons. Harrison was the poor man's candidate, the plain American living in a log cabin, the simple farmer of North Bend. These things told powerfully on the voters, and when the election was over the Whigs had swept the country and elected Harrison and Tyler. In the great popular excitement the new anti-slavery party and its candidate were forgotten."

The volume also contains two chapters on

Canada, and one on "The American Intellect," by Mr. Barrett Wendell, a Harvard professor.

Mr. J. H. Millar's *Literary History of Scotland* (Fisher Unwin), begins at the year 1301, and ends with the year 1901. Had Mr. Millar excluded living writers from his survey his History would have been reckoned a sound achievement; but it would not have had the popular success that extension to the present day has assured for it. In dealing with living Scots writers Mr. Millar is hardly courteous, and his remarks are sometimes so violent that the recipients of them must be grateful that he has used the bludgeon and not the rapier. A defter, a subtler method of attack would have given more point and conviction to Mr. Millar's criticisms. *The Lilac Sunbonnet* of Mr. Crockett, he writes, "is a perfect triumph of succulent vulgarity; though how nauseous it is—how skilfully it makes its appeal to some of the worse traits in the national character—no one who is not a Scot can really know." The vulgarity of "Ian Maclaren," we are told, "is less robust and blatant than that of Mr. Crockett, but it is none the less offensive that it is more subtle and insidious." Of Mr. Barrie he writes:

"No author of his capabilities condescends to write with his tongue so obviously in his cheek, and he has his reward. The truth is that Mr. Barrie's real strength lies in satire; in satire of a unique and mordant flavour, quite distinct from that of the professional satirist, but infinitely more pungent. *The Admirable Crichton* might be appealed to in proof of this assertion; and testimony scarcely less convincing will be found in the files of the *St. James's Gazette*, the *Edinburgh Evening Dispatch*, and the *Scots Observer*, where, as his discriminating admirers are aware, much of his most characteristic writing lies concealed. Much, therefore, of his later stuff must to them appear unsatisfying; the two *Tommy* books, for example, which, in addition to much that is delightful, contain much that is cheap and undistinguished. Nor can they readily forgive *Margaret Ogilvy*, an exercise compared with which the labours of the resurrectionist are praiseworthy, and which many men (I believe) had rather lose their right hand than set themselves to attempt."

With Mr. Millar's remarks on *Margaret Ogilvy* I, for one, thoroughly disagree. I prefer to side with Mr. William Archer, who has well said that only genius could have made the book tolerable, and that Mr. Barrie happened to possess just the genius which redeemed and glorified it.

To the social historian of our times *Letters of a Diplomat's Wife* (Smith, Elder) should be of service. The writer was Madame Waddington, widow of the French Ambassador to this country from 1883 to 1889. Madame Waddington was an American, not in the least interested in literary, artistic, or political matters, but showing a keen enjoyment in the high social functions to which her position admitted her. The letters, chatty and unpretentious, were written to a family friend. Great names pepper the pages, thus: "When I got back I found W. smoking in a big arm-chair, quite pleased with his talk with Bismarck, who was most amiable, had at least no *crise de nerves* while he was there." The incident of the pearl necklace, which took place at Hatfield, in 1891, when Lord Salisbury was entertaining the German Emperor and Empress and the Prince of Wales, is amusing and well told:

"About half-way through luncheon came the pearl necklace incident. I suddenly felt that my necklace was unclasped. It was sewed on the corsage in front, as the pearls are large and heavy, and I am always afraid of breaking the string. I asked Soveral, who was next to me, if he couldn't clasp it for me. He tried, but was nervous or awkward; at any rate, he couldn't manage it, and we were both getting red and flustered when suddenly we heard the Emperor calling W.'s attention to the fact that 'le Portugal était en train d'étrangler la France'; also Staal saying that his 'collègue du Portugal se livrait à un gymnastique étrange.' They all made various jokes at my expense, and the Prince said, 'Let me do it,' but he couldn't either, and again we heard the Emperor remarking, 'Maintenant c'est plus sérieux—l'Angleterre s'en mêle.'"

In the end "the Prince and I retreated to a corner of the terrace, and he cut the stitches that held the necklace in front with his knife."

*The Orrery Papers*, edited by the Countess of Cork and Orrery (Duckworth) take us back to the eighteenth century. They reveal no political secrets, they touch but slightly on public affairs; what they do is to recreate the busy lives of two of the Earls of Orrery. The fourth earl was the hero of the once famous controversy with Bentley known as the "Battle of the Books." The fifth earl, with whom these pages are mostly concerned, was a man of culture and intelligence, gifted with a light and witty epistolary style, and the friend of Swift, Pope, and Southerne. His vanity and self-esteem are amusing enough to us now, also the blind devotion of his wife, who brackets him with Shakespeare and Milton.

A passage in one of his wife's letters shows that the prophets of ill-omen were not unknown in the eighteenth century:

"Everything appears in both these Kingdoms to have a most melancholy aspect. Certainly it is so in Ireland. Poverty and distress is seen in both the dress and looks of all the People, and it is incredible the dreadfull alteration I find (for the worse) both at Dublin and in the country; a few years, if affairs do not mend, must end in the utter ruining of Ireland, and probably a few years after England will fall."

The volumes contain some excellent illustrations, and as a picture of the manners and moods of the times are most entertaining.

### Biography

Such a life as that of Sir Henry Acland (Smith Elder) is valuable for the glimpses it gives of contemporary life in Oxford, and the eminent men who crossed Acland's path. Newman, Pusey, Martineau, Huxley, Tyndall were his friends; for a quarter of a century he had the largest consulting practice in Oxfordshire, and his appointment as Regius-Professor of Medicine in the University crowned his labours. For over fifty years a deep friendship existed between Acland and Ruskin. The following letter from Ruskin, written in 1851, shows how heavy was the pressure of Acland's professional duties:

". . . . I never saw such a life as you live at Oxford—you never were able so much as to put a piece of meat in your mouth without writing a note at the side of your plate—you were everlastingly going somewhere and going somewhere else on the way to it—and doing something on the way to somewhere else, and something else at the same time that you did the something—and then another thing by-the-bye—and two or three other things besides—and then wherever you went, there were always five or six people lying in wait at corners and catching hold of you and asking questions, and leading you aside into private conferences and making engagements to come at a quarter to six—and send two other people at a quarter-past—and three or four more to hear what had been said to them, at five and twenty minutes past—and to have an answer to a note at half-past—and get tickets for soup at five and twenty minutes to seven—and just to see you in the passage as you were going to dinner—and so on."

His servants participated in the kindly exuberance of his nature. He was wont to address them on scientific subjects. The following amusing extract reveals their attitude towards him:

"One maid, who had known the household for over forty years, on being asked if she understood what he had been telling them, replied, 'I never thought of doing that!' and, being further questioned, she added, 'I look across at the dear Doctor and I think to myself—You poor dear gentleman, how you are enjoying yourself!'"

Mr. J. L. Le B. Hammond has convictions, knowledge of his period and enthusiasm for his subject. His *Charles James Fox* (Methuen) is a vigorous and brilliant study of the life, work, and personality of Fox. Such a sentence as this, contrasting the oratorical styles of Fox and his great rival, gives a taste of Mr. Hammond's method. "Fox's personality was too impetuous to allow speech to be to him what it was to Pitt—the instrument of his ambitions; speech was for him the flood of his released ideas rather than the cold creation of his mind." Mr. Hammond's book is a subtle appraisement of Fox, and a thorough examination of his relations to all the important questions that filled the minds of men during his lifetime.

### Travel

An original travel book is Mr. W. J. Harding King's *A Search for the Masked Tawareks* (Smith Elder). This group of nomad tribes roam a country covering about a million and a half square miles to the south of the French colony of Algeria. Mr. King set out from the station of Beskra, on the borders of the Sahara, in search of these mysterious hunters and marauders, who always wear a mask or veil, which is practically never removed, and who are referred to by the Arabs of the Sahara as "God-forsaken." After many wanderings he was rewarded by the sight of a Tawarek in the town of El Wad. Mr. King's Arab guide, Aïssa, discovered this formidable Tawarek, who is thus described:

"I expected to see something extraordinary, but I was by no means prepared for the uncanny creature which actually entered.

"There was a pause, and then a huge black-masked figure, stooping his head to avoid the lintel, stepped over the threshold and stood for a moment grim and forbidding by the entrance.

"He was enormously tall. He towered literally head and shoulders over my little guide.

"From the crown of his head to his feet he was dressed, even in this country where every one for the sake of coolness clothes himself in

white, entirely in black. A pair of remarkably well-shaped hands and a few snaky-looking locks of black hair protruding from above his head-coverings were the only portions of his person to be seen.

"His face was entirely concealed by a black mask consisting of a strip of black cotton wrapped twice round his head in such a manner that the edges of the two folds met over the bridge of his nose.

"His hands at once arrested my attention. They were white, whiter than many Sardinians and Italians that I have seen. I tried hard to catch a glimpse of his face through his mask, but was unable to do so. The occasional glint of an eye between its folds was all that there was to be seen.

"'He's a Tawarek,' said Aïssa triumphantly. 'I found him wandering about in the town, so I brought him here for you to see.'

"He spoke about him exactly as though he had been a wild beast that had somehow managed to stray into the haunts of men.

"'I told you,' added Aïssa, with a little laugh, 'that you would be surprised when you saw one.'

"I was."

Later, Mr. King found a party of Tawareks. He stayed with them, and describes at length the habits and customs of the tribe. The mask, or veil, is practically never removed. An appendix to this interesting volume gives an account of the alphabet used by the Tawareks.

## Fiction

The novels of the month have not been particularly interesting, but those who admire the unaffected culture of Mr. W. D. Howells will appreciate *Questionable Shapes* (Harper and Brothers). Three stories are contained in this volume, and each deals, in Mr. Howells' elusive way, with the supernatural, with telepathy, or with mysterious happenings. Mr. Howells hovers about his subject, touching it deftly here and there, but he is not one of those authors who explain.

"He went away, leaving me alone with the psychologist.

"'And what is your conclusion in this instance?' I asked.

"'Why, I haven't formulated it yet.'"

So ends one of the tales. The longest of them, "His Apparition," is a ghost story told with such delicate art that a child would not be frightened by it. Who, or what, the ghost was we never learn, but it pervades every page. "Simply to be there, and then to be gone, and leave the rest to us," says the heroine; "it was majestic, it was—delicate."

It is some years now since Mr. R. Murray Gilchrist first began to be spoken of as a young man of promise. He writes well, and he has a quick eye for the idiosyncrasies of men and women whose individuality has not been smoothed away by contact with town life. His new novel, *Beggar's Manor* (Heinemann), passes in the Peakland district of Derbyshire, and tells of the Quixotic action of the owner of the manor in marrying beneath him, and how in spite of this the course of true love ran, in the end, smooth for him. His servant-relations, if grotesque, are vividly presented, and the story has a grasp of characterisation and a freshness of style that single it out from other novels of the month.

*Juicy Joe*, by Mr. James Blyth (Richards), has been described as a book "nobody could like." It is a realistic study of the barbarity and corruption that exist to this day, according to the author, in the Norfolk marshlands. The story is certainly powerful, and the brutality of the scenes is not relieved by any gleams of poetry or sympathetic insight. Over all broods the many superstitions that still linger in those marshlands. Mr. Blyth has taken his work very seriously; he has even included a preface where the dialect, and the method of its use, is explained.

## Miscellaneous

*Caliban's Guide to Letters*, by Mr. Hilaire Belloc (Duckworth), is a book of delightful humour. Essentially it is a satire on modern journalism, but satire of an amiable kind, without a grain of malice in it. As in *Lambkin's Memoirs*, Mr. Belloc takes a portentous windbag, Dr. Caliban, of Winchelthorpe-on-Sea, and plays pleasantly with his egregious reputation. There is riotous fun, and perhaps a little truth, in the chapter on reviewing, and there is one living author who will read the section on the interview with mingled feelings. The title-page of this merry volume runs: "The Aftermath; or, Gleanings from a Busy Life, called upon the outer cover for purposes of sale, Caliban's Guide to Letters."

The prose of a poet is always good, and Mr. F. B. Money-Coutts is no exception to the rule. *The Poet's Charter; or, The Book of Job* (Lane) may be called his poetical confession of faith. Job refused the counsel of his friends, and maintained the right of the individual to seek God in his own way. Mr. Coutts pleads for the divine mission of the poet as seer and teacher. It is a thoughful little volume of insight and clear understanding.

In *Crumbs of Pity and other Verses* (Blackwood), Mr. R. C. Lehmann shows his versatility and also his incurable boyishness. He sings of horses, dogs, and wine, always with a light touch, often with a swing, and he is not ashamed of sentiment and mild pathos. I quote some touching lines on Rufus, a spaniel :

"Old dog, content you ; Rufus, have no fear :
While life is yours and mine your place is here.
And when the day shall come, as come it must,
When Rufus goes to mingle with the dust
(If Fate ordains that you shall pass before
To the abhorred and sunless Stygian shore),
I think old Charon, punting through the dark,
Will hear a sudden friendly little bark ;
And on the shore he'll mark without a frown
A flap-eared doggy, bandy-legged and brown.
He'll take you in : since watermen are kind,
He'd scorn to leave my little dog behind.
He'll ask no obol but instal you there
On Styx's further bank without a fare.
There shall you sniff his cargoes as they come,
And droop your head, and turn, and still be dumb—
Till one fine day, half joyful, half in fear,
You run and prick a recognising ear,
And last, oh, rapture ! leaping to this hand,
Salute your master as he steps to land."

Miss Ethel Clifford's volume of poems called *Songs of Dreams* (Lane) has been received with considerable favour. A daughter of Mrs. W. K. Clifford is of course sure of a hearing, but there is a true lyrical note, thought, and sympathy in this little collection. The following stanza from "A Song of the Moor," shows apprehension of the subtle voices of nature.

"Was some old battle fought upon the moor ?
Down in the hollow sets a tide of pain
And on the height a savage triumph swells,
And dies away, and louder grows again,
Out in the open places courage is,
But in the darkness of the wood I hear,
From out the closest of the undergrowth,
The sudden indrawn breath of hidden fear."

Miss Clifford is a natural singer, her sentiment is never forced, and her emotions have a wider range than we find in many volumes of modern verse.

I must mention two other books of the month, each, in its way, uncommon. One is *The Descent of the Sun*, by Mr. F. W. Bain (Oxford : Parker). Mr. Bain will be remembered as the author of *A Digit of the Moon*, a tale which purported to be a translation of an original Hindoo MS., but which there is good reason to think was the work of Mr. Bain himself. This volume, like the former, is a little study in that spiritual Oriental love wherein the lovers only attain beatitude by "abandoning the body," and so "regaining their immortal natures." This is foreign, indeed, to our Western notions, but it is well that we should be reminded, in beautiful language, of this venerable conception of the Hindoo mind. Says Mr. Bain :

"Metempsychosis, transmigration, everlasting incarnation, and re-incarnation of the immortal soul in body after body, birth after birth : all Hindoo literature is but the kaleidoscopic reiteration of this one identical idea, whose beauty is such that no logic will ever destroy it or oust it in favour of another. For the Sanscrit language is a kind of shrine consecrated to the embodiment and immortalisation of this philosophical myth. The Hindoos are possessed by it ; it is their hereditary heirloom, *Kramagatám*, the legacy from an immemorial past : it is all that they have left."

Far removed from this book in thought and method is Mr. Carl Snyder's *New Conceptions in Science* (Harper). Mr. Snyder is a keen and enthusiastic scientific worker. Under such titles as *The World Beyond our Senses*, *The Newest Ideas as to What is Life*, *How the Brain Thinks*, Mr. Snyder examines and illustrates all the recent discoveries in science. His mind is modern, well trained, and material ; but he has his enthusiasms—for science.

"Not, then, to the Cæsars and Alexanders ; not to the bandits and plunderers who have reddened history ; neither to the dreaming messiahs whose hallucinations have filled men's minds with empty fancies—not to these should rise our pantheons ; but rather to those who, in the pursuit of science and of truth, have added to the intellectual wealth of mankind. For they are the true gods, the real gods."

Exact knowledge is his aim, and he is able to impart to others what he has acquired.

# THE PROPOSED SCOTTISH SHIP CANAL

TO SHORTEN THE PASSAGE BETWEEN THE NORTH SEA AND THE ATLANTIC—TWO SCHEMES FOR A WATERWAY FROM THE FORTH TO THE CLYDE—ITS STRATEGIC VALUE IN THE EVENT OF A NAVAL WAR

BY

BENJAMIN TAYLOR

TIME flies so fast the present writer hardly realises that it is thirteen years since he, in the pages of a well-known magazine, characterised as one of the most interesting engineering proposals of the day that for bisecting the British Isles with a waterway available for ships of all tonnage, including the most powerful vessels in the navy. The idea is simply to shorten the passage between the North Sea and the Atlantic, for purposes both of trade and of national defence. At the present time, a vessel proceeding from a port on the east coast to one on the west, must either go "north about" or "south about." The former passage round by the extreme north of Scotland is a considerably hazardous one, attended by these dangers which mariners most dread, such as narrow channels, turbulent currents, frequent fogs, the proximity of rocky shores; besides which, there are no harbours of refuge, and the route is a crowded one. It is estimated that over five thousand vessels pass annually through the Pentland Firth. The southern passage, round the Land's End, involves a longer *détour*, and the threading of the always overcrowded English Channel, where the risks of collision are constant. The loss by wreck on the northern route, and the damage and loss by collision on the southern route, attain a high percentage of the traffic. A ship canal across Scotland at its narrowest part would obviate these dangers, besides presenting other advantages, to be referred to presently.

The project is not a new one, and, as a matter of fact, there are already two canals from sea to sea across Scotland. One is between the Forth and the Clyde, and the other, known to tourists as the Caledonian Canal, is between Inverness and Fort William. But neither of these waterways is adapted for vessels of modern type—the Forth and the Clyde Canal being mainly used by barges, and the Caledonian Canal by vessels under 160 ft. in length. This is because of the shallow depth of water and the small size and large number of the locks. The existing Forth and Clyde Canal is thirty-nine miles long; its width at surface is 56 ft., and at bottom 27 ft.; and the depth of water is only 10 ft. Obviously, then, it is of no use as a ship canal, though proposals have frequently been made to widen and deepen it.

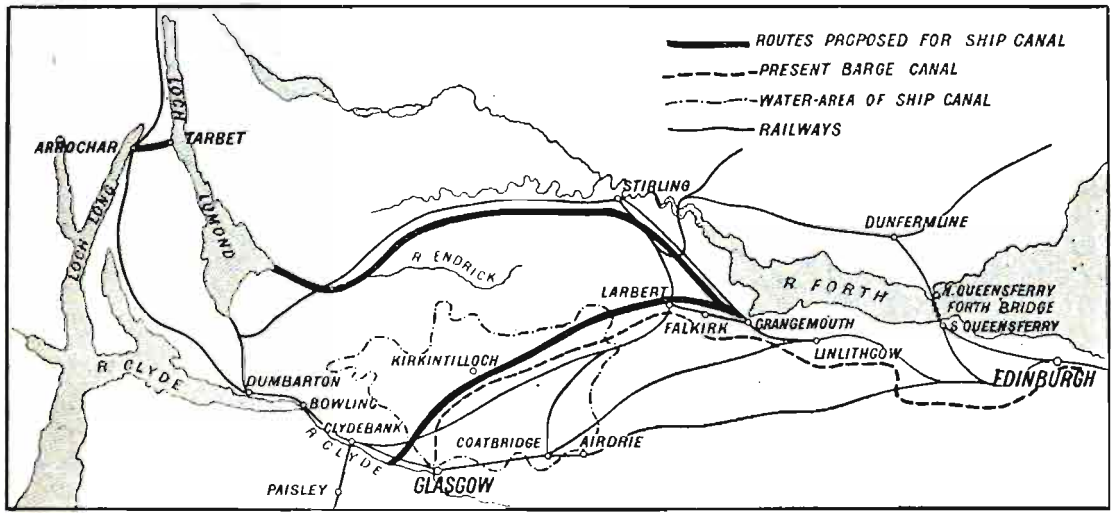
What is wanted is some waterway of dimensions large enough to admit merchantmen and warships of the largest class, to allow them to pass freely, and in perfect safety, from sea to sea at all times; and which will be as free as possible from locks or other mechanical appliances involving delay. To meet these requirements, not only has the intervening land to be considered, but also the tidal movements at each end, and the condition, depth, and current of the river channels to be united. The shortest route might be the dearest to make, but the cheapest in the end; the longest route might be both the cheapest to make and the dearest in the end. One line might take the canal through comparatively valueless lands at a low cost; another might take it through valuable lands at a much greater cost, to be compensated by the access of local traffic. These are some of the initial difficulties of the project.

There are now two definite schemes before the world, and these we propose to sketch briefly, since the subject has become of special interest in connection with the establishment of a new naval station in the Firth of Forth, at St. Margaret's Hope or Rosyth.

The first scheme is what is called the Direct Route, with which the name of Mr. J. Law Crawford is specially associated. For this it is claimed that the Ship Canal would traverse one of the most extensive coal-fields in Great Britain, with one-half of the unwrought coal of Scotland adjacent to its

eastern entrance. Strength is laid on this fact, because the seams are mostly of steam-coal, and it is argued that steamers using the canal would be able to coal practically at the pit's mouth, and thus save the cost of carriage on their fuel. We will trace this route from the west.

Leaving the River Clyde between Clydebank and Yoker, some few miles below Glasgow, the Direct Route Canal would run in an easterly direction partly along the line of the existing Forth and Clyde Canal, and partly along the valley of the Rivers Kelvin, Bonny, and Carron. It would reach the Forth just at the mouth of the Carron, near Grangemouth, a few miles south-west of St. Margaret's Hope.




HOW THE WATERWAY BETWEEN THE FORTH AND THE CLYDE MIGHT BE ACCOMPLISHED

Upon this plan, there would be an artificial waterway rather under thirty miles in length. It would have a bottom width of 100 ft.; a depth of 26 ft.; and a surface width varying according to locality, but nowhere less than 126 ft. There would be six locks at each end of this canal, and the engineers propose that these locks should be double—one part 600 ft. long and 65 ft. wide; the other 400 ft. long and 40 ft. wide, for smaller craft. The first lock, eastward, from the Clyde, would have a lift of 10 ft. above ordinary high-water mark; and the next five locks, which all occur within four or five miles, would have a lift of 16 ft. each, raising to the summit-level. This level runs continuously for 17½ miles; at the end of this the first of the eastern locks is encountered, five of which have an aggregate lift of 85 ft. from the ordinary high-water mark of the Forth. The fifth lock would be at Larbert, and admit vessels into the River Carron, which would be canalised. The sixth eastern lock would be a tidal lock, at the end of the canal, and admitting to the Forth.

This plan involves the crossing of six railways, and, for two of these crossings swing bridges would be necessary. The present Forth and Clyde Canal, and, of course, a considerable number of roads would also have to be crossed. But it is contended that no serious physical or engineering difficulties occur, and that there is abundant water supply from the streams on the summit-level. The question of cost is important. It has been estimated that the cutting of the Direct Route Canal, the construction of locks, the forming of railway and other crossings, reservoirs, &c., will require about six millions sterling. The land required is valued at a million, and if another million is allowed for margin, we have a maximum estimate of eight millions sterling.

The second scheme is that of Messrs. D. and T. Stevenson, engineers, and is what is known as the Loch Lomond Route. This plan when first drafted was most favoured in Edinburgh, as the former was in Glasgow and it is now being surveyed by a syndicate preparatory to the formation of a Canal Company. It is proposed to drive a cutting from the Forth, near Grangemouth, past Stirling, and along the line of the Forth and Clyde Railway to the River Endrick, and then by that water to Loch Lomond. This cutting would be some thirty-two miles in length. Practically, this

would be through the valley of the Forth, in which, up to within ten miles of Loch Lomond, the ground does not rise more than from 30 to 50 ft. above sea level, and is alluvial. On entering Loch Lomond vessels of the largest size would find ample depth and "sea room," and it is proposed to canalise the Loch—much like the lakes on the Suez Canal—up to Tarbet, a resting-place well known to tourists on the Queen of Scottish lakes. From Tarbet, a short canal of about a mile and three-quarters would have to be cut, through ground reaching a maximum height of 130 ft. above mean sea-level, to Arrochar on Loch Long. Loch Long is a sea loch—a portion of the Firth of Clyde—and, therefore, practically the Atlantic Ocean. It has great depth of water, and being sheltered by high mountains, presents an easy navigable run of several miles down to the wide-spreading Firth of Clyde.

By this plan, Loch Lomond would be the summit-level and the water supply, with a water area of 21,000 acres, fed by countless streams. The lake is only 22 ft. above the mean sea-level, and thus there would be only two locks required at each end, at Alloa in the east and at Loch Long in the west. This canal is proposed to have a uniform depth of 30 ft.; a width at the bottom the same as the Suez Canal, viz., 72 ft.; and a surface width varying with locality. The locks would be capable of passing vessels 600 ft. in length and 80 ft. in width, with, if necessary, smaller locks alongside for smaller vessels. To make this canal of sufficient width throughout to enable two large vessels to pass each other at any point would add too much to the cost to leave reasonable hope of remuneration; so it is proposed to provide frequent passing-places at suitable intervals.

There was one difficulty about this route, however, which formed an objection, and that is, a space of about two and three-quarter miles of high ground just before Loch Lomond is reached from the east. This involves either a very deep open cutting—for the promoters of this scheme are determined to have none but the unavoidable tidal locks at the ends—or a tunnel. Some engineers favour the latter mode: a tunnel of not less than 150 ft. above the water-line, and lighted continuously by electricity. This is the novel element in the scheme; and yet not altogether novel, except as applied to a ship canal, for one or two of the English canals pass through long tunnels. The Huddersfield Canal has one of three miles in length. It has now, we believe, been decided to abandon the idea of a tuunel and to make a cutting through the high ground.

As against the cut from Loch Lomond to Loch Long, across the Tarbet Isthmus, it has been proposed that a route should be taken from a point opposite to where the canal enters the lake, and by a cut of about four miles to the Clyde. This would shorten the total length of the waterway by about fourteen miles; but it would involve a very expensive tunnel.

A third alternative is to take ships down to the south end of Loch Lomond, and thence by canal through the Vale of Leven, to the Clyde at Dumbarton. This would be some seven or eight miles shorter than the Tarbet route; but it would involve five miles more of canal and six miles of river navigation, which means restricted speed, and therefore, no saving of time on the passage. Up and down Loch Lomond and Loch Long steamers could go at full speed; but not so on the canal or river. The estimated cost of the Tarbet line of the Loch Lomond route is eight to ten millions sterling; and the estimated cost of management and maintenance £60,000 per annum.

These, then, are the two main schemes which now divide attention; but there are others which may also be considered. For instance, the first idea was to deepen and enlarge the existing Forth and Clyde barge canal, and to change it into a tidal canal without locks; but it was found that this could not be done for less than £14,000,000. Then it was proposed that, whatever line was chosen, there should be no locks, but that vessels should be raised and lowered at the seaward ends to a level line of water by means of enormous hydraulic lifts. It was calculated, however, that in the case of a warship the total weight to be moved would be 80,000 tons or over, and although engineers do not regard such a feat as impossible, it is so far beyond anything yet attempted, that they shrink from the risk, not to speak of the enormous cost of the machinery.

The advantages which may be expected from a safe and secure waterway for the largest vessels across this island may be briefly shown. It would enable vessels proceeding from the Clyde to the east of Scotland, the north-east of England, and the north-west of Europe, to save a distance of from 238 to 528 miles. Thus, Clyde to London, *viâ* English Channel, is 758 miles, by canal it would be 505, saving 253 miles; Clyde to Hamburg, *viâ* Pentland Firth, is 913 miles, *viâ* canal 601 miles, saving 312 miles. There would, of course, be a similar saving in voyages the other way, and from the Forth to

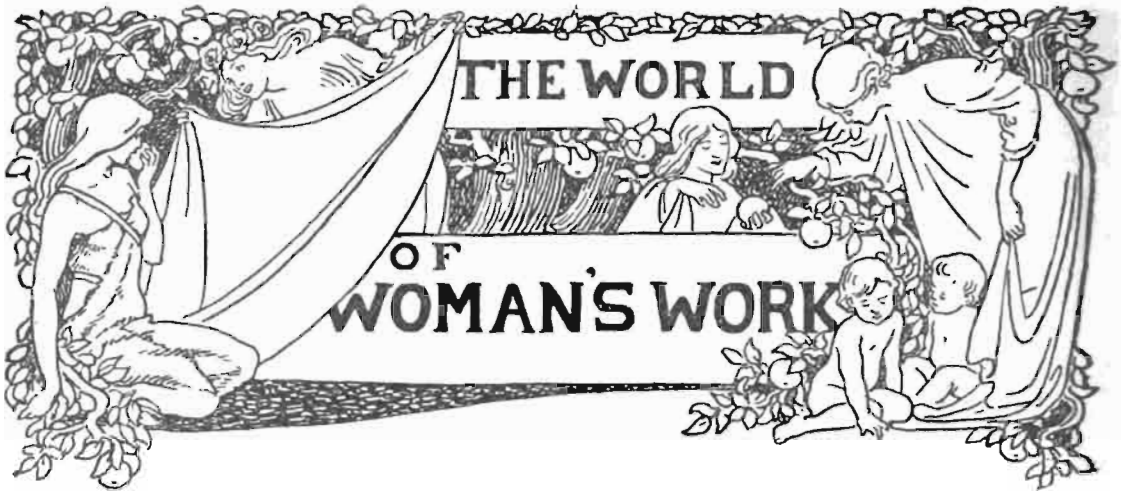
New York a saving of 175 miles would be effected; to Quebec 140 miles; from the Tyne to the Saint Lawrence, 150 miles. From the west of Great Britain and north-east of Ireland, the voyage to many Continental ports would be shortened by between 200 and 400 miles. It has been computed that, taking an average measurement of the vessels which pass annually through the Pentland Firth, and an average saving by the canal route of 300 miles, the total annual saving by the canal will be equal to 750,000,000 ton-miles.

The total foreign and coasting traffic which would be directly affected by the waterway amounts to twelve or fifteen million tons per annum—a traffic sufficient, at a very moderate toll, to yield a fair return on the cost of the undertaking. And it is not only time that would be saved to vessels passing from coast to coast—from the west coast to the Continent, and from the Continent and the east coast to the west, and to America—but also the risk of the tempestuous voyage by the north, or the overcrowded passage by the south. This means a decrease of tear and wear, and a lower rate of insurance—very important commercial considerations.

From an international point of view, this project derives further interest in connection with the Baltic Canal, from Kiel on the Baltic to Brünsbuttel on the Elbe. This canal is some sixty miles in length, is available for the largest merchantmen, and cuts off about one hundred miles in the distance between the Forth and the Baltic. The two canals would together present something like a straight line of route for vessels from Northern Europe to America—a line in which a further saving might be effected by carrying out the late Duke of Argyle's idea of a ship canal, about a mile long, across the narrow isthmus in Kintyre between East and West Loch Tarbert. This may, perhaps, be the waterway of the future between the Baltic and America.

From a national point of view, however, we have mainly to consider the immense advantage of a Forth and Clyde Canal were Great Britain engaged in a naval war. It would be simply invaluable, as it would enable us to despatch warships with rapidity and secrecy from coast to coast, and would, therefore, leave a larger portion of the Fleet at freedom to protect our ocean commerce, and to scour the seas. There are 3000 miles of coast on these islands to be protected, and it hardly needs to be emphasised how important it is to have a passage across absolutely at our own command for strategical and defensive purposes.

This waterway would bring the Naval Base on the Forth into direct and unrestricted connection with the great shipyards and engine works on the Clyde. In fact, it would double the base. The strategical value of the project has now become so important a factor that it raises the question whether the Forth and Clyde Ship Canal should not be constructed and maintained as a State enterprise (like the romantic but practically useless Caledonian Canal), even though it could be demonstrated as certain to be a commercial success from the mercantile traffic alone. It has been stated in Parliament that the Admiralty have the advantages of the Canal under consideration and that if it be constructed for commercial purposes they will certainly make use of it. Perhaps the matter may take shape as a commercial enterprise with a Government guarantee of interest on the cost of construction until the revenue suffices to pay all charges.




## RECENT ACHIEVEMENTS OF WOMEN

THE record of advanced and advancing women workers is naturally highest in America, but even among some of the conservative countries of the Old World the scope of their work continues to widen. A noteworthy occurrence in May was their admission to the profession of law in Holland. A new paper has been established by prominent women in Leipzig for promoting what is known as "the woman movement." A law has just been enacted in Russia which will enable a wife to leave a brutal husband and earn her living elsewhere, which heretofore has been impossible. A teacher of a boys' school in Florence, Italy, has won a case against the municipality, which, in disregard of the law, has been paying her a smaller salary than a man would have received, and has been awarded eleven years' arrears of pay. Women have recently been admitted to the bar in Norway and also appointed inspectors of hospitals and lunatic asylums. Vienna has at last decreed that girls may matriculate at their own gymnasium, or preparatory school, instead of having to go to a boys' school for their examinations.

In Great Britain, the old and exclusive Linnean Society has at length voted to admit women to full fellowship. Women have entered the Swanley Horticultural College in so much larger numbers than men that the governing body has reorganised the institution and made it a woman's college. For the sixth time in eight years a woman headed the list of successful candidates and won the medal in the Royal Horticultural Society's examination. In the four universities of Scotland sixty-four students took the examination for the Franco-Scottish bursaries, or fellowships, and three women stood at the head of the list.

The list of registered vessels published by the Canadian Government shows seventy women owners or managing owners of steam-vessels and fifty-six of sailing-vessels. Five women in the United States have passed the examination for a pilot's licence, the last one a few weeks ago. They navigate the Mississippi, the Ohio, the rivers of Virginia and the waters of Chesapeake Bay. A woman has taken the place of her deceased husband as stationary engineer in Cleveland, Ohio, and is filling it acceptably. Another, a graduate in mechanical engineering, has just been appointed foreman of the Pueblo Machine Works in South Chicago. The president and general manager of the Southern Independant Telephone Company, in El Paso, Texas, a woman, has recently built lines to adjacent towns, covering several hundred miles. The Cleveland, Painesville, and Eastern Traction Company is being managed by the president's chief clerk, a woman, while he takes a trip around the world. A woman has just been appointed assistant city ticket agent in New Orleans for the Louisville and Nashville Railroad. A few months ago a woman, by vote of the electors of Davenport, Iowa, was granted the franchise for an electric road between that city and Clinton.

One of the most prominent of oil magnates in Los Angeles, California, is a woman, who is said to control about half of the whole product. A woman is considered one of the most valuable of the sugar inspectors for the Spreckles Company of Hawaii. A woman who has been for twenty years cashier of a bank in Huntingdon, Indiana, has just been offered the presidency of a large banking institution now being organised in New York. The Philadelphia woman who recently invented a scientific bread-making machine has taken several prizes and been offered a large price for her patent. A woman lately died in New York who was said to stand at the head of the diamond experts in that country and to have left a fortune of £200,000.

The master of the Minnesota State Grange is a woman. The President of the Elwood, Indiana,

Trades and Labour Council of 3000 members, is a woman, who is also State organiser. The general organiser of the Retail Salesmen's Protective Association, for the past three years has been a woman, and membership of more than 40,000 is largely due to her efforts.

In the professions, in the world of letters, and in the colleges, women are constantly growing more prominent. The Iowa Society of Medical Women which met in April announced that in sixty-six counties the number of women physicians had increased from ninety-eight in 1899 to one hundred and fifty-five in 1903. A young woman studying naval architecture at the Boston Institute of Technology is said to have received an offer of a position from the Cramp shipbuilders. A woman sculptor of Cambridge, Massachussetts, has just had an important commission from the Brooklyn Institute of Fine Arts for a large collection of figures of elephants, lions, and other big animals. A young woman of Harrisburg has just been given the contract for the mural decorations of a room in the new capitol of Pennsylvania. The rooms of the Cosmos Club, of Washington City, have recently been handsomely redecorated by a woman. Congress has awarded to a woman a $500 commission for a bust of President McKinley. Much important sculpture for the St. Louis Exposition is being executed by women artists. The Colorado Academy of Science has elected a woman president.

Between 1890 and 1900 the men students in the colleges and universities of the United States increased 60 per cent.; the women students, 148 per cent. Between 4000 and 5000 women were graduated last year.

## A WORKING GIRLS' CLUB

IT is a matter of course for the expensive modern woman to have her favourite club where she can lunch with a choice friend, or rest and read and free herself for an hour or two from domestic cares or the exigencies of fashionable life. The exclusively literary woman, too, finds her club indispensable. But it is only quite recently that social clubs have been started for the class of women to whom such institutions are a real need and benefit—these are the women who have to work for their daily bread as clerks and shorthand writers, and have not capital to start clubs for themselves. There are doubtless a number of clubs for this class in London with libraries and registration bureaux attached, but so far there is only one club where the members can have food at a price within their reach. It is difficult for the "soup and fish" people, as a certain old woman described the wealthier classes, to realise that there are hundreds of women of education and refinement all over London, who consider a shilling luncheon an extravagance, and a visit to the ordinary "popular" restaurant discovers the fact that the mid-day meal of numbers of girls who are working in offices from nine till six, consists of a cup of tea and a roll and butter, with perhaps the doubtful luxury of an unwholesome pastry.

The only club in London which answers this need was started three years ago, with a membership of a hundred, by a few public-spirited women who had recognised with sympathy the lonely, comfortless existence of some of the city workers. Its object is to provide a convenient centre for rest, recreation, and social intercourse for women engaged in clerical work. Already the list of members has grown to three hundred, which is quite a large enough number for their limited premises. It is now almost, if not entirely, self-supporting. The membership fee is very small, 10*s.* a year, with an entrance fee of 2*s.* 6*d.*, and provision is made for this to be paid in instalments, by those to whom even this small fee is a tax. The rooms are well and artistically furnished with numbers of comfortable low easy chairs. Every day there is a well-cooked hot luncheon at a most reasonable figure. These luncheons are deservedly popular, the average attendance being about eighty members. There is a well-filled buffet with light refreshments, and the catering is carried out efficiently by a responsible housekeeper. About six o'clock or earlier tea can be had, after which the small folding-tables are cleared away, and the club room arranged for the evening. The club is open from noon till 9. There is a library of some six hundred volumes, mostly fiction, where Scott and Charlotte Yonge rub shoulders with other favourites. The great feature of the club is that all members must be workers, and as they are mostly engaged in similar occupations, a healthy *esprit de corps* prevails. Throughout the winter there is a variety of successful evening-classes for dressmaking, millinery, wood carving, French, and shorthand. Monday is the musical evening, when the piano—which is kindly lent by a friend of the club—is made good use of. There are also enjoyable Saturday afternoon parties. The winter programme generally includes concerts, song tableaux and games, while in summer there are delightful picnics and cycle rides, lawn tennis, and hockey. There are also holiday excursions to different parts of England and to the Continent.

There is a registry in connection with the club which a member can use for a merely nominal fee, and good work is done also by their branch of the National Deposit Friendly Society, which provides a weekly allowance in case of illness. Indeed, everything that can add to the comfort of the members seems to have been thought of and acted upon by the generous founders and patrons of the club, and results have certainly justified their ambition. The steadily growing list of members

is the surest test of how the club is appreciated. No doubt the idea will in time be extended to other parts of London, and if conducted on similar lines should meet with equal success.

## THE INFLUENCE OF HIGHER EDUCATION FOR WOMEN

THE bearing of the higher education on the health of women and on their attitude toward marriage and the home is a question of perennial interest. The independent women's colleges have felt under the necessity from the beginning of facing these questions, and have been at some pains to keep their statistics and to watch the tendencies among their graduates. It may be said in brief that it has been abundantly shown by the most careful investigation that the health of college women improves during the four years of the college course. Dr. J. M. Taylor, President of Vassar College, says:

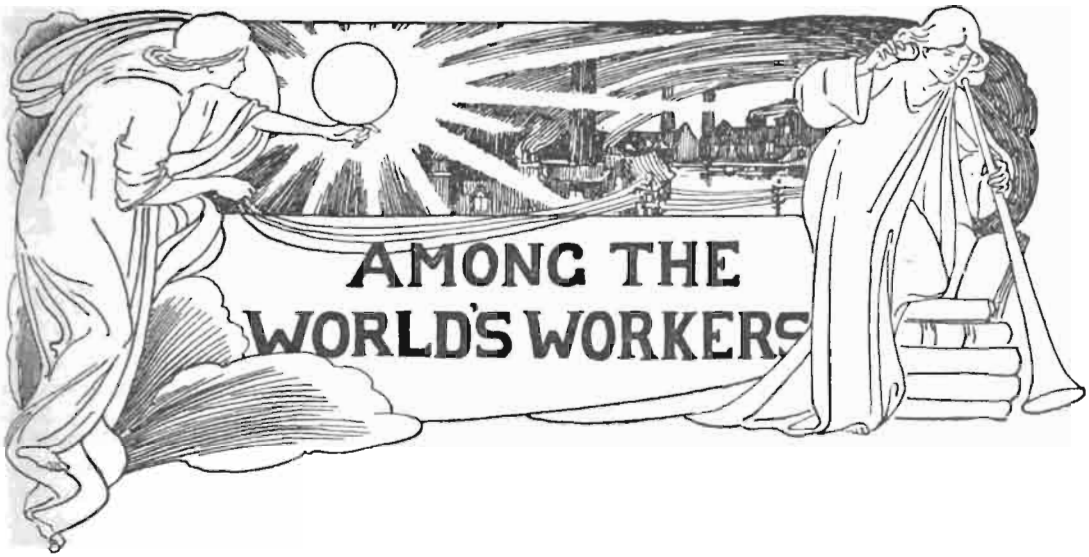
"It would be difficult to find several hundred young women of the same general social conditions in more generally good health and spirits than are those who have just closed the current academic year in the women's colleges. Only three of the 153 graduates of Vassar College in 1903 assert that they have not improved in general health since entering college. Such evidence is not scientific, but is noteworthy and probably well-based.

"So far as the relation of education to marriage and the home is concerned, there seems to be little or no bearing upon the matter in the system of women's education, whether co-educational or independent. It has been clearly shown that among American college men of the generation, the number in the family has by a slight fraction surpassed the number in the native-born population. The same figures would probably hold for the educated woman. All figures are untrustworthy unless fully interpreted, and in gathering averages of classes it must be remembered always that the college women are likely to marry a little later than those who do not go to college. It is certainly true as far as the first ten years of the history of Vassar College are concerned, that more than half the total number are married, and that the proportion of children to each marriage is from two to three. The very large classes graduating now at all of the institutions which train women would, of course, bring down the average to very small figures, but manifestly this is a point where the figures of recent classes should have small influence on our conditions.

"There is nothing in the college training of women to contribute to abnormal results. A healthy mind and a healthy body and absolutely healthy and natural sentiments toward life are the general product. Those who have seen most of the work are foremost in their belief in it, and in their scouting of the fears of men, based on considerations unsupported by experience and without warrant in anything known of woman's nature. No work promises more for its future than the thorough education of a country's girls."

## A NEW WEAPON AGAINST DIRT

ANY invention that can lighten the burden of domestic work and also help on the moral duty of making and keeping the home beautiful, brings with it its own welcome and needs no elaboration of praise. Every woman may one day be her own architect, and why not also her own engineer? It is to the praise of a lady whose name is best known as the founder and principal of a high school and training college, that she has invented and taken out a patent for something which is at first sight perhaps rather out of the usual path of education. Her invention, which is a triumph over dust and dirt, is a short window-curtain protector. Already the protector has been adopted by a large temperance hotel in Southampton Row, where eighty-three pairs of short curtains are immune for ever from the smoke and dirt of West Central London. Where the protector is adopted no future expenditure is required for window decoration, and artistic housewives may without fear or compunction trim their short curtains with real lace, and rejoice in the certainty that during their lifetime at least neither moth nor rust may corrupt. She may indulge in chaotic spring-cleanings and whitewashings, while all the time the curtains remain in spotless serenity—graceful and fresh, without knowledge of a washing-day. The expense of the protector, too, is nominal and initial. The protector itself is invisible, and in no way interferes with the opening of the windows upwards or outwards. This simple and effective protector consists of a sheet of glass in a wooden frame the size of the lower part of the window. The curtains hang between the frame and the window-pane, attached either to the frame of the protector or to the window sash. They are thus in a small air-tight compartment and thoroughly protected. It is quite impossible from the outside to detect the arrangement, and from within it rather heightens the good appearance. Any carpenter can make the frame, which can be easily fixed or detached.




## THE MOTOR AND AMERICAN ROADS

THE speech which President Roosevelt recently made at a convention of good-road promoters in St. Louis advocating Government aid for the building of inter-State highways is regarded as the turning-point in the long struggle to this end in the United States and is directly traceable to the agitation of motorists. Never before has the hope of federal aid been held out, and without it co-operation between the various separate states has not been possible. For many years the head and front of the good-roads movement in America has been General Roy Stone, a distinguished officer of Engineers, retired. He is also the father of the scheme for a motor speedway, 113 miles in length, running through the backbone of Long Island and connecting Montauk Point with New York, which is in contemplation. It is to be a double track steel toll road, exclusively for pleasure and freight automobiles. General Stone has submitted his scheme to prominent officials of the National Association of Automobile Manufacturers, the Association of Licensed Automobile Manufacturers, and the American Automobile Association. These have the scheme under consideration with a view to the formation of a company to finance and build the road, the estimated cost of which is £3000 per mile, including the right of way, the laying of rails, and the building of hedges and wire-fences enclosing it. The speedway, according to a recent description in the *Daily Telegraph*, will be forty feet wide, and enclosed by hedges and close smooth wire fences to shut out stray animals. A double track of steel plates, each track five feet between centres, and the same outside, will be laid on the grass. The highways are to be carried over the motor way by raising them five feet, the motor way being correspondingly depressed. On such a road laid on grass, said General Stone, there would be no dust nor mud, no glare from sunlight, and no reflected heat, while the road will suffer no wash from rain and no wear of any kind, and if it were bordered with stout hedges, no serious accident would be possible to any motor-vehicle.

## PROPOSED POSTAL REFORMS

IN the cause of reforming the whole postal system Mr. Henniker Heaton, M.P., never seems to weary. He has recently submitted a list of sixty-nine reforms to the Postmaster-General. Whether as a result of his representations or in anticipation of them Mr. Austen Chamberlain has announced the early granting of several of the measures asked, among them a new series of postal orders rising from sixpence by sixpenny gradations to £1, the free redirection and transmission of telegrams, and a more effective system for insurance of postal matter. Among the other reforms suggested by Mr. Heaton are: universal penny postage; telegraph tariff to any part of Europe to be 1*d.* per word; telephone charges to the Continent to be reduced at least 50 per cent., with a minimum charge of 1*s.* per message; money order charges to the Continent to be low and uniform; money with the money order to be brought to the residence of the receiver; the telegraph money order system to be extended to all parts of the civilised world; the cables owned by British companies to be acquired or purchased at market price by Great Britain, India, and the colonies, and then worked at the lowest remunerative rates; telegrams to all parts of the British Empire to cost 1*d.* per word, with a minimum total charge of 1*s.* to Australia and South Africa for each message: cable messages to Egypt to

be reduced from 1*s.* 7*d.* per word to a reasonable rate; a cheap agricultural parcel post, with special provision by motor-car or otherwise for rapid collection, to be established; parcel post rates to be uniformly 1*d.* per pound minimum; post-cards to be sold at their face value; all postal orders to have counterfoils with details of issue; an Imperial exchange of postal orders (between England and her colonies) to be arranged; no fines to be imposed on delayed postal orders, and the value given for halfpenny stamps affixed to postal orders; stamps and postal orders to be on sale at all chief postal and telegraph offices that are open on Sundays; the charge for registration of letters and all postal articles to be reduced to 1*d.* each; the fine for insufficient postage not to exceed ½*d.* for an inland and 1*d.* for a foreign letter; three classes of postmen to be appointed for expediting delivery of correspondence: (1) for letters, (2) for newspapers, and (3) for parcels; tube conveyance of mails in cities from the post offices to the railway stations, &c.; letter-boxes to be provided on all through trains; stamps for sale at railway stations; an International postage stamp, or its equivalent, to be provided; right of senders to recall letters after posting; legible postmarks; letters containing lottery tickets and immoral literature to be destroyed; full compensation to be given for neglect, default, or larceny by officials; improved pillar-boxes for the safeguarding of letters; private letter-boxes at large post offices in London, etc., for visitors from the colonies; penny postage to Egypt, and also to all foreign countries where there are British post offices; the weight of letters carried at the minimum charge to foreign countries and to all parts of the Empire to be increased from ½oz. to 1oz.; the name of each place, etc., in the United Kingdom to be charged in telegrams as one word; all porterage charges on telegrams and guarantees to be abolished; compensation to be given for telegraphic official errors where loss has occurred; all public telephones to be owned and worked by the State; magazine post at the rate of 8oz. for 1*d.*; all *bonâ fide* periodicals issued for sale to be registered and transmitted at newspaper rates; the halfpenny postage or book-post regulations to be revised in a liberal spirit; sailors and soldiers serving abroad to have their letters sent postage free; the Post Office Savings Bank to accept pence; the Post Office surplus of over £4,000,000 not to be exceeded; all profits exceeding this to be devoted to improving, extending, cheapening, and facilitating postal and telegraphic service; a new Post and Telegraphic Office to be erected at Charing-cross; a clear and intelligible Post Office Guide, in legible type, to be prepared; automatic stamping machines to be introduced; fines for late posting at railway stations to be abolished; London to be made one "district" for calculating charges for delivery and redirection of parcels; the fee for receipt of a telegram to be reduced from 2*d.* to 1*d.*; an Imperial Postmaster-General to be appointed.

## GERMAN COMPETITORS FOR COLONIAL TRADE

IT is always advantageous and sometimes instructive to learn the plans of the enemy even when he attacks an impregnable position. It is therefore interesting to read advice issued by the Austrian Commercial Museum intended to forward continental trade with South Africa. Here is a report concerning the cotton goods trade:

"A strong article, indigo-dyed with small patterns and colours which do not fade in washing, is in greatest demand. The English manufacturers have not succeeded in furnishing a product at the same price as their German and Dutch competitors. Another article in good demand in South Africa, which is in part supplied by Holland and Germany, is 'flannelette.' This is made of various kinds, either of one colour or with stripes of coloured yarn, or printed in different patterns.

"For goods dyed in the piece, very light colours must be chosen; if coloured yarn is used, it is advisable to have a combination of stripes and checks. Tasteful and original patterns are in favour, but the goods should be heavy and durable. The reason that the German article is more in favour than the English one is on account of its greater width. The price also is of importance, a quality retailing for from 6*d.* to 8*d.* per yard meeting with the largest sales. The largest and most important imports of the South African textile trade are cotton blankets. Seven years ago they came exclusively from England, while to-day Belgium furnishes the largest part. The blankets are white or coloured, smooth, and with a coloured border, or white, with coloured stripes. They are made of unbleached cotton. The sizes differ according to the market and the wishes of the dealers. It is specially important to send blankets of light and gay colours. They are mostly bought by the Kaffirs, who are to be found in the suburbs of all large and small towns in South Africa.

"The female Kaffirs use mostly cotton goods, either of bleached or unbleached yarns, dyed with lively colours or prints of fancy patterns, in various widths. They use them for loin cloths, belts, shawls, turbans, or dresses. Each tribe calls for certain kinds of these goods. The English have studied the market carefully and know the tastes of the various tribes. The dress of the male Kaffirs is much more simple; it consists of a loin cloth, several ornaments, and the above-mentioned cotton blanket, which the native prefers in white, as he usually paints it himself. Cheap ready-

made clothing finds a sale. The native who comes into the city or settles in the suburbs is forced by law to wear European dress. Oftentimes the native remains in the cities for a short time only, returning after a few weeks to his 'kraal.' In this case he buys the cheapest kind of clothing; if, however, he intends to remain longer and receives fair wages he buys a better quality. Woven goods and underwear, on account of the climate —which is very changeable—are articles of necessity.

"German woven goods, on account of cheapness, find a ready sale. Socks should be seamless and well dyed. Of the more expensive woollen goods, the English are the favourites. In the cheaper kinds, however, it would seem that England cannot compete. These are mainly cotton goods, mixed with sheep wool (Angola), well dyed, and of good appearance and finish. Light and lively colours are in demand."

## A WORKING COLONY FOR EPILEPTICS

"THIS is not an asylum; it is a colony. The inmates are not 'patients'; they are colonists." Thus spoke Mr. Hubbard, the Chairman of the Asylums Committee of the London County Council, at the opening, by the Duke of Fife, accompanied by Princess Louise, Duchess of Fife, of the Epileptic Colony at Ewell, Surrey, on July 1. His words may be taken as an index to the character and objects of this humane enterprise of London's great governing body.

Colony-life has long been provided for sufferers from "the falling-sickness," and alike in Great Britain, America, and on the Continent of Europe, there are well-known homes which provide the two essential therapeutic factors—life in the country and regular employment. But hitherto in founding such colonies a sharp distinction has usually been made between the sane and the insane. Exceptions to the rule are found in the United States, where the Ohio and the Monson Hospitals for Epileptics receive both classes; but in the United Kingdom—possibly because of the operation of the Lunacy law—there has until now been no special provision for the certified insane epileptic other than is afforded by the ordinary asylum. Roughly speaking, in Great Britain there is one adult epileptic in every thousand of the general population, including those in asylums. Sometimes the disease is found associated with great mental power, but, as a rule, the trend of habitual epilepsy is towards gradual mental deterioration. The London County Asylums alone contain sixteen hundred epileptic patients, among whom there is a sufficiency of suitable cases to form the nucleus of a working colony. The colony has therefore been established. It occupies one hundred and twelve acres on the Horton estate (which belongs to the Council). The buildings were designed by the Asylums Committee's engineer, Mr. W. Charles Clifford Smith, M.I.C.E., and consist of an administrative block and eight villas. These provide for sixty female and two hundred and sixty-six male patients (or "colonists"), and have cost £98,000 to erect and equip. The villas are named after trees (Holly, Elm, &c.), and their verandahs and porches will enable the colonists to be in the open in all weathers. The colonists will also have a cricket and recreation ground, the laying out of which will probably be one of their first tasks. In conducting the colony a prominent place is to be given to the fostering of home-life. Each villa for men will be under the charge of a man and his wife, who will have the assistance of other attendants so far as is found necessary. The cooking, washing, and mending of clothes and other domestic matters will be performed by the female colonists, under supervision. For the men and, as far as possible, for the women also, it is felt that, though trades and employment in workshops shall not be altogether excluded, an out-door life is likely to be the most beneficial. The formation of a market garden and shrub nursery will be part of the earliest work undertaken. This will provide continuous out-door occupation during all seasons of the year, and it is hoped will also prove remunerative. Whether a colony of epileptics can ever be entirely self-supporting is doubtful. The fact that in this instance they are insane and under certificate implies a staff numerically sufficient to ensure continuous supervision, a point that of course will always militate against complete absence of all cost of maintenance.

## BRITISH AND FOREIGN EXPORTS TO AMERICA

IN an important report which the British Consul-General at New York (Sir Percy Sanderson) has just made, there are some interesting figures concerning the United States as a consumer of the products of Greater Britain. During the year 1902, he says, the total imports into the United States were the largest on record, the value being returned at about £193,862,000, an increase of about £17,800,000, or 10 per cent. This increase is spread over a number of articles, the most important coming under the head of iron and steel, in which the home demand largely outstripped the very considerable advance in production. On the other hand the value of the total exports was returned at, roughly, £272,140,000, a decrease as compared with 1901 of about £21,000,000, or 7 per cent., due almost entirely to diminished exports of grain. The value of the imports at the port of New York represented 63 per cent. of the total of the United States in 1901 and 61 per cent. in 1902; that of the exports about 34 per cent. in 1901 and 35 per cent. in 1902.

A table given in the report shows the total values

of the imports and exports at New York by foreign countries. Comparing the years 1901 and 1902 it is found that the imports from the United Kingdom have increased by about 12 per cent., from £19,802,000 to £22,169,000; those from British possessions by about 8½ per cent., from £9,243,000 to £10,043,000. The imports from Germany have increased from £13,602,000 to £15,220,000, about 12 per cent.; those from France from £13,266,000 to £14,643,000, about 10½ per cent.; imports from Italy, £5,703,000, show an increase of 21½ per cent.; from Switzerland, £3,636,000, an increase of nearly 24 per cent.; from the Netherlands, £3,204,000, a decrease of over 40 per cent. As regards the exports, those to the United Kingdom decreased by about £2,400,000, or 6½ per cent. to £34,075,000, while those to British possessions, £12,828,000, increased by about £740,000, equal to 6 per cent. Exports to Germany, £9,779,000, and to France, £4,769,000, each show a decrease of about 7 per cent., those to Belgium, £4,232,000, a decrease of 8 per cent., while there is a slight increase in the value of exports to the Netherlands, viz., from £6,532,000 to £6,796,000.

## AMERICAN INVASION OF THE COLONIES

MUCH has been heard about the American invasion of England, but it remained for Mr. Consul Wyndham, at Chicago, to point out in a recent report that the all-pervading Yankee is also laying siege to the colonial market. Looking far ahead to the realisation of Mr. Chamberlain's dream of a "protected" British Empire, this 'cute trader is already establishing branch factories in Canada and Australia to be behind the tariff wall before it is built. Speaking of the year 1902 Mr. Wyndham says that the trade, manufacturing, wholesale, and retail, of Chicago and the whole consular district showed a continued and marked increase over previous years. A great many houses are making arrangements to extend their export business, and with the increased manufacturing capacity keen competition may be looked for both in the United Kingdom and colonies as well as in foreign countries. Many more firms are likely to start branches in the United Kingdom and will, if thought practicable, manufacture there, while strong efforts are being made to control the trade of South Africa and other British colonies.

The business methods of Canada are similar to those of the United States, and a number of young Australians are in that country learning the business methods and studying the machinery used in the States for mining, irrigation, etc. Many of the conditions in the United States are like those of the colonies, and the same machinery and methods can be used there as can be seen in the Western States of America in operation in mines and on large farms and in the semi-arid districts. The labour conditions on farms are also similar, labour being highly paid and scarce, and a close study of all labour-saving methods on farms is being made. The importance of careful study of the business and manufacturing methods of the United States and the adoption of those which may be suitable to the country where trade is sought is very great and should be encouraged. Many of the methods are unsuitable for the United Kingdom, but are indispensable to increasing or holding trade in those parts of the world where the American merchant is active, and a study in the United States for several months would, in most cases, be found of great advantage.

## A CROSS-CHANNEL TURBINE STEAMER

THE South Eastern and Chatham Railway has the credit of being the first to adopt for regular cross-Channel work the turbine steamer, which, it is expected, will prove of great advantage in that troublesome bit of water. This vessel, the *Queen*, is now regularly at work, but so far has not shown what she can do in really rough weather. Externally she differs but little from those of the ordinary twin-screw type, but according to the *Daily News*, on her trial trip, she was swift, she was steady, she answered her helm readily, and, save just over the centre of the rapidly revolving turbines, there was not a tremor to be felt on her. She was never really driven, yet she crossed from Folkestone to Calais in an hour and five or six minutes, while one day she went from pier head to pier head of the Calais-Dover journey under the sixty minutes. She has great manœuvring powers. On her trial trip on the Clyde early in July, when steaming continuously astern, she attained a speed of about thirteen knots. Starting and stopping trials were also carried out, and the vessel when going over nineteen knots per hour was brought to a dead stop in a minute and seven seconds after the telegraph-order was given to the engine-room, and the distance she travelled in this time was equal to only two and a half times her own length.

Internally the new vessel, which is 310 ft. long, with a moulded breadth of 40 ft., and a depth of 25 ft., is all that can be desired. She is fitted with a complete awning deck, where are a number of special cabins provided for the convenience of passengers. Amidships is a comfortable smoking-room. Above the first-class accommodation is a promenade deck extending out to the ship's side, which shelters the awning deck in wet or rough weather, and provides a large promenade in fine weather.

A PICTURE FROM THE DURBAR

BY MORTIMER MENPES

The
# World's Work

AN ILLUSTRATED MAGAZINE OF
NATIONAL EFFICIENCY AND SOCIAL PROGRESS

**Edited by Henry Norman, M.P.**

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## The March of Events

### DISSENSION AND DISRUPTION—AN END AND A BEGINNING

THE Prime Minister has defended his citadel of silence to the last. Parliament has been prorogued without a discussion of the one subject about which the whole country is thinking and talking. True to the end to the carelessness of Parliamentary form and tradition which distinguishes Mr. Balfour's Administration from any which has preceded it, the Speaker was not provided with a copy of the King's Speech, which accordingly was not read in the House of Commons. The King does not regard these matters of historic precedent with the indifference of his Ministers, and we should imagine, therefore, that his Majesty will be somewhat astonished that his words to the "Gentlemen of the House of Commons" were not formally communicated to them.

This, however, is but one among many such examples of the neglect of Parliamentary procedure during recent years. Mr. Balfour's persistent refusal to grant an opportunity of debate upon the Colonial Secretary's frank announcement of an autumn campaign against the fiscal policy of successive British Governments for more than half a century is not only a blow against the House of Commons itself, and not only an injury to his own reputation as a statesman, but—we say it with sincere and deep regret—it is a blot upon his own fair fame for sincerity and straightforward dealing. In July he told Mr. Bryce that "there was no reason to doubt" that the results of the "inquiry" of the Government into our fiscal system would be presented to Parliament before the prorogation. When the eve of the prorogation was reached, and the House was informed that the final corrections of the proofs of the report by the Board of Trade had not been made, and when this report was therefore laid "in dummy" upon the table of the House, he told Mr. Bryce that the latter's complaint and criticism were "extremely absurd." And when another Member reproached him with not having given a day for the discussion of the whole matter, he replied, "Am I to give a day for anything any honourable Member would like to discuss?" In this case "any honourable Member" means the entire Liberal party, and more than fifty of his own supporters, led by his own ex-Chancellor of the Exchequer. Mr. Balfour's reply was not only foolish from the point of view of the facts, but it was disingenuous, and the more one has admired and respected him, the more must one regret to see him fall so far short of his own previous standards of Parliamentary and personal conduct. The fact—and it is a lamentable one—is that a discussion would certainly have been injurious and might have proved fatal to the Government, and that therefore it has been burked

without scruple. If voters throughout the country are not both blind and deaf, and if their demand for high qualities of honour in their political leaders remains what it has been in the past, such tactics must inevitably bring their own punishment. Mr. Chamberlain, meanwhile, is using his official position, his personal influence, and the funds which wealthy sympathisers have placed at his disposal, to push his own campaign, and his leaflet-factory in Birmingham is stated to have already circulated fifty million leaflets and pamphlets advocating principles repugnant to at least five members of his fellow Cabinet Ministers and several other members of the Government.

Under these circumstances, a split in the Unionist Government cannot be long delayed. To suppose, for instance, that the Duke of Devonshire will consent to remain a member of a Government one Minister of which is to be at liberty to advocate a policy of his own, while other Ministers of opposite views either remain silent or openly repudiate it, would be to misunderstand both the personal character of the Duke and the honourable pride of the Cavendish family. Mr. Ritchie, too, will most assuredly not put his convictions in his pocket for the advantage of remaining Mr. Chamberlain's colleague, while Lord George Hamilton, Lord Balfour of Burleigh, and Lord Londonderry in the Cabinet, and Lord Stanley and Mr. Arthur Elliot outside it, are all Free Traders. Therefore, if the Prime Minister finally throws in his lot with Mr. Chamberlain, these Members of the Government must resign. On the other hand, if the Prime Minister concludes that this bogus "inquiry" does not support Mr. Chamberlain, then it will clearly be impossible for the latter to remain in the Government, and obviously the Postmaster-General would follow him into retirement. In either case, a Unionist split appears inevitable, and while it may have occurred before these words are in the reader's hands, it cannot be delayed longer than the end of September, when the Cabinet Council immediately preceding Mr. Chamberlain's speech at Glasgow on October 6 takes place.

How far this split may go, or what its ultimate consequence will be, nobody can foretell, but a recent article in the *Standard*, the most consistent and influential representative of Unionist opinion, shows well the anxiety, almost amounting to despair, which prevails in that party. We reproduce two passages:

"We have had no other example of a Minister appealing to the country to support him in forcing his own views upon colleagues with whom he shares the obligations of office. The situation cannot last; but it should not have been created. A Cabinet is supposed to have come to an understanding as to its own opinions before it allows them to be promulgated. If any Minister finds himself out of accord with the rest—if he is out-voted or ignored—his course is plain. He should stand aside, and then, released from the trammels and ties of office, he is at liberty to place his views before the electorate."

"It is not too late, even now, to restore harmony to the councils of the Party, and to refrain from throwing our whole political system into a welter of confusion, which may impede all domestic reform for years, and leave the country distracted at home and discredited abroad. But, if the battle is to be fought out to the bitter end in the same spirit in which it has been begun, we may close one chapter of our Party history, not without melancholy misgivings as to what the next may have in store for us."

Our readers may take it that such an article has a grave significance for those whom it represents. In fact, so certain is it that Mr. Chamberlain's action will have the effect of splitting his own party that it is only reasonable to assume that this is his aim and intention, and that he is looking—politically speaking—for the subsequent advantages that proverbially attend him who fishes in troubled waters.

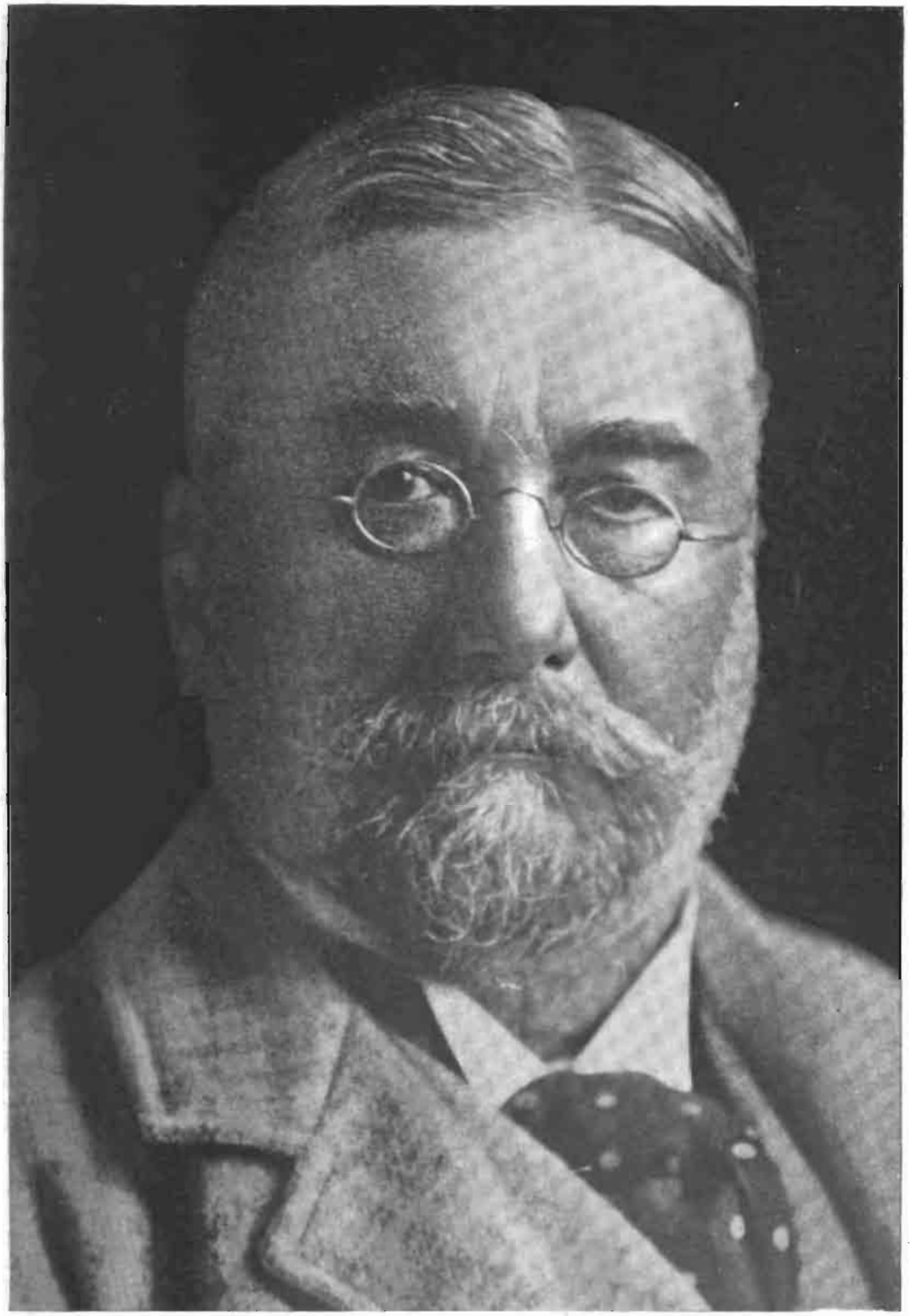
## THE EXPERTS AND MR. CHAMBERLAIN

A MANIFESTO of a kind without precedent in this country appeared in the *Times* of August 15. It is a pronouncement signed by no fewer than fourteen professors of economics, including, with possibly one exception, all the leading recognised authorities upon political economy, upon Mr. Chamberlain's proposals. To the intelligent citizen it should carry the gravest conviction, while to the preferential trader and the protectionist it is a crushing reply and a weighty warning. It is the duty of every one who controls an organ of publicity to help to give this manifesto the widest possible circulation, and we therefore reproduce it in full. The text and the signatures are as follows:

"PROFESSORS OF ECONOMICS AND THE TARIFF QUESTION

"*To the Editor of the 'Times'*

"SIR,—We, the undersigned, beg leave to express our opinions on certain matters of a more or less technical character connected with the fiscal proposals which now occupy the attention of the country.



Elliott & Fry

SIR NORMAN LOCKYER, K.C.B., F.R.S.

THIS YEAR'S PRESIDENT OF THE BRITISH ASSOCIATION, WHICH OPENS ITS MEETINGS

"One of the main objects aimed at in these proposals—the cultivation of friendly feelings between the United Kingdom and other parts of the Empire—is ardently desired by us, and we should not regard it as a fatal objection to a fiscal scheme adapted to this purpose that it was attended with a considerable sacrifice of material wealth. But the suggested means for attaining this desirable end do not seem to us advisable: firstly, because there would probably be incurred an immense and permanent sacrifice not only of material, but also of higher goods; and secondly, because the means suggested would be likely in our judgment to defeat rather than attain the end in view.

"Firstly, having regard to the prevalence of certain erroneous opinions, to which we advert below, we think that any system of preferential tariffs would most probably lead to the re-introduction of Protection into the fiscal system of the United Kingdom. But a return to Protection would, we hold, be detrimental to the material prosperity of this country, partly for reasons of the same kind as those which, as now universally admitted, justified the adoption of Free Trade—reasons which are now stronger than formerly, in consequence of the greater proportion of food and raw materials imported from foreign countries, and the greater extent and complexity of our foreign trade. The evil would probably be a lasting one since experience shows that Protection, when it has once taken root, is likely to extend beyond the limits at first assigned to it and is very difficult to extirpate. There are also to be apprehended those evils other than material which Protection brings in its train, the loss of purity in politics, the unfair advantage given to those who wield the powers of jobbery and corruption, unjust distribution of wealth, and the growth of 'sinister interests.'

"Secondly, we apprehend that the suggested arrangements, far from promoting amity, may engender irritating controversies between the different members of the Empire. The growing sense of solidarity would be strained by an opposition of interests such as was experienced in our country under Protection, and has been noticeable in the history of the United States and of other countries. Such an opposition of interests would be all the more disruptive in the case of the British Empire, as it is not held together by a central Government.

"Our convictions on this subject are opposed to certain popular opinions with respect to which we offer the following observations:

"(1) It is not true that an increase of imports involves the diminished employment of workmen in the importing country. The statement is universally rejected by those who have thought about the subject, and is completely refuted by experience.

"(2) It is very probable that a tax on food imported into the United Kingdom would result in an equivalent—or more than equivalent—rise in wages. The result which may be anticipated as a direct consequence of the tax is a lowering of the real remuneration of labour.

"(3) The injury which the British consumer would receive from an import tax on wheat might be slightly reduced in the possible, but under existing conditions very improbable, event of a small portion of the burden being thrown permanently on the foreign producer.

"(4) To the statement that a tax on food will raise the price of food, it is not a valid reply that this result may possibly in fact not follow. When we say that an import duty raises price, we mean, of course, unless its effect is overborne by other causes operating at the same time in the other direction. Or, in other words, we mean that in consequence of the import duty the price is generally higher by the amount of the duty than it would have been if other things had remained the same.

"(5) It seems to us impossible to devise any tariff regulation which shall at once expand the wheat-growing areas in the Colonies, encourage agriculture in the United Kingdom, and at the same time not injure the British consumer.

"(6) The suggestion that the public, though directly damnified by an impost, may yet obtain a full equivalent from its yield is incorrect, because it leaves out of account the interference with the free circulation of goods, the detriment incident to diverting industry from the course which it would otherwise have taken, and the circumstance that, in the case of a tax on foreign wheat—English and Colonial wheat being free—while the consumer would have to pay the whole, or nearly the whole, tax on all the wheat, the Government would get the tax only on foreign wheat.

"(7) In general, those who lightly undertake to re-organise the supply of food and otherwise divert the course of industry do not adequately realise what a burden of proof rests on the politician who, leaving the plain rule of taxation for the sake of revenue only, seeks to attain ulterior objects by manipulating tariffs.

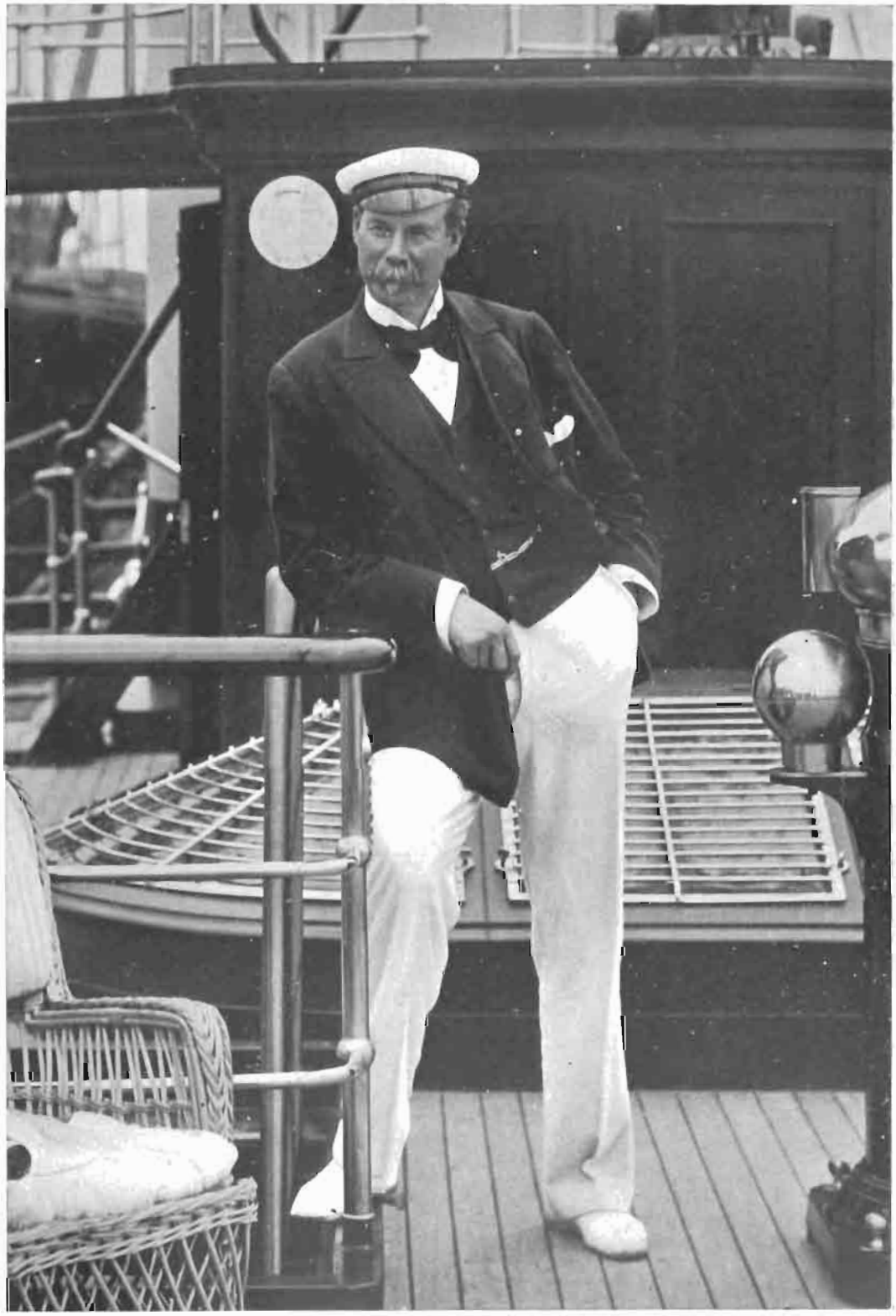
"C. F. BASTABLE (Professor of Political Economy at the University of Dublin).

"A. L. BOWLEY (Appointed Teacher of Statistics in the University of London at the London School of Economics).

"EDWIN CANNAN (Appointed Teacher of Economic Theory in the University of London at the London School of Economics).

"LEONARD COURTNEY (formerly Professor of Political Economy at University College, London).

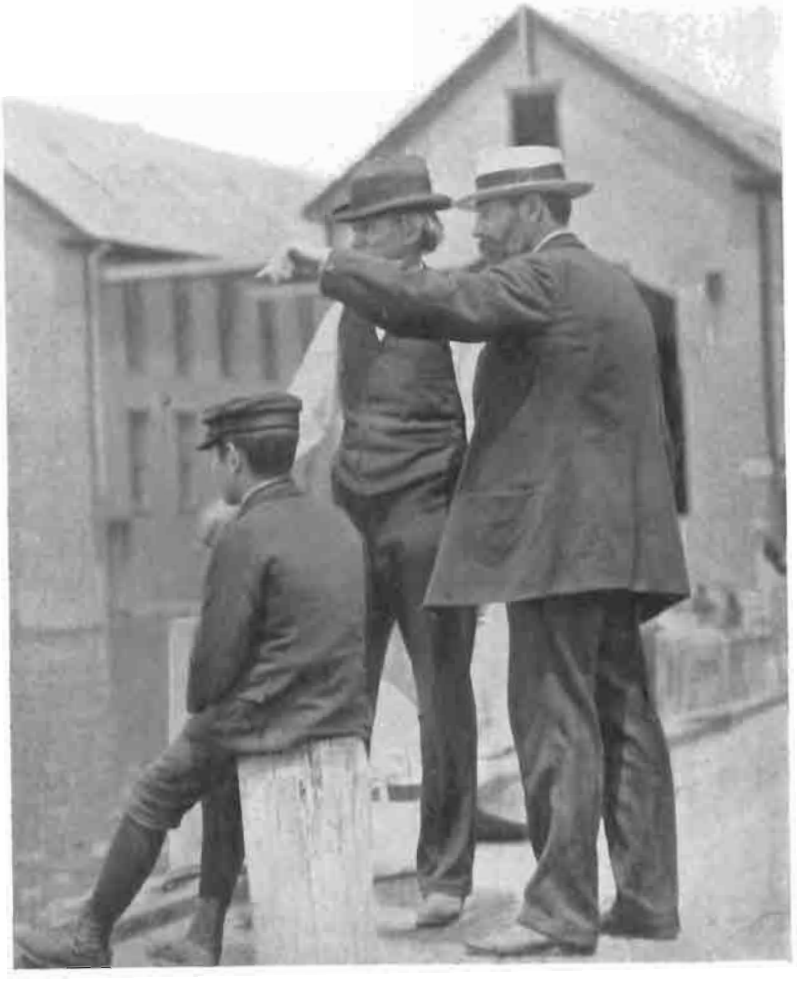
"F. Y. EDGEWORTH (Professor of Political Economy at the University of Oxford).



SIR THOMAS JOHNSTONE LIPTON, BART.

MR. WILLIAM FIFE

WHO DESIGNED "SHAMROCK III." WITH THE ASSISTANCE OF MR. G. L. WATSON



MR. NATHANIEL HERRESHOFF (at the right)

WHO IS CHIEFLY RESPONSIBLE FOR THE DESIGN OF "RELIANCE"

"E. C. K. GONNER (Professor of Economic Science at the University of Liverpool).
"ALFRED MARSHALL (Professor of Political Economy at the University of Cambridge).
"J. S. NICHOLSON (Professor of Political Economy at the University of Edinburgh).
"L. R. PHELPS (Editor of the *Economic Review*).
"A. PIGOU (Jevons Memorial Lecturer at University College, London).
"C. P. SANGER (Lecturer in Political Economy at University College).
"W. R. SCOTT (Lecturer in Political Economy at the University of St. Andrews).
"W. SMART (Professor of Political Economy at the University of Glasgow).
"ARMITAGE SMITH (Lecturer in Political Economy at the Birkbeck College; Recognised Teacher of the University of London in Economics).

"*August* 14."

One dissentient letter is appended—from Mr. L. L. Price, Fellow and Treasurer of Oriel College, Oxford, who declined to sign it, largely on the ground that he does not yet know what Mr. Chamberlain's plan is. But even he is of opinion that "in view of the extreme gravity of the problem raised, and of the many complicated issues involved in its solution," "it is desirable that before definite action is taken, committing the Mother Country or the Colonies or dependencies to a fiscal policy which might be difficult, if not impossible, to reverse or modify materially, if once adopted, the matter should be exhaustively examined and impartially considered by a Royal Commission." And he adds, with probably unintentional sarcasm directed against Mr. Chamberlain, "although I should prefer, and I imagine most economists would agree in this opinion, that such consideration should be previous, and not subsequent, to submission to the electorate." Even the one dissentient professional economist, therefore, carefully guards himself from supporting either Mr. Chamberlain's proposals or his tactics.

## FRANCE, THE FRIEND OF ENGLAND

THE last words of President Loubet's message to King Edward afford conclusive proof of the change wrought within the last few months in British relations with France. A new era has begun in the relations of the two countries, both of which now realise how much their common interests as well as those of the civilised world can be furthered by a mutual understanding, and it behoves us all to do what we can to promote this end by smoothing off those rough corners that have hitherto stood in the way of the *entente cordiale*.

No two countries are more deeply interested in furthering each other's welfare than are England and France; for they are each the other's best trade customer. Misunderstandings must therefore be fatal to a large number of interests on either side of the Channel. The figures that can be quoted are in themselves sufficiently eloquent. According to the Annual report of M. Jean Périer, French Consul in London, £74,300,000 worth of business or 22 per cent. of the total trade of France was done last year with England. France purchased from us our woollens and our cottons, our leather and our machinery, our iron, our coal, and our copper, and in return for these commodities and for our cash, sold us silks and sugars, wine and brandy, skins and *objets d'art*, motor-cars and other manufactured articles, in fine, many of those products that have almost become the necessities of our daily life. This interesting report then proceeds to point out that whilst of late years, mainly owing to the inadequacy of the co-operative methods employed by the French farmers, our colonies have supplanted them in sending us such agricultural exports as wine, fresh and preserved fruits, as well as eggs; on the other hand, the French export trade to England in silk stuffs, woollen goods and ladies' clothes, has advanced in proportion. The most remarkable development is, however, in motor-cars, whose exportation has increased from £120,000 in 1900 to £804,000 in 1902, or 570 per cent. in three years. The exports from France to England amounted last year to £51,000,000, or twice as much as her export trade to Belgium, while France imported from England £23,200,000 worth of goods, or £5,200,000 more than she did from the United States. In addition to this vast volume of trade which can be set out clearly in black and white, there is also a large business done whose value cannot be estimated in figures. The number of Frenchmen who visit England may not be large but it is annually on the increase. On the other hand, those Englishmen who travel in and through France, who use her railways, her hotels, her inns and her health resorts, cannot be calculated with any approach to accuracy, nor can we say how much the British tourist spends during his stay in France; one careful student has put it at £20,000,0000 annually. Then France spends according to another calculation £14,000,000 annually in freights to our British

MR. CHARLES FRANCIS MURPHY

TAMMANY'S NEW LEADER, WHOSE CAREER IS DESCRIBED BY MR. MAURICE LOW ON PAGE 378

merchant service, which she uses to a greater extent than she does her own ships. Beyond this the business interests of the two countries are so intimately intertwined through French investments in British and colonial securities that the French money market takes its inspiration from that of London—so much so that during the war French shares fell on the news of our reverses, and rose on hearing of our victories in South Africa. In short, the prosperity of the two countries is so interdependent that a rupture must inevitably lead to common disaster.

Our first duty is to remove those grounds of controversy which may at any time afford material for friction between the two countries, and if this is to be done a clear understanding is absolutely necessary. Fortunately for both parties M. Eugène Etienne, deputy for Oran in Algiers, Vice-Chairman of the Chamber of Deputies, and what is more important, President of the Foreign and Colonial Group in that Chamber, has rendered us a valuable service by setting out briefly in a recent number of the *National Review* the various issues that must be settled between the two countries. We may perhaps not agree with all his conclusions, we may not be ready to accept all the solutions which he suggests, still the value of his statement is very great, especially when we remember what M. Etienne's political position is and has been in the past. He sets out briefly the various grounds of controversy which have of late years and in the past disturbed the friendly relations between the two countries. First and foremost is the old question of Egypt, and here M. Etienne, without asking for anything like immediate evacuation, wishes to bind us to those pledges which English Ministers have given in the past to evacuate the country when England's mission has been accomplished. We do not wish to lay down our future policy in so far as Egypt is concerned. Circumstances may arise when evacuation may be possible without loss to ourselves and without injury to Egypt; but it is difficult to foresee what these circumstances will be. It is therefore well to start with a clear and plain understanding upon this question. We must boldly face the facts of the situation. M. de Freycinet put an end to the Dual Control by his refusal to co-operate with us in the bombardment of Alexandria, and every Frenchman knows this. France may possibly complain of our neglect to fulfil past pledges of evacuation, and we may retort that our mission is not yet fulfilled, as M. Etienne himself admits; but a friendly understanding is far more likely if this question is left on one side and the maintenance of the *status quo* treated as outside the controversy. Mutual arrangements may easily settle any differences that have arisen in Siam, so long as the logical results of the treaty of 1896 are preserved. An even wider scope is afforded to both countries on the banks of Lake Tchad, whilst in Morocco we must have some safeguards in so far as Tangiers is concerned, and the Australian prejudice against the possible establishment of another French penal settlement must be considered in settling our difficulties in the New Hebrides.

Each one of these questions may be argued at length, but none of them is as important as the problem that confronts us in Newfoundland. We, on our side, must consider the interests of our colonial fellow subjects, whilst France has to think of her fishermen and of the feeling that prevails throughout the country that the "Great Banks" fisheries are the nursery of the French navy. No French Government can afford to neglect those hundred deputies that sit for her sea-board from Dunkirk to Marseilles. The issue must be approached by us and by the French in the most conciliatory spirit. If we are to induce our neighbours to give up their bounties as well as their treaty rights, we must enable them to satisfy their fishermen and other electors that they have not been worsted in the bargain.

This question once settled those other problems quoted by M. Etienne in his article are comparatively easy of solution. We trust that, whilst showing no undue eagerness, our statesmen will be ready to approach these questions in a practical spirit of "give and take." Whatever is done must however be achieved in a broad and comprehensive spirit. There must be no loopholes, no vagueness that may be productive of future trouble. The terms of settlement must be at once clear and conclusive. This policy will complete the edifice of mutual friendliness and goodwill, whose foundations have been laid by the tact and diplomacy of our Sovereign and of the President of the French Republic, and the remarkable visit of French Senators and Deputies to London, to be returned by our own legislators next November.

## THE UNKNOWN POPE

THE unforeseen has happened in the election of a successor to Leo XIII., and the Throne of the Fisherman is to-day occupied by one who was unknown outside Italy until the seventh ballot of the Cardinals sent his name round the world.

In the first four days of August while the decision was being matured all eyes were fixed upon Rome—attracted among other interests by that glamour of mystery which to the Protestant sense is so unsympathetic, and to the members of the Roman Catholic Church so sacred in all its manifestations. Strictly shut off from the contagion of the world, the seventy Fathers of the Conclave sat and voted in the Vatican, while outside in the Piazza of St. Peter the miscellaneous crowd of priests, friars, nuns, fashionably dressed ladies, artists, journalists, and peasant men and women gradually attained greater dimensions as the sitting was prolonged. Ballots were held twice a day on Saturday, Sunday, and Monday with no result, though the probable election of Rampolla, Gotti, or Vannutelli was freely speculated upon. It was entirely in keeping with the character of the proceedings that the only indication afforded to the public of how the election was progressing lay in the pillar of smoke from a little stove-pipe projecting above the roof of the Sistine Chapel. If dense smoke issued from this, the people knew that straw was being burned with the papers—a signal that the ballot had been indecisive, no candidate having received the requisite two-thirds majority of votes. It was inevitable that enterprising newspapers should endeavour to pierce this atmosphere of archaic secrecy; one report states that 50,000 francs were offered to a personage connected with the Conclave for information, and that the bait was declined. A few persons did indeed get accurate news on the Monday evening (the Pope has since instituted an inquiry to discover the source of the leakage), but even at this stage the general belief among the public in the square seems to have been that Cardinal Rampolla held the highest place in the votes of the cardinal electors. On Tuesday, however, the appearance of a different smoke put an end to the tension, and the aged Cardinal Macchi emerged upon the balcony and proclaimed the "tidings of great joy" to the multitude. "We have a Pope, the Most Eminent and Most Reverend Lord, Guiseppe Sarto, who hath assumed as his title Pius X."

The acclamations of the vast crowd which heard these words were a prelude to the general approval of the new Pope expressed everywhere on receipt of the news. Finding it impossible to agree upon one of the more favoured candidates, the rival parties in the Conclave had evidently chosen the one who divided them least, and that this should be one who is understood to be free from political bias was gratifying to all the nations. France—which, however, wants nothing so little as it wants the interference of Rome—favoured the chances of Rampolla, and Germany had a preference for Vannutelli; Austria was concerned chiefly to prevent the election of Rampolla, whom the Emperor dislikes; while in other countries, as the election of an Italian was accepted as a foregone conclusion, the principal wish entertained was that the Pontiff should be priest rather than politician. That Cardinal Guiseppe Sarto, Patriarch of Venice, is likely to be a pacific and spiritual, rather than a political Pope, is at least promised by his past record. The son of a peasant of Riese, in Venetian Lombardy, where he was born sixty-eight years ago, he is described as genial and dignified, intensely religious, kind and charitable, a strict disciplinarian, a shrewd man, of moderate scholarship and with a sense of humour. From being a parish priest he was promoted in 1884 to be Bishop of Mantua, where his labours attracted so much attention that in 1893 Leo XIII. gave him the Cardinal's hat and appointed him to Venice. Here again he displayed a practical democratic spirit, settled many strikes, and was beloved of his people, who not only desired to see him appointed Head of the Church but believed that he would be elected. Their affectionate farewell when he was departing to Rome for the Conclave showed their disposition, and evoked from the Cardinal, when he was informed what the demonstration meant, the reply: "Nay; I have taken a return ticket." But his sympathies towards religious democracy and Christian Socialism are not incompatible with the determined attitude which the Pope is reported to entertain on the subject of the Temporal Power. He was a favourite with King Humbert, but although as a patriotic Italian he accepted the rule of the House of Savoy while he was stationed in Venice, we are told that in Rome as an irreconcilable Churchman he will continue to protest against its "pretensions"; and the fact that after his election he gave the benediction from the loggia which looks into St. Peter's, and not from that which looks into the piazza and over Rome, is quoted as evidence that his firm will is likely to be unyielding upon the observance of the Vatican tradition. Meanwhile, the account of the progress of Italy which we present this month goes to show that even with a "prisoner" Pope the nation has increased in stability and well-being.

## THE NEW MOTOR-CAR ACT

I HAVE never seen in any gathering of responsible people such an exhibition of combined ignorance and prejudice as was afforded by the House of Commons on the introduction of the Motor-car Bill. There was much genuine—and, in my opinion, entirely just—indignation against the outrageous conduct of a section of motorists. I not only do not complain of that, but I share it. Beyond it, however, there was the grossest ignorance, and a rancorous, and in some cases an interested, prejudice. Mr. Soares, who moved the rejection of the Bill, spoke quite fairly, from the point of view of the Devonshire horse-owner, though, of course, he would not claim to know much about motors—as, indeed, his lurid picture of a car, with blinding lights, passing a carriage at night, at a speed of forty miles an hour, "with its sparking-plug out," sufficiently showed. But the attitude of many speakers who supported him was ferocious. Those of us who attempted to defend the motorist, or to introduce some element of moderation into the discussion, were interrupted and jeered at, and generally treated as if we were enemies of our race. The "rich man's toy" argument was repeated by every speaker. I explained that there are a score cars selling to-day at less than £200, and that one firm is just putting a thousand cars at about £135 on the market. Is this a rich man's toy? I asked. "Yes," shouted the anti-motorists. But, I added, such a car can be kept for the expense of a pony and trap. Is a pony and trap a rich man's toy? "Yes," they shouted again. I naturally replied that in view of such an attitude it was obviously impossible to have any serious discussion of the subject. Opinions will hardly differ, too, upon the propriety of the strenuous opposition of certain Members who are deeply interested in horse-breeding, while for my own part I am unable to see how a county magistrate who announces his determination to inflict imprisonment in the case of every motorist convicted before him can be allowed to remain on the Commission of the Peace. The bed-rock fact, however, is that, partly from personal prejudice, partly from a desire to protect horse traffic, partly because of heavy pressure from constituents, partly from just resentment of the actions of some motorists, there was such an overwhelming sentiment against the motor that we are fortunate in not having much worse conditions imposed. For this sentiment we have chiefly to thank a minority of our own number.

If, however, the House of Commons has shown itself prejudiced, the subsequent attitude of the automobile Press—including the *Automobile Club Journal*—has been hardly more reasonable. These journals have been hopelessly wrong from the beginning in their belief that motorists could "bargain" with the Government by "consenting" to identification, and their ignorance of procedure and possibilities in Parliament has led them into all kinds of unjust and absurd criticisms. Nothing, too, in Parliament was more indicative of thoughtless panic than the Club *Journal's* remark that the Bill has "given the motor industry a set-back from which it will never be able to recover." It is much to be regretted that the chief and official organ of motorists should not be edited with more discretion. It is ridiculous, also, to reproach members of the Club who are also Members of Parliament with having "betrayed" their fellow motorists. I, for instance, have always been in favour of making cars identifiable at all times. If this had been done a year ago we should not have had the unjust severity of the present Act. Other Members shared this opinion, regardless of any view the Club might take. It is childish to charge us with having "betrayed" anybody by consenting to legislation which we have always desired.

The automobile industry is destined to be far too great, and to play far too important a *rôle* in the social life of the future, to receive any permanent injury from the new legislation. Motorists will increase in number every day, and manufacturers will sell cars in rapidly increasing numbers. What motorists have to do is to adapt themselves for the time to the new law, to endeavour to extirpate the anti-social motorist who has done them so much harm, to avoid recrimination and panic, to remember that they are yet an extremely small minority of the community, and to educate their friends and acquaintances to a knowledge of the capacities, the importance, and the delights of the car. Since Parliament rose I have already converted one Parliamentary friend. A run of fifty miles in a powerful car convinced him, to his amazement, that it is the rarest thing for a horse to shy, that high speed at proper times and places may be allowed with perfect safety and propriety, and that a motor-car is the most controllable and the safest of vehicles. "If I had known in the House what I know now," he said, "I should not have voted as I did." If every motorist will make himself a missionary in this sense, we shall be in a very different position three years hence, when the present Act expires. H. N.

## THE AMERICA CUP

THE enormous amount of money sunk in the preparations for the "America" Cup Races has rather blinded the public on both sides of the Atlantic to the real issues that are involved. Every year the expense of the competitions has steadily mounted up to a larger and an ever larger sum, and if we consider the financial aspect only we may gather some comfort from the fact that one Irishman, single-handed, has taken up the challenge of no fewer than three syndicates of American millionaires. Out of *Reliance*, *Columbia*, and *Constitution*, the first-named was selected as the defender after numerous and exhaustive trials—trials which not only eliminated her less speedy rivals but added largely to her own capacities by the gradual and costly process known as "tuning up." Our own boat, standing, as she does, practically alone among English yachts, has had no such competitive process to face among domestic rivals. She has been brought up to racing pitch by friendly, but by no means inexpensive, contests with an older craft belonging to the same owner, a craft which those who know her best consider to be much improved since 1899. It is worth remembering that every expert considered in 1895 that *Valkyrie III.* had *Defender* practically beaten, if Lord Dunraven had been able to feel satisfied about the conditions. That the present contest is now taking place amid the welcoming interest of both nations speaks highly for the impression made by Sir Thomas Lipton in 1899, and again in 1901. His second *Shamrock* was a mistake in design, and Mr. Watson will be the first to admit that we do him no disrespect in saying so. Mr. Fife's illness in 1899 never gave Archie Hogarth a chance to get the best out of *Shamrock I.* But now the most fortunate circumstance that possibly could have occurred has been brought about by the sportsmanlike feeling which has animated both Mr. Fife and Mr. Watson in all that concerns this latest venture. That such a combination should have been possible in the boat which Mr. Fife produced, does great credit to Sir Thomas Lipton, and is even more satisfactory in the case of two great designers who have been persuaded by him, and by their own patriotic spirit of sportsmanship, to unite their intellects in the responsible and worrying task of building a challenger. Their reputation is safe. They can get all the work they want at home; but they are not disposed to let the Yankees keep the Cup while there are the brains and the money and the men in the British Islands to make a fight for it.

But these are merely external reasons for the happy spirit of anticipation with which the Cup Races have been so long expected. A deeper feeling can be traced, alike in the yachts themselves and in those who will have the privilege of watching their struggle or hearing of their prowess. International competition is not always a good thing for international amity. Men find that what is usual and popular in their own country is sometimes considered abnormal, and even ill-bred, in another. The shock of conflicting sentiment then obscures the primary object of sport, and whatever the result may be, it is discounted by the arguments of either side. Nothing of the kind has been heard of in the present race. There has, indeed, been no year for a very long time when the two great English-speaking countries have seen so many visiting teams on each side of the Atlantic, competing in such various forms of sport. Americans have triumphed at Bisley. English golfers have gone over to show the democracy of the New World how Oxford and Cambridge play the Royal and Ancient Game. English lacrosse players were measuring their strength against American and Canadian teams, while their compatriots were on the water. The Dohertys and Mahony were fighting for the lawn-tennis championships in the Eastern States as soon as our golfers had madet heir first drive off an alien tee; and in many an English county an eleven of Philadelphia cricketers were showing that baseball was not the only game our transatlantic cousins knew and cared for. And as the crown and consummation of all this friendly rivalry comes the contest that is as old as the old sea itself, between those who sail the daughter's ships and the sailors of the motherland. We flatter ourselves—and, expert witnesses affirm, with truth—that our crews are still the best that ever hauled on a rope, and our sails the handiest that ever held a breeze. Our men are ready too to take those risks which seem inseparable from every sport worth trying. In these days of steel rigging, the strapping of a screw, the buckling of a mast, may mean disaster. Two lives have been sacrificed already in the present contest. No Englishman will ever forget how narrowly the King himself escaped a similar fate. He knew the risks he ran, and the goodwill he testified will remain a tradition in the history of yachting. In Captain Robert Wringe, Sir Thomas has selected for the skipper of *Shamrock III.* a Brightlingsea man

who served with Sycamore on the *Carina*, who proved himself one of the ablest skippers in the world as racing-master of the *Cicely*, and who has had large experience of American ways and waters; for not only was he under Hogarth on *Shamrock I.* in 1899, and under Sycamore again in 1901, but in 1900 he sailed the Herreshoff 70-footer *Mineola* in America. He is therefore sure to do the best possible, as Mr. Fife believes he will, with *Shamrock III.*

This boat is the ultimate survival in that creative struggle towards the fittest which the Cup Races have produced, and here, no doubt, is the chief reason why the genuine yachtsman pardons their extravagance and welcomes their solutions of his many problems. Yachting is a pursuit with many different aspects. You may tear up and down the channel in a 14-tonner, while your eyes are dim with spray and the tiller is kicking under your hand as if it were alive; you may steam to far Cathay in a palatial saloon and explore the wonders of the hidden East as never a traveller has seen them off the beaten track before; but if you love the poetry of motion, if you have a heart that hungers after pace, if you want one prolonged quiver of the sustained excitement that is bottled into the few seconds of an Epsom finish, then get a first-class racing-cutter and a steam launch as a tender, and you have the finest sport the elements can give. This sport, at its highest, Sir Thomas Lipton has now done more than any other single man to foster. It was the dream of his penurious boyhood. It is the realisation of his maturer, wealthy days. In *Shamrock III.* he has produced a fitting representative of the nation that is Empress of the Seas.

## THE FITNESS OF THE RACE

IT has recently been shown that 70 per cent. of the board-school children of Edinburgh suffer from physical defects more or less grave. There can be no question that this disgraceful percentage is higher than in former years and it may be correlated with the fact recently demonstrated in an inquiry made by the feminine medical students of that city, that the use of oatmeal porridge is rapidly disappearing amongst the poorer classes there. In Aberdeen, on the other hand, where much porridge is still consumed, the school-children, though far below any satisfactory standard, are in a better state than those of Edinburgh. The records, to be brief, of London children and of the children of our large towns generally, are similar. If the younger generation be taken at a later age, as in the case of recruits for the army, the facts are still similar. The ratio of rejection of recruits in 1901 rose by 12⅓ per 1000 as compared with the previous year. When, in some time coming, the papers for last year appear, they will doubtless continue the tale of the last decade. The teeth of would-be recruits seem to be degenerating at the greatest speed, and it is easy to connect the all-important *rôle* of the teeth as a preliminary factor in digestion with the wretched condition which so many of these stunted products of our towns display.

This fact of physical degeneration may be traced to the same causes as those which are lowering the birth-rate and which place the rate of infantile mortality 2 per cent. *higher* than it was seventy years ago, whereas the general death-rate is 21 per cent. lower. The elementary facts of hygiene are unknown to the great majority of the people, who are being poisoned in fifty ways in consequence; poisoned by bad air, for the public knows nothing about ventilation; by alcohol (consumed by the women—the mothers—of our race in three times the quantity of twenty-five years ago); by tobacco—nicotine is a poison to growing children—and by many other active poisons. Added to these there is the abandonment of such foods as porridge, the growing neglect of the custom of nursing children, so that the infant is fed on septic cow's milk instead of pure maternal milk; and the deterioration in the nutritive properties of bread due to improvements in the making and use of the roller-mill.

These facts have at last been raised in Parliament, and after a "preliminary inquiry" by the Royal Colleges of Physicians and Surgeons we are to have a Royal Commission, which will sit upon as complex and difficult a question as can well be imagined. We are also promised a National League of Physical Education, which will co-ordinate all the present agencies, and will issue an official journal.

That this degeneration is universal in our midst fortunately cannot, of course, be maintained. Such acute observers as Mr. Benjamin Waugh can adduce facts which point in the other direction, and there is much evidence of advance in the physique of the class immediately above that which most largely contributes to the statistics we have quoted. At any rate the matter is indisputably one for the exhaustive and scientific inquiry which we have now every reason to demand and expect.

## THE AMERICA CUP

THE enormous amount of money sunk in the preparations for the "America" Cup Races has rather blinded the public on both sides of the Atlantic to the real issues that are involved. Every year the expense of the competitions has steadily mounted up to a larger and an ever larger sum, and if we consider the financial aspect only we may gather some comfort from the fact that one Irishman, single-handed, has taken up the challenge of no fewer than three syndicates of American millionaires. Out of *Reliance*, *Columbia*, and *Constitution*, the first-named was selected as the defender after numerous and exhaustive trials—trials which not only eliminated her less speedy rivals but added largely to her own capacities by the gradual and costly process known as "tuning up." Our own boat, standing, as she does, practically alone among English yachts, has had no such competitive process to face among domestic rivals. She has been brought up to racing pitch by friendly, but by no means inexpensive, contests with an older craft belonging to the same owner, a craft which those who know her best consider to be much improved since 1899. It is worth remembering that every expert considered in 1895 that *Valkyrie III.* had *Defender* practically beaten, if Lord Dunraven had been able to feel satisfied about the conditions. That the present contest is now taking place amid the welcoming interest of both nations speaks highly for the impression made by Sir Thomas Lipton in 1899, and again in 1901. His second *Shamrock* was a mistake in design, and Mr. Watson will be the first to admit that we do him no disrespect in saying so. Mr. Fife's illness in 1899 never gave Archie Hogarth a chance to get the best out of *Shamrock I.* But now the most fortunate circumstance that possibly could have occurred has been brought about by the sportsmanlike feeling which has animated both Mr. Fife and Mr. Watson in all that concerns this latest venture. That such a combination should have been possible in the boat which Mr. Fife produced, does great credit to Sir Thomas Lipton, and is even more satisfactory in the case of two great designers who have been persuaded by him, and by their own patriotic spirit of sportsmanship, to unite their intellects in the responsible and worrying task of building a challenger. Their reputation is safe. They can get all the work they want at home; but they are not disposed to let the Yankees keep the Cup while there are the brains and the money and the men in the British Islands to make a fight for it.

But these are merely external reasons for the happy spirit of anticipation with which the Cup Races have been so long expected. A deeper feeling can be traced, alike in the yachts themselves and in those who will have the privilege of watching their struggle or hearing of their prowess. International competition is not always a good thing for international amity. Men find that what is usual and popular in their own country is sometimes considered abnormal, and even ill-bred, in another. The shock of conflicting sentiment then obscures the primary object of sport, and whatever the result may be, it is discounted by the arguments of either side. Nothing of the kind has been heard of in the present race. There has, indeed, been no year for a very long time when the two great English-speaking countries have seen so many visiting teams on each side of the Atlantic, competing in such various forms of sport. Americans have triumphed at Bisley. English golfers have gone over to show the democracy of the New World how Oxford and Cambridge play the Royal and Ancient Game. English lacrosse players were measuring their strength against American and Canadian teams, while their compatriots were on the water. The Dohertys and Mahony were fighting for the lawn-tennis championships in the Eastern States as soon as our golfers had madet heir first drive off an alien tee; and in many an English county an eleven of Philadelphia cricketers were showing that baseball was not the only game our transatlantic cousins knew and cared for. And as the crown and consummation of all this friendly rivalry comes the contest that is as old as the old sea itself, between those who sail the daughter's ships and the sailors of the motherland. We flatter ourselves—and, expert witnesses affirm, with truth—that our crews are still the best that ever hauled on a rope, and our sails the handiest that ever held a breeze. Our men are ready too to take those risks which seem inseparable from every sport worth trying. In these days of steel rigging, the strapping of a screw, the buckling of a mast, may mean disaster. Two lives have been sacrificed already in the present contest. No Englishman will ever forget how narrowly the King himself escaped a similar fate. He knew the risks he ran, and the goodwill he testified will remain a tradition in the history of yachting. In Captain Robert Wringe, Sir Thomas has selected for the skipper of *Shamrock III.* a Brightlingsea man

who served with Sycamore on the *Carina*, who proved himself one of the ablest skippers in the world as racing-master of the *Cicely*, and who has had large experience of American ways and waters; for not only was he under Hogarth on *Shamrock I.* in 1899, and under Sycamore again in 1901, but in 1900 he sailed the Herreshoff 70-footer *Mineola* in America. He is therefore sure to do the best possible, as Mr. Fife believes he will, with *Shamrock III.*

This boat is the ultimate survival in that creative struggle towards the fittest which the Cup Races have produced, and here, no doubt, is the chief reason why the genuine yachtsman pardons their extravagance and welcomes their solutions of his many problems. Yachting is a pursuit with many different aspects. You may tear up and down the channel in a 14-tonner, while your eyes are dim with spray and the tiller is kicking under your hand as if it were alive; you may steam to far Cathay in a palatial saloon and explore the wonders of the hidden East as never a traveller has seen them off the beaten track before; but if you love the poetry of motion, if you have a heart that hungers after pace, if you want one prolonged quiver of the sustained excitement that is bottled into the few seconds of an Epsom finish, then get a first-class racing-cutter and a steam launch as a tender, and you have the finest sport the elements can give. This sport, at its highest, Sir Thomas Lipton has now done more than any other single man to foster. It was the dream of his penurious boyhood. It is the realisation of his maturer, wealthy days. In *Shamrock III.* he has produced a fitting representative of the nation that is Empress of the Seas.

## THE FITNESS OF THE RACE

IT has recently been shown that 70 per cent. of the board-school children of Edinburgh suffer from physical defects more or less grave. There can be no question that this disgraceful percentage is higher than in former years and it may be correlated with the fact recently demonstrated in an inquiry made by the feminine medical students of that city, that the use of oatmeal porridge is rapidly disappearing amongst the poorer classes there. In Aberdeen, on the other hand, where much porridge is still consumed, the school-children, though far below any satisfactory standard, are in a better state than those of Edinburgh. The records, to be brief, of London children and of the children of our large towns generally, are similar. If the younger generation be taken at a later age, as in the case of recruits for the army, the facts are still similar. The ratio of rejection of recruits in 1901 rose by 12½ per 1000 as compared with the previous year. When, in some time coming, the papers for last year appear, they will doubtless continue the tale of the last decade. The teeth of would-be recruits seem to be degenerating at the greatest speed, and it is easy to connect the all-important *rôle* of the teeth as a preliminary factor in digestion with the wretched condition which so many of these stunted products of our towns display.

This fact of physical degeneration may be traced to the same causes as those which are lowering the birth-rate and which place the rate of infantile mortality 2 per cent. *higher* than it was seventy years ago, whereas the general death-rate is 21 per cent. lower. The elementary facts of hygiene are unknown to the great majority of the people, who are being poisoned in fifty ways in consequence; poisoned by bad air, for the public knows nothing about ventilation; by alcohol (consumed by the women—the mothers—of our race in three times the quantity of twenty-five years ago); by tobacco—nicotine is a poison to growing children—and by many other active poisons. Added to these there is the abandonment of such foods as porridge, the growing neglect of the custom of nursing children, so that the infant is fed on septic cow's milk instead of pure maternal milk; and the deterioration in the nutritive properties of bread due to improvements in the making and use of the roller-mill.

These facts have at last been raised in Parliament, and after a "preliminary inquiry" by the Royal Colleges of Physicians and Surgeons we are to have a Royal Commission, which will sit upon as complex and difficult a question as can well be imagined. We are also promised a National League of Physical Education, which will co-ordinate all the present agencies, and will issue an official journal.

That this degeneration is universal in our midst fortunately cannot, of course, be maintained. Such acute observers as Mr. Benjamin Waugh can adduce facts which point in the other direction, and there is much evidence of advance in the physique of the class immediately above that which most largely contributes to the statistics we have quoted. At any rate the matter is indisputably one for the exhaustive and scientific inquiry which we have now every reason to demand and expect.

# THE ATLANTIC AGREEMENTS:

## A NEW DEPARTURE IN BRITISH POLICY

THE CODDLING OF THE CUNARD—WHAT SHALL WE GET FOR THE LOAN AND THE SUBSIDY?—THE GOVERNMENT AND THE WATER-LOGGED MORGAN COMBINE—SENTIMENTAL LEGISLATION AND ITS PRACTICAL RESULTS

WRITING on the subject of the Shipping Combine, in the first issue of this magazine, we ridiculed the widely expressed terror of all the evil the establishment of the so-called "community of interests" was to bring in its train. But we were practically alone. There were outcries from all sides, and the fearsome ones prevailed over the Government, with the resulting promise that something should be done to protect British interests—as though these were ever endangered by the very high finance of Mr. Pierpont Morgan and his colleagues. It has taken many months to learn what form the remedial something would take, but on the eve of the autumn vacation, and, it may be added, after actual experience has shown the little ground there was for the fears expressed in so many quarters a year ago, curiosity is satisfied by the publication of two agreements—one between the Government and the Cunard Company, the other between the Government and the various shipping companies representing the Combine.

The details of both these agreements have been fully set forth in the daily Press; it will suffice here to repeat the main points. The first-named document provides that the Company shall build in the United Kingdom two large steamers, capable of travelling at 24½ knots an hour, and suitable for the trade between this country and the United States; all the Company's ships are to be retained under the British flag, and shall also be under the control of the British Government. In return, the Government advances to the Company £2,600,000 at 2¾ per cent. to pay for the construction of the steamers, for the security of which loan there is given a first mortgage over the whole of the Cunard fleet; pays an annual subsidy of £150,000 and increases the postal payment from £62,000 to £68,000 per year. Then, too, the Government will have the call of all the Cunard steamers either for hire or purchase; there is a proviso that a certain proportion of the crew shall be British subjects; that the masters, officers and engineers in charge of a watch shall always be British, and that at least one half of the crew of each vessel shall be members of the Royal Naval Reserve. The capital of the Company has been increased by one £20 share which is to be held by the Government, and will carry with it a strong voting power on the directorate. Finally, no foreigners shall hereafter hold shares in the Cunard Company.

Briefly, the position comes to this: We have an all-British Company, and in due course the national flag will fly over the two fastest steamers in the world. Let us attempt to learn if the game is worth the candle.

There is provision in the agreement to the effect that all or any of the vessels forming the Cunard fleet shall be available as armed cruisers should the Admiralty call for them. A singular fact in this connection is that during the past session the Government, which advances £2,600,000 sterling for the construction of a couple of ocean greyhounds, and undertakes to pay a heavy subsidy to their owners, discarded armed merchant cruisers, declaring that they were unnecessary and that no longer would any subsidy be paid in connection with a system whose inception, it is interesting to remember, was due in great part to the late Lord Inverclyde. What qualities (if any) will the new Cunarders possess to raise them from the rank of the *Campania*, *Lucania*, *Majestic*, or *Oceanic*? Their speed? Are a few knots enough to justify the change? The affirmative was suggested in the House on August 12, but even admitting such a contention—which we do not—of what value are only two swift steamers for a Power possessing such vulnerability on the seven seas as does Great Britain? Or will the flyers possess some special feature of construction which shall raise them as armed cruisers above the common ruck? It is impossible, with the details published, to answer this question with any degree of certainty,

but a rough guess will place the reply in the negative.

Turning from war to peace, we have to consider the mail and passenger services. It is stipulated in the agreement that the mails are to be carried at a higher average rate of speed than at present, the Company binding itself to use its best ships, including the two new vessels, in the service. To secure a greater average speed than that at which the mails are at present conveyed across the Atlantic by British liners would not be difficult, as will be apparent to any one having much correspondence with the United States. But will the increased average secured by the addition of the two new steamers be sufficient to justify the loan, the subsidy, or the additional rate for the carriage of the mails? Do passengers desire these very fast ships? An answer is apparently supplied by the facts that the White Star Line, which never possessed greyhounds, always paid handsomely; that, when the Cunard Company owned the "Blue Ribbon of the Atlantic" the shareholders went dividendless; and that such moderate-speed ships as those of the Atlantic Transport Company are always booked well ahead. Again, high speed means costly construction, and to earn an adequate return necessitates high fares. Were there a sufficient number of wealthy passengers to justify the outlay, the Cunard, or some other company, would long ago have put into the water steamers of such great speed as we shall shortly see launched from British yards under this new agreement. It is true that the German lines own very fast steamers, but they do not pay, notwithstanding the handsome Government assistance granted them.

Another clause in the agreement, and one to which we have already made passing reference, demands closer attention. It is that dealing with the crews. While it is eminently desirable that the foreigner in the fo'castle should be a diminishing rather than an increasing quantity, we find nothing here calculated to achieve that end, for Atlantic liners represent only a very small proportion of the British Mercantile Marine. On the other hand, what we do find in the stipulation is a distinct pandering to the scaremonger, who ever and anon paints lurid pictures of what would happen in time of war to British ships manned and officered by aliens. Without admitting the magnitude of the danger, one may ask the exact value of a rule affecting only one fleet out of the scores which compose our merchant navy. And even this advantage, such as it is, is neutralised by the further condition that one half the men shall belong to the Naval Reserve. In war-time every one of these should be called upon to serve in the fleet. Whence will come the Britishers to take their places? Would not some of the money dispensed with so liberal a hand to the Cunard Company be better utilised in providing adequate training-ships for young would-be sailors, and for improving the conditions under which the Royal Naval Reserve men are drilled? So far as manning goes, then, one is forced to the conclusion that it is difficult to find an adequate *quid pro quo* in this Cunard contract.

But, it may be urged, the ships shall remain British, the Company shall be British, and the Government shall always have the call of the ships. What are the exact values of these benefits? The first seems to be answered by the Combine agreement with the Government; the stipulation concerning the nationality of the Company surely comes within the domain of the Companies' Acts—at any rate, the question, if serious, is sufficiently serious to demand general legislation rather than a mere agreement affecting only one undertaking and a paltry score steamers; and finally, no special agreement was necessary to give the Government the call of the Cunard or any other British fleet—that right was already in existence.

When we get to bed-rock, then, one is unable to find any other excuse for the Government's action than national sentiment, and that catered for to the advantage of only one company, for it has been stated that no other shipping enterprise than the fortunate Cunard is to be blessed by the Government. On the contrary, as we have already seen, the merchant cruiser subsidies are withdrawn, and those companies which constructed steamers with a special view to Admiralty requirements are left to admire, as well as they can, the glorious uncertainties of statesmanship. Mere business men may, perhaps, talk of breaking faith, but that is neither here nor there, and, furthermore, does not come within the scope of the present article. The nation saw disaster to our mercantile supremacy in the Morgan Combine, and was wounded in its *amour propre* by the Germans owning the world's fastest steamers, and the nation had to be pacified.

Let us take these further points. The Combine cannot pay a dividend; it has steamers lying idle; it is compelled to make an agreement with the British Government, giving us the control of its ships. Again, refer to the report of the Bureau of Navigation of the United

States for the fiscal year ended June 30 last. It shows that the tonnage-tax collected from vessels in the foreign trade amounted to $883,434, of which British ships paid $510,570, German $122,311, American $71,970; the rest were nowhere. There is nothing here to indicate a weakening of our lead in the Atlantic trade. Now as to speed; let it be granted that the new steamers achieve 24½ knots and so win the "Blue Ribbon." For how long will that supremacy be maintained? Is there any reason to believe that the ambitious German companies, backed as they are by the Kaiser and the treasury, will lie down under a whipping? Practically speaking, there is nowadays no limit to speed except that of depth of purse. But, apart from this aspect of the question, it is to be remembered that steamers deteriorate. The agreement between the Government and the Cunard Company is for twenty years. Long before the expiry of that term the flyers will have become obsolete. Will there be another £2,600,000 forthcoming? The answer can hardly be in the affirmative. But, presumably, over all the period the shipping company will be receiving £150,000 and £68,000 a year. For what? For merchant cruisers of an inferior speed, and a mail service which, judging from the recent history of the Cunard Company, will be no better relatively than that which we "enjoy" to-day!

Now let us glance for a moment at the agreement between the Government and the Combine. Here, again, the powers at Westminster have tacitly admitted that *vox populi* is indeed *vox dei*. The great cry was that we were losing by the Morgan transaction certain British fleets which would henceforth be under alien control, and the reply to this was that an agreement had been come to by which the transferred British ships should continue to fly the British flag for twenty years; that the officers and the majority of the crews and of the directors should be British. A year ago, the accuracy of the assertion made by the President of the Board of Trade concerning the last proviso was denied. Yet the agreement now made public, shows that Mr. Gerald Balfour was absolutely correct in what he said. The ships which were British remain British so far as the flag is concerned; we nominally continue to control some 900,000 tons of shipping, which, it was feared, had gone from us for ever. But for this we must pay a price. The American-owned steamers posing as British shall "continue to be treated as heretofore on the same footing of general equality with other British companies in respect of any services, naval, military, or postal, which his Majesty's Government may desire to have rendered by the British mercantile marine, provided that nothing in this agreement contained shall extend to vessels of uncommercial speed which his Majesty's Government shall specially require to be constructed and which are primarily designed for service in time of war." Thus, these foreign-owned ships enjoy all the protection of, and any other benefits which may be conferred by, the British flag, and we have the privilege of calling upon them for national use when the occasion arises—of course, for a consideration. Where does the advantage to us come in? According to the last report (1902) of the United States Commissioner of Navigation, the fastest steamer owned by the Combine is the *Oceanic*. After her, in point of speed, come the four chief vessels of the American Line, but these are not covered by the terms of the agreement. It will be observed, too, that steamers of an "uncommercial" speed, that is, flyers, are also outside the contract. Where is the benefit to us? Surely our merchant fleet is not reduced to so poor a state in numbers, size, or speed, that we should make a contract such as we have done with the group of American financiers who have "bitten off more than they can chaw." A further stipulation is that a moiety of any additional steamers acquired by the Combine shall be registered as British. But this was practically arranged between the Morgan group and Messrs. Harland and Wolff at the outset. Furthermore, self-interest would impel the Combine managers to build any new ships in the cheapest market—which is the British. But beyond this, in seeking to ascertain the value of this agreement, either clause by clause or as a whole, let it be asked where will the Combine be, not at the end of the twenty years for which the contract is made, but at the end of five years, or even less? The scheme has already proved a failure; it is dragged under by its own weight, and with this waterlogged craft the British Government makes a special agreement, beneficial to no one save an enterprising group of ambitious American financiers and their few British associates. Regard the two agreements in any way one will, it is impossible, from a shipping point of view, to come to any other conclusion than that a combination of ignorance and fear has caused the British Government to make a huge blunder in the first place, and to act unjustly to the shipping community as a whole in the second.

# THE FOOD TAX: HOW IT WOULD AFFECT EGGS AND POULTRY

THE VALUE OF EGGS AND POULTRY—WHERE THEY COME FROM—THE EFFECT OF A TAX UPON THEM—THE CONSUMERS WOULD PAY £2,133,204, AND THE COLONIES WOULD BENEFIT BY £25,000

BY

EDWARD BROWN, F.L.S.

AMONG the articles of food which it is proposed to tax in the interest of our colonies are eggs. But for the purpose of our present inquiry it may be desirable to include poultry and game. Of both these products there is an enormous importation—in 1902 as follows: eggs, £6,299,934; poultry and game, £1,059,060; total, £7,358,994. Of this vast amount not more than 4 per cent. came from British possessions, and practically the only colony or dependency sending supplies which are of any moment was Canada, from which country we received in 1902 eggs to the value of £209,316. The poultry was insufficient to warrant separate record in the Trade and Navigation Returns. Were it not for the heavy import duties into the United States under the McKinley tariff, the supplies from Canada of these two classes of food would be practically *nil*. That tariff, however, is frankly protective, for the United States sends very small quantities of eggs or poultry to Britain. I have not the figures for 1902, but in 1901 the import of eggs from the United States was less than 1 per cent. of the total foreign and colonial supplies received into this country.

Assuming that the object of the proposed tax is not protective, though it could not fail to have that effect, it is of importance to see what would be the benefit accruing to the Colonies on their present supplies. In 1902 Canada sent 517,822 great hundreds of eggs. In 1901 other colonies and dependencies only sent 725 great hundreds all told. If we estimate as the total for last year 520,000 great hundreds received from British possessions, that number will be near the mark. On this basis, and assuming that the tax were 10*d*. per great hundred, or 1*d*. per dozen, the entire benefit obtained by Greater Britain on last year's figures would have been £21,666 for eggs, provided that as a result these supplies had increased in price to the extent of the tax. My estimate is that the poultry received from our possessions last year was in value £80,000. A 5 per cent. duty on that amount would have probably enhanced the price received by colonial producers by £4000. Thus the total gain by our colonies would have been little more than £25,000.

The claim made, however, is that taxes on foreign supplies would stimulate production in the Colonies, and to some extent this must be conceded. But in respect to eggs especially, and to a lesser extent poultry, distance is the great factor, as these are perishable products. An examination of market returns at the time of writing shows that prices for eggs vary from 4*s*. 9*d*. to 10*s*. 6*d*. per 120, and fowls from 1*s*. to 4*s*. 6*d*. each, the cheapest in each case being Russian and the highest home produce, the gamut determined by the distance which supplies have to travel. In spite of all we may do, space can never be annihilated. If abbreviated by improved methods of transit in one direction, equal changes take place in others. Colonial eggs and poultry can never be equal to the best British, Irish, or French; they will find it almost impossible to compete with Danish, and the main gain will be in giving them an advantage over supplies from southern and eastern Europe. The prices these could be sold for, even with the suggested taxes, would not encourage British production to any great extent. The only country which might gain would be Canada, and if the United States tariff should be reduced, as is probable, by reasons of nearness to the latter markets, and enhanced value as a consequence, it would pay better to sell there than send to England. South Africa is a big importer of both eggs and poultry, and will not be able to

meet her own requirements for some time to come. Australia and New Zealand are too far away, and they have not found the trade profitable, nor are they likely to benefit from any tax on foreign poultry products. But if we grant that as a result of the proposed tax the Colonial supply of eggs and poultry displaced foreign goods to the extent of 5,000,000 great hundreds per annum, that is an increase of nearly 1000 per cent., and if the increase of poultry supplies was 500 per cent., the advance in price by reason of the preferential taxes of 10*d.* per great hundred of eggs and 5 per cent. on poultry, would only amount to a little more than £200,000 per annum over what they might now obtain. I need hardly say that, for reasons already given, such increases are very doubtful.

We must remember that eggs and poultry are consumed to an enormous and rapidly increasing extent in this country. Of the eggs imported a proportion are used for manufacturing purposes, the extent of which cannot be estimated with accuracy. As these would, under the tax, be increased in price, all may be lumped together. The total imports amounted in 1902 to £7,358,994; the Irish supplies to £2,300,000; the home produce to £6,750,000; or a total of say, £16,400,000. Of this £13,400,000 would represent eggs, and £3,000,000 poultry. Presuming that there were no falling off in foreign supplies, a tax of 10*d.* per great hundred, and of 5 per cent. on poultry, would yield a gross revenue of £788,771 and £48,953 respectively, or a total of £837,724, less the cost of collection, whatever that might be, a satisfactory amount no doubt to the Treasury. But we must estimate the amount which consumers would be mulcted as a consequence. It is well known that profits have to be made upon the tax, and we may fairly anticipate that the increased price to traders and consumers would be at least 1*s.* per great hundred, though probably the latter would pay 1*s.* 3*d.* per great hundred, as that is the divisible figure in eggs. At 1*s.* per great hundred the retail price of foreign eggs would be increased by £940,525. Home and colonial supplies would advance at the same ratio, and on the basis of last year's imports the prices paid would advance by £26,000. Irish eggs would advance £285,000. The rates for British produce would also be enhanced, and on the same basis these would increase by £650,000. Thus the retail prices for eggs alone would be greater by £1,907,525. In poultry, taking the retail prices as 7½ per cent. greater than at present, the additional amounts paid by consumers would be £73,429 for foreign; Irish, £30,000; colonial, £6000; and British, £116,250; or a total of £225,679. Thus on the basis of present supplies the people of Britain would pay £2,133,204 to give a preference of little more than £25,000 to the Colonies, with a problematical future gain of, say, £200,000. But the almost certain result would be to reduce enormously the demand for eggs and poultry, or an increased sale of cheaper foreign goods, to the disadvantage of home producers, who would either have to abandon the pursuit or cut down their profits to induce consumers to buy British eggs and poultry.

The claim may be made, though for the reason just given it cannot be regarded as by any means certain to follow, that producers in the United Kingdom would secure an advance in their returns, on the basis of 10*d.* per great hundred of eggs and 5 per cent. on poultry, equal to £876,666. As against this, however, we must set the increased cost of food for the fowls. The development of the poultry industry during the last twenty years has been built up on cheap food. Estimating that a tax on grain of 3*s.* per quarter was levied, this would amount to 12½ per cent. inclusive of profits, which may be reckoned at 6*d.* per fowl per annum. With 50,000,000 fowls in the United Kingdom (30,000,000 in Britain and 20,000,000 in Ireland), the advance in cost of food would be £1,250,000. Not only, therefore, would producers suffer a serious and immediate diminution in returns with a probable increase of such loss due to falling demand and prices, but the nation would suffer seriously, as the following table will show:

| Gain | £ | £ |
|---|---|---|
| Revenue % Eggs . . | 788,771 | |
| „ „ Poultry . . | 48,953 | |
| | | 837.724 |
| Colonies % Eggs . . | 21,666 | |
| „ „ Poultry . . | 4,000 | |
| | | 25,666 |
| Increased price received by home producers: Eggs . | 779,166 | |
| Ditto Poultry . | 97,500 | |
| | | 876,666 |
| Balance, Net Loss . . . | | 1,643,148 |
| | | 3,383,204 |

| Loss | £ | £ |
|---|---|---|
| Increased prices to consumers: Eggs . . | 1,907,525 | |
| Ditto Poultry . . | 225,679 | |
| | | 2,133,204 |
| Additional Cost of Food . . . | | 1,250,000 |
| | | 3,383,204 |

# IS MUNICIPAL CREDIT GOOD?

THE INCREASE OF THE MUNICIPAL DEBT IS NOT A PROOF OF EXTRAVAGANCE—DIFFICULTIES OF BORROWING—WHY THE MONEY-MARKET IS UNFAVOURABLE—THE FALL IN CORPORATION STOCKS HAS BEEN SHARED BY ALL GILT-EDGED SECURITIES—THE SENSIBLE VIEW

BY

J. E. WOOLACOTT

ONE might imagine from the language used by their critics that the municipal administrators of this country were men of the same type as the members of defaulting Argentine municipalities, and that instead of performing, without fee or reward, valuable and onerous public duties, they were carrying on a system of culpable extravagance if not of wanton corruption.

Mr. J. M. Barrie makes a bashful lady confess to her middle-aged suitor that she considered it "dashing" on his part to smoke. There are among us a number of writers who apparently consider it "dashing" to throw mud at municipalities. Their qualifications to handle financial questions are often conspicuously absent, while many of their assertions are either unjust or absurd. The onslaught almost invariably opens with the statement that the municipal debt grew from £198,671,000 in 1889 to £316,700,000 in 1900–01, less sinking-funds of £11,250,000, and it is suggested that these figures in themselves furnish irrefutable proof of extravagance. There is no reference to the fresh duties involving heavy expenditure for sanitation and other matters of vital importance to the public well-being that are constantly being thrown on local bodies by Parliament; on the contrary, it is covertly insinuated if not openly alleged that municipal trading is the evil that must be checked if bankruptcy and disaster are to be staved off. Any one who approaches the question in a judicial spirit knows that the increase of the municipal debt of the country is not in itself a proof of extravagance. The real points are: Has the capital raised by the corporations been utilised advantageously? and is the security given to the investor in municipal stock adequate and satisfactory? With the first point the ratepayers are the persons most directly concerned, and whatever extravagance may have arisen in isolated cases, it is safe to say that if the general charges of waste and of spendthrift expenditure so freely made had any solid foundation in fact, Parliament would long ago have been called upon to interfere by indignant ratepayers. What is the actual position? On two occasions Parliament has appointed a Select Committee to investigate the question of municipal trading, and on both occasions the Committees have reported they were unable to decide in the duration of a single session on the great questions involved. Yet critics abound who are ready summarily to condemn the municipalities root and branch, and not infrequently vital factors are either deliberately or through ignorance overlooked, while sets of figures containing glaring inaccuracies are utilised with the object of convicting municipal bodies of reckless financial methods.

The recent decision of the Nottingham Corporation to postpone a projected loan owing to the unfavourable condition of the money market is apparently regarded by some anti-municipalists as a proof that investors have taken alarm at the recent development of municipal enterprise, and that the underwriters, who assist the Corporations in issuing loans, are determined to check the growth of "trading" by public bodies. Now every one who is acquainted with the course of financial events knows perfectly well that owing to the colossal issues of stock by the Government in consequence of the war, the market is glutted with high-class securities—known in city parlance as "gilt-edged" stocks.

Financial houses which underwrite issues—that is to say, agree for a commission to take over bonds that the public fail to subscribe for—find themselves in possession of securities which they cannot at present profitably dispose of. Firms, too, which apply for large portions of various issues of bonds with the intention of retailing them at a profit are in a similar position, the reason in both cases being that investors have been surfeited with high-class securities. It is not surprising, then, that underwriters should regard with disapproval any attempts at fresh loans, for in the present condition of affairs even the Chancellor of the Exchequer has to walk circumspectly when he approaches the

City with borrowing proposals. The time is not a favourable one for issuing loans, but it can hardly be disputed that so soon as the masses of gilt-edged securities issued within the past year or two have been absorbed by investors, municipalities of standing will experience no difficulty in obtaining money in the City of London for their reasonable requirements.

It may be that the Corporations will, in the course of time, appeal more directly to the small investor. In Paris the municipal bond is made attractive by the fact that it offers at once a sound investment and a speculative chance of winning a large money prize at any of the periodical drawings of bonds for redemption. The owners of certain lucky numbers receive considerable sums, amounting to thousands of pounds on these occasions, and as (while noted for his thrift) the Frenchman dearly loves a lottery, a £16 municipal bond is to him a very desirable possession. Lotteries in this country are of course out of the question, so that the conditions here are widely different from those which obtain in France. The Manchester Corporation, however, have been for some time past inserting small advertisements in the Press for loans for three years in sums of not less than £100 at £3 7*s.* 6*d.* per cent., and the Treasurer informs the writer that between August 2, 1902, when the advertising commenced, and August 4, 1903, the amount received was no less than £1,808,060. Manchester is an exceptionally wealthy city, but these figures are certainly striking and suggestive.

It is quite true that Corporations have had to pay more for financial accommodation of late than they were called upon to pay six or eight years ago. But it is not true, as has been asserted, that this is due to the development of municipal trading. The entire conditions of the market have changed within that period, and no more striking proof of this could be cited than the fact that six years ago the demand for gilt-edged securities was so great that Consols could only be purchased to yield 2 per cent., whereas the yield on current prices is about 2¾ per cent. In consequence mainly of the war, the market, as has already been shown, has been swamped with high-class stocks, with the inevitable result that the supply is in excess of the demand, and borrowing even by the Government has become impossible except upon far more onerous terms than those which would have been accepted by lenders a few years ago.

The fall in Corporation stocks from the high prices ruling in 1897 has been very considerable, and if these securities stood alone in that respect the position of the municipalities would give cause for grave disquietude. The truth is, however, that this fall has been shared by all gilt-edged securities, as the following comparison of prices ruling at the beginning of August 1897 and the beginning of August of the current year shows:

| | August 1903 | August 1897 | Fall |
|---|---|---|---|
| Consols, 2¾ % till 1903 | 91 | 113 | 22 |
| New South Wales, 3½ % 1924 | 99 | 109½ | 10½ |
| Birmingham, 3½ % | 107½ | 122½ | 15 |
| Glasgow, 3½ % Irredeemable | 113½ | 135 | 21½ |
| Manchester, 4 % Consolidated | 128½ | 151 | 22½ |
| G.W. Rly., 4 % Debentures | 129½ | 157 | 27½ |
| L. & N.W. Rly., 3 % Debs. | 100 | 120 | 20 |
| North-Eastern Ry., 3 % Debs. | 97½ | 119 | 21½ |

The municipal bonds named come well out of this comparison, which if extended would show similar results.

It is obvious again that if the municipalities were in a parlous condition financially their securities could be purchased to yield a high rate of interest. Let us then apply the test of the Stock Exchange list of quotations to the credit of corporations. At the beginning of August the yield to the investor on the current quotations of Glasgow Corporation Irredeemable 3½ per cent. stock was £3 2*s.* 3*d.* per cent., which was practically the same yield as that obtainable on French Rentes and several shillings per cent. less than that on German Imperial bonds—French Rentes yielding £3 1*s.* 9*d.* per cent. and German Imperial bonds £3 6*s.* 9*d.* per cent. The yields per cent. on the principal stocks of other Corporations largely engaged in municipal trading were: Bolton, £3 6*s.* 9*d.*; Birmingham, £3 4*s.*; Blackburn, £3 9*s.* 3*d.*; Cheltenham, £3 6*s* 6*d.*; Huddersfield, £3 7*s.*; Manchester, £3 3*s.* 6*d.*; Wigan, £3 5*s.* 6*d.*; Stockport, £3 7*s.* 6*d.*; Stockton, £3 10*s.* Every one of the Corporations named has incurred at least two-thirds of its debt for "trading" purposes, and this makes the comparison of their credit with that of the Governments of the two wealthiest and most progressive nations on the Continent of Europe especially interesting.

There is another point of importance both to the investor and the ratepayer. The impression left on the public mind by the persistent attacks on the municipalities is that rates are far higher in boroughs which have engaged largely in municipal trading than in others that have shown themselves more conservative. Mr. Robert Donald has published most interesting figures proving that this is not the case. In

towns where the debt for unremunerative undertakings is double or more than double the debt for remunerative purposes, the average municipal rate is 4*s.* 8½*d.* in the £, while in towns where the remunerative debt amounts to double the unremunerative debt the average rate is 4*s.* 5¾*d.* in the £. Since West Ham is so frequently cited as a horrible example of the highly rated municipality, it is interesting to note that according to the "Stock Exchange Official Intelligence," its trading debt is only £102,503, while its non-trading debt is £1,562,075.

A most elaborate statement relating to municipalities is given in the Parliamentary return issued earlier in the year of the "reproductive undertakings carried on by municipal boroughs," which was recently quoted in THE WORLD'S WORK. The capital position and the average annual profit or loss between January 1, 1898, and March 31, 1902, was as follows:

| | Capital Invested. | Capital Outstanding. | Average Annual Profit. | Average Annual Loss. |
|---|---|---|---|---|
| | £ | £ | £ | £ |
| Waterworks | 56,943,016 | 49,556,717 | 90,128 | — |
| Gasworks | 24,028,116 | 18,497,587 | 394,825 | — |
| Electricity | 12,508,997 | 11,192,779 | — | 11,707 |
| Tramways | 9,751,153 | 8,572,924 | 99,318 | — |
| Markets | 6,181,080 | 3,926,671 | 83,782 | — |
| Baths and wash-houses | 1,988,340 | 1,232,659 | — | 124,952 |
| Burial-grounds | 2,382,305 | 1,313,405 | — | 63,784 |
| Workmen's dwellings | 1,253,592 | 1,090,340 | — | 26,979 |
| Harbours, docks, &c. | 5,421,827 | 4,936,816 | — | 77,724 |
| Other undertakings | 713,946 | 466,506 | 15,373 | — |
| | 121,172,372 | 100,786,404 | 683,426 | 305,145 |

The net profit was £378,281, after providing for interest, sinking fund, and depreciation, but if the losses arising from undertakings that cannot fairly be termed "reproductive" are eliminated, the total profit is practically double that amount. Baths, wash-houses, and burial-grounds are absolute necessities, while harbours and docks are claimed, not without reason, to be really public improvements. It is further pointed out by municipal traders that the small loss on electricity was only to be expected seeing that many of the undertakings included were less than a year old and could not be in a position to earn a profit. The point of the return, however, is that it gives no support to the reckless charges that have been hurled against the Corporations as a whole, and it is undoubtedly of great value to all who are endeavouring to arrive at a right decision on the question of municipal trading.

It may or may not be desirable for municipalities to enlarge the scope of their operations; it certainly is highly desirable in the interests of public life and of investors in municipal stocks that reckless, extravagant and inept attacks on the municipalities, whether they originate from interested or disinterested sources, should come to an end. Criticism of bodies entrusted with the expenditure of public funds is absolutely necessary, but to be of value it must be judicial criticism, and above all things informed criticism. It is perfectly proper to advocate the establishment of an elaborate audit and to demand that the financial arrangements of every municipality should be at least up to the standard of those adopted by sound private enterprise. But it is not proper to cast unjust reflections on the wisdom and honesty of municipal councillors generally, and it is simply grotesque to assert that the country is crushed under the burden of municipal debt.

It would be well if this problem were always approached with a due sense of the obligations of the community to those who perform municipal work, and with an appreciation of the purposes to which the finances of the corporations are applied. In concluding his admirable speech on the estimates of the London County Counil for 1903–4, Lord Welby, in dealing with municipal expenditure, remarked that what he called the home budget of the United Kingdom, comprising rates, sums contributed from Imperial taxes to local services and the cost of education, amounted to about £75,000,000 per annum, while the military and naval expenditure for 1903–4 amounted to £70,000,000, and the nation appeared to acquiesce in the latter charge, equivalent to more than 4½ per cent. of the country's estimated income, as a necessary charge for insurance against attack. "I will apply," continued Lord Welby, "the same test to our home budget of £75,000,000. The home budget, so essential to the well-being of the people, is 5 per cent. of the national income. Let me conclude by asking the Council this question—if £70,000,000, or 4½ per cent. of the national income, is a reasonable insurance against the possible attack of a foreign foe, is £75,000,000 or 5 per cent. of that income an unreasonable insurance against the domestic foe, the foe within our gates, which is fighting us day by day, and gives us no truce? Is it unreasonable insurance against ignorance, poverty, bad sanitation, vice, crime, and discontent?" It is not unreasonable to suggest that in the consideration of municipal expenditure this phase of the problem should be kept prominently in view.

# A GREAT ELECTRICAL DISCOVERY

TWO NEW PHENOMENA IN PHYSICS—WIRELESS TELEGRAPHY: ITS COMMERCIAL APPLICATION ASSURED—MERCURY VAPOUR AS A CONDUCTOR OF ELECTRIC CURRENTS—A NEW ILLUMINANT AND ITS MEDICAL AND INDUSTRIAL VALUE—THE RESEARCHES OF MR. PETER COOPER HEWITT

BY

KATHLEEN SCHLESINGER

IT is many years now since the discovery of any new element in physics startled the scientific world, and stimulated it to fresh labours in the field of research. Since Marconi's first experiments with wireless telegraphy in 1896, for instance, no new knowledge in physics has rewarded the efforts of scientists to discover just what is wanted to establish that wonderful invention on a commercial basis. There is not a single commercial circuit of wireless telegraphy established at the present moment in the whole world.

Recently, however, a discovery was made by Mr. Peter Cooper Hewitt, of New York, which is destined to revolutionise wireless telegraphy, solving the problem at once simply and easily by providing an ideal interrupter, scientifically accurate, one of Nature's own contriving, one might almost say. The essence of the discovery consists of some hitherto unsuspected properties of mercury vapour as a conductor of electric currents. Wireless telegraphy depends for its operation on a transmitting apparatus and on a receiving station provided with some form of coherer or magnetic detector. In the more recent transmitters the high-frequency oscillations are set up in the sending circuit by discharging condensers across a spark gap. This device has serious defects which scientists have vainly been trying to remedy. Much of the power of the oscillating discharges is used up to overcome the resistance opposed by the air at the gap, leaving proportionately little for radiating electric waves across space; the very force of the current required, moreover, produces considerable deterioration in the apparatus itself, causing serious irregularity in the frequency of the impulses, so that it is practically impossible to tune a receiver to them. This defect is a serious drawback in practice, for as the electric waves are radiated in all directions from the sending wire, much in the same way as circles are formed on the surface of water into which a stone has been thrown, it follows that the message is distributed broadcast and that any wireless telegraphy installation within range can pick it up or make it indecipherable at the proper receiving-station merely by setting its own apparatus to work. This makes such wireless telegraphy worse than useless for the fleet in time of war, and it would prove a dangerous pitfall.

The crying need of wireless telegraphy is thus a system that will admit of perfect syntony or tuning to ensure secrecy. The two new phenomena discovered by Mr. Hewitt and applied in his Mercury Vapour Interrupter now make this possible for the first time. In this new transmitter there is nothing to deteriorate; the impulses produced are powerful, regular, and persistent, and their frequency can be varied at will. To establish a frequency code for each station and perhaps a recognised universal one for general use understood by all, will be a simple matter. When a message is about to be sent off, the operator at the transmitting station will signal to the receiving station the particular code symbol indicating the frequency about to be used, and the receiving apparatus will be instantly tuned to that frequency. The message will thus be detected by the station alone for which it is intended; no other could intercept it without being in the secret of the selected frequency.

Mr. Hewitt's interrupter consists of a glass vacuum globe about ten inches in diameter, having two tubes or electrodes containing mercury sealed into the bottom of the vessel. This simple and inexpensive device, which takes the place of the spark gap in the circuit, depends for its operation on two properties of the mercury vapour.

Many investigators have penetrated to the very threshold of this discovery, making attempts to pass an electric current through mercury vapour *in vacuo*, but they all failed to overcome and control the resistance of the mercury.

Mr. Hewitt found that *a current of a certain very high potential applied for a fraction of a second is required to break down the negative electrode or cathode resistance of the mercury, but that once this is overcome a low-tension current passes readily through the globe*, causing the vapour to glow with a very brilliant light. This phenomenon he has utilised in the Mercury Vapour Lamp, to which we will return.

The second phenomenon, a complement of the first, consists in that *if the potential of the current be made to fall below a certain critical point while traversing the mercury vapour, the initial cathode resistance reasserts itself instantly.* By using condensers in connection with the mercury vapour globe, these two phenomena bring about the alternate charging and discharging of the condensers at a very high rate, which can be exactly controlled and pre-determined by means of the constants of the circuit and the power of the supply of electric current. Therefore, the electric waves produced being powerful, continuous and of equal amplitude, there is no difficulty in tuning a receiving circuit to respond to any given frequency; and wireless telegraphy is thus at once established on a commercial basis.

With Marconi's apparatus, the spark is as large as a man's wrist, and the crack made on its passage between the two brass spheres is so deafening that the operators are obliged to protect the tympanum of the ear by packing it with cotton wool. Hewitt's interrupter is noiseless and sparkless.

Mr. Peter Cooper Hewitt, grandson of Peter Cooper, the famous American philanthropist and millionaire who built the first American locomotive, and was a prominent supporter of Cyrus Field in his project of laying an Atlantic cable, inherits his grandfather's constructive and inventive mind. He received his education in Stevens Institute and at Columbia College, where he devoted much time to the study of electricity, physics, chemistry, and mechanics, all of which he subsequently turned to practical account in improving various kinds of machinery used in his father's steel works and his grandfather's glue factory. Mr. Hewitt's researches in the field of electricity, however, were mostly carried out after business hours. In his fine laboratory overlooking Madison Square, he worked and plodded for seven years, performing thousands of experiments, undismayed by constant failures, until at last his labours were crowned with success.

Having recognised the tendency of modern mechanical inventions to eliminate waste and increase efficiency, he turned his attention first of all to the universally used but most wasteful of all electric lights, the incandescent lamp. Only 3 per cent. of the power used to make the filament glow results in the luminous radiations we call light; a large amount of the electric power applied is wasted in producing useless heat. This suggested to Mr. Hewitt the possibility of finding some incandescent gas which would yield light without heat and make more profitable returns for the power used. While pursuing this idea, he stumbled upon the first phenomenon described and obtained a lamp deriving its light from the vapour of mercury raised by the passage of an electric current to a high state of incandescence. Mr. Hewitt uses what is known as a "booster" for producing for a fraction of a second the powerful current necessary to overcome the resistance of the mercury; the "booster" is then automatically cut off.

As the vapour is in a vacuum, there is no consumption of the light-giving element, and the lamp requires no trimming or attention of any kind. The efficiency of the mercury vapour lamp is twice that of the arc lamp and from eight to ten times that of the incandescent; it is the cheapest kind of illuminant, cheaper even than paraffin. The lamp, consisting of a glass tube, may be made in any shape or size from $\frac{1}{8}$ of an inch to 3 ins. in diameter and from 3 ins. to 12 ft. in length, by which variations the intensity of the light can be increased from sixteen candles to several thousand. The lamps require no special wiring, they are turned on and off by means of the usual switch and can be operated on any direct current voltage between 50 and 500 volts, allowing of a regulation of as much as 10 per cent. variation.

The light emitted by this vapour is almost entirely lacking in red rays, and although producing a considerable distortion in colour values, which renders it unsuitable at present for the drawing-room, it remains superior to any other electric light for many purposes. For studies, libraries, and drawing-offices, for all work which tends to strain the eye, the new light has proved far less fatiguing than any other artificial light, and creates hardly any shadow. It forms an ideal light for all sorts of

photographic purposes. As it is composed almost entirely of actinic rays, and the light is so diffused, it forms a real substitute for daylight and flashlight.

Gardeners, both amateur and professional, will be interested in this wonderful lamp. Some experiments made with the seeds of various plants sown and exposed, some to the light of day, and others to that of the mercury lamp alone (other conditions being the same), showed in the case of the latter a considerably more rapid and luxuriant growth. Plants and vegetables have also been forced artificially in hot-houses by means of this light with remarkable results.

Lord Rayleigh when showing the lamp and lecturing upon it before the Royal Institution in March last, pointed out that this new light, being almost uniquely rich in violet and ultra-violet rays, those in fact which kill the tubercle bacilli and cure lupus, would prove of great advantage to the medical profession, being so inexpensive and self-sufficient. Queen Alexandra, it will be remembered, presented to the London Hospital the first lamp for the Finsen treatment of lupus, and she has quite recently given another for the new Finsen room of the fine out-patient department of the same hospital. The Finsen lamp is an electric one, from which the red or heat rays (which would burn the patient) have to be removed by running cold water through the double lens of rock crystal used for focusing the rays on the patient. Each lamp costs £400 a year for up-keep, owing to the great amount of electricity consumed to obtain the 65,000 candle-power necessary. It is evident, therefore, that by using the mercury lamp (as soon as it is available commercially), so simple in construction, so inexpensive to purchase and also the most economical of all electric lights, hospitals will be able to afford to cure many more lupus patients and we may hope to see at least this form of tuberculosis soon eradicated from the land.

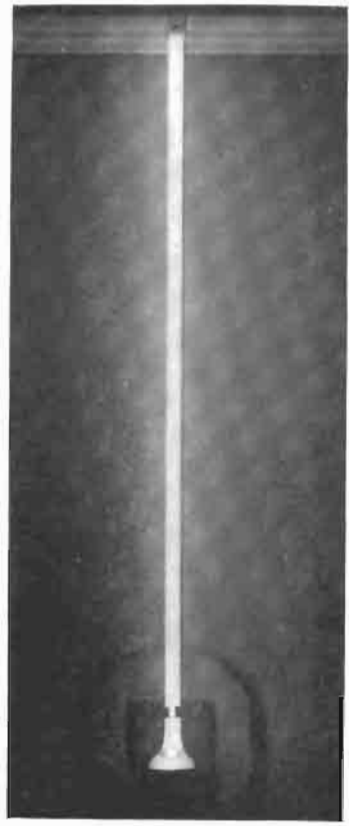
The absence of red rays from this new light has been found of great value in examining the back of the eye by means of the ophthalmoscope. It is possible under this light to see far deeper into the retinal layers, and thus to discover morbid changes more accurately without the usual interference offered by the net-work of red blood-vessels spread over the tissues of the eye. Another important use of the lamp will undoubtedly be as an illuminant for tunnels and underground railways, where lamps can be connected in series; the life of this lamp is practically infinite and it burns without requiring attention for 1500 to 2000 consecutive hours. All that is then required is to open the tube, wash it and re-exhaust it, by which simple process the lamp is made as good as new again.

"I have found the absence of red in the light much less tiring to the eyes," said Mr. Hewitt; "I use it in my own laboratories and workshops and my men prefer it to ordinary daylight. But I am still experimenting with the lamp, for although it is in its present form already adaptable for many purposes, its colour is objectionable and gives the face a livid, death-like hue. I want to obtain the red rays and produce a pure white light."

Mr. Hewitt's third invention, based upon the new phenomena of the mercury arc, is the Static Converter, recently exhibited at the offices of the British Westinghouse Company, and briefly described in THE WORLD'S WORK last February. The photograph shows Lord Kelvin and Mr. Charles Merz, consulting engineer to the North-Eastern Railway, watching the tests of the new device conducted by Mr. George Westinghouse, who with his usual keen scent for new inventions, was the first to realise the importance of Mr. Hewitt's discovery. The row of incandescent lamps serves together with a voltmeter and an ammeter to measure the intensity of the current the amount of resistance and the loss of power in converting. By means of this simple apparatus, which a man can hold in his hand, which requires no operator, has no moving parts, does not deteriorate and yet possesses a very high efficiency, Mr. Hewitt has given a powerful impetus to the development of the electrical industry, and a serious drawback in the application of electricity has been removed.

There are two kinds of currents, alternating and direct. The latter for many reasons is more used in this country than the former; all the tube and other electric railways, and the tramways, most of the electric light and power supply companies use direct current. The distribution of electrical energy over great distances, however, can only be made economically possible by using alternating currents of high tension generated at central power-stations and transmitted thence to the points of application. There the current must first of all be reduced to a low potential and then the conversion to direct current is effected by means of what are known as rotary converters, cumbersome revolving machinery, which must be

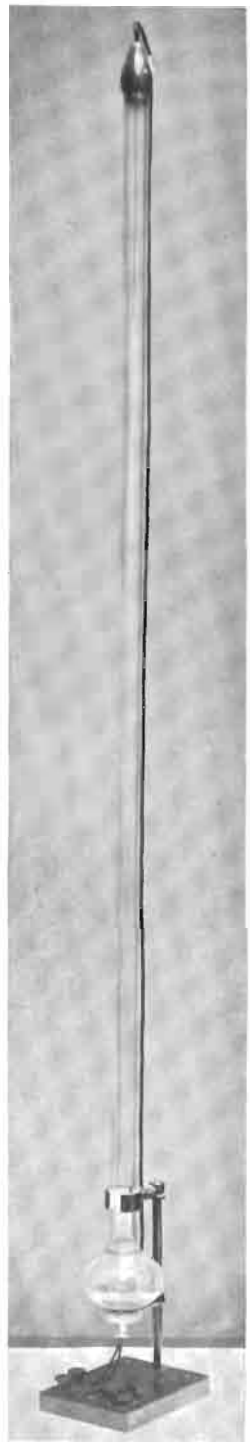
installed in sub-stations, requires constant personal supervision and moreover wastes some of the current during the process. The mercury converter possesses none of these drawbacks. A Hewitt converter costing about £3 can do all the work of a £700 or £800 machine and do it better, without supervision and with but a slight loss of power due to a constant drop of fourteen volts in the bulb, which are used in vaporising the mercury. For the supply of power to electric railways or tramways, the Hewitt converter could be installed in man-holes or boxes, connected directly to the feeder mains, along and beneath the line, where the work of conversion would go on silently and unobserved. For long-distance work, the converters can be placed directly on the cars and the alternating current collected through a trolley or third rail. It will at once be seen what this means in economy for even short lines requiring some twelve to fourteen sub-stations.



THE LAMP ALIGHT

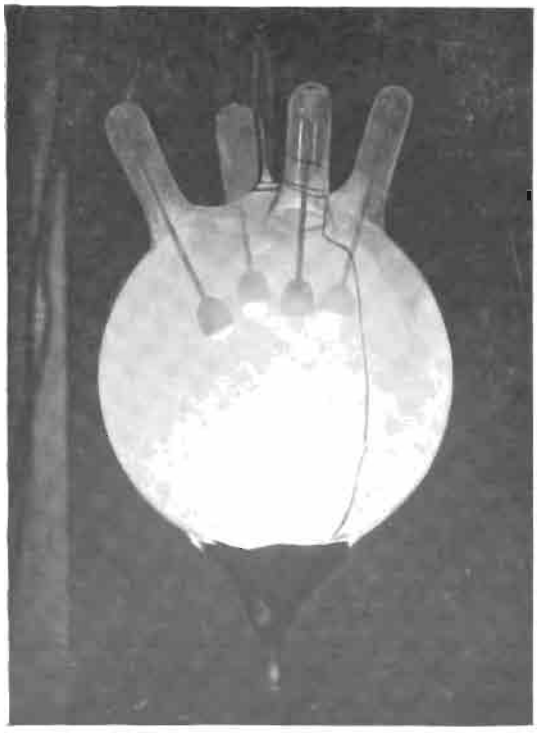
Owing to the peculiar and wonderful characteristics of the vapour column as a conductor the alternating current passed through the mercury bulb undergoes a natural conversion into direct current, the work usually performed by a rotary converter. A vacuum globe similar to that of the interrupter, and seen in the photograph, is supplied with a positive electrode for each phase of the alternating current, which successively permits the positive alternations of the current to flow to a single negative electrode common to the several positives. Current passed through mercury vapour can run in one direction only, and in consequence the alternations on one side of the zero-line only will find a passage between the electrodes. The alternations of opposite sign are cut off and become inert, in that they absorb no power.

This invention is perhaps of less direct interest to the general public than the other two, but it has a most important bearing on the development of electric power as a factor in industrial prosperity, and is still more intimately connected with the question of electric traction and the problem of the electrification of steam railways, which is being forced upon our notice more and more every day. Our great railway companies are fully conscious that the time has come for them to electrify at least those portions of their lines which handle local and suburban traffic. The rivalry of the rapidly growing net-work of electric tramways and tubes in and around London threatens their interests. Many of the companies indeed would readily find the necessary capital not only for this, but for total electrification, if only the reliability and efficiency of any one system for main line and goods traffic, consistent with conditions prevailing in Great Britain, were once practically proved. Unfortunately this is not the case at present. Several systems are in



THE HEWITT MERCURY VAPOUR LAMP

MR. GEORGE WESTINGHOUSE, LORD KELVIN, AND MR. CHARLES MERZ AT THE TRIAL OF THE HEWITT STATIC CONVERTER



THE STATIC CONVERTER IN OPERATION

the experimental stage, none is yet perfected. We are undoubtedly on the verge of important new developments, and Mr. Hewitt's static converter, when fully developed, will, it is hoped, solve this problem in a satisfactory manner by eliminating the expensive sub-stations and rotary converters and thus bringing direct current systems of electric traction for long-distance lines within the range of possibility.

These three inventions by no means represent the sum total of what may be expected from mercury vapour or other incandescent gases; on the contrary this is but the beginning of a new field of research, open to all alike, which may yield still more wonderful inventions and discoveries in the near future. The greatest of all living electricians, Lord Kelvin, has recognised the importance of Mr. Cooper Hewitt's discoveries; and on his return from a recent visit to the United States he said: "What attracted me most in America was the work of Mr. Peter Cooper Hewitt and his vapour lamp." Meanwhile Mr. Hewitt continues his experiments, penetrating ever deeper and deeper into Nature's most secret paths.

# THE BURIED STONES ON THE CHILTERNS

A RURAL INDUSTRY IN PICTURESQUE SURROUNDINGS—THE HUGE BLOCKS THAT LIE SCATTERED OVER THE CHALK FORMATION OF THE CHILTERN HILLS—DENNER HILL STONE AND THE PRIMITIVE METHODS OF WORKING IT

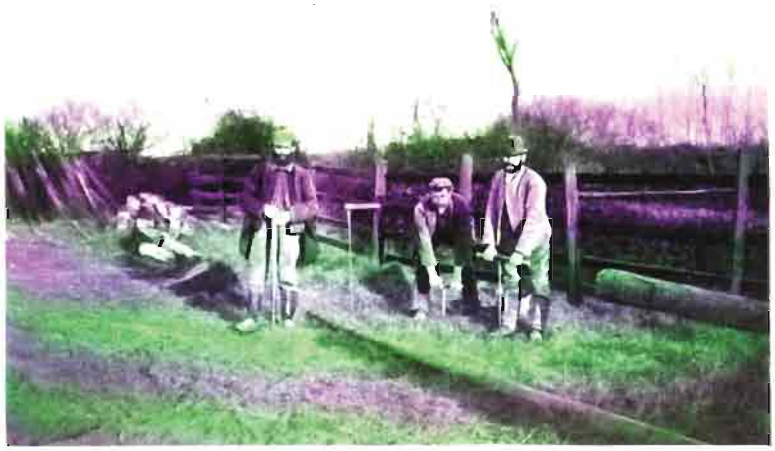
BY

W. BOVILL

THE stranger who visits the Chiltern district of Buckinghamshire is generally puzzled by one curious feature which constantly meets his eye as he wanders through the noble beech woods, or roams over the breezy hills and down the sunken sequestered valleys. In the heart of the woodlands, on the summits of the high plateaus, or the slopes of the steep declines, he is for ever coming across mysterious hollows. Sometimes these hollows are planted with larches, and form picturesque little groups of feathery foliage—sometimes they are merely sudden and abrupt depressions in meadow or plough-land. He asks himself in bewilderment: What can have caused these pits? Are they the beds of pools long since dried up? Are they relics of some primitive excavations? When at last he seeks information as to their origin from the intelligent native, he is told that they are the holes from which blocks of "Denner Hill stone" have been extracted. He learns that the quarrying of these huge single stones is one of the recognised rural industries here.

The singular feature about this "Denner Hill stone" is that it is found in colossal, isolated blocks, immense single stones, sometimes there is but one of these, sometimes several lie near one another, as if flung there heedlessly and recklessly by some resistless but uncontrolled force. One huge stone of a hundred and twenty tons weight was found in the heart of the big woods round Hampden, with no other stones anywhere within half a mile of it. This, we believe, is the largest single stone as yet discovered in the district.

The stone of which the greater part of Windsor Castle is built is the same stone that forms the outer circle of Stonehenge, and it is used in many other historic and prehistoric edifices that lie within the large area over which it is scattered; yet, probably not one person in a hundred knows what that stone is, or where and how it is quarried. Scientifically described as a hard, saccharoid sandstone, it is known in various localities by so many names that it would be well nigh impossible to collect them. Druid Sandstone, Denner Hill stone, Sarsden stone, and Greywethers are a few amongst many of these local



PROBING FOR A STONE

The stones are located by means of a crowbar or long steel rods

# A GREAT ELECTRICAL DISCOVERY

TWO NEW PHENOMENA IN PHYSICS—WIRELESS TELEGRAPHY: ITS COMMERCIAL APPLICATION ASSURED—MERCURY VAPOUR AS A CONDUCTOR OF ELECTRIC CURRENTS—A NEW ILLUMINANT AND ITS MEDICAL AND INDUSTRIAL VALUE—THE RESEARCHES OF MR. PETER COOPER HEWITT

BY

KATHLEEN SCHLESINGER

IT is many years now since the discovery of any new element in physics startled the scientific world, and stimulated it to fresh labours in the field of research. Since Marconi's first experiments with wireless telegraphy in 1896, for instance, no new knowledge in physics has rewarded the efforts of scientists to discover just what is wanted to establish that wonderful invention on a commercial basis. There is not a single commercial circuit of wireless telegraphy established at the present moment in the whole world.

Recently, however, a discovery was made by Mr. Peter Cooper Hewitt, of New York, which is destined to revolutionise wireless telegraphy, solving the problem at once simply and easily by providing an ideal interrupter, scientifically accurate, one of Nature's own contriving, one might almost say. The essence of the discovery consists of some hitherto unsuspected properties of mercury vapour as a conductor of electric currents. Wireless telegraphy depends for its operation on a transmitting apparatus and on a receiving station provided with some form of coherer or magnetic detector. In the more recent transmitters the high-frequency oscillations are set up in the sending circuit by discharging condensers across a spark gap. This device has serious defects which scientists have vainly been trying to remedy. Much of the power of the oscillating discharges is used up to overcome the resistance opposed by the air at the gap, leaving proportionately little for radiating electric waves across space; the very force of the current required, moreover, produces considerable deterioration in the apparatus itself, causing serious irregularity in the frequency of the impulses, so that it is practically impossible to tune a receiver to them. This defect is a serious drawback in practice, for as the electric waves are radiated in all directions from the sending wire, much in the same way as circles are formed on the surface of water into which a stone has been thrown, it follows that the message is distributed broadcast and that any wireless telegraphy installation within range can pick it up or make it indecipherable at the proper receiving-station merely by setting its own apparatus to work. This makes such wireless telegraphy worse than useless for the fleet in time of war, and it would prove a dangerous pitfall.

The crying need of wireless telegraphy is thus a system that will admit of perfect syntony or tuning to ensure secrecy. The two new phenomena discovered by Mr. Hewitt and applied in his Mercury Vapour Interrupter now make this possible for the first time. In this new transmitter there is nothing to deteriorate; the impulses produced are powerful, regular, and persistent, and their frequency can be varied at will. To establish a frequency code for each station and perhaps a recognised universal one for general use understood by all, will be a simple matter. When a message is about to be sent off, the operator at the transmitting station will signal to the receiving station the particular code symbol indicating the frequency about to be used, and the receiving apparatus will be instantly tuned to that frequency. The message will thus be detected by the station alone for which it is intended; no other could intercept it without being in the secret of the selected frequency.

Mr. Hewitt's interrupter consists of a glass vacuum globe about ten inches in diameter, having two tubes or electrodes containing mercury sealed into the bottom of the vessel. This simple and inexpensive device, which takes the place of the spark gap in the circuit, depends for its operation on two properties of the mercury vapour.

quarrying. To quarry the stone, it must first be found, and this is accomplished in the following manner. "Probing for a stone" gives a good idea of the methods employed to ascertain firstly the existence of a stone at some particular spot, and also its dimensions and the size of hole that will be required to reach it. If the stone lies close to the surface, its presence is discovered with an ordinary crowbar, but should this fail, small steel rods, about half an inch in diameter and anywhere from ten to fifteen feet long, are brought into use; these are worked into the ground with the help of water poured into the hole.

The stone being located is now uncovered, split into convenient pieces, and raised to the surface, when it is worked into blocks for paving, curbing or building purposes. The fact that it keeps a rough biting surface, makes the stone peculiarly suitable for the two former uses; and that it hardens with age and exposure, and very quickly assumes a more subdued and weathered tone, recommends it to the builder who looks for effect as well as durability.

The stone when first uncovered splits easily, and for this purpose in large masses, wooden wedges are driven into holes cut in the boulder, and are then swelled with water, a time-honoured method amongst all workers in stone, and one peculiarly adapted to Denner Hill stone, as the use of explosives would be liable to cause too much waste of the rather precarious supply. In the stone-cutter's hands, the readiness with which it lends itself to his dextrous manipulation is very wonderful; a line is made with a cold chisel, then the process is repeated, when suddenly the stone parts asunder, leaving a face that a few well-placed blows of the hammer renders quite true enough for all purposes for which the stone is used. A glance at the photograph showing the stone cutters at work gives the reader a notion of the temporary nature of their shelters; structures that are no doubt eminently adapted to the constant moving in search of material.

The illustration, "A large stone" shows an exceptionally large mass that has just been uncovered; it is also a very good example of a stone lying close to the surface, and was found on ground that has up till now never been "worked," or doubtless it would have gone long ago, and the workers of to-day would have been forced to seek their material at greater depths; for it is worthy of remark that much of the land now being "worked" shows signs of old workings, long since filled up, and visible only by some slight dip in the surface.

HOISTING A BLOCK OF DENNER HILL STONE

Like the shelters of the stone-cutters, the derricks, and in fact all tools and machines used in the industry, are of the simplest character, and adapted to constant moving. "Hoisting a block of stone" shows the derrick commonly in use. The pit from which the stone is being drawn is a very good example of an average working. Probably three or four stones have been found and taken out. All the stones being got out, the pit will be filled, and the workers will then move on to another stone.

Such is the industry that supplies most of the larger towns in this part of the country with curbing and guttering for their streets. It was from such primitive quarries as these that the stone for a large portion of the modern addition to Windsor Castle was obtained, though much of the older parts of the castle may have come from surface stones found in the surrounding country. It is unfortunately true that small masters and primitive methods do not mean advance or cheapness, however much they may tend to preserve the pleasant and picturesque side of the industry.

photographic purposes. As it is composed almost entirely of actinic rays, and the light is so diffused, it forms a real substitute for daylight and flashlight.

Gardeners, both amateur and professional, will be interested in this wonderful lamp. Some experiments made with the seeds of various plants sown and exposed, some to the light of day, and others to that of the mercury lamp alone (other conditions being the same), showed in the case of the latter a considerably more rapid and luxuriant growth. Plants and vegetables have also been forced artificially in hot-houses by means of this light with remarkable results.

Lord Rayleigh when showing the lamp and lecturing upon it before the Royal Institution in March last, pointed out that this new light, being almost uniquely rich in violet and ultra-violet rays, those in fact which kill the tubercle bacilli and cure lupus, would prove of great advantage to the medical profession, being so inexpensive and self-sufficient. Queen Alexandra, it will be remembered, presented to the London Hospital the first lamp for the Finsen treatment of lupus, and she has quite recently given another for the new Finsen room of the fine out-patient department of the same hospital. The Finsen lamp is an electric one, from which the red or heat rays (which would burn the patient) have to be removed by running cold water through the double lens of rock crystal used for focusing the rays on the patient. Each lamp costs £400 a year for up-keep, owing to the great amount of electricity consumed to obtain the 65,000 candle-power necessary. It is evident, therefore, that by using the mercury lamp (as soon as it is available commercially), so simple in construction, so inexpensive to purchase and also the most economical of all electric lights, hospitals will be able to afford to cure many more lupus patients and we may hope to see at least this form of tuberculosis soon eradicated from the land.

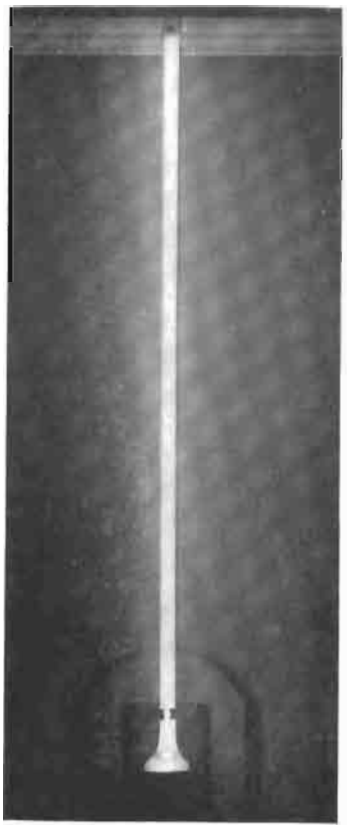
The absence of red rays from this new light has been found of great value in examining the back of the eye by means of the ophthalmoscope. It is possible under this light to see far deeper into the retinal layers, and thus to discover morbid changes more accurately without the usual interference offered by the net-work of red blood-vessels spread over the tissues of the eye. Another important use of the lamp will undoubtedly be as an illuminant for tunnels and underground railways, where lamps can be connected in series; the life of this lamp is practically infinite and it burns without requiring attention for 1500 to 2000 consecutive hours. All that is then required is to open the tube, wash it and re-exhaust it, by which simple process the lamp is made as good as new again.

"I have found the absence of red in the light much less tiring to the eyes," said Mr. Hewitt; "I use it in my own laboratories and workshops and my men prefer it to ordinary daylight. But I am still experimenting with the lamp, for although it is in its present form already adaptable for many purposes, its colour is objectionable and gives the face a livid, death-like hue. I want to obtain the red rays and produce a pure white light."

Mr. Hewitt's third invention, based upon the new phenomena of the mercury arc, is the Static Converter, recently exhibited at the offices of the British Westinghouse Company, and briefly described in THE WORLD'S WORK last February. The photograph shows Lord Kelvin and Mr. Charles Merz, consulting engineer to the North-Eastern Railway, watching the tests of the new device conducted by Mr. George Westinghouse, who with his usual keen scent for new inventions, was the first to realise the importance of Mr. Hewitt's discovery. The row of incandescent lamps serves together with a voltmeter and an ammeter to measure the intensity of the current the amount of resistance and the loss of power in converting. By means of this simple apparatus, which a man can hold in his hand, which requires no operator, has no moving parts, does not deteriorate and yet possesses a very high efficiency, Mr. Hewitt has given a powerful impetus to the development of the electrical industry, and a serious drawback in the application of electricity has been removed.

There are two kinds of currents, alternating and direct. The latter for many reasons is more used in this country than the former; all the tube and other electric railways, and the tramways, most of the electric light and power supply companies use direct current. The distribution of electrical energy over great distances, however, can only be made economically possible by using alternating currents of high tension generated at central power-stations and transmitted thence to the points of application. There the current must first of all be reduced to a low potential and then the conversion to direct current is effected by means of what are known as rotary converters, cumbersome revolving machinery, which must be

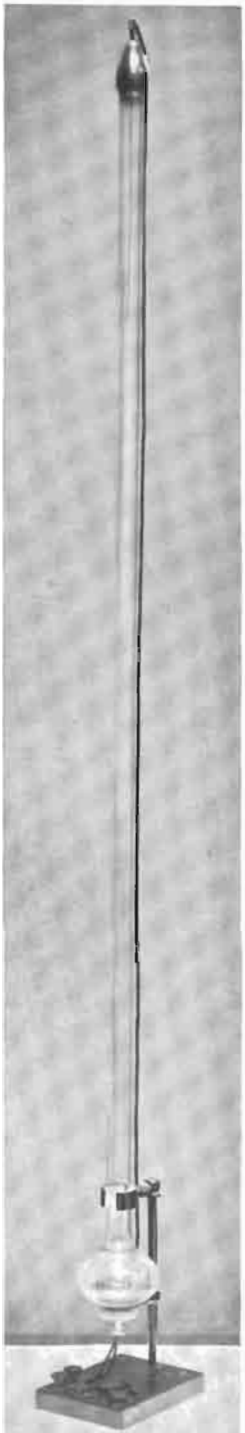
installed in sub-stations, requires constant personal supervision and moreover wastes some of the current during the process. The mercury converter possesses none of these drawbacks. A Hewitt converter costing about £3 can do all the work of a £700 or £800 machine and do it better, without supervision and with but a slight loss of power due to a constant drop of fourteen volts in the bulb, which are used in vaporising the mercury. For the supply of power to electric railways or tramways, the Hewitt converter could be installed in man-holes or boxes, connected directly to the feeder mains, along and beneath the line, where the work of conversion would go on silently and unobserved. For long-distance work, the converters can be placed directly on the cars and the alternating current collected through a trolley or third rail. It will at once be seen what this means in economy for even short lines requiring some twelve to fourteen sub-stations.



THE LAMP ALIGHT

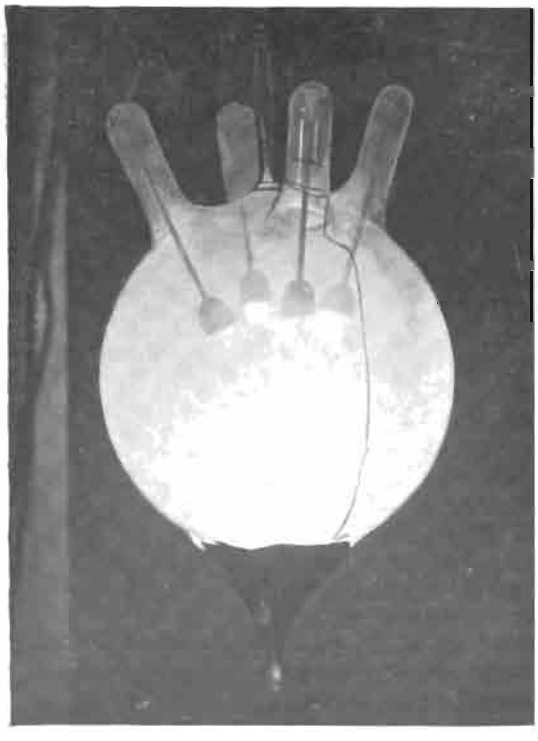
Owing to the peculiar and wonderful characteristics of the vapour column as a conductor the alternating current passed through the mercury bulb undergoes a natural conversion into direct current, the work usually performed by a rotary converter. A vacuum globe similar to that of the interrupter, and seen in the photograph, is supplied with a positive electrode for each phase of the alternating current, which successively permits the positive alternations of the current to flow to a single negative electrode common to the several positives. Current passed through mercury vapour can run in one direction only, and in consequence the alternations on one side of the zero-line only will find a passage between the electrodes. The alternations of opposite sign are cut off and become inert, in that they absorb no power.

This invention is perhaps of less direct interest to the general public than the other two, but it has a most important bearing on the development of electric power as a factor in industrial prosperity, and is still more intimately connected with the question of electric traction and the problem of the electrification of steam railways, which is being forced upon our notice more and more every day. Our great railway companies are fully conscious that the time has come for them to electrify at least those portions of their lines which handle local and suburban traffic. The rivalry of the rapidly growing net-work of electric tramways and tubes in and around London threatens their interests. Many of the companies indeed would readily find the necessary capital not only for this, but for total electrification, if only the reliability and efficiency of any one system for main line and goods traffic, consistent with conditions prevailing in Great Britain, were once practically proved. Unfortunately this is not the case at present. Several systems are in



THE HEWITT MERCURY VAPOUR LAMP

MR. GEORGE WESTINGHOUSE, LORD KELVIN, AND MR. CHARLES MERZ AT THE TRIAL OF THE HEWITT STATIC CONVERTER



THE STATIC CONVERTER IN OPERATION

the experimental stage, none is yet perfected. We are undoubtedly on the verge of important new developments, and Mr. Hewitt's static converter, when fully developed, will, it is hoped, solve this problem in a satisfactory manner by eliminating the expensive sub-stations and rotary converters and thus bringing direct current systems of electric traction for long-distance lines within the range of possibility.

These three inventions by no means represent the sum total of what may be expected from mercury vapour or other incandescent gases: on the contrary this is but the beginning of a new field of research, open to all alike, which may yield still more wonderful inventions and discoveries in the near future. The greatest of all living electricians, Lord Kelvin, has recognised the importance of Mr. Cooper Hewitt's discoveries; and on his return from a recent visit to the United States he said: "What attracted me most in America was the work of Mr. Peter Cooper Hewitt and his vapour lamp." Meanwhile Mr. Hewitt continues his experiments, penetrating ever deeper and deeper into Nature's most secret paths.

# THE BURIED STONES ON THE CHILTERNS

A RURAL INDUSTRY IN PICTURESQUE SURROUNDINGS—THE HUGE BLOCKS THAT LIE SCATTERED OVER THE CHALK FORMATION OF THE CHILTERN HILLS—DENNER HILL STONE AND THE PRIMITIVE METHODS OF WORKING IT

BY

W. BOVILL

THE stranger who visits the Chiltern district of Buckinghamshire is generally puzzled by one curious feature which constantly meets his eye as he wanders through the noble beech woods, or roams over the breezy hills and down the sunken sequestered valleys. In the heart of the woodlands, on the summits of the high plateaus, or the slopes of the steep declines, he is for ever coming across mysterious hollows. Sometimes these hollows are planted with larches, and form picturesque little groups of feathery foliage—sometimes they are merely sudden and abrupt depressions in meadow or plough-land. He asks himself in bewilderment: What can have caused these pits? Are they the beds of pools long since dried up? Are they relics of some primitive excavations? When at last he seeks information as to their origin from the intelligent native, he is told that they are the holes from which blocks of "Denner Hill stone" have been extracted. He learns that the quarrying of these huge single stones is one of the recognised rural industries here.

The singular feature about this "Denner Hill stone" is that it is found in colossal, isolated blocks, immense single stones, sometimes there is but one of these, sometimes several lie near one another, as if flung there heedlessly and recklessly by some resistless but uncontrolled force. One huge stone of a hundred and twenty tons weight was found in the heart of the big woods round Hampden, with no other stones anywhere within half a mile of it. This, we believe, is the largest single stone as yet discovered in the district.

The stone of which the greater part of Windsor Castle is built is the same stone that forms the outer circle of Stonehenge, and it is used in many other historic and prehistoric edifices that lie within the large area over which it is scattered; yet, probably not one person in a hundred knows what that stone is, or where and how it is quarried. Scientifically described as a hard, saccharoid sandstone, it is known in various localities by so many names that it would be well nigh impossible to collect them. Druid Sandstone, Denner Hill stone, Sarsden stone, and Greywethers are a few amongst many of these local

PROBING FOR A STONE

The stones are located by means of a crowbar or long steel rods

# BUILDING A BALLOON

A VISIT TO THE LARGEST BALLOON FACTORY IN THE WORLD—HOW BALLOONS ARE MADE AND WHAT THEY COST—SURPRISING FACTS AND FIGURES ON A VERY SIMPLE SUBJECT—THE LUXURY OF A BALLOON "PARC," AND THE REASON WHY IT IS A SPORT FOR MILLIONAIRES

BY

EDOUARD CHARLES

GAZING upon the finished aërostat, as, urged upwards under the elevating influence of its gaseous meal, it tugs at its moorings, impatient to escape the restricting weights—or looking aloft at it, a mere speck in the sunlit vault, speeding on an inevitable course to an unknown destination, the casual observer is apt to imagine there can be nothing simpler than to make a balloon. As some one once flippantly remarked, "You just take some gas and wrap some silk around it, and there you are." And really a balloon is not much to look at. There is no complicated machinery about it, as there is about a motor-car, and its impressiveness arises not from its appearance as a gas-filled sphere, but from its aspect as an isolated atom swinging through unbounded space.

But, like many simple-looking objects, there is more in the building of a balloon than is apparent on the surface; much that is both interesting and surprising, and particularly interesting in view of the fact that the day does not appear to be far distant when man will be seized with ambition to build his own balloon, just as in the past he has built his own bicycle. For surely never was more money spent on aërostats, dirigible and otherwise, never was enthusiasm on the subject of aërostation keener than to-day, when scores of inventors are working to produce a veritable airship that shall be as manageable in foul as in fair weather, and clubs exist for those wealthy enough to follow ballooning as a sport or as a scientific hobby. And never before were the military nations of the world more actively interested in the subject, for the utility of the balloon in warfare has been demonstrated beyond the shadow of doubt.

As to France will always belong the honour of inventing the balloon—as she has devoted more study to the science of aërostatics in the past, and is spending more time and money upon it than any other country at the instant—

Clarke & Hyde

TESTING THE STRENGTH OF THE MATERIAL

The silk must withstand a breaking strain of 245 lbs.

OILING THE SILK

The piece being treated is for the valve

it is to Bilancourt, just outside Paris, the largest balloon factory in the world, we have been to see and learn exactly how a balloon is built. An output of twenty-one balloons a year may not strike one as anything remarkable in numbers until one remembers that balloons may be as costly as motor-cars, ballooning costlier still than motoring, and that the demand for them is not yet so great as for railway locomotives. Of course, when the increased demand exists it will be readily met; though it may take some time yet to convince man that he is as safe, safer, in fact, in the air as on solid earth. Over a score of balloons, of all sizes, from the smallest regulation dimensions upwards, not to mention dirigible aërostats, have been annually turned out from Surcouf's factory, whose total output runs into between three and four hundred, and includes M. Bacon's "Le Vercingetarix," the largest balloon in the world, with a volume of 2500 cubic metres, and costing 12,000 francs.

Contrary to the general idea, it is not alone in silk that balloons are made, though that is the dearest material and the lightest, if not the strongest. They are also made of cotton and in *étoffe caoutchoutée*, and their price differs accordingly. But the manner of their making is practically the same; the only difference between the silk bag and one in rubbered cotton being that the latter has its seams crossed on the inside and outside with bands to render impermeable the lengths when the sections of material have been sewn together. In the silk envelope this is unnecessary, because the stitching of the sections is done with a special silk cotton which becomes as impermeable as the solid silk when the varnish is applied.

We will take as the balloon to be built—for, of course, a standard basis is necessary to work from—one, of the dimensions of that supplied some time ago to the Sultan of Morocco. The size generally favoured by "sportsmen" ranges from 27,000 to 45,000 cubic feet, costing, the former, in *coton caoutchoutée* £120, in Chinese silk £192, and in French silk £252; and the latter, £220, £316, and £384, according to the material used. These prices include the balloon complete and ready to be filled with gas. That of the Sultan of Morocco cost £600, though its volume was but 21,600 cubic metres, but then the aërostat was a particularly luxurious one in every respect. One of the same size can be had to satisfy the requirements of the ordinary man for a modest £100, though he can pay twice that sum for it; or he may purchase the smallest made balloon capable of carrying himself for no more than £70.

But expenses are not finished here, for if he has a captive balloon—and the lower-priced articles are of this description—he must possess also the necessary machinery for ascents, and this will run him into anything from £660 to £720. And he can pay from £92 to £125 for the smallest balloon in which to make *ascensions libres*.

For so simple-looking an article this seems a high price to pay, but when the subject is

PRESSING THE BAND OVER THE SEAM

Clarke & Hyde

BEGINNING THE INFLATION

Notice the two halves of a balloon hanging up

studied in detail the reason of its apparent costliness will be readily recognised. Everything about a balloon has to be the most durable and of certain standard strength, which qualities are only secured by special care and treatment. One has to trust one's life to it, so it must not only be made strong to stand the ordinary strain put upon it, but also to withstand the extraordinary and unexpected strains it is subject to consequent upon swift changing conditions of temperature.

So it will be apparent that, first and foremost, the material of which the envelope is constructed must be of a particular strength, and this is the first consideration of the balloon builder. If a strip of silk 2½ inches wide breaks under the strain put upon it by the dynamometer at anything less than 245 pounds, that material is useless. The silk being of satisfactory quality, the first step towards the making of the gas-bag is the cutting of the material. If the average man were asked how this was cut into sections, he would probably reply, "In elliptical lengths to be joined at the top to the valve and to the mouth at the bottom." But the balloon maker knows too much to attempt this, for in cutting a 60-feet long ellipse from a length of silk 4 feet wide the waste would be enormous. Consequently he proceeds to work in a totally different fashion.

Taking a length of silk that will represent the circumference of the inflated balloon at its centre, he plans out thereon the number of pieces into which it is to be cut. These pieces, or panels, are cut *en trapèze*. The bottom of the piece measures 1 metre, 30 centimetres; the top 1 metre, 29 centimetres; and its depth is just 1 metre. The panels planned out, the silk is folded, held together with *agrafes*, and run through the cutting machine—a fine steel blade driven by electric power. The whole forty panels are thus cut at one operation.

Each succeeding circumference of panels above and below this centre will naturally be somewhat smaller than its immediate predecessor, and, of course, the circumferences diminish at the same time. In all, no fewer than 720 panels go to the making of the balloon of 21,600 cubic feet, whose circumference is 37 metres; and they represent a surface measurement of 450 metres.

Now, it is necessary to join all these panels together, and female fingers are pressed into service. It may be imagined that all the panels necessary for one of the elliptical sections, of which there will be forty in all, are now pieced

THE VALVE OF THE BALLOON

ANOTHER STAGE OF INFLATION

Captive balloon for the Sultan of Morocco which cost £4000

into length. This, however, is not the case. A balloon is built in halves—the top half and the bottom half—and the panels are stitched together in position to this end. When all the lengths for the halves, first having been stitched by hand, have been sewn by the sewing machines they are in turn stitched, then sewn together. In the sewing of the silk a specially prepared silk thread is used, as mentioned before.

At this stage we are in possession of two filmy heaps of pure silk, snowy white. They pass into the hands of the varnishers to receive each three coats of a special composition, which shall render the silk quite impermeable and proof against extremes of temperature. Between each application of varnish, which is applied and well rubbed in with a pad, the halves are hung up to dry, looking like nothing more than two gigantic umbrellas loosely closed, and as each drying takes from three to four days they are not ready to be connected until about a fortnight has elapsed since their completion. Concerning the envelope, now ready with valve affixed, there is nothing more to be said beyond the interesting fact that its weight is just under 130 pounds. A similar bag in *etoffe caoutchoutée* weighs about twice as much.

We pass now to the *filet*, or net-work of cordage which encloses the gas-bag and attaches it to the circular piece, or suspension ring, to which the car is suspended. It is of the finest hempen rope, that has been steeped in the juice of the cashew nut so that it may be affected neither by dampness nor heat. It is very light, very solid, and very strong, embodying the minimum of weight with the maximum of strength. It is so light that three feet of it weighs but three grams, so that the 2 miles 300 yards of it enveloping the bag weighs only 23 pounds. It is so strong that it will support 22,000 times its own weight, which is to say a yard will support 145 pounds. The actual breaking-point of this netting can be readily worked out; it is something astounding. The cord is nearly as strong as piano wire, which will support twenty-six times its own weight.

The basket is the next consideration. For captive balloons this is made circular in shape, to admit of the cable passing through the bottom of it. In the case of voyaging aërostats the car is made square. Cars vary in weight, of course, according to the size of the balloon. That for a balloon of 21,600 cubic feet weighs 66 pounds, but the car shown in our photograph, being for "Le Vercingetarix," is considerably more; it is built to accommodate ten persons. It is the latest fashion of car, having a door that opens to admit ladies and save them climbing over the side, and being fitted with a frame made of bicycle tubing to hold out the ropes and give more space in the car, and permit also of a roof being rigged up to provide shelter from the sun.

The car is woven of stout wicker, and is attached to the suspension-ring above by eight strong ropes, which have each withstood a breaking strain of about one ton. In the case of the car here illustrated ten of these ropes were used. There is no possible chance of the car turning turtle, for the ropes are woven down into the wicker-work and through it, so the ten ropes that show are in reality five—their ends

terminate outside and above the basket, suspending it to the ring.

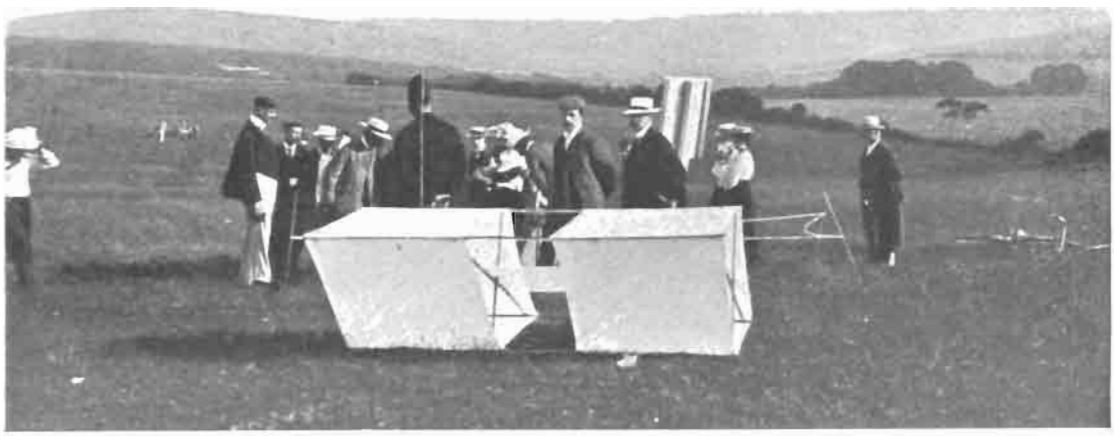
The ring itself is fashioned of stout wood, and the valve is a combination of metal, wood, and silk. The latter consists of a trap-door, held firmly closed by a trio of powerful steel springs, which is opened by pulling on the valve-line to govern descent and ascension; and a sheet of silk, which can be removed in the piece to let the gas out rapidly when the balloon has reached earth.

Such a balloon as we have described when complete weighs about 660 pounds, and can be installed in a park with the necessaries appertaining to a captive balloon for a matter of £500, though the Sultan of Morocco spent no less than £4000 on his outfit, and the general expenditure for a first-rate captive balloon and accessories is somewhat in excess of £1000. But aërostation must remain a sport for the wealthy, since the initial outlay is small compared with the amount that must be continually expended on workmen to take charge of the engines, and the outlay for gas, which, once used, is done with. As to what each excursion runs into depends naturally a good deal on the gas used, and its price in different parts. In France ordinary gas costs 15 centimes per cubic metre, while pure hydrogen is eight times as dear. To expend £32 in filling an 800 cubic metre balloon to make a voyage of uncertain duration requires courage and a good banking account if the experiment is to be often repeated; and to this must be added the cost of transporting the aërostat home again from the spot where it descends. Most decidedly ballooning is a sport for millionaires.

THE LATEST TYPE OF BALLOON CAR

It holds ten persons, and has a door to admit ladies, saving them from climbing over as hitherto

MR. S. H. R. SALMON'S TRIAL RHOMBOIDAL KITE
In the competition on Sussex Downs



# EXPLORING THE AIR

THE KITE AS A MEANS OF SCIENTIFIC INVESTIGATION, AND THE RECENT COMPETITION HELD BY THE AËRONAUTICAL SOCIETY AT FINDON

BY

W. NAPIER SHAW, Sc.D., F.R.S.

*Illustrated from photographs specially taken for* THE WORLD'S WORK

THE use of kites for scientific purposes is more usual on land than at sea, although a kite is in many respects more manageable from the deck of a steamer than from a position on land, because the motion of the steamer can be used to reinforce or to moderate the wind at will. Only about two years ago Mr. A. L. Rotch, of the Blue Hill Observatory, Massachussetts, who is so well known in connection with the development of this branch of scientific work, obtained the first records from instruments raised from a ship's deck. The ships of the Antarctic Expeditions carry kite equipment, but we do not yet know what results have been obtained therewith. The only considerable series of observations from aboard ship hitherto discussed is that secured by Mr. W. H. Dines last year by the use of a tug off the West Coast of Scotland, and briefly described at last year's meeting of the British Association at Belfast. A full account of the methods employed to raise the kites was given to the Royal Meteorological Society in March, and the observations obtained have been the subject of a paper before the Royal Society.

MR. L. CODY'S WINDING GEAR

A kite is only one of three well-recognised

modes of obtaining information from considerable heights above the earth's surface: the manned and the unmanned balloon furnish the other two. The three different modes have their own peculiar aptitude and have all received special attention in recent years. Using round numbers, the unmanned balloon is available up to, say, 60,000 ft., the manned balloon to 30,000 ft.; both these float in the air and travel with it. Kites working together in tandem are available up to 15,000 ft., and in that case the moving air goes past the apparatus which records the changes above a fixed station. The kite may, perhaps, be called the favourite of America, the manned balloon of Germany, and the unmanned balloon of France; but the Aëronautical Institute of Berlin, under the direction of Professor Assmann, and the meteorological department at Strassburg, under Professor Hergesell, make vigorous use of all three, and at Berlin they have a curious and very ugly combination of the balloon and kite—a Balloon-kite—in addition. M. Teisserenc de Bort's Observatory near Paris, where the unmanned balloon has been very largely used, has an equipment of kites and manned balloons as well. In America the Weather Bureau had no fewer than seventeen kite stations in full work for some time.

MR. S. F. CODY'S 18-FT. KITE ON THE GROUND

MR. S. F. CODY'S 18-FT. KITE IN THE AIR

The parcel below the kite is the load of 2 lbs. required by the competition

In this country little has been done with any of the different means of exploring the upper atmosphere since James Glaisher, who died some months since at a most venerable age, made his memorable balloon ascents about forty years ago. The use of balloons for military purposes, and of kites with similar objects, has not been neglected, but it is to Mr. Rotch of Blue Hill that we owe the full development of meteorological investigations by the use of the box-kite, designed by Mr. Hargrave, of New South Wales, and used at one time in England by Mr. Archibald for ascertaining the variations in the wind in the upper regions. It is, therefore, a matter for congratulation that the Aëronautical Society of Great Britain has used the characteristic British expedient of a competition, between kites suitable for carrying instruments, to stimulate enterprise in this country. The competition took place at Findon, near Worthing.

A kite competition is not altogether a novelty

although it is a new departure for so serious a body as the Aëronautical Society. It is said that in China competition kite-flying is a characteristic feature of high festivals, but the object which the competitors keep in view is to steer their kites in a way that is at once artful and peculiar, and enables them to cross and then to saw through their opponents' strings. The successful kite is a conqueror of the same kind as the schoolboy's chestnut; its owner has put all other competitors *hors de combat.* At Findon the competition was of a different kind; its object was to develop the utility of the kite as a means of scientific investigation, and on that account the conditions laid down that the silver medal of the Society was to be given for the highest flight, provided it was more than 3000 feet, and each kite had to carry a load of two pounds, which represents the weight of the self-recording apparatus carried by a kite when it is required to register the temperature and the humidity of the atmosphere at different heights. The weight was made up into a suitable parcel to be carried within 100 feet of the kite. One of them is shown very clearly as a black patch below the kite in one of our photographs.

High kite-flying is not free from incidental dangers in this country. It is necessary for the sake of combining strength with lightness to use a steel wire. One of the first scientific uses of kites by Benjamin Franklin was to draw lightning from a cloud by a kite-wire, and that it is a risky experiment was soon demonstrated by one of Franklin's imitators who was killed by the shock. It is not by any means unlikely that the experiment may be repeated unintentionally with more or less serious results unless certain simple precautions are taken.

It is not only the experimenter who has to be considered. A kite-flight of from 10,000 to 15,000 ft. involves the paying out of from five to six miles of the very best steel wire, and the results that might be achieved with a few miles of strong wire laid across a suitable country are better entrusted to the imagination than verified by experiment. The scientific aëronauts of Berlin soon found that the police have opinions about the incidental difficulties of kite-flying, especially in a district where a loose wire might make connection with high-tension electric leads.

In this respect the Aëronautical Society were fortunate; by the kindness of Lord Henry Thynne they were provided with an almost ideal site for the competition. The Sussex Downs, about four miles from the coast, gave them all the advantages of an exposed situation, with as little likelihood of accident as can be secured anywhere except over the sea. The competition on June 25 seemed to be equally fortunate in the matter of weather, until the results came to be worked out. It was a brilliantly fine day; at first it seemed possible that the wind might be light and variable with a tendency to thunder, the worst possible kind of weather for an assemblage of kites; but as the day wore on a steady breeze set in from the sea, passing up the slope of the downs. It increased in strength up to the close of the competition with but little variation in direction.

Eight competitors entered originally for the contest, but only six appeared on the ground. One of the difficulties of the competition was to arrange matters so that each kite should fly clear of its neighbours, and that each should be visible from selected points for the determination of its height. A kite does not necessarily fly truly down the wind, so that a good deal of space may be required; a shift of the wind might throw a competition not intended to be conducted on the Chinese plan into dire confusion. The stations were set at 200 yards apart along the line of the downs on the windward side of the ridge. The distances seemed enormous on the ground, but any shorter distance might have been inadequate. During the competition kites were raised from Station 7, which commenced the line on the west, from Station 2, next but one to 7, and Station 3, next to Station 2. The kites from 7, 2, and 3 were up simultaneously, and that from Station 1, between 7 and 2, was making an attempt to rise. The three already in the air seemed to occupy the available space for manœuvres, and one wondered what would happen if No. 1 succeeded in making good its claim to a place, but, fortunately or unfortunately, the wonder was not resolved.

The kites were of very various patterns. No. 1 was a plane-hexagonal kite; No. 2 a rhomboidal kite, similar to the trial kite shown in the first illustration, but having four strips of linen instead of two. No. 3 was by Mr. L. Cody, and similar to that flown by his father, Mr. S. F. Cody, at Station 7. This remarkable kite is shown on the ground in one of our illustrations, and in the air, looking like an immense butterfly, in another. It was 18 ft. across from tip to tip of its wings. No. 4 was an ordinary Hargrave kite with rectangular cross-section; it did not reach a measurable

height. No. 5 did not appear on the ground. No. 6 was a kite of Burmese pattern, by Mr. Charles Brogden, made up of a number of separate sails, all lying in a single plane.

Different forms of winding gear were employed, but it is unnecessary to enter here into the differences. It is sufficient to say that it is upon the handiness of the winding gear that the scientific kite-flyer depends to prevent the kite breaking away in a gust of strong wind, or the wire becoming entangled in the trees if the wind falls light. In ordinary use mechanical power of some kind is almost a necessity for driving the winding gear, as a large kite may pull on its wire with a force of more than 100 lbs. and hand-winding is then very laborious.

The measurement of the heights of a number of kites is a question which presents some difficulty, and the Aëronautical Society were fortunate in carrying out the measurements successfully. Mr. J. E. Dallas and Mr. N. F. Mackenzie, of the Royal Engineering College, Cooper's Hill, took the observations with theodolites at two stations about half a mile apart. In accordance with a system arranged by Mr. C. V. Boys two members of the jury were stationed, one near each theodolite, and in accordance with a code of signals between them, at first by flag and subsequently by telephone, simultaneous observations were obtained by the two observers of the altitude and azimuth of each kite in turn. Observations commenced an hour after the signal had been given for the kites to start, and four observations of the altitude of each kite were obtained within an hour. It appears from the computations that the average of the four observations and the highest observation for each kite, were as follows:

| No. of kite. | 2 | 3 | 6 | 7 | |
|---|---|---|---|---|---|
| Average height | 1189 | 1271 | 1554 | 1308 | ft. |
| Greatest height observed . | 1339 | 1476 | 1816 | 1407 | ft. |

The result was somewhat disappointing, as no kite reached the limit of 3000 ft. required for the award of the medal. As a single kite might be expected to reach 5000 ft. under favourable conditions we learn incidentally from the competition the interesting fact that the wind on June 25 was a mere surface wind, a sea breeze due to the bright sunshine inland, which extended to no great height but fell off at from 1000 to 2000 ft. Apart from the failure of the wind aloft the competition was remarkably successful and afforded very useful evidence of the possibilities of the kite as a means of scientific investigation in this country.

# TAMMANY HALL: ITS BOSS, ITS METHODS, AND ITS MEANING

AN ORGANISATION FOR PLUNDER—HOW IT HAS TO BE TAKEN INTO ACCOUNT BY THE PARTY MANAGERS IN AMERICAN POLITICS—THE REMARKABLE STORY OF CHARLES FRANCIS MURPHY, SALOON KEEPER AND BOSS

BY

A. MAURICE LOW

TAMMANY HALL is the most powerful piece of political machinery the world has ever known. When the Democrats are in control in New York City the power of Tammany is almost unlimited, and even in those years when the Republicans are on top, the influence of Tammany is great enough to make itself felt; and the power of Tammany centres in one man, the so-called leader, who, elected by the votes of his fellows, is practically absolute master. There is no man in any English-speaking country who exercises such absolute domination over his followers as the leader of Tammany. There is nothing resembling this political organisation in any other part of the world; nothing has ever approached it, with the possible exception of the Italian Camorra, and Tammany, like its Italian imitator, is organised for plunder, and lives on the results of its predatory excursions. In the days when piracy flourished and the *Jolly Roger* was the terror of men engaged in peaceful trade,

one of the first requirements of the pirate leader was absolute and blind obedience from his crew. The man who led a mutiny and failed knew that there was only one fate in store for him. He walked the plank. The rebel who succeeded won a great prize, but the risks were too great. Tammany Hall is organised on the same principles. Any man may aspire to leadership, but he must not fail in his aspirations. If he succeeds, well and good, and the rank and file yield to him the same blind obedience that they did to his predecessor, but if he fails that is the end of him, and politically and socially he walks the plank.

The importance of Tammany cannot be overestimated in the politics of the United States. The State of New York, exclusive of the City of New York, is Republican, but the vote of the city is so overwhelmingly Democratic that it is frequently able to overturn the Republican majority in the State, and make the net majority Democratic. The population of New York is larger than that of any other State, and consequently has the largest representation in the electoral college, which makes the vote of New York of the greatest importance to a candidate for the Presidency. Because of the geographical distribution of the electoral votes it is almost absolutely necessary for the Democrats, if they are to be successful in the Presidential election, to carry New York, which in the last analysis means this: The Democratic candidate for the Presidency must carry the City of New York; to carry the city he must have the support of Tammany Hall; to gain Tammany he must control the *imperium in imperio* — the leader of that organisation, and his half-dozen close friends. Let the English reader grasp the full significance of this. Let him appreciate that the election of a president may hinge on the preference, or pique, or prejudice, or cupidity of a single cunning politician, of one man who is responsible to nobody but himself, whose actions, so long as he is in power, are blindly obeyed. Remembering this, one can see why the leader of Tammany Hall is a personage, and why he is of sufficient consequence to be introduced to English readers, especially as next year there will be a presidential election, and the defeat or re-election of Mr. Roosevelt may turn on Tammany Hall.

The present leader of Tammany Hall is Mr. Charles Francis Murphy, who came into power when Boss Croker abdicated to become an "English gentleman." He is forty-five years old, a New Yorker by birth, the son of an Irish immigrant, who died a year ago at the age of eighty-eight, boasting that he had never been idle a day in his long life. Charles Francis is the second son of a family of eight. Dennis Murphy, the father, was a poor and illiterate man, but he realised the value of an education, and he sent his children to the public schools where they acquired the rudiments. As soon as the boys were old enough they were put to work. Charles began life in a shipyard. He was a strapping youngster with an ambition to become a first-class ship-caulker. The work was hard, but young Murphy thrived upon it, his muscles hardened into steel, his chest expanded and he became quick on his feet. He worked with rough boys, and the new apprentice had to fight his way into the fellowship of the craft. He not only knew how to use his fists, but he had no fear. In two years he was the acknowledged boss of the boys in the shipyard; he had literally fought his way into leadership. Boy after boy went down before him, and when there was no more fighting to be done he beat them all in swimming, rowing, and playing baseball. He had all of an Irishman's love for a "beautiful scrap," and an Irishman's keen zest for manly sports. Combined with these, he early displayed a marked ability for organising and leading his associates, the same qualities that for many years made him a prominent figure in New York City politics, and have now made him the leader of Tammany Hall.

When he was only seventeen years old he organised the Sylvan Social Club, the members of which were boys from fifteen to twenty years old, and was elected, as a matter of course, its president. The club had a baseball team, and Murphy was the captain. Frequently a game with a rival team ended in a fight, when no quarter was given or asked, and retreat was only sounded when the other side had been pounded into submission. In all these battles Murphy was always in the thickest of the fray. He tackled without hesitation men twice as old and twice as heavy as himself. Sometimes he was knocked out by the sledge-hammer blows of a carpenter or caulker working in a neighbouring shipyard, but the more often he held his own, and withdrew his forces in triumph from the field of battle.

When he was about twenty years old he was given a place as a driver on a tramcar. Those were the days before the invention of devices to register the fares. It has been said that conductors took whatever they wanted of the receipts, handed over half to the driver, and gave what was left to the company. Whether this is an exaggeration or not, the fact remains

that in two years Murphy had accumulated £100. With this modest capital he opened a public-house, or, as it is known in America, a saloon, in the neighbourhood where he had formerly worked, and which had so often witnessed his triumphs as leader of his gang. The saloon had one window and a narrow door; the bar and fixtures were bought at second-hand; upstairs were the headquarters of the Sylvan Club. For five cents Murphy served a glass of fresh beer and a large bowl of soup. Soon the place became a popular resort, and as a saloon proprietor he found time to keep in touch with all the young men of the ward, and to patronise athletic sports. To his success as an athlete he owes the beginning of his political career.

The Sylvan Club had a four-oar crew, and had challenged a rival club. On the day of the race the stroke of the Sylvans was suddenly taken ill. The event was of more importance in the ward than even a presidential election, and in addition to a large prize, heavy bets had been made on the result. The rival club was accused of having drugged the Sylvan's stroke, and the partisans of both sides were in an ugly mood and ready to fight at the drop of the hat. The rival club wanted to row over the course alone and claim the race on a forfeit. A dense crowd had gathered about the starting-point, and from the *argumentum ad hominem*, an appeal was quickly taken to the *argumentum baculinum;* a riot was imminent. Just when the prospect was blackest Murphy stepped down to the river bank. He took off his hat, coat, and collar, handed them to a friend, and calmly took his place as stroke of the Sylvan boat. His adherents went wild with joy. They had absolute confidence in him, and at once began to lay additional wagers on the result. Their confidence was not misplaced. The Murphy four won two out of the three heats. The men lifted him out of the boat and carried him back to his saloon. From that moment Murphy could have whatever he wanted.

Three years later Murphy had opened another saloon, but this time it was a far different place from the humble little establishment in which he first figured as a saloon-keeper and manager of men. It was in the densest part of what is known as the East Side of New York, a district corresponding in some respects, although not entirely, to the Whitechapel district of London. Murphy was shrewd enough to understand the effect of display. His bar fittings and fixtures had been ordered apparently without regard to cost. The men and women of that section gazed in open-mouthed wonder at all this gorgeousness, for never in their lives had they seen anything like it. The magnificence of Murphy's was its best advertisement, and day after day the people of that teeming tenement-house district flocked to the bar and dropped their money in his till. Murphy had always been noted for his reticence, and even some years before that he had been nick-named "Silent Charlie." He always listened when other men talked and said little himself.

It was now that he first displayed his ability as a politician. He had allied himself with Tammany Hall, to which he turned over the Sylvan Club, no mean auxiliary force, and to him one day came his most intimate friend, a man of the name of Hagan, who explained that he wanted to be re-nominated a member of the Assembly, but the Tammany leaders, as well as the rival Democratic faction which existed in that day, known as the "County Democracy," had refused to endorse his nomination. Hagan asked Murphy for advice. "Run independent," was all Murphy said. And Hagan did "run independent," with "Silent Charlie" managing his campaign. To the surprise of the political leaders, the managers of Tammany Hall and the County Democracy, Hagan was elected. The man who could turn that political trick was too shrewd not to be respected by more important politicians. Tammany took him into full fellowship and recognised him as the captain of his district.

Three years later he exhibited the same political astuteness and indifference as to methods if results were accomplished; and parenthetically it may be remarked that a New York City politician must not permit his conscience to be unduly active. In that year there was a notable contest for Congress, the Tammany Hall Democratic candidate being a man of the name of Spinola, and his Republican adversary Allen Thorndyke Rice, the editor of the *North American Review*, who was supported by the respectable element of the district, Democrats as well as Republicans, who were chafing under Tammany domination. Apparently Mr. Rice was sure of election, and so far as his managers could perceive, no move had been made by the opposition to stem the tide up to the very morning of election day. But "Silent Charlie" had not been asleep. Late in the afternoon, shortly before the closing of the polls, the Republicans learned that ballot-papers, headed by the name of Spinola, but carrying the rest of the Republican candidates, were being voted in the district. These ballots were fraudulent and illegal, but election laws in New York at

that time were much more lax than they are now, and this illegality did not vitiate the election. Spinola was elected by a majority of 174. Murphy was now looked upon by Tammany Hall as one of its most important advisers. Previous to that campaign he had opened another saloon, and a few years later two more. In 1890 he had four saloons running, all of them coining money.

As the now recognised leader of his district he applied himself assiduously to political matters. One of the duties of a boss is to find jobs for his henchmen—to get them appointed on the police force, to have them made street-car conductors and motor-men, to put their names on the city pay roll. The old days when the street-car conductor or driver was able to make his "grub stake" in the course of a few years have gone, but the wages are good, and there is always a demand for such places. The great prize now is the police force, where under the beneficent reign of Tammany the opportunities for an active man to make money are simply limitless, and only depend on his energy and industry. Murphy was noted for getting more jobs for his constituents than any other leader in Tammany Hall, no matter which party was in power. He was by this time a wealthy man, and spent his money freely whenever any object was to be gained by the use of money, but he was neither reckless nor extravagant. Although the owner of four saloons and constantly mixing with men who drank deep and hard, he seldom touched liquor, and no one ever saw him intoxicated. He did not smoke, and he was never known to swear or to lose his temper. Most men of his class are either gamblers or devoted to the race-track. Murphy is neither. He never gambles, unless speculation in stocks can be called gambling, but unlike most speculators he makes money out of his ventures on the Stock Exchange. A silent, reserved, calculating man, and yet neither cold nor heartless. In his rise from poverty to affluence he carried his family with him, although none of them has shown even a trace of his ability. One brother he put on the police force, another he made an alderman, and still another was elected a councilman.

Murphy displayed no desire to hold political office, and was apparently content to be the power behind the throne, but a few years ago a Democratic mayor offered him a place as dock commissioner, which was Murphy's first political office. At that time he was said to be worth about £80,000, the bulk of his money being safely invested yielding him a good income. He remained in office as dock commissioner for four years, and when he retired, owing to a change of administration, he was believed to have accumulated a fortune of not less than £200,000. He has been leader of Tammany Hall for a year. It would be surprising if his fortune were not considerably larger now than it was at the time when he was elected to leadership.

It will be observed that men who go into politics in New York City, especially those who are affiliated with Tammany Hall, do not impoverish themselves by serving the public. When Murphy retired as dock commissioner he was accused of having shown favouritism in awarding contracts, and of sharing in the profits of the favoured contractors. He entered a general denial of the latter charge, but did not deny that he showed favouritism. "Why not?" he carelessly asked. To a man of Murphy's stamp it seemed the most natural thing in the world that an officer of the corporation of New York should favour his friends at the expense of the citizens. According to the Tammany code of honour a man is a fool who does not help himself, and an ingrate who does not help a friend.

That is the foundation upon which Tammany Hall stands. It originated as a charitable society, and to-day it still retains its original character, but in its charity it knows only its members. If there is anything to be given away, if there is a "good thing" by which some one may profit, if there is a place paying a few shillings a day or a contract out of which hundreds of thousands of pounds can be made, a Tammany man must be the beneficiary. That is the first lesson drilled into the recruit. Tammany is not an oath-bound organisation, apparently it is as open as the day in its methods, and yet no association of men bound by vows and pledges to succour one another in good or evil times is more loyal to its principles than this political machine. Absolutely unscrupulous as the average Tammany man is, that is, so far as politics is concerned, usually with a blunted conscience and unburdened by principles, he shows unswerving loyalty to his organisation, and an almost quixotic devotion to his leaders, for whom he will fight or steal or lie, if he thinks it will be for the honour and glory of the "machine."

Tammany owes much of its power to the loyalty it inspires, and to the social influence it exercises over its members. In every ward and district in New York there is a Tammany club, an organisation similar to the Sylvan Club which Murphy formed in his younger days

The meeting-place is usually over a saloon, and here the members talk, smoke, play cards, and drink, generally in moderation, as the members are hard-working young fellows who have to keep clear heads and steady hands if they would hold their jobs. In their clubs they discuss politics, just as men do in London, and as men in London talk about yesterday's division in the House, or the latest move of the Government, or speculate as to the disposition of the vacant garter, or wonder whether Smith after all his faithful work will get his knighthood, which was his by right ten years ago at least, so these young fellows gathered in an ill-flavoured room talk about the ward boss, who is little above them in the social scale, and therefore to be treated with scant respect, or the "district captain," who is so far above them that he inspires unbounded respect, or the "old man," the leader of the Hall, who is to them what the Premier is to the most unimportant member of the House of Commons. And the young fellows in the stuffy room over a New York saloon occupy themselves with more practical affairs than Englishmen in the luxury of their club-rooms when they talk about stars and crosses. A broad blue ribbon is a pretty thing, but it doesn't pay house rent; the dispenser of patronage in the "wigwam," as Tammany Hall is popularly called, has substantial favours to bestow. Every member of Tammany is a proselyter; every member is anxious to bring in still another convert. Tammany, with the politics that flow from it, is at once their social and material life; among their co-workers they find their relaxation, it is they who extend a helping hand when help is needed, or give the men toiling up the ladder a boost to the upper rung. Tammany is not inspired by disinterested motives or lofty altruism. It is narrow, mean, dishonest, unscrupulous, and because it is all these things it wields such enormous power over the horde gathered from the four quarters of the globe, who, for the first time in their lives, realise their power, which they promptly abuse. It is because Tammany invariably appeals to selfishness and cupidity that the Boss controls his followers, and grows rich, and to a large extent sways the destinies of a free Republic. Verily a Republic that bows down before a saloon-keeper has reason to rejoice in "triumphant democracy."

# AN ARTIST AND HIS HOME

THE MANY-SIDED MORTIMER MENPES AND HIS DEFTLY CLEVER FAMILY—
THE HOUSE BEAUTIFUL WHICH HE HAS BUILT IN THE HEART OF LONDON—
"A DREAM OF IDEAL JAPAN"

MORTIMER MENPES is singularly many-sided. It would be hard to find a more up-to-date man. This is the most striking feature of his work, and it undoubtedly accounts for much of his cleverness as an artist. He might be just as good at a dozen other things: his many experiences and clear point of view would fit him peculiarly for journalism; he was long known as one of the crack rifle shots of England, and the fame of Menpes the shot penetrated corners where Menpes the artist was never heard of; a large circle of people in many quarters of the globe know him as a most entertaining *raconteur*; it is said that in Japan, of whose art he has made a speciality, he left records in wrestling which are still remembered. Whatever one may think of the work of Menpes the artist, there can be little doubt about Menpes the man, the man not only of to-day, but of to-morrow. If he had never done anything else, the building of his house at 25 Cadogan Gardens would have made a notable record in domestic architecture in England. It is truly a house beautiful, well worth a trip across England to see. Not to know Menpes and his house and his deftly clever family is to miss an experience in the London of to-day.

Although yet quite a young man as well-known artists go, Mr. Menpes has raised up a family which will carry on his work and his ideas even when he has reached a time of well-earned rest. It is characteristic of his modernity that he immediately saw the important possibilities of colour-printing and the necessity of a thorough artistic training for printers in colour. Several years ago, therefore, he sent his eldest son and daughter to study this new art with the Continental authorities on the subject. Miss Menpes and her brother entered

into regular apprenticeships at the best-known Continental presses, and went thoroughly into the whole subject of reproduction, as well as the use of coloured inks. And almost at the same time a further member of the family developed, remarkably young, talent in another branch of art. Miss Dorothy Menpes was not sixteen years of age when she saw her name on the title-page of a book of South African war impressions, illustrated with coloured reproductions of her father's pictures. Since then she has written the text of five bulky volumes transcribing brightly her father's recollections and impressions of his many and various adventures in the four corners of the earth. It would be difficult to find in any family more talent and more happy, busy activity.

There is no end to the good stories about Mr. Menpes in London studios and drawing-rooms. One, for instance, relates to an experience in Mexico several years ago. The artist was staying with a number of railroad Americans—such riff-raff as pass for Americans in Central America—refugees from every dark corner of the world, a gang of scoundrels. Mr. Menpes unexpectedly found himself alone with this body of brigands. They regarded him as a mere wandering painter who could use no other weapon than his brush. They were full of *mescal*, and not very comfortable companions in a lonely desert. They began to "rag" the artist and hustle him about. Instantly Menpes the artist became Menpes the crack shot, and offered to beat them at their own best game. He seized a revolver and gave some extraordinary exhibitions of his skill. They were won over at once and the artist stepped from a very awkward position into one of assured triumph. Besides telling you many reminiscences of his artistic life, Mr. Menpes can tell you as much that is amusing from the experiences of Menpes the crack shot or Menpes the prize-fowl raiser.

Asked what pictures, of all the many he has seen round the world with his artist's eye, remained most clearly in his mind, he described two. One was a tobacco factory in Seville, with over a thousand beautiful women rolling cigarettes in the strong lights and shadows of Andalusia. Another was a market-place in Tehuantepec, Mexico, a market-place filled with women, certainly as beautiful as any in the world, and not a man in their midst save perhaps the artist. Think of two or three thousand beautiful women, all dressed in Tyrian-dyed skirts and *chemisettes*, with superb carriage and exquisite figures. For all the world it suggested a handful of flowers thrown on a bed of silver—the silver sand of a Mexican desert. Speaking of his early life and the development of his work, Mr. Menpes told the writer that he began his artistic career as a baby sketching on the floor, as he lay on his stomach. This was in South Australia. It was not long, however, before the artistic instinct so stirred within him that he felt he must needs move to a more artistic atmosphere. At that time art life in Australia was almost an impossibility and he soon came to London. He studied in the art-centres of South Kensington for some time, but he thinks to little purpose. Of course upon such a point as this, even the artist's own judgment may not be wholly reliable. But he believes that he got his real start at Pont-Aven in Brittany. This was, he says, "an amazing nest of French and American painters"—just the crowd to stimulate a timid young artist.

"On leaving Brittany," he says, "I met Whistler. He taught me much, most of all perhaps. Not so much in picture-making as in living within one's range, with full comprehension of one's limitations. For no man in the world knew his own limitations better than Whistler. At this period, of course, I was one of the school. It was a very feverish school, living a very reckless life, and about the only solid work it did was to decorate a room which it hired as a club. We felt this would revolutionise the future of art."

"How long did that last?" the visitor asked.

"Oh, the school and the master both lost an interest in me when I started out and gave independent exhibitions on my own account. These exhibitions led to a series of travels. I did much work on my own lines, and got a world of enjoyment out of it. Not the least enjoyable was the handling of the exhibition itself—there is the whole revelation of human nature in it. For instance, to my first Japanese exhibition in Bond Street, there came one day an old retired General. He confided to me that he had been in Japan and had his own theories of the painting of a Japanese sky. 'You boil a pound of rice for three-quarters of an hour,' he said, 'then strain off the liquor which you must use as a medium for your water-colour.' Then patting me on the back, he added, 'I am glad to help you in your artistic career, young man.' As he was leaving the room he turned round solemnly and said to me: 'Remember you can eat the rice.'"

To trace briefly the artist's career, after his

return from Brittany, he exhibited at the Royal Academy, the Grosvenor Gallery and other collective shows, and his pictures were well noticed by the experts. He then went to Japan and spent eight months in that heaven of artists. He worked with Japanese artists, learning whatever they could or would teach him, and he says that Kyosay, at that time leader of the best Japanese school, gave him many valuable hints. The result of this was an independent exhibition in Bond Street in 1888. After this he tried a new field, new both for himself and for the art world generally. He made a large dry-point etching of *The Officers of the Archers of St. Adrian*, by Franz Holz. This exacting task was perhaps quite a turning-point in his career. The great plate finished, the nomad spirit boiled in his veins, and the East called him again. This time he went to India, Burma, and Cashmir. His pictures after this visit show a definite purpose in experiments for the realisation of brilliant Indian sunlight. For several years, in fact, there were almost annual exhibitions. After India came Venice, then the East again, with another idea of light and colour worked out. A later exhibition consisted of pictures from France, Spain, and Morocco. Next year came a visit to Mexico with an almost new line of work resulting. A Japanese Exhibition containing many studies in black and white in the real Japanese style was the result of a second and longer visit to Japan.

After this Mr. Menpes built his wonderful house and for a year or two painted portraits. "My house is part of my life scheme," he said, "and I have placed it in a fashionable part of London in order to be near my sitters. My studio is a side-light and not the typical studio light. I don't flop my sitters down in a chair beneath a top light and pose them. I simply allow them to walk about and sit down where they wish, and when I have got a characteristic pose, I get them to keep it as nearly as possible, but to talk or listen as they wish, while I make innumerable small studies of expression. I collect as much material as possible, pencil drawings, colour notes, and so on. In portrait painting so much depends upon the atmosphere created by you and the sitter. I defy you to do justice to a beautiful woman after a lunch at the Savoy. I struggled to be conventional when I started portrait-painting. I lunched and dined my sitters all over London, but it only resulted in blurred blotches of colour." Mr. Menpes' portrait gallery includes practically all the notabilities of the day, not only the beautiful women of fashionable London and the English stage, but portraits of Generals in the field and Viceroys at their capitals, amid all the surroundings and in the atmosphere of their life's labour.

The latest development of this remarkable and varied career is as much an astonishment to the artist himself as it has been an evident delight to the public. He went to the South African War just as many other artists did, to have a first-hand acquaintance with real fighting and incidentally to do portraits of England's great soldiers in the field. On his return home, there was the usual exhibition of war impressions, and, as it was an age of war books and war reminiscences, an enterprising publisher suggested that the artist record his recollections and anecdotes in a book illustrated with coloured reproductions of his pictures. This was done, Miss Dorothy transcribing her father's fund of accumulated impressions. The result, although by no means a cheap book, was surprisingly beautiful, and a pronounced success financially. It was at this point Mr. Menpes concluded that ordinary methods of coloured reproduction would not suffice, and determined to start a press of his own where artistic instinct and training should aid mechanical expertness. Since that time there have been four exhibitions of work intended for reproduction in book-form. First came a series of coloured Japanese memories and studies. This book, again a pronounced success in all its editions, was followed by a general selection from the artist's sketch-book under the title "World Pictures." After this came an exhibition of studies of child-life, later made into a volume with the title, "World's Children." Last winter Mr. Menpes went to the Durbar with all manner of favouring credentials and opportunities, and his latest exhibition in Bond Street had for its subject, "The Durbar and Life in India." These pictures are to form a book published during the current month, and one of the studies has been very kindly placed at the disposal of THE WORLD'S WORK for the frontispiece of this number. This is at the same time a specimen of the work done by Miss Menpes at her colour press, and the forthcoming book, like all the others, has been written by the artist's younger daughter.

The Menpes press has rapidly outgrown its original surroundings. When Miss Menpes and her brother returned from Germany the presses were set up in the basement of the house in Cadogan Gardens with electrical motor-power,

and it was here that work was done upon the first of her father's books that she printed, "World Pictures." The books, however, proved so popular, the demand for them justifying about two a year, that it was soon seen that these quarters were much too circumscribed. A large building was engaged near by in Pimlico, and a staff of apprentice-students was gradually added until to-day the force far outnumbers all original expectations. Mr. Menpes says that the difficulties and disappointments accompanying the first reproductions in colour-printing of his pictures taught him much. He was convinced that the work would never be satisfactory until it was done under the artist's immediate supervision and with more artistic care and pains than is possible in a great establishment of the ordinary kind. It is only in such a studio-press, he says, that the loss of register in colour can be absolutely prevented and all misprints promptly destroyed. He has, moreover, a number of interesting theories about the artist's part of colour reproduction. He firmly believes that the ordinary three-colour process has yet many undreamed-of possibilities, and he says only an artist who thoroughly understands it can use the proper

Fouldham & Banfield

MR. MORTIMER MENPES

WORLD'S WORK photo

A CORNER OF MR. MENPES' STUDIO

medium, can, so to speak, definitely paint for reproduction. In time Miss Menpes hopes that besides the work in connection with her father's popular books her press will be able to engage in outside work and to undertake many interesting experiments in fine colour-printing.

But the lay visitor to the scene of the activities of the Menpes family will on a first visit be most impressed and thoroughly delighted with the house which Mr. Menpes has built in Cadogan Gardens. It has been often called "a dream of ideal Japan," and of course the visitor there naturally talks most about it. "I called it a gold house myself," the artist said, "with a lacework of delicate wood-carving on the gold." That is true. Your first impression is of carved black wood everywhere over a ground of rich gold. The various rooms of the house are devoted to the development of a flower idea, each room dedicated to a particular blossom—the camellia in the studio, the peony in the drawing-room, the cherry-blossom in the dining-room, and the chrysanthemum in the hall. The studio on the first floor opens into the drawing-room and on occasion the two rooms may be used as one. The ceiling is covered with open-work panels in wood—the black camellia everywhere on gold ground, and no two panels alike. The carpet is solid green, with a plain band of black for a border. Light curtains at either end of the room are of apricot-coloured silk. In one corner is an enclosure, screened from floor to ceiling with a Japanese structure of carved wood and bronze, within which is concealed a stove for heating the great room. The upper part of this screen is a kind of bronze lace, formed of tiny pieces of thin bronze joined together at the edges, yielding to the touch as if it were some thin fabric. Below the bronze panels are curtains of orange-coloured silk, decorated with Japanese love poems. The walls are plain and of pure yellow. In fact, it is the artist's idea that the lower part of the room should be like the stem of a flower, quite plain, with all the glory of decoration blossoming above.

WORLD'S WORK photo

IN THE LOWER HALL

The decoration in each room is devoted to the development of a particular flower. In the hall it is the chrysanthemum

From this room one enters the drawing-room. Again, the walls are yellow and the general scheme of decoration the same, except that the carpet is vermillion, and the carving of the woodwork and the wall panels, as well as the bronze work, represent the peony instead of the camellia. There are quaint bronzes and rare porcelains everywhere. On the same floor there is a little gallery lined with books running round an open space above the inner hall. This gallery and the hall below, which are lighted by day with the great square ground-glass skylight, receive at night light from the same place, as electric lights are arranged to shine through it. The interior windows, protected without by ordinary glass ones, are of the white oiled paper used in Japan. All about the house are little Japanese lamps and lanterns in which there are electric lights. The walls of the halls are a cool clear green. A fine needlework panel, gorgeous suns in gold thread on silk, once a temple-hanging in Kyoto, fills a black wooden frame in the upper landing of the stairway, and lower down in the hall is another panel with a design of immense chrysanthemums worked in gold.

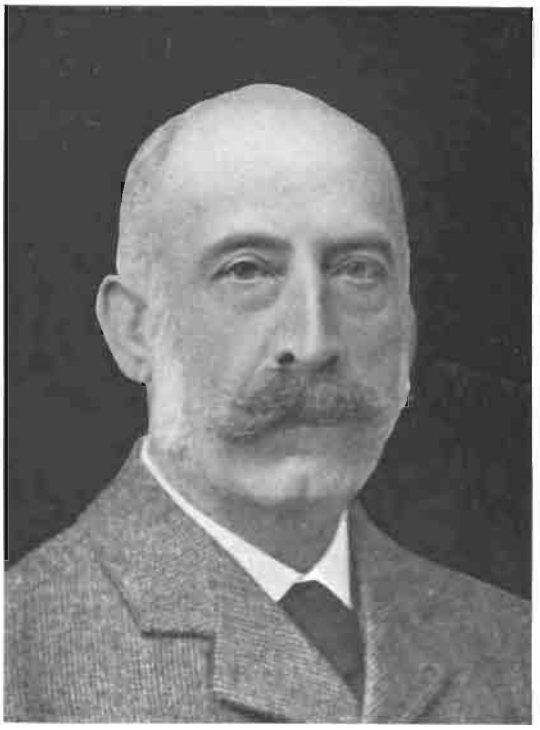
One must indeed live in this wonderful house to know all its beauties. Of course it cost its owner a world of labour, to say nothing of money. It is not a copy of any house in Japan but is worked out on an entirely new scheme of decorative art. Armed with his own plans, drawn to precisely to the scale of his house, Mr. Menpes went to the East to get the benefit of native labour, and for the greater part of a year employed nearly seventy Chinese and Japanese workmen. These are, he says, all true artists, and perfectly understood, and often improved upon, his schemes. Metal-workers, wood carvers, porcelain painters, silk weavers, all—a host of them—worked upon this veritable artistic masterpiece, which had then to be brought home and put together. Mr. Menpes went so far as to have even his knives, forks, and table service made in Japan, while in the kitchens many Japanese cooking utensils may be found. Among these are all manner of little carved wooden moulds, such as Japanese housewives use for butter, jellies, or ices.

The owner can indeed congratulate himself upon the success of his work. Only an artist to the finger tips could build such a house, and the house is ample introduction to the man. One might paraphrase the poet and say, "As the house is, so the man is." It is, perhaps, from the standpoint of pure beauty, as expressed in Eastern art, one of the most perfect houses in the world.

WORLD'S WORK photo

THE DRAWING-ROOM

Mr. Mortimer Menpes' house in Cadogan Gardens, London



COUNT BENCKENDORFF
THE RUSSIAN AMBASSADOR

Russell

M. PAUL CAMBON
THE FRENCH AMBASSADOR

Maull & Fox

COUNT METTERNICH

Lafayette

VISCOUNT HAYASHI

# THE NEW DIPLOMACY

THE MISSION OF THE MODERN AMBASSADOR—DEMOCRATIC DIPLOMACY—DIPLOMATS' WIVES—ROUGH-AND-READY-MADE AMERICAN DIPLOMATISTS—THE PRESS AS A FACTOR IN INTERNATIONAL RELATIONS

BY

CHALMERS ROBERTS

TWENTY years ago it seemed not improbable that diplomacy was on its last legs as an appreciable factor in world politics. The famous suggestion that Ambassadors be abolished and that newspaper correspondents be sent to take their places, though meant as a jest had more than the usual grain of truth. It was curiously prophetic of the development of publicity in what was once the most secret of careers. The new diplomacy has yet to win its way to full acceptation. I mean the diplomacy of frank speeches, of inspired publications, of open negotiations, of State visits. The old-time dark dealings and mysteries have yet their adherents, are yet feared and respected. For instance the only first-class autocracy is yet suspected, is never trusted even when it seeks, as it often does, to work with modern methods. In both the near and far East, Russian diplomatists alone inspire the solemn reverence which was once the meed of all Ambassadors. But even they cannot hold their own against new influences and against the open trafficking of their colleagues. It still takes two to keep a secret, and international State secrets are fast going out of fashion. Several different influences have aided to end the diplomatic methods of a century ago. The invention and extension of the telegraph system was the first serious blow to the responsibility of a Government's foreign representatives. It made the Ambassador only an agent at the end of a wire. But the spread and permanency of popular government had even more to do with opening up international affairs. For if all Governments remained autocratic, the telegraph would only facilitate secrecy. The constant influence of parliaments is to reveal foreign negotiations to the public. These open discussions of foreign affairs are so fatal to the success of secret diplomacy, that Ministers of State have generally adopted publicity as the best policy. And so the position of the Ambassador has quite changed. It used to be that he made decisions and his Government had to support him. Now his Government makes the decisions and leaves him with the consequences. Ambassadors used often to embarrass their Governments. Now Governments embarrass their Ambassadors.

But it should not be understood that this has changed or lessened the importance of the diplomatic corps. As will always happen, new cycles of affairs bring forward new masters to take the place of old, and there are to-day men as apt in the use of publicity in international affairs as their predecessors were in mystery and secrecy. Then too there has been a great democratisation of the diplomat. He used to be a mighty person far removed from the common man. Now he almost seeks out the plain people and fraternises with them. He goes to public dinners and makes speeches about the policy of his Government. He receives members of the Press, not always as a favour to them. He seeks, in short, to know the people to whom he is credited and to anticipate their position upon any public question which arises between them and his own country. The greatest British Ambassador of recent years, and one of the latest type, was Lord Pauncefote. He met a difficult situation with entirely new methods and triumphed all through his long term of service at Washington. Secret diplomacy of the old school could never have thriven in the capital of the New World's great democracy, and many famous failures there have been due to lack of perception of this fact.

The late British Ambassador went to the United States under the most trying of circumstances. His predecessor had been sent home in disgrace for having innocently entangled himself in local politics. It was in the days when Anglophobia was a never-failing expedient

with all American parties. The new ambassador was met with constantly increasing difficulties from "Behring Sea" to "Venezuela," all made more bitter by a rabid hostility of Press and people. That these troubles were successfully negotiated would have been enough for the ordinary diplomat. But Lord Pauncefote did more. He won over the great public by his invariable courtesy, his democratic bearing, and his frankness on all occasions. I always remember an incident at the beginning of the Spanish-American war, which first opened my eyes on the subject of the British Ambassador's influence with the masses. I was hurrying to the front by train through Florida, and began a chance conversation with a very plain cattle-man, whose language would never have led you to imagine that he was interested in diplomacy. We were talking about the possibility of European intervention in Spain's behalf. And he said: "No, don't you be afeared of it. Ole England won't let 'em move. That there man Pauncefote in Washington has taught the Old Country to look on us as something a little better than a South American Republic. And I am not so sure but what he has learned us a bit too, and showed us who our best friend would be when trouble comes."

I cannot imagine a higher tribute, or a more ample description of the mission of a modern Ambassador.

From being a sort of special messenger from one king to another he has come to be an emissary from one people to another. And succeed he ever so well in fulfilling the letter of his instructions, if he does not at the same time win popular favour, failure will surely overtake him. No one who has watched closely recent diplomacy can fail to name a dozen instances where Ambassadors, zealous in the policy of the cabinets directing them, have yet lacked that new diplomatic fifth sense—tact with the people—and have ruined their careers and blundered their policies by petty public misadventure. No less than kings and presidents and prime ministers, Ambassadors must keep their ears to the ground for the sounding message of the masses. Every day the modern diplomat has to decide some small matter of public action which will make him or mar him with his many-headed host. It is not an easy position. And it is, as the years of diplomacy go, quite a new one. Then too there is a marked change in the position of an Ambassador as a public figure. He used to be a solemn potentate who lived apart and engaged in plots against the Government to which he was accredited. Now he lays corner-stones, opens hospitals, unveils monuments, presides at banquets, and performs all the usual labour by which royalty earns the bread of parliamentary settlements, whenever and wherever the supply of princes fails. For instance, the work of an American Ambassador in London is as much a part of the morning paper as the court circular. And on these occasions the ability constantly to say and do the right thing is the surest test of fitness in the new diplomacy. For here again the people and not the Foreign Offices decide if the visitor has fulfilled his aim and that of his craft in promoting friendship between the two nations. It often seems but petty business, the gentle art of saying nothing prettily, but little things counted in the old diplomacy as well as the new. A good dinner or a graceful speech have often won the day, against the most convincing heavy and honest argument. The proper bow and the proper smile have changed the course of history more than once. So, too, have careers been ruined and politics upset by want of tact. As is well known, the late Queen of Denmark was, through family connections, very powerful in international affairs. As she grew older her hearing became bad and conversation with her very difficult. One day was presented to her a young diplomatist who had been sent to Copenhagen on a special mission. He was very anxious to win her favour. After a pleasant greeting came the usual flow of inquiries which is so necessarily the major part of royal conversation. One of the first was, "How long have you been in Denmark?" "Three months, your Majesty." Then a few sentences more from the Queen as if she had understood. But she returned to the query: "How long did you say?" "Three months, your Majesty." But he saw that she had not heard. And, very frightened, he was wholly at a loss what to do. He could not shout at her in the presence of the assembled Court, and his voice was one of those which are too soft to carry well. So, as an extreme measure, he held up three fingers. This was a fatal mistake. Her Majesty turned her back, and the young man was soon, very soon, called home.

Here is another story yet current in Berlin chancelleries of a misfortune befalling a young English diplomat, now an Ambassador, which left at least a lasting effect on the German Court. No one who saw the Empress Augusta in her later years will ever forget her. Always a clever, strong-willed woman, her fight against old age, against death itself, was thoroughly

characteristic. Even as second Dowager, she used to appear at Court balls, wheeled in an invalid's chair-throne to the daïs. Her appearance cannot be described, for what with *perruque*, highly coloured cheeks, and even artificial shoulders, only her keenly gleaming old eyes seemed alive. It was as if living eyes were set in a death's head. At a ball where this old lady presided, one of her grand-daughters, sister to the Emperor, honoured a young English diplomat with an invitation to waltz. And, by a mischance, just in front of the invalid-throne, the two fell sprawling on the floor. The Empress was furious, and did not attempt to conceal her rage. The young diplomat was so soundly rated that he asked at once to be transferred to another capital. And for several years after no waltzes were allowed at Court balls in Berlin, for, as the determined old lady had said, no dance was decent which could place a royal princess in such an undignified position. So, after all change, manners still remain the very breath of diplomatic life.

There is another noteworthy development in this new diplomacy, where to know the wishes and sentiments of the people is as important as to understand the Government. It used to be a fixed rule in all corps that a Chief of Mission should never be accredited to a post where his wife was a native. This seemed a sound rule, for she would know and sympathise with the people of her country, and might influence her husband in their favour against the interests of his own State. Now when it is so important for ambassadors to keep fully acquainted with the feelings of the people they live amongst, it is considered highly advantageous if they have wives to aid them. Certainly no general movement in recent diplomacy is more marked than the desire of European Powers to cultivate friendly relations with the United States, even at the expense of their neighbours. And to-day, as part of this policy, the British, German, and French Ambassadors in Washington have American wives.

On their part, the Americans sent abroad have undoubtedly left a marked influence upon the conduct of international affairs. The Court of St. James has been so favoured in the Americans accredited to it, that English people scarcely realise the rough-and-ready-made diplomats of Brother Jonathan elsewhere. And while there is no doubt that much improvement is possible, and would be to the advantage of the Washington Government, it cannot be denied that Yankee unconventionality has broken down many of the old-time iron bands of corps etiquette. I always remember the horror of a stately ambassador of the old school, when his American colleague, my chief, would slap him on the back and call him by his unadorned name. Once this same chief sent me to the Secretary for Foreign Affairs with an important communication scribbled on the blank sheet torn from a note, taken from his pocket. There was a long conversation between his Excellency and several permanent under-secretaries as to whether my communication should be received or returned with a request for more formality. But just at that time it was the policy and to the distinct advantage of the Government in question to be friendly with the United States, and so to-day among all the stately files of that Foreign Office you will find that little pencilled note on the roughly torn note-paper. It was with this same chief that I came to lose a natural democratic distaste for titles. Before my service with him any sort of titular distinction seemed to halt on my tongue, and was only spoken with difficulty. He was a very distinguished man at home, whom I had known for years, and always called "Judge," because he had formerly been on the bench. Quite able, he was nevertheless not at home in the little politenesses of diplomacy, and was indeed an object of ridicule on the part of my colleagues. I used often to defend him against their gibes. One day one of them said to me: "Oh, it's all very well for you to defend your funny old Minister because he is your own countryman. But you yourself cannot have much respect for him, for you do not even call him 'Excellency.'" Ever after this I was careful to call him by his title in a loud voice, and to insist on every one else doing likewise. Only Roman methods impress the Romans. The fact that these rough men, whom political chance had raised to positions for which they were socially unfit, have shown a crude ability which gained its way often over all the elegances of trained opponents, has lent a certain respect to their methods. Every court on the Continent has its pet story of the gaucheries of some Yankee diplomat.

For instance there is one story which must still amuse The Hague, of the wife of an American Minister under a former administration, who on being granted an audience with the Queen-Mother, then Regent, looked up at a large portrait of her Gracious Majesty Wilhelmina, and said: "Your little girl, I suppose, Ma'am?" On receiving an affirmative answer she added

to the horror as well as amusement of the court in waiting: "Well, I must say she's a mighty fine child." None of the many who used to laugh over this story, always told in an exaggerated American accent, ever doubted the good woman's kind heart.

There is another, even more illustrative of American kindliness and absolute lack of all the fine nothings of etiquette which are the very breath of courts and diplomatic life. The story concerns a former American minister to St. Petersburg at one of the elaborate and very formal receptions or *levées* which the Emperor and Empress hold on New Year's day. All the diplomats stand in their order of precedence and their Majesties walk down the line to exchange greetings with each in turn. On this occasion the Empress, now the Dowager, was not present, having just given birth to one of the younger Grand Duchesses. It seems that the good wife of the American Minister was also at home occupied with a similar domestic duty. The Emperor came down the line and asked after the health of each of the gentlemen present, at the same time exchanging the usual seasonable greetings. Then, as was also his custom, he asked of each what was the news from home. This always means in the diplomatic world: "How is my good brother the German Emperor?" or "What is the news from my dear sister, the Queen of Holland?" It is supposed that all of his questions were properly answered with pleasant information about his fellow rulers.

So when he came to the American he asked the usual question, "I hope you have good news from home?" Of course he had, and the full-hearted Minister could not keep it a secret. "Yes, thank your Majesty, excellent news. It is a boy and weighs twelve pounds." It is needless to say how this perfectly natural answer smote the assembled corps hip and thigh. It is said that the widespread titter was scarcely decorously suppressed. But the good-natured man and father, even if he was Tsar, pretended not to notice, and said he was truly glad to hear it, and he hoped his Excellency would convey his heartiest congratulations to Madame Ministre. He then passed on to the next man in the line, extending his greetings. It seems that the ill-concealed disorder among his colleagues made no impression upon the American with the overflowing heart. He had forgotten something. Coming out of his place, he followed the Emperor and, tapping him on the shoulder, said: "I beg your Majesty's pardon. I forgot to inquire after the health of the Empress and the little Grand Duchess." The Emperor thanked him again with great kindness and assured him that both were going on as well as could be expected. From all accounts this last exchange of domesticities provoked the line to actual laughter. This was the one good story of the great winter capital for days, and was whispered at parties until it at last reached the ears of the recovering Empress. And with the kindness which always characterised her as well as her husband, at their next meeting, in a particularly audible voice, she thanked the American Minister for his kind inquiries after her health during her recent illness.

Strangely enough it is the Russian corps, the last stronghold of the old diplomacy, which more nearly approaches the American in its opportunities for success and reward. The small man who has done well in some insignificant distant post is apt to be promoted at once to one of the most important places in the career, regardless of the claims of rank and time of service. With other corps, and under the old *régime*, a man who has made all manner of failures in one place is still supposed when his turn comes to take the promotion which his ability has never earned. This still happens in the British service, but of late there have been several instances where the claims of the corps have been wholly disregarded, and men promoted to ambassadorships from the Foreign Office or from the lower ranks of the service.

But in considering the greatest changes in the methods of modern diplomacy, we come back after all to the use of the Press, to the newspaper correspondent, who carries on the conduct of affairs abroad. It was through the activity of the busy correspondent, who published the text of unconcluded treaties or foretold the actions of chancelleries and foreign offices, that the Press gained recognition as a diplomatic agent. Such publications always revealed popular sentiment on the subject at issue. So those behind the scenes soon came to use the inspired or semi-official paragraph to test popular opinion. This in turn was followed by the absolutely false announcement, issued either to conceal contrary action elsewhere, or to pave the way for strong denials in the event of too loud an uproar of opposition. Even in the Levant and the Orient, newspapers, such as they are, are now used as a means of instructing or inciting or inclining the people to the wishes of the Government. Now comes a later development, whereby governments make unpleasant communications to each

other by means of the "semi-official" or "inspired" paragraph in the Press.

In the recent negotiations between Russia and the United States in regard to the Kishineff massacre this new messenger was much in use. Thousands of American Jews sent to Washington petitions asking that the Government take some step for the protection, in the name of humanity, of their co-religionists in Russia. The American Government made the unofficial announcement that it could not actively intervene, but it might transmit the petitions to the Russian Government. Immediately the Russian Government replied also through the means of the inspired Press paragraph, that it could not under any conditions consent to receive petitions from abroad, relating to the conduct of its internal affairs; and further that if the Americans sent such a petition it would be returned to the messenger. The publication of this defiance, both in St. Petersburg and Washington was promptly resented by the Americans. President Roosevelt is said to have personally written and given out to the Press a statement that the American Government could not pay any attention to communications through the newspapers, and that the petition would certainly be treated as at first intended. It was a very amusing battle with new weapons and undoubtedly made precedents in diplomacy, even if it was concerned with a matter comparatively unimportant.

# WHAT THE BRITISH ASSOCIATION DOES

SEVENTY YEARS OF PROGRESS IN THE ADVANCEMENT OF SCIENCE—HOW THE ASSOCIATION URGES THE NEED FOR EFFICIENCY TO SECURE OUR INDUSTRIAL FUTURE—FAMOUS PRESIDENTS AND THEIR ADDRESSES—SIR NORMAN LOCKYER—A FORECAST OF THIS YEAR'S MEETING

BY

EDWIN SHARPE GREW

THE British Association, which holds its annual meetings at Southport this month, stands for many things in the intellectual life of the nation. But first and foremost it stands for the object which is proclaimed in its title—it is the British Association "for the Advancement of Science." It was founded at a time when the place of science in the national life was at its lowest; and throughout its career it has never ceased to urge the claims of science on a nation which is never too attentive to scientific needs or advantages. In this capacity it has always spoken with exceptional authority. It voices in a more representative way than any other society or association can do, the opinion of the whole body of science of the country in matters which affect the body's general welfare. This we might almost say is its first and chief function. It owed its origin to a discussion which arose between the years 1826 and 1831, "on the low state of science in England, and the neglect of scientific men." The actual idea of the form which the remedy for this state of things should take belonged to Babbage, who suggested as the way to revive the national interest in science, the formation of "an Association of our nobility, clergy, gentry, and philosophers—which alone can draw the attention of the sovereign and the nation to the blot on its fame." He had attended the meetings of the German Association for the Promotion of Science, which had first met at Leipzig in 1822 and which in 1828 had Von Humboldt for president; and like more than one philosopher since, had come to the conclusion that a seed which had been so fruitful of impulse to German science and education might bear good fruit in England too. His belief was warmly supported by Sir David Brewster; and the inaugural meeting of the British Association was held at York, under the chairmanship of Lord Milton, in 1831; with Dr. L. Vernon Harcourt as the first Secretary, and with 353 members. In its second year the meeting at Oxford brought together, under the presidency of the Rev. W. Buckland, all that was most conspicuous in the scientific mind of the nation, and drew a still larger assembly to listen to papers on Astronomy by Airy, on the Tides by

J. W. Lubbock, on Optics by Brewster, on Minerals by Whewell, and on the History of the Human Species by Dr. Pritchard.

From that time onward the success, the growing importance—and the public recognition of that importance—of the British Association were assured. Among its presidents were Adam Sedgwick, the Earl of Rosse—when the meeting was first held in Ireland—Professor Whewell, Sir John Herschel, Sir David Brewster, the Duke of Argyll, and Richard Owen. Yet in spite of its real success, the British Association found it necessary to press on the nation the still existing need for national support of science. In 1859, the year after the presidency of the great palæontologist, and a generation after the Association's first foundation we find the point again urged, in the Presidential address of the Prince Consort. He said:

"We may be justified in hoping that by the gradual diffusion of science, and its increasing recognition as a part of our national education, the public in general, no less than the Legislature and the State, will more and more recognise the claims of science to their attention; so that it no longer may require a begging box, but speak to the State like a favoured child to its parents, sure of the parental solicitude for his welfare; that the State will recognise in science one of its elements of strength and prosperity, to foster which the clearest dictates of self interest demand."

Again, we may note, the impulse was German in origin. A generation and a half later, only as long ago in fact as Professor Dewar's address last year, the British Association delivered through the mouth of its President what is perhaps the most solemn warning that any scientific body has ever administered to the nation, in respect of science teaching. Professor Dewar showed how by the development of applied science, the Germans had wrested from us various industries, of which the chemical trade was the chief. But, said he, it is not the loss of this, that, or the other industry, that England has to deplore. The cause of the loss is the want of education among our so-called educated classes, and secondarily among the workmen on whom these depend. The greatest threat to our industrial future is that the whole German nation has reached a point of specific skill and organised equipment which it will take us a couple of generations to reach. Professor Dewar's warning is not to remain an isolated one.

We have reason for believing that Sir Norman Lockyer's Presidential address this month at Southport will urge the importance of increased state aid to universities and research. We may trust that the appeal no less than the warning will be heeded by the nation.

There is another battle which the British Association has fought continually throughout its seventy years' career, the battle for the whole truth, the battle of science against superstition. On the banners of the leaders in this fight might be inscribed the noble sentence from Professor Tyndall's presidential address at Belfast in 1872: "There is in the true man of science a wish stronger than the wish to have his beliefs upheld; namely the wish to have them true." That was a generation ago. The echoes of the dispute between Darwin, Huxley, Tyndall, and Flower, on the one hand and the theologians on the other, have died down; and while there would be few bishops now to contest on religious grounds the theory of evolution, there is also to be observed a less militant certainty about the utterances of the great leaders of scientific thought. Lord Kelvin the other day asserted his belief that the living cell could not come into existence by fortuitous occurrences—and raised rather a storm of controversy and inquiry by doing so. But it seems to have been forgotten that he said something to the same effect in the Presidential address which he delivered in 1871. "Dead matter cannot become living without coming under the influence of matter previously alive"—another rendering of Virchow's famous "Omnis cellula e cellulâ." But Lord Kelvin's presidency, though it followed immediately after that of Huxley in 1870, was eleven years later than the famous discussion at Oxford in which Huxley and Bishop Wilberforce were the chief antagonists. At that meeting Bishop Wilberforce, in the discussion on the Darwinian theory, was ill advised enough to ask banteringly whether it was through his grandfather or grandmother that Huxley claimed his descent as a monkey. To which Huxley made the tremendous retort that he would not be ashamed to have a monkey for his ancestor; but he would be ashamed to be descended from a divine who employed authority to stifle truth. Such controversy, great as it is to look back on, is no longer possible. The greatest of scientific men approach the great insoluble questions in a humility akin to that which found expression in Lord Salisbury's Presidential address, also at Oxford, in 1894:

"Overpoweringly strong proofs of intelligent and benevolent design lie around us, and if ever

perplexities, whether metaphysical or scientific, turn us away from them for a time they come back upon us with irresistible force, showing to us through nature the influence of a free will, and teaching us that all living things depend on an everlasting Creator and Ruler."

In the foregoing paragraphs an attempt has been made to indicate the underlying purpose of the British Association. Its material contributions to science have been no less great and no less obvious. Among the Presidents who have delivered addresses to it, besides those whose names already have been mentioned, are numbered Sir Charles Lyell, Dr. Joseph Hooker, Professor G. G. Stokes, Sir John Lubbock (now Lord Avebury), Sir William Armstrong, Dr. C. W. Siemens, Lord Rayleigh, Sir Lyon Playfair, Sir F. Bramwell, Sir H. Roscoe, Sir W. Flower, Dr. Huggins (now President of the Royal Society), Sir A. Geikie, Professor Burdon Sanderson, Sir Douglas Galton, Lord Lister (then Sir Joseph Lister), and Sir William Crookes. Astronomers, mathematicians, chemists, biologists, zoologists, physicists, their addresses—usually summarising the latest developments of the sciences of which they were among the first living expositors, and sometimes, as in the case of Sir William Crookes' examination of the future of the world's wheat supply, or in the addresses of Tyndall and Lord Salisbury, touching on the gravest social and philosophical problems—are themselves a splendid contribution. They do not stand alone. The Association is divided into sections, physical, chemical, astronomical, zoological, geographical. General in comprehensiveness, it is special in its sectional arrangement, and thus is not only a counterpart, but in some senses a counterpoise to the general tendency of subdivision in science. The sectional Presidents have included every distinguished name in British Science for nearly three generations; and their addresses are a monument of scientific literature. There remains the enormous mass of scientific contributions of the nature of papers and reports which are annually presented to the Association. These are in part voluntary contributions, and in part the result of research to which the Association devotes its own funds and those derived from the scanty assistance of Government.

The prospects which any annual meeting has of becoming a memorable one, are hard to arrive at beforehand. We have already in part indicated one subject with which Sir Norman Lockyer's Presidential address will deal—the necessity for increased State aid to Science. He will dwell still more strongly on the necessity of organisation in science, and in scientific research—a subject which from an astronomical standpoint has recently received exposition from Professor Pickering of Harvard University. From a review of Sir Norman Lockyer's own great work in astronomy, we may expect to hear of the recent progress of stellar chemistry and spectroscopy, and what light is thrown on the birth of the elements, from the astronomer's point of view, by the recent theories and discoveries in radio-activity.

The Sectional Presidents this year are as follows: Mathematical and Physical Science: Professor C. Vernon Boys, whose address will urge the importance of the physical sciences not alone as educational necessities, but in the welfare of the world. Chemical Section: Professor W. N. Hartley of the Dublin College of Science. Geology: Professor Watts, of the new Birmingham University, whose subject will be "The Importance of Geology in Education and in Practical Life." Zoology: Professor Hickson of Owens College, Manchester. Geography: Captain Creak, R.N., whose address will deal with the subject on which he is one of the greatest authorities, Terrestrial Magnetism. Economic Science: Professor Brabrook, who will speak on "Thrift." Engineering: Mr. Charles Hawksley, of the Institute of Civil Engineers. Anthropology: Professor Symington of Queen's College, Belfast. Botany: Professor A. C. Seward of Cambridge, who may deal with the present position of the Darwinian theory as exhibited by recent discovery in fossil botany. Education: Sir William Abney. It will be noticed that a large proportion of the Sectional Presidents this year are from the provincial universities and colleges. To the other attractions of the meeting, social and scientific, two unusual additions will be made. The Meteorological Congress, also meeting at Southport, will bring together a number of most interesting meteorological charts, diagrams, and instruments; and Mr. W. H. Dines, who was one of the committee appointed last year by the British Association to inquire into the "Currents of the Upper Air," will give demonstrations of the way in which the atmosphere is explored by high-flying kites towed by steam launches or tugs. The unusual social attraction will be a motor-car run, for which a large number of motor-cars have been lent to members of the Association.

# THIRTY YEARS OF ITALIAN PROGRESS

A NEW SPIRIT IN UNITED ITALY—HOW EDUCATION IS BEING USED AGAINST ERROR, IGNORANCE, AND CRIME—INCREASED POPULATION AND INCREASED PRODUCTS—STARTING A HUNDRED YEARS BEHIND ENGLAND THE ITALIANS HAVE READILY ADAPTED THEMSELVES TO OUR INDUSTRIAL ERA—THEIR ATTITUDE TOWARDS PAPAL CLAIMS—A TRIUMPH FOR TOLERATION

BY

THE AUTHOR OF "THE DAWN OF ITALIAN INDEPENDENCE," "THRONE-MAKERS," ETC.

I FIRST saw Rome in the spring of 1877, after I had already spent the larger part of two years in Tuscany and Naples. Returning to the Eternal City in the spring of 1903—with many intervening visits behind me—I am struck by a new spirit in the air, a more hopeful tone, a feeling that an era of true prosperity lies just ahead. About no other country have foreigners written so much; yet of none have foreigners in general so little intimate knowledge. Italy is the paradise of foreign pessimists, the Cockayne of political prophets. Her defects are so open, her sins so salient, that everybody can diagnose them; they may be the same defects, the same sins which abound in the foreigner's own country, but he is so used to seeing them there that he would never think of asserting that they must hurry his country to destruction. What Italy has achieved since she became a kingdom is so commonly overlooked that it will be novel, at least, to state it briefly here, for it is this positive achievement which explains why she has not collapsed at any one of the score of crises when her collapse was predicted as inevitable by the gloomy foreboders.

To all the nations of the West the nineteenth century set two tasks—the establishment of political liberty through the adoption of some form of representative government, and the creation of an economic system based upon modern methods of production and transportation. These were the common tasks; but as Italy down to 1860 was not a nation at all, she had to secure independence and union before she could take her place as a nation and join in the competition of modern civilisation.

Her political regeneration began in Piedmont about 1850. Piedmont had the advantage over the other Italian States of being independent, and as she had never shared in the glories of the Renaissance, so she had escaped the enervation which followed upon them. Her people were thrifty, matter-of-fact, bluff, backward in many things, but backward from slowness of growth, not from exhaustion. In ten years the little country was wonderfully transformed. Probably nowhere else in the world has a community emerged so rapidly from mediæval to modern conditions, and the transformation was not only swift but solid. When, however, Lombardy and the Marches, Tuscany and Naples, suddenly freed from their tyrants, joined Piedmont to form the Kingdom of Italy, the task was greatly complicated. Not one of them had had any experience in self-government; they had lived under different systems of law, of trade, of agriculture, of education. While Tuscany had enjoyed a mild despotism, Naples had been brutalised by seventy years of the worst of all Bourbon governments. In Lombardy the Austrians had protected the tradesman or farmer by fairly just laws, so long as he did not meddle with politics; in the States of the Church, where there was not idleness and beggary, there was economic chaos. In the south, the feudal *régime* still survived, although it had been officially abolished by the French. To these clashing conditions must be added the subtler but not less vital antagonisms rooted in local or family jealousies and the plotting of the ousted despots, of Austrian, Pope, and Bourbon—to recover their ground by intrigue if they could, and failing therein, to stir up dissensions to paralyse the high purposes of the new kingdom.

The immediate duty of Victor Emmanuel's Government was to put into operation uniform

laws; to secure a uniform fiscal and political administration; to open schools of uniform grades, leading up to universities; to make the Sicilian and the Venetian, the Piedmontese and the Romagnole, who had for centuries been swayed by an intensely local patriotism, feel that Italy, and not their town or province, was henceforth their true country. In other words, having achieved unity from outside, there must now be built up the deeper, essential unity from within. And Italian unity is unquestionably stronger to-day than it was ten years ago. The internal blending has gone on toward the point of fusion, although new causes of local antipathy have sprung up. The north, with its better educated people, under the stimulus of capital and favourable conditions of production and distribution, has become overwhelmingly industrial; the south, still checked by poverty, ignorance, and inveterate economic abuses, which it can slough off only too slowly, remains almost exclusively agricultural. As a result one section regards the other too much as an enemy. The Southerner grumbles that he is taxed proportionately more heavily than the Northener and given less in return, and this is true, for the protected manufacturer in the north enjoys Government bounties in the form of tariffs which do not benefit his agricultural brother in the south. And in Italy it is less easy than in the United States to persuade the victim of protection that he is being enriched by it. This clash of interests, with the fiscal inequalities springing from it, naturally causes sectional resentments; but were Italy assailed from abroad, or were she threatened from the inside, the Northerner and the Southerner would leap to her defence. Foreigners make a huge mistake when they infer that sectional bickerings, or even sharp criticism and mutual recriminations imply national weakness in Italy. There are kindred, the strength of whose family spirit is best measured by the vigour with which each member expresses his individual opinions.

Whatever sectional or class antagonism may have been created by the spread of industrialism is not peculiar to Italy. The rapid manufacturing expansion of the north proved that the Italians can avail themselves not less successfully than other nations of the modern industrial agents; and they have done this against a tremendous handicap, for Italy lacks the two indispensable elements, iron and coal, which she has to purchase abroad. If we turn to the latest volume of statistics we find that in Italy—including Sicily and Sardinia—there are nearly 18,000 kilometres of railways, besides 3500 kilometres of mechanical tramways; about 50,000 kilometres of telegraphs; more than 400 steamships and 5700 sailing vessels, of a total net tonnage of nearly 1,000,000 tons; that she spends every year about £8,000,000 on coal; that her native industrial companies have £60,000,000 of paid-up capital, while foreign companies have about half that amount; that her progress in applied electricity has been very rapid—in three years, from 1896 to 1899, her production of electrical horse-power increased from 50,000 to 100,000; that in 1900 the cotton industry product was valued at £12,000,000; that her chemical product doubled between 1893 and 1899, when it reached £2,080,000; that the output of her paper mills has doubled in fifteen years. In forty years the population, after deducting a large number of immigrants—probably 4,000,000 now live outside of Italy—has risen from 25,000,000 to 33,000,000 souls, or about one-third; meanwhile the value of her annual products has quadrupled, if they have not quintupled—exactness is impossible, owing to the imperfect records kept in the bureaus of the old *régime*. The kingdom is well provided with savings institutions, public and private, which have deposits to the value of £100,000,000.

And yet the stranger, blind to these evidences of progress, sees only the poverty, which he thinks is universal, helpless, incurable. But if you know Italy, you know that the areas of poverty vary greatly in extent. At Turin, for instance, you rarely see a beggar, whereas some quarters of Naples seem to have no other inhabitants. Wages of farm labourers and of mill-hands are often desperately low, and employment, especially for the agriculturists, is not steady. In certain regions and seasons a farm labourer can earn barely 8*d*. a day; he regards twice that sum as large pay anywhere; but we must remember that he can buy the necessaries of life very cheaply. Actual starvation overtakes those districts which rely on a single crop, if that crop fails. Misery is endemic in more than one ill-favoured locality. To escape these evils, the peasants emigrate in myriads, while other myriads flock to the cities to swell the ranks of the submerged there.

Again, these phenomena are not peculiar to Italy: they are the grim facts which confront modern civilisation. The capital social achievement of the nineteenth century was the discovery of the slum. Before that the slum had been taken for granted—accepted

as a necessary evil—from the earliest times. In Italy, under the old *régime* it was almost a privileged institution. The States of the Church swarmed with beggars, to whom Pius IX. showed special indulgence; how, indeed, could a Church which encouraged the Mendicant Orders effectively reprove untonsured mendicants? The Neapolitan Bourbons actually based their throne on the slums: the league between Ferdinand I. or his grandson, Bomba, and the *lazzaroni* of Naples was so close that, thanks to it, the King more than once stifled the efforts of the decent minority; and when Victor Emmanuel entered Naples in 1860 he found 90,000 professed *lazzaroni*—criminals of every grade, from the brutalist assassin to the sneak thief, idler, drunkard, low *débauché*—who avowedly had no honest employment.

How stands the matter to-day? Italy has declared war on the slum. The worst parts of Naples have been demolished, and she has now one of the finest water-supplies in the world; new broad streets bring light and pure air into what were lately the unhealthiest wards of Rome; that reeking sty, the Florentine Mercato Vecchio and its neighbourhood, is an open piazza; the blocks of squalid buildings which crowded the Duomo at Milan have been swept away to make room for one of the finest squares in Europe. In every city and almost in every town of Italy this beneficent "vandalism" has been carried forward; while in the country immense tracts of malarious or unproductive land have been reclaimed.

This war against poverty has been waged on the material side by substituting healthful for disease-breeding conditions; on the intellectual and moral side it has been waged by education. The old *régime* and the Church hated schools, and very naturally; since their grip on the masses depended on keeping them in ignorance. Fifty years ago Italian peasants and servants were almost wholly illiterate. The new *régime* has reduced illiteracy until now less than a third of the adult males and one-half of the adult females are illiterate. To cite only two symptoms of progress: first, the number of homicides fell from 5418 in 1880 to 3749 in 1898; secondly, the percentage of illegitimate births has fallen from 7.35 in 1881 to 6.14 in 1889. Illegitimacy is still most common in Romagna, Latinum, and Umbria (reaching 142 per 1000 births in Umbria), the former States of the Church—a significant fact.

Look now at the political growth of Italy. We see many blunders, much incapacity, much positive corruption. Recent historians almost unanimously agree in unfolding crisis after crisis, each of which seemed certain to wreck the newly launched monarchy. Nevertheless in 1903, the nation is stronger than she was in 1893, or in 1883, or in 1873. The voyage has always been stormy, sometimes desperate, but Italy has weathered every gale, and she forges ahead to-day better manned and equipped than ever. Many of the evident mistakes of the past thirty years can fairly be charged to lack of parliamentary experience. The masses were uneducated, and generations of Papal and Absolutist misrule had corrupted the general character of the people. Under the old *régime* there could be no citizens: the relations between the oppressed subject and the despotic ruler, far from fostering those civic qualities which we look for in free men, trained instead the baser instincts—cringing hypocrisy, cowardice toward those above, greed and cruelty and arrogance toward those below.

It is not surprising, therefore, that the Italian Parliament has often failed to solve the great problems set for it; nor that the type of public man who has come to the front has often been the astute politician, the intriguer, the demagogue, the boss. Since Cavour died, Italy has had no statesman of transcendant power; but in Ricasoli, Minghetti, Sella, Lanza, and other survivors of the heroic epoch, she had leaders of stainless integrity, who were true patriots. That the new generation should breed politicians and not statesmen seems inevitable. Italy was made—the day for heroic sacrifices was past; the day of immense spending had come—of honest spending, to lift the new kingdom up to the modern plane; of injudicious spending, on public works before they were needed; of dishonest spending, to enrich corrupt politicians and their gang. The American Whiskey Ring, the Credit Mobilier Ring, Star Route Robbers, Sugar Ring Senators, and other rascals have had their counterparts in Italy, and in Italy too they have generally gone unpunished. This grave blot cannot, therefore, be charged to the Italians alone, or used as evidence of their unfitness for self-government. It is the curse of the age; it has blackened modern France; it has stained England.

It will not do, therefore, to single Italy out as a failure in parliamentary government because her public men have been corrupt or incompetent. The effects of their corruption or incompetence have been more apparent because she is weaker than France, or England,

or the United States, countries which, like strong men, can stand dissipation which would kill a weakling. But her comparative weakness has been also a safeguard: for it registered almost immediately a warning after each excess. Her worst folly—the chase for a colonial empire in Eritrea and Abyssinia—began at once to plague her; in 1886 Nemesis smote her at Dogali; in 1896, after Adowa, she heeded the warning. "The Abyssinian campaign gave us our colonial anti-toxin treatment," said a keen Italian financier to me the other day: "it was costly and made us very sick, but it cured us."

The over-taxation of Italy is so common a theme that I need not enlarge upon it. Her public debt averages about £16 per capita, nearly as much as the French, although in paying capacity France far outranks her. Even so, Italy for this sum has provided herself in three decades with the outfit—if I may use the term—of modern civilisation. Her neighbours, richer to start with, have had from fifty to one hundred years in which to get theirs. This represents, further, the debts of the old government, which she swallowed up, and the cost of her wars of liberation in 1859, 1860, and 1866. Free government, even when most economically administered, costs more than despotic, and thus far it has nowhere been economical. Conceding all that pessimists urge against the financial errors of Italy, I cannot, on that account, despair of her future. If financial errors alone could ruin a nation, the United States would have long since perished.

Political education has not kept pace with the needs of the country, and centralisation, which tends everywhere to preserve the form but vitiate the essence of representative government, has been partly responsible for this backwardness. But centralisation could not be dispensed with in the early years, when the planting and nurture of uniform national ideas transcended all other needs. In like manner, the army has been less harmful in Italy than elsewhere. It has served to unite the various provinces not only by making their conscripts recognise the Italian flag as supreme, but by mixing the various elements. It has taught millions to read and write. It has given the Italians, who had been mercenaries or the defenceless subjects of unspeakable tyrants, a requisite sense of personal and national honour, and of devotion to duty. Finally, it has bred discipline in a race which had grown slack and shiftless.

The Socialists, who number many of the best educated, as well as the most earnest, Italians, hold almost the balance of power, and they have by no means reached their full strength. Some of their demands have already been granted in other countries; only their extremists hint at abolishing the monarchy. With proper guidance, they must do a great good in urging on social and economic improvements. They are dangerous in so far as they kindle class hatred or teach the discontented that the causes of their discontent can be removed by summarily sweeping away the army, or the monarchy, or individual ownership of land, or industrial competition. Their true mission in Italy is education, not revolution: for no revolution that they might achieve would last, unless the people were educated to live up (or down) to it. They have perforce resorted to political methods; they have made unholy alliances—witness their tacit league with the Clericals in 1898—which will come back to plague them; and they have not always seemed to work disinterestedly; but among them few believe in violent means, and still fewer plot against Italian unity.

Evidently, in all these respects, Italy has not been the exception which she is usually painted. She has had economic and agrarian problems—offset Sicily, for instance, against Ireland; she has tackled the slum; she has spent wastefully; she has bred dishonest politicians, and she has now to reckon with Socialism—just as her neighbours have.

But in addition to the common burden of the age, Italy has had to bear her special cross — the sleepless, unscrupulous, far-reaching enmity of the Vatican. She has had to hear French and American Catholics threaten to deprive her of her capital, although they would be quick to resent the agitation of Germans or British to hand over Paris or Washington to a foreign hierarch. The strongest proof of the stability of United Italy is the fact that for thirty years she has permitted her arch-enemy to occupy Rome. I venture to think that no other nation would have done this. How long would Prussia tolerate in Berlin a foreign court of similar nature, working day and night to overthrow the Prussian Kingdom? Can one suppose that the English, who used to go into hysterics whenever the late Doctor Pusey added half an inch to the width of his hat brim, would have suffered the Pope himself to dwell in London and to carry on with France and the other Catholic powers intrigues for the restoration of Popery and the Stuarts in Great

Britain? Or would Americans hold hands off from conspirators, lay or clerical, who avowedly plotted at Washington to destroy the republic? Yet Italy has forborne so admirably, as if it were a matter of course, that the world has hardly given her credit for it. Every Papalist speaks proudly of the achievements of Leo XIII., but in so doing he despises the Papal contention that without the temporal power the Pope cannot perform his functions. Equally specious is the claim that, unless the Pope is King at Rome, foreign Catholics may suspect that his policy is adopted under pressure from the Italian Government—as if France, Spain, and Austria had not for centuries exercised in the Conclave the right of vetoing any Cardinal they disliked, who appeared as a candidate for the tiara; and as if, out of the seventy members of the Cardinals' College, a safe majority were not always Italian, to make certain the election of an Italian Pope.

Simply by non-interference Italy has demonstrated the speciousness of all the Papal claims. She has been able to do this because she has no illusions about the Church-Papacy. She never confounds the religious with the secular. She has no fanaticism, no rancour. She knows, moreover, that the Papalists are playing a great game of bluff; she is rather amused than otherwise that foreigners should be taken in by it. If some Papal organ laments the good old times when everybody was happy and prosperous under the Pope's rule, the Italian smiles. The countrymen of Machiavelli are too old in worldly wisdom to grow hot over perfectly obvious political tricks. So long as the Pope, by playing prisoner, can reap millions of lire a year, they are generous enough to admit that he would be a fool not to do so.

How desperate the Vatican has become appeared in the league of Clericals with the Socialists, and, more recently, in Leo XIII.'s *rapprochement* with Prussia—Protestant Prussia—to compensate for the loss of prestige in France. As we live in a period of reaction, it is but natural that the Vatican and Prussia, the two strongholds of mediævalism, should at last clasp hands. So, in the reaction after Waterloo, the Vatican clung to Austria. Furthermore, it is a great mistake to suppose that all Italian ecclesiastics are anti-national; many of them are intensely patriotic, liberal even, and they would never consent to see the nation broken up. The pretence that a great body of Catholics does not vote deceives nobody; because it is known that nearly the same number of votes are cast in municipal elections, in which the Catholics are allowed by the Pope to take part, and in the parliamentary elections, from which the Pope tries to exclude them. Therefore, either the Catholic voters number less than 5 per cent. or they vote against the Pope's order; whichever alternative we take, the claim of the Papalists that if they all went to the polls they would control the country is absurd. As a menace to Italian unity, the question of the restoration of the Pope's temporal power has dwindled almost to nothing.

I have touched on the material and political progress of the kingdom; it would be pleasant to record Italy's attainments in science, literature, and the arts; to speak of Carducci, the only original poet in Europe since Victor Hugo died; of Fogazzaro and Verga and De Amicis, conspicuous in fiction; of Lombroso, Morselli, and Ferri, in psychology; of Villari, in history; of Comparetti and D'Ancona in scholarship; of Ferrari, in sculpture; of Morelli, in the criticism of art; of Marconi, in invention. The generation has been "practical" in Italy, just as it has been here; and yet these names attest that she has not lagged behind her neighbours in the higher pursuits.

Thus the nation, in spite of its local discords and failures, and of the disillusionment as to the speedy regeneration of society which has spread over Europe and America in the last twenty years, has become really united. In Rome, monuments to Cavour and Garibaldi have already been raised, and those to Victor Emmanuel and Mazzini are well advanced. A statue to Giordano Bruno rises on the very spot where he was burned by the Jesuits 300 years ago. "The only tradition we have since 1870," said to me a person who could speak with authority, "is toleration. The King is at the Quirinal, the Pope at the Vatican; the Minister of War is a Jew; members of every church can worship undisturbed in Rome." Nothing can illustrate better than this toleration the spirit of the new Italy. And her new King—a man of sound education, firm will, clear judgment and high sense of duty—must be an important factor in her future progress. Judged by the difficulties she has overcome, the transformation of Italy has been relatively greater than that of any other modern nation. On this fact her well-wishers base their hopes.

# BRITISH AND AMERICAN ADVERTISING

INTERESTING DIFFERENCES IN THE POINTS OF VIEW OF THE TWO COUNTRIES —THE CREATIVE POWER OF PUBLICITY—NOTABLE SUCCESSES—THE MOVEMENT IN ENGLAND FOR MORE ATTRACTIVE AND EFFECTIVE ADVERTISING

BY

HERBERT S. HOUSTON

(OF NEW YORK)

LONDON, *August* 8.

TO offer more than suggestions on advertising in a country that has such great international advertisers as Pears, Liebig, and Lever Brothers would be like undertaking to land cargoes of coal at Newcastle. And although Americans are supposed always to rush in where even angels are fearful I shall try to keep far from the docks on the Tyne. But there are clearly differences between English and American advertising, and they are interesting differences.

In the first place there seems to be a fundamental difference in the way English and American business men look upon advertising. To the former it appears incidental and optional and to the latter absolutely vital and necessary. This may be a superficial view, but it has been forced upon me by the seeming indifference an Englishman often manifests in deciding whether or not he should advertise at all. To the American this is seldom a debatable question. He looks upon advertising as a matter of course. The only question is as to how he can do it most profitably. Advertising is to him one of the most important factors in the modern distribution of commodities. It is the means of communication between seller and buyer, and there is no other means he knows anything about that is so direct or so sure. This is the American view of advertising and it at once reveals the cause of the attractiveness, the unfailing quality of interest and the convincing note of sincerity that mark American advertising. Again and again English advertisers have said to me: "It is astonishing how attractive and interesting your advertising is." The reason is soon found—it is simply because American business men believe in advertising to their finger tips. Naturally they have striven to find the most effective way to advertise, and the present high excellence of American advertising is the result.

The advertising manager of an English magazine told me that the greatest difficulty he contended with was the lack of belief in the real potency of advertising; in a vague sort of way there was a belief that advertising was a good thing, at times, but that it was seldom considered an essential factor in business. This is certainly a radically different view from the one held in America, and it explains, I believe, the difference in quality between English and American advertising. This difference, it is interesting to state, one hears very much more about in England than in America, for America, I am sure, does not claim so much in the quality of its advertising as England freely concedes. But whatever the difference—one can quickly form his own judgment from a comparison of the advertising pages in a few magazines of each country—it is largely due to this difference of view as to the relationship of advertising to business. If a man takes up advertising in the belief that it is a marvellous force with which he can build up his business if he but use it wisely, he is sure to work hard to find that wise use. On the other hand if a man takes up advertising in a perfunctory kind of way, probably because a competitor is doing it, he is not apt to take much pains to find the best advertising for his particular business, for he is not really sure that any advertising is good.

The conservative Englishman—and conservatism is a good thing which we need much of in America—may properly inquire whether, after all, the value of advertising is a fact. And the affirmative reply can be instantly

pointed out in the experience of those who have followed the way of good advertising. Surely every one in England knows that Port Sunlight is built quite as much on advertising as on soap. Cadbury, Pears, Lemco, Fry, Bird, Globe Polish, and many other notable successes can be named in England. In America a directory of successful business enterprises and a directory of advertisers would be practically identical.

A few months ago I had occasion to make a careful study of chocolate-making in America, and the way in which advertising had affected its growth. One of the pioneers in general advertising with us was Walter Baker and Company, chocolate and cocoa makers. In 1860, about the time that this company began its advertising, the United States consumed 1,181,054 pounds of chocolate and cocoa. In 1902 the consumption had grown to 48,785,688 pounds; the stupendous increase of 4030 per cent. in forty-two years. During this same period the population of the country had increased only a little over 151 per cent. Of course it may be too much to claim that this remarkable growth has been entirely due to the progressive policy of advertising followed by the chocolate manufacturers, but that policy has surely had a great deal to do with the growth. Good advertising of a good article is profitable whether in England or America, and in the future it will prove even more profitable, because magazines and weeklies and dailies, the most effective advertising media, are giving to advertisers, through their growing circulation and widening influence, more direct communication with buyers than ever before.

And it is cheering to chronicle that a movement for good advertising, or rather the best advertising, is plainly afoot in both England and America. If English advertisers have not been quite sure that advertising had an essential part to bear in business, they are having their faith quickened, not only by such examples as have been named, but, what is much more to the point, by object-lessons in their own advertising experiences. They are being shown that strong and simple advertisements, which catch the eye and hold it while a short and interesting statement is made, are effective. When a great magazine like the *Strand* starts a department for designing advertisements for its patrons, as it has recently done, and THE WORLD'S WORK supplies trained writers for its industrial supplements, as it has been doing from the beginning, there are clearly better times ahead for English advertising. In this movement the advertising agents are astir and their work is undoubtedly responsible for it in large measure. Still, to one familiar with the initiative and progressive force of American agents, the English agents seem to have been somewhat lacking in generalship in not bringing their clients to see the value of good advertising long ago. But there may have been much of explanation in what an agent said to me in London: "It is a good thing for business men to have traditions—if they can afford them."

A very hopeful sign of the better advertising is the rather amusing endeavour to shift the responsibility for the advertising of the past. Agents will tell you with great positiveness that it is all the fault of publishers in not using better paper and ink and giving better press work. With equal emphasis publishers place the blame with agents and advertisers, saying that they should give more freshness and interest to advertising. As is nearly always the case the responsibility is a divided one. Publishers should have taken better care of advertising on its mechanical side beyond doubt, and agents and advertisers should have done more for its artistic form and its straightforward persuasiveness. But this discussion as to responsibility reveals clearly that those most directly concerned with advertising agree that it has not been all that it should be, and this fact, in itself, forecasts better things. Then, too, thanks largely to the fine example of Mr. Edward Hudson, one of the proprietors of *Country Life*, publishers are learning that good mechanical production is not only a good thing in an artistic way but that it is profitable as well, for it greatly increases the efficiency of advertising, and enlarges, as a sure result, the publisher's income from advertising. THE WORLD'S WORK recognised this when it began, and as much care has been given to printing the advertising as the text pages. These are but signs of a progressive movement that will surely give to advertising the large place in British commercial life that it deserves to occupy.

And this movement will certainly, although quite unconsciously, remove some erroneous views that are now held. For example, the manager of the advertising department of a great magazine said to me that he was convinced that the chief reason for the larger volume of advertising in American newspapers and magazines was the more direct evidence of profit American advertisers had, in letters and inquiries about their advertisements. This

seemed to me an interesting point but I doubted its correctness. Oddly enough the next morning I saw in the *Daily Mail* a fine specimen of American advertising in an announcement from Mr. Seymour Eaton about his Booklovers Library. This was Saturday. On Monday following, Mr. Eaton told me that he had received over 400 replies to the advertisement by Saturday evening and over a thousand more on Monday. Surely the English people were not slow in showing they were "alive" when they were told in a direct and simple way about something which interested them. The experience of the *Times* in its sale of encyclopædias is another case in point. Every one knows of the stupendous results that came from this striking and convincing advertising. The failure to get returns, therefore, is clearly not the fault of the English people but of the advertising. Of course there are many cases where "direct results," as they are called, are of little value. Where they are of value they will be secured by good advertising in England just as they are secured by good advertising in America. This has no reference, I wish to make clear, with what in America is called "mail-order business." That has developed a special type of advertising, fitted to its needs, but it can be of little interest in England, as a mail-order business is not possible here under your postal laws.

The better advertising, moreover, as it spreads may have the effect of convincing non-advertisers that they have been in the wrong way. An American is struck at once, in turning through English publications, with the absence of certain great groups that he had come to look upon as confirmed advertisers the world over. For example, the railway and steamship lines, the publishers and the motor-car makers are large users of general advertising with us in America, while in England they follow entirely different lines. In America the general passenger agent of a railway must be first of all an accomplished advertising man. It would appear to be the view of the English railways that there is just so much travel in the ordinary course of things, and that each line will get its fair share any way. The American railways would not for a moment be satisfied with the travel that is—they eagerly stimulate more travel and still more travel, in an endless progression. Their advertising is in the best sense creative. It has been largely responsible for making the Americans the greatest travellers in the world. The Atlantic steamship companies, especially the German lines, have followed the example of the railroads in extensive advertising of the highest excellence, and every year the British and European railways are beneficiaries to the extent of many thousands of pounds—and still they seem blind to what advertising could do for them if they wisely availed themselves of its creative power.

The same contrast is offered in the methods of English and American publishers as in the railways of the two countries. In England the publisher seems to confine his announcements to the literary weeklies and to a few dailies, seeking evidently to reach only the bookish class. The result is advertising of a very dull and stereotyped sort; it has no "life" in it, and surely it cannot interest the class at whom it is aimed or any one else. In America, publishers, strangely enough, do probably the poorest advertising that is done, yet, like the railroads with travellers, they are not satisfied with the readers there are, but they seek to make new readers. To that end they spread their announcements far beyond the boundaries of the bookish class—always small in every country—and seek, through the great magazines and the most widely circulated dailies, to interest the masses of people in buying books. And they succeed, as is shown in the many books whose circulation runs to a hundred thousand copies, and even half a million—a thing, I am told, practically unheard of in England. It is advertising that does it, creative advertising.

And the motor-car makers in England roll along with the publishers, using class or trade papers in the main, instead of the magazines and general publications which reach the great public. It is safe to say, I am sure, that automobile makers in America spend twenty, probably thirty pounds in general publications, to one pound in trade papers. They say that they want to secure the widest possible publicity for motor-cars, not only for present but for future sales, and also because wider knowledge of motors creates a more favourable sentiment towards them, lessens the probability of harsh restrictions, and gradually educates the public to the stage of buying.

But comparisons or contrasts only serve to show, after all, that open-minded business men both in Great Britain and America are working, in their own way, for better advertising. And with the men who dominate the commercial life of the two greatest commercial countries in the world working to a common end this result is sure—advertising will become the most potent business force of the century.

# MODERN METHODS OF SAVING SHIPS

NEW INVENTIONS HAVE SIMPLIFIED AND MADE SUCCESSFUL MANY A "WRECKING" OPERATION—OLD METHODS AS CONTRASTED WITH THE NEW —STRIKING RESCUES OF SHIPS, AND HOW THEY WERE DONE

BY

MORGAN ROBERTSON

A BRIGHT lantern, elevated above the water at the end of a long pole, and given a slow right and left movement across the wind, would look on a dark night very much like the riding-light of a craft rolling at anchor; and strange vessels seeking port and good holding-ground, would head toward the light. When they struck the bottom and became, under the law of custom and precedent, "wrecked," they became the perquisites of the discoverers — always the men that manipulated the lantern—stout-hearted, strong-limbed fellows, able to enforce their rights against the protests of misguided mariners.

That was old-time wrecking. To-day it is a business that requires integrity and ability, big central offices with long-distance telephones, big tugs and tow-lines, and a complete equipment of diving apparatus, pumps, pontoons, and derricks, with a force of men trained for years in this peculiar work.

Perhaps the best known of these shore pirates inhabit Nassau, the Bahamas, and the Florida Reef. There every fisherman, sponger, or beachcomber—"conchs," they are called—who owns or can lease a boat of any size, takes out a wrecker's licence. Let a vessel but strike a reef, and up will come the wreckers by the dozen to wait in a circle, like vultures, while the anxious officers and men strive. Not a conch among them can be prevailed upon to work, even at the highest wage. When hope is given up—when, with a gale coming on, the sore-hearted captain decides to abandon and save the lives of his crew, no sooner does his boat leave the side than there is a rush of the wreckers; and the first one aboard has the legal right to salve the ship and cargo.

The simple-mindedness of these people militates against them. If they would combine instead of competing, many a ship and cargo could be saved to the owners or underwriters, and their ultimate reward would be heavier; for the "chance of loot" is little compared with the certainty of salvage. So certain and so generous is this salvage that wreckers of larger growth and knowledge of law—the wrecking companies of the seaports—on learning that a ship is in trouble will rush their tugs and equipment to the spot, and labour, often against the wishes of the ship's officers, who may think they need no help. But a bargain is made if possible for a sum greater than would be the award of the courts, and this, if contested later, need only give way to the always certain salvage. The wrecking companies also respect the unwritten law of the craft, and the first tug to get a line to a stranded ship, or an anchor down near a sunken craft, has first rights.

Wrecking has two distinct phases — the pulling of stranded craft from the beach and the raising of sunken craft from the bottom. Another and new method, the salving of cargoes with submarine boats, is not generally used, though a man named Simon Lake, with a genius for keeping out of print and a very practical submarine boat of his own invention, has been nosing around under water for the last three or four years in American waters, and getting rich on his findings. Wrecking has to do with the reclaiming of wrecks, not of cargoes.

When a ship goes ashore she lies broadside on and punches holes in herself or strains her planking, so as to fill with water up to the outside level. If she does not, the divers are saved the work of patching and pumping her; but when they have made her tight, the floating of her is merely a question of a long, strong pull of tug, capstan, or windlass. Tugs are tried at first. Tugs, in fact, finally sufficed to save the great Atlantic liner *City of Paris*, perhaps the most famous of recent salving records on these shores. Considering the size of the ship saved and the unexpected success obtained, it is likely to remain notable for years to come. The *Paris*

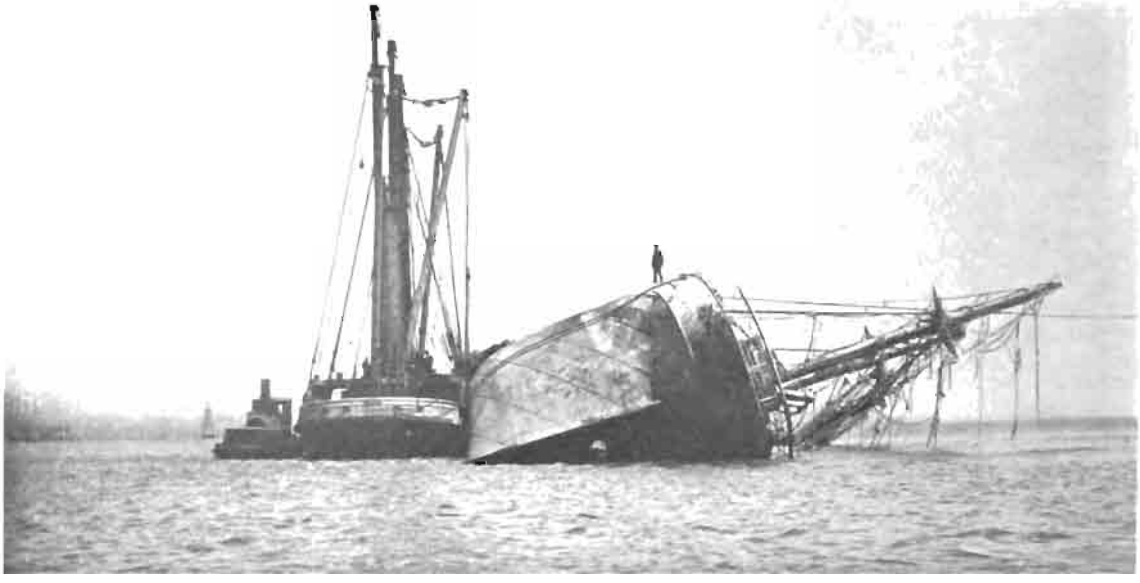
W. M. Harrison, Falmouth

THE STEAMSHIP "PARIS" ON THE ROCKS

THE BOW OF THE UNFORTUNATE "UMATILLA"
Perched in Esquimault Harbour, British Columbia

was one of the old Inman boats which, with its sister ship the *New York*, was taken over by the American Line, and in view of the construction at Philadelphia of the *St. Louis* and *St. Paul*, was given an American register despite their British origin. After an excellent record as a cruiser in the Spanish-American war she resumed her passenger service across the Atlantic. Early on the morning of May 21, 1899, on her outward voyage from Southampton, she went many miles out of her course in a fog and landed badly placed on the Manacle Rocks. There were, with passengers and crew, more than 750 souls on board. Daylight showed how narrowly she had escaped the fate of the *Mohegan*, and the general opinion of those who saw her was that her owners should congratulate themselves on having landed all the passengers, and that the ship might well be given up for lost, so deeply had she ground her way into the reef and so serious seemed the damage to her bottom. But the company never relaxed their efforts at salving her, even though as time went on many failures seemed to confirm the general opinion expressed at first, and although several different salvage companies were employed in turn.

Her captain had been almost immediately



THE WRECK OF THE "BLAIRMORE"
Pushed into shallow water after coming to the surface in San Francisco Harbour

found guilty of negligence by the American authorities and his certificate suspended for two years. The beginning of July found the high walls of the great ship still towering above the Cornish rocks, and so very much weather-beaten and stripped of every vestige of her usual smart appearance as to make all hope of saving her seem more remote than ever. Divers had been at work for months blasting away rock to reach the injured parts under her boiler and to patch them up in order that she might be safely floated. In view of her position a small army of men was engaged in dumping tons and tons of stone into the stern in order to tilt her in readiness for the high tide. This work went on for seven weeks. Then quite unexpectedly to those at work upon her, while slewing the liner in order to give the divers better access to the injured parts, she was found to be so free that three tugs moved her several hundred feet, and eventually got her free of the rocks altogether. There remained a strong list to starboard, but her pumps were able to cope with this, and the same day she was successfully towed into Falmouth Harbour, eight miles away, that is, on the night of July 11. After this it was only a question of time, when, entirely renovated and rechristened the *Philadelphia*, she took up again successfully her old trans-Atlantic journeys.

THE "POTRIMPOS"
Wrecked in the breakers off North Beach, Washington

It was from these dreaded Manacles that the fine four-master *Clan Graham* had such a narrow escape in February last. It is not often that a ship is lucky enough to be towed off these rocks into Falmouth Harbour practically uninjured, for nearly every vessel stranding on the Lowlands becomes a total wreck. The *Clan Graham* struck in very thick weather, with the wind blowing a terrific gale, on the night of Friday, February 20, just twenty minutes after having signalled "All well" to the Lizard. That she was refloated next morning in the still very rough weather was a feat greatly to the credit of the local salving forces, for if she had remained there only a few hours longer she would surely have been dashed to pieces in a short

THE SCHOONER "MINNIE E. CAINE" ASHORE

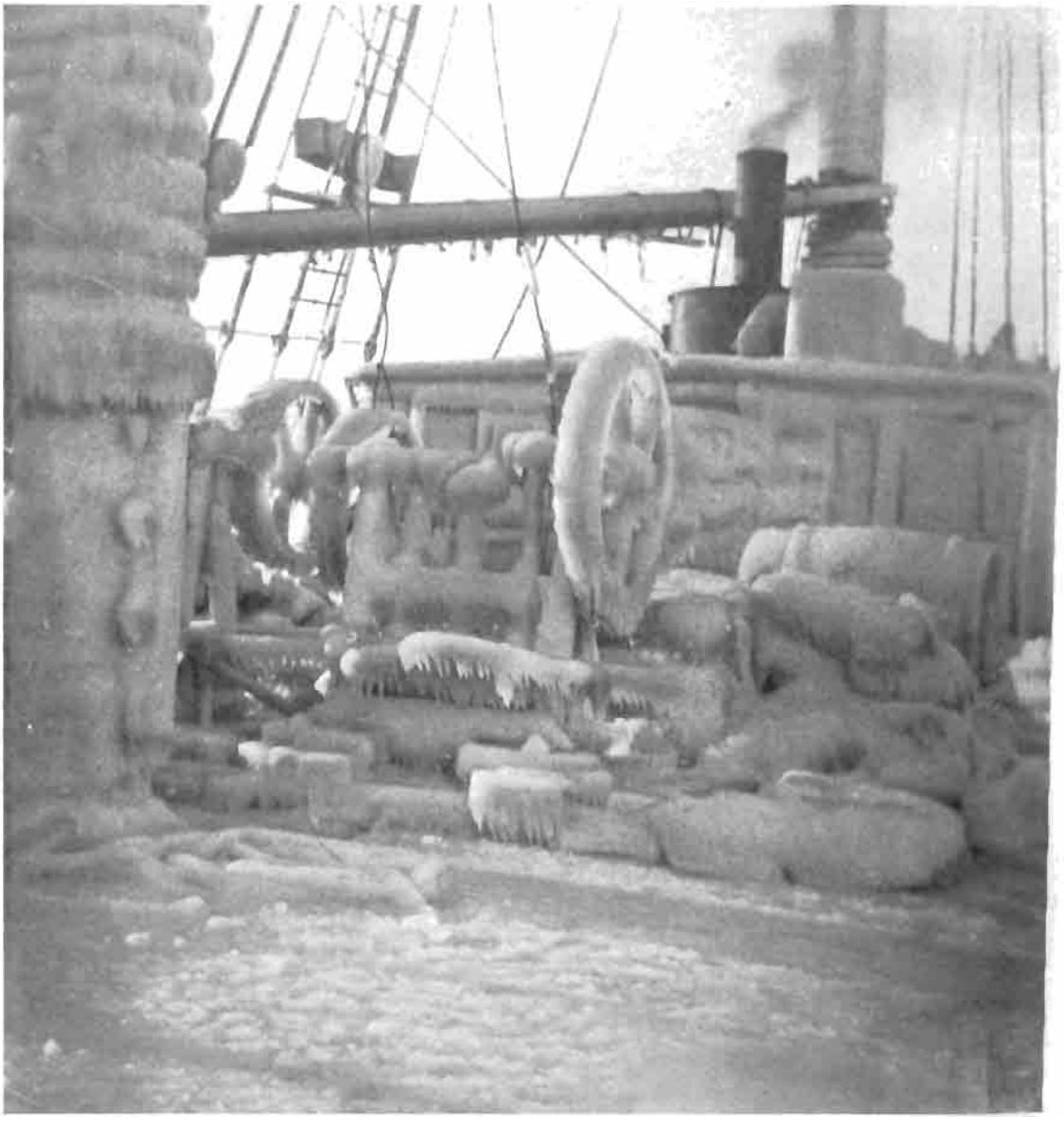
time by the Atlantic rollers—the fate of the *Glenbervie*, which went ashore at the same place some months before.

The salvers of British North America are among the most famous in the world, particularly those who have to deal with the treacherous Pacific coast of British Columbia. Six tugs recently dragged the *Kilbrannan* ashore in Puget Sound, on a beach nearly as flat as a floor, into deep water. But in heavier effort, when six tugs, or as many as the ship has bitts and masts to fasten to, cannot pull her afloat, advantage is taken of elasticity and buoyancy. There is a trick known to teamsters and horsemen on which bets and reputations for strength have been won, which illustrates this. A moderately

WRECKERS RAISING THE "UMATILLA"

Showing the coffer-dam at work

strong man may brace his chest against a tree and, extending his arms at full length, grasp the whippletree of a team of horses. Provided that his grip is not loosened by the first plunge of the animals, they may tug with all their strength and not tear that whippletree from his hands; but if the whippletree be extended at the end of a long, elastic rope, they could not only drag his arms from their sockets, but might pull the tree down if his arms and his grip and the rope were strong enough. A tug may not be able to drag a heavy weight from a dock if it is attached by a chain, but if a long hawser be substituted the tug stores up in it the momentum of her mass during the time she is stretching it, and this, acting with her undiminished pull at the moment the stretching ceases, will jerk the anchor into the air. In this way the ponderous ship is dragged down the sand toward deeper water; and it matters little at which end of the elastic cable the power is applied. In the case of a large craft—a steamer, for instance,



ICE-BOUND

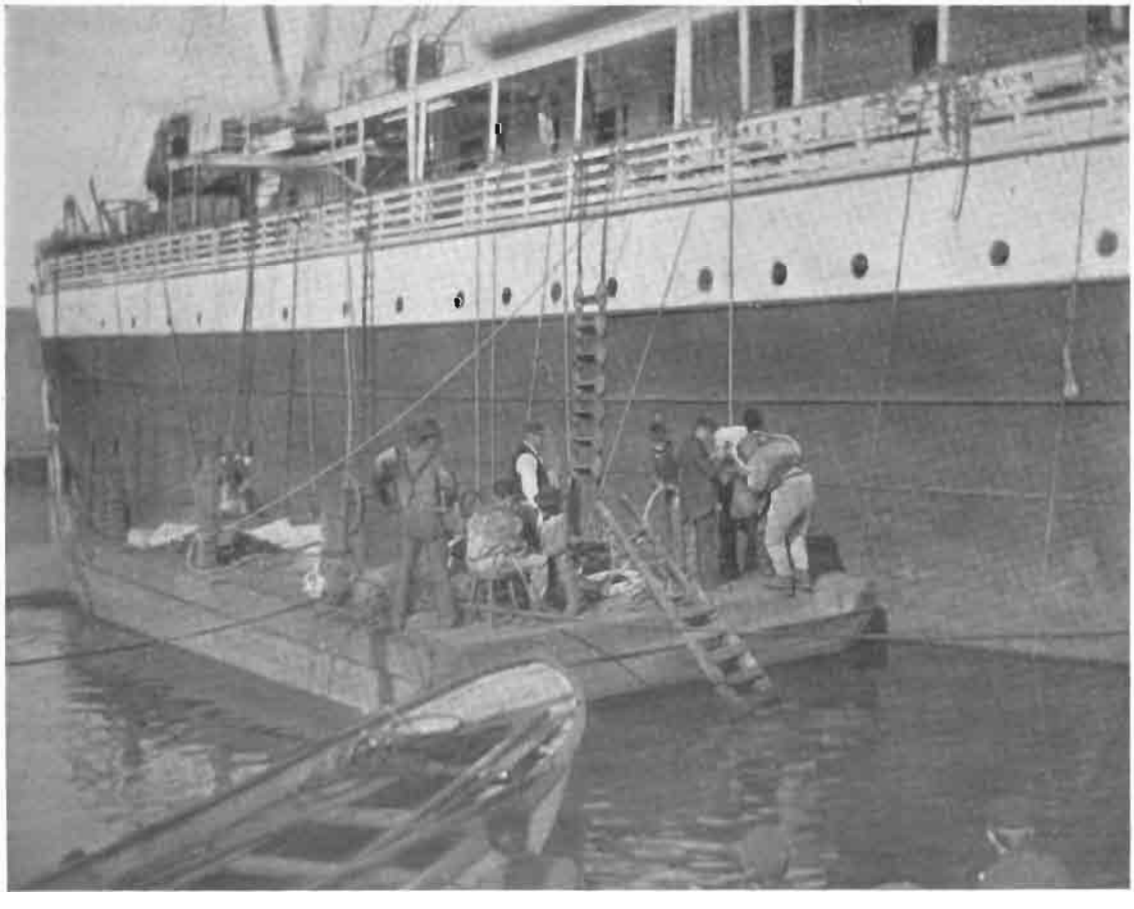
The wrecking operations on the *Minnie E. Caine* hindered by the freezing of the apparatus

thrown high on the beach and imbedded in the sand, too heavy a drag for tugs and tow-lines—four large anchors, each nearly four tons in weight, will be carried out and dropped with cables of 200 fathoms' length and fifteen inch circumference leading into the ship. Four powerful tugs might drag on these four cables until they parted; a strain could be put upon them from the ship that would part them or drag the anchors home without budging the wreck an inch. The fifteen-inch cables must be tautened, at first with capstans and winches, then by tackles and luffs. The power that can be gained is enormous—sufficient to tear out the sides of the ship. But the cables must be considered; their elasticity, which is about thirty feet to the 200 fathoms, must not be destroyed. But if they are tautened to moderately near a straight line the wreckers may wait for the aid of the sea.

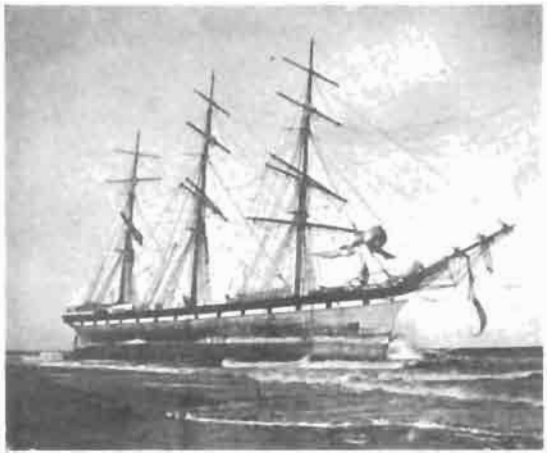
STEAMSHIP "WILLIAMETTE" ASHORE AT UNION, BRITISH COLUMBIA

Its bow was lifted from the ledge by logs running through the hull and resting upon scows

If the ship has gone on at low tide, moderate waves and a high tide will suffice to lift her, but if at high tide, nothing but a storm nearly as severe as that which threw her ashore will



DIVERS AT WORK PATCHING THE HULL OF A VESSEL



SHIP "KILBRANNAN" ASHORE IN PUGET SOUND

furnish seas heavy enough; and often the wreckers must wait for the spring tides.

A sea that will lift a stranded ship will first break over her, and when at last she quivers and "goes the cables," she comes down with a shock that seems to start every spike and bolt in her framework. But after each jump seaward the cables are tightened, and little by little—it may take two, three, or a dozen tides—the ship hitches down toward deep water until she floats. An experience on the beach ages a craft more than a score of storms at sea; every plank and frame has been twisted a little; every bolt and spike is looser. And in an iron ship no one can tell how many rivets are half sheared through.

Sometimes a ship can be pushed instead of pulled into deep water. This operation occurred in the case of the big four-mast schooner, *Minnie E. Caine*, ashore on the precipitous beach of Smith Island, in Puget Sound. A row of hydraulic jacks arranged along her side moved her the short distance necessary to float her.

A craft caught in a quicksand is usually a total loss, though a coffer-dam sometimes saves her. If a tight ship, a corked bottle, or a swimming man gets into the grip of a quicksand it (or he) will be sucked down until solid bottom is reached or the quicksand solidifies; and inertia and friction hold it there. A quicksand wrecked the big ship *Glenmorag*, which ran ashore near the mouth of the Columbia River in the winter of 1896–97. The wreckers pulled her off, but carelessly allowed her to touch a soft spot, and she is there now.

It is often necessary to lighten a ship of cargo and ballast in order to float her, and this brings an additional danger: she may capsize when water-borne. The German bark, *Potrimpos*, which grounded at high tide near where the *Glenmorag* piled up, and which made much work for the wreckers thereby, undid the whole by toppling over immediately the support of the sand was taken from her. She filled and sank in the surf. Yet there was not a leak in her.

No method of raising sunken craft is of use for a depth greater than twenty-five fathoms—the limit of diving operations. Within this limit a small craft can be lifted, cargo and all, by a derrick scow until her deck openings are out of water; then she can be patched by the divers and pumped out on the spot; or, half submerged, she may be towed in her slings to a dry dock and there repaired. But a big craft is too heavy to lift with derricks. Pontoons are employed in most cases, though when a ship can be patched and sealed up by the divers, and wind, tide, and sea are easy and favourable, she may be raised by her own buoyancy. The English ship, *Blairmore*, which capsized and sank in San Francisco Harbour, was raised in this manner. She came up on her side and was righted later by skilful grounding.

One successful trick in the trade, when the craft is not too large, and when the deck can be sealed but not the leak in the bottom, is to pump in compressed air, which, of course, forces the water out. But a craft rising from the bottom of her own volition is apt to be erratic in her movements; she may turn over as she comes, or may come like a bubble and upset the helpful wrecking craft above her.

But, all in all, pontoons are the main reliance of wreckers in raising sunken craft. They are

"RESURRECTED"

A vessel coming to the surface after being pumped out by wreckers

THE SHIP "BLAIRMORE" BEING RAISED

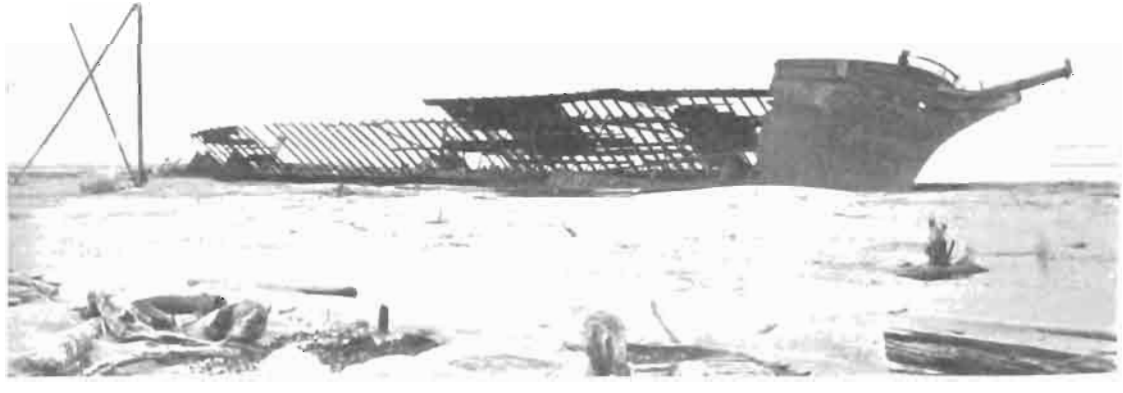
COLUMBIA RIVER LIGHTSHIP EN ROUTE FROM PACIFIC OCEAN TO BAKER'S BAY

The ship was taken about a mile through the woods

strongly built, scow-like hulks, submergible, with pumps to empty them, and wells from the deck down into which lead the heavy chains by which wrecks are lifted. Two pontoons at least are required, and the chains pass down the wells of one, under the bottom of the wreck and up through the wells of the other. They are tautened at low tide with the pontoons full of water, and made fast. Then, from the rising of the tide and the lifting power of the pontoons as the water is pumped out, the wreck leaves the bottom. At high tide, and with the pontoons empty of water, it is towed into shallower water until it grounds; then with the going down of the tide the pontoons are again flooded, the slack of the chains taken up, and the operation is repeated. By-and-by the receding tide will expose the leak or bring it within reach, and when it is plugged or patched the wreck may float of its own buoyancy. But it requires months of hard work. Pumps may break down, pontoons leak, chains part, anchors drag, or drifting and unmanageable craft may crash into the outfit at the last moment and the work of weeks must be done over again.

Where the tides are high, as they are here and in Canadian waters, pontoons need not be emptied and pumped out. They are merely an aid to the lifting power of an ordinary tide, and a good substitute where there is no tide at all. The Thames Conservancy seldom needs submergible pontoons, "camels," as they are called.

The wrecker's life is full of danger and daring, with rush of storms and high tides, with the blow of the salt sea in his face, trusting his life to swaying ropes and the worn windlass, and through it all governing and mastering the sea. His work, in its application of modern invention, is a new evidence of growing human control over natural forces.



THE LAST STAGE—DISMANTLING AN OBSTINATE WRECK

Gleaning on the beach near the mouth of the Columbia River

# OXYGEN AND LIFE

HOW CONSUMPTIVE PATIENTS ARE TREATED AT THE OXYGEN HOSPITAL—MAKING AND BREATHING OZONE—AN ALPINE CURE IN THE HEART OF LONDON

BY

C. W. SALEEBY, M.B., CH.B.

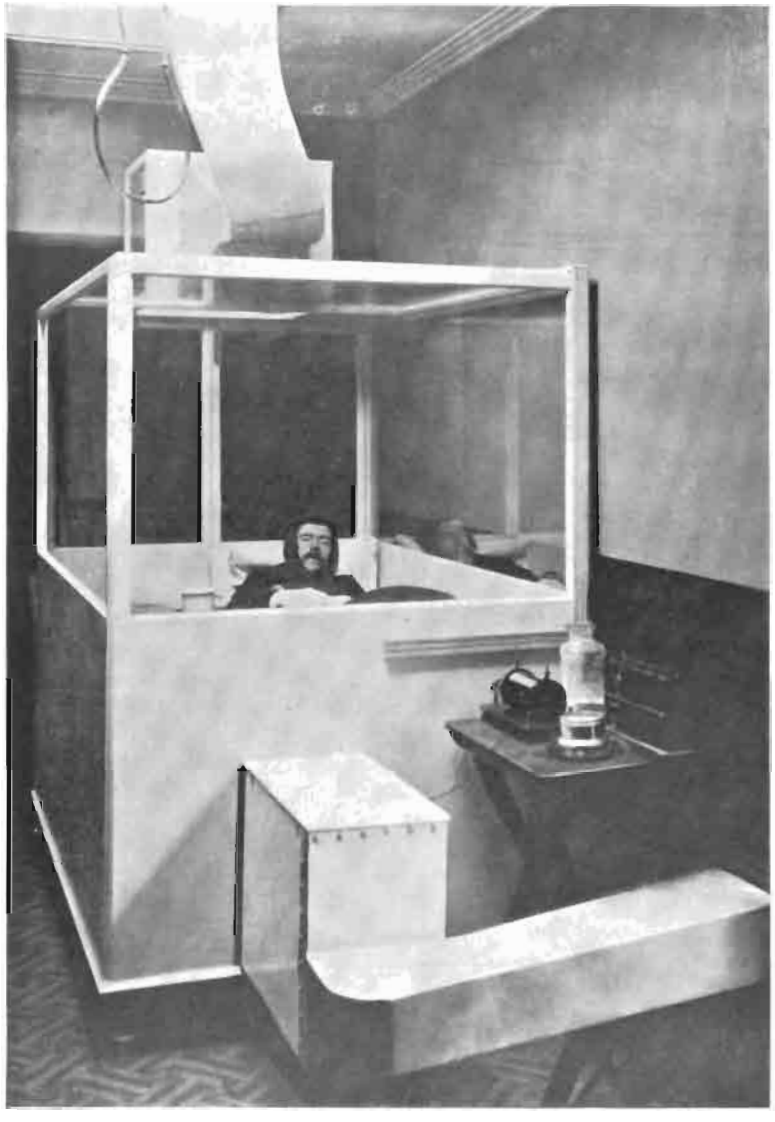
EVERY living thing—an oak and an acorn, a man or a microbe—needs oxygen for its life. Only in so far as it burns does it live, and that it may burn oxygen is essential. There are no exceptions to this absolute rule. Long ago Pasteur discovered some microbes which could not live in presence of free oxygen, and he named them *anærobic*. Even these, however, live by obtaining oxygen from its compounds, splitting them up in the process. It is plain, therefore, that varying quantities of oxygen, and under varying conditions, are necessary for various kinds of living things. Man lives in an atmosphere which consists of one part of free oxygen in five. The other four parts are almost entirely constituted by the inert gas called nitrogen. Were the atmosphere all oxygen we should burn away too quickly—should live too fast—and the nitrogen is therefore valuable as a diluent. This fact has been well brought out by Jules Verne, in his story of Dr. Ox and his servant, Ygene. In disease, however, the circumstances are changed, and oxygen is now constantly used as a stimulant in pneumonia and other conditions.

At the Oxygen Hospital, Fitzroy Square, of which Princess Louise is the distinguished patroness, Dr. Stoker is now carrying these principles into practice. His cases may roughly be divided into two very different classes—ulcers and consumption. Success has also been obtained in cases of lupus, due to the tubercle bacillus, as is consumption, but consequent on its invasion not of the lungs but the skin. It could hardly be possible, however, to surpass the success attained by the Finsen light in the treatment of lupus. I will confine myself, therefore, to the cases of ulcer, some of which have been healed after twenty years or more of other treatment, and to those of consumption or phthisis.

The patient with an intractable ulcer—usually on the leg, where the circulation is difficult—has the damaged limb placed in an air-tight metal box with a glass top, through which its condition can be observed. A piece of tightly fitting india-rubber serves to close the opening through which the limb enters. A tube conveys a mixture of oxygen and air into the box. When first an ulcer comes under treatment pure oxygen is used. The effect of such a strength is probably, I should fancy, rapidly to burn up or oxidise and destroy the microbes then present. Thereafter, when the ulcer is aseptic or sterile (germ-free, that is), the percentage of oxygen is reduced. Its action now is probably to stimulate the minute cells of healthy skin at the edge of the ulcer, so that they may rapidly multiply and cover over the denuded area. At night a simple linen dressing is employed, but during the day no dressing or application whatever. The hospital has now been in existence for eight years, and the technique described may be taken as established. Amongst other merits it has that of simplicity.

Even more interesting—as also more recent—are the little plate-glass cubicles for patients suffering from the most deadly and important of all diseases, consumption, phthisis, or pulmonary tuberculosis. This method of treatment has now been in use for three years, and may be said to have passed the experimental stage. The cubicles are seven feet long, five feet wide, and seven feet high, containing room for a bed, a table, and a nurse. They are, of course, air-tight, all the air used by the patient entering through a wide pipe in one wall near the floor. Before the air reaches the patient, however, it has been subjected to two processes which make it a very different thing from the usual London article that it was before. The untreated air of the metropolis is air *plus* several things. Of these, the most important are tubercle bacilli, derived from the expectoration of consumptive persons, various other germs of greater or less importance, and myriads of particles of dust, including organic matter derived from the excrement of the too-slowly disappearing horse. That these particles affect the lungs

is well shown in three specimens that lie side by side in the Anatomical Museum of Edinburgh University. One is that of an Eskimo and, the red blood of life having left it, is pearly white; the third is that of a coal-miner and is coal-black. The intermediate one is that of a town-dweller and is dirty-grey. Now the air admitted to these cubicles at the Oxygen Hospital has first to pass through a cheap, efficient, and simple filter of cotton-wool. This frees it entirely from any and every solid particle and allows nothing but the pure gas to pass through. Next the air encounters a layer of calcium chloride, a salt keenly avid of water, and used by chemists whenever they wish absolutely to dry a gas. The air admitted to the patient has therefore all the Alpine qualities, in that it is entirely free from solid particles, and is absolutely dry.



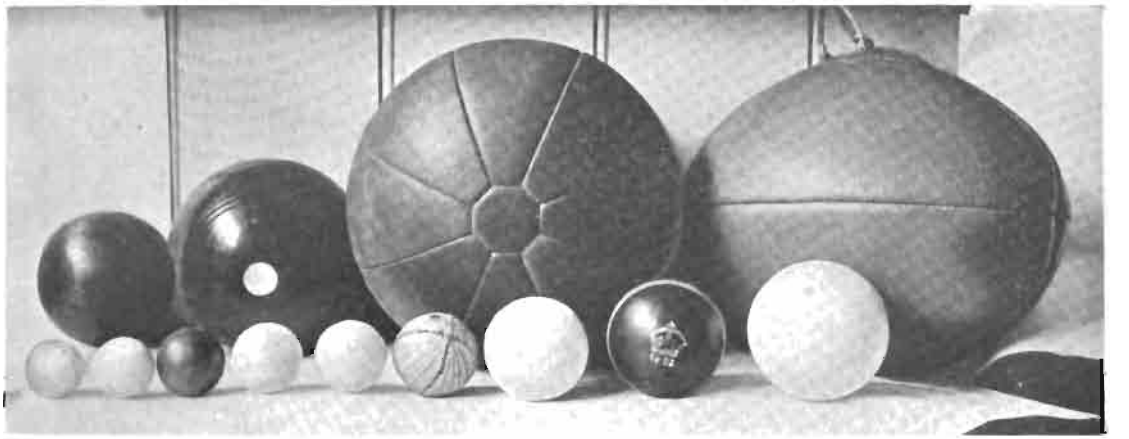
A PATIENT IN HIS CUBICLE

A constant supply is kept up by an electric fan which removes it through an aperture in the roof, and which can be made to work at any speed desired. Nor is this all. Oxygen, as most of us know, consists, like most gases, of molecules, in which the atoms go about in pairs. Its formula is therefore $O_2$. But the same element also exists in another form in pure air, a form in which the atoms go about in threes. It is called ozone, and its formula is $O_3$. It is formed by discharges of lightning and atmospheric electricity, and by some other conditions; but its quantity in town air, especially in the daytime, is practically *nil*. In the Alps, of course, ozone is more abundant, and its *rôle* is beneficent in that it tends to oxidise and thereby render harmless the organic products of diseased lungs. Now in this cubicle at the Oxygen Hospital is a clock which is ingeniously connected with an electric battery, so that for five minutes in each quarter of an hour electric discharges are made to pass through the incoming air, and thereby generate ozone, of which the patient's lungs get the advantage. The likeness to Alpine air is thus complete, whilst the expense is much reduced.

The principles of treatment at this admirable institution in Fitzroy Square may be applied in degree by many who cannot avail themselves of its advantages. It has only thirty-three beds and very few cubicles; whilst a patient dies of consumption in London probably about every three-quarters of an hour.

THE BALLS USED IN VARIOUS GAMES

Showing the differences in size from racquets up to Rugby football

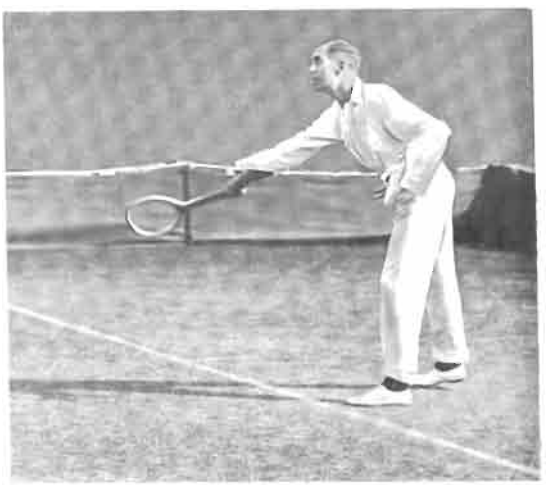


# THE WORLD'S PLAY

## X.—BALL GAMES

ORIGIN AND PHILOSOPHY OF THE BALL—THREE FAMILIES OF GAMES—HAND-FIVES, BAT-FIVES, AND REAL TENNIS — DEVELOPMENT OF THE GAME IN FRANCE AND ENGLAND — RISE OF LAWN-TENNIS — GOLF — RACQUETS—IMPLEMENTS USED IN BALL GAMES — JOHN ROBERTS, EUSTACE MILES, DOHERTY, AND MISS DOUGLASS

IF one thing could be picked out which has contributed more than anything else to the pleasures, the pastimes, and the sports of mankind, it would be the Ball. There are forms of exercise and forms of amusement which claim a large place in modern social history without depending on the ball at all for their attraction. But if we consider either length of time or area of enjoyment there is nothing else that can compare with it. Old age itself cannot materially diminish the happiness it bestows, for when we can no longer play ourselves we have reached the years when our keenest enjoyment is the appreciation—or the criticism—of another's skill. There is perhaps some reason, far deeper beneath the surface than we usually look, which may explain the antiquity, the persistence of type, and the infinite variety of games based on the ball; for from a cell we were born; upon a sphere we live our lives; and the phenomena of our universe have hitherto been solely explicable by that type of infinity which is the circle, in all its million differences of size, of arrangement, and of growth. The rounded pebbles of the shore, the shapes of fruit, and seeds, each may in turn have provided the



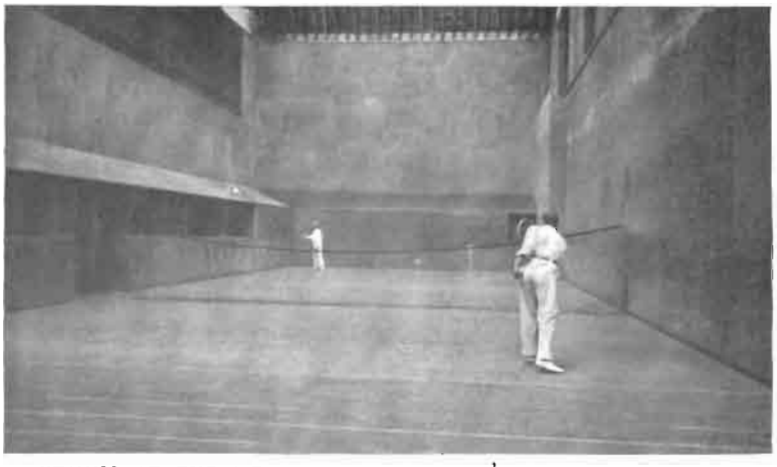
F. L. RISELEY

A famous lawn-tennis player

By courtesy of Eustace Miles

PREPARING FOR A FOREHAND STROKE AT RUGBY FIVES

WAITING FOR THE SERVICE AT RACQUETS



TENNIS AT THE NEW COURT, BURRELL'S WALK, CAMBRIDGE

The ball has been served upon the penthouse and the marker is going to volley it

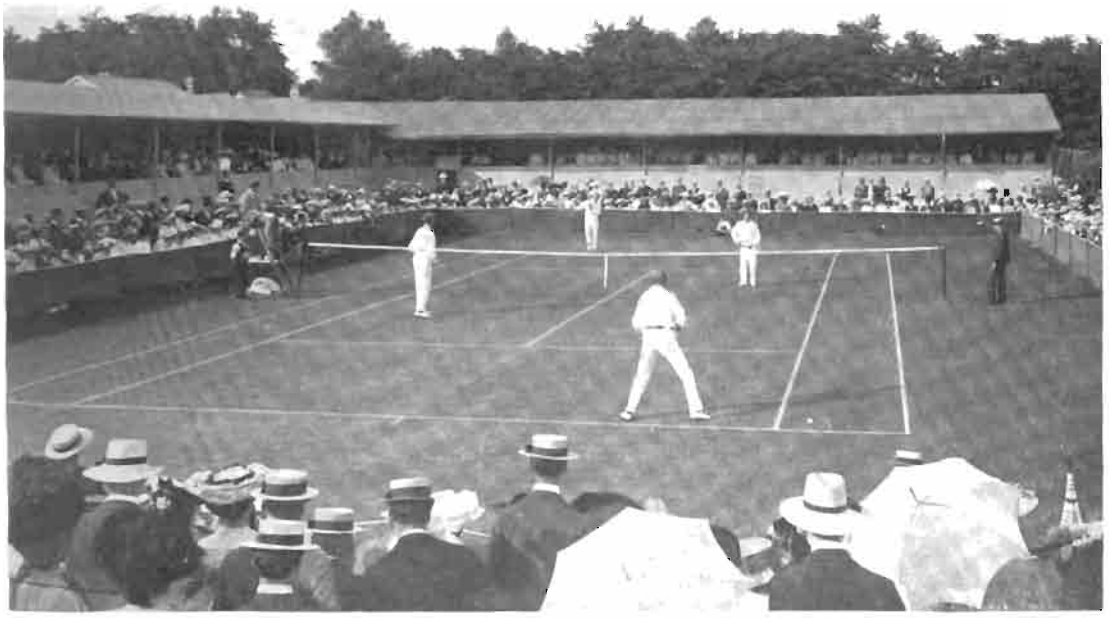
prehistoric child with his primæval plaything, or the palæolithic warrior with a missile for his sling. In any case the ball is firmly established as a factor in human amusement in the earliest human records. Whether Homer or the Old Testament be the earlier document it is not my province to discuss. But Isaiah must have been sure of his simile being understood when he wrote: "He will surely turn and toss thee like a ball"; and the writer of the *Odyssey* appealed to a sympathetic audience when he described how "the maidens and the princess fell to playing at ball" in Scheria, that far-off land of the Phæacians, washed by the utmost tides of ocean.

All early ball games were naturally rather undefined, and it was only as skill was developed along certain lines that the specialisation arose which has resulted in our modern multiplicity. The photograph I reproduce of some (only) of the very various balls which the famous firm of Lillywhite have to keep in stock will show better than anything else how many differences from the simple type have now arisen. Only one of these "balls," it will be noticed, is not round—that used for Rugby football, and this is strange, because the free use of a ball with hands and feet is certainly the earliest form in the history of these games. The perfectly rounded sphere used in the Association game still retains the ancient simplicity of play, without any implement, with a ball of the same

weight (14 ounces), but the refinement of forbidding the use of the hands is now introduced. When the ball is made so much heavier for its size that it can scarcely leave the ground, the reverse restriction appears—for in lawn-bowls you may use only the hands. In all these three cases the sphere is too large for the useful employment of anything but hands or feet, or both. Directly an implement is added the ball decreases in size, and you get three varieties: hockey, played with a cricket-ball, $9\frac{1}{8}$ inches in circumference and weighing $5\frac{5}{8}$ ounces; polo, with a ball whose diameter is $3\frac{1}{2}$ inches, made of light willow; and lacrosse, with a ball measuring $2\frac{3}{4}$ inches in diameter, of solid sponge rubber, and lighter still. Hitherto we have found that whether an implement is used or not, only one ball is employed, and the players all use the same means to propel it, though divided into opposing sides, which have to attack or defend according to the momentary exigencies of play. It is not until more than one ball is used in the same game that greater accuracy becomes necessary. And if the accuracy needed in bowls, golf, and croquet bears a certain relation to the weight of the ball and the area of play, these two causes produce the highest effect of all in billiards, in which the three balls, with a diameter of only $2\frac{1}{16}$ inches, each weigh no less than $4\frac{2}{3}$ ounces, and are manœuvred on a very

MR. EUSTACE MILES AT TENNIS

Ready to volley in order to defend the Dedans (the "Winning Opening" behind him, where the spectators generally sit)



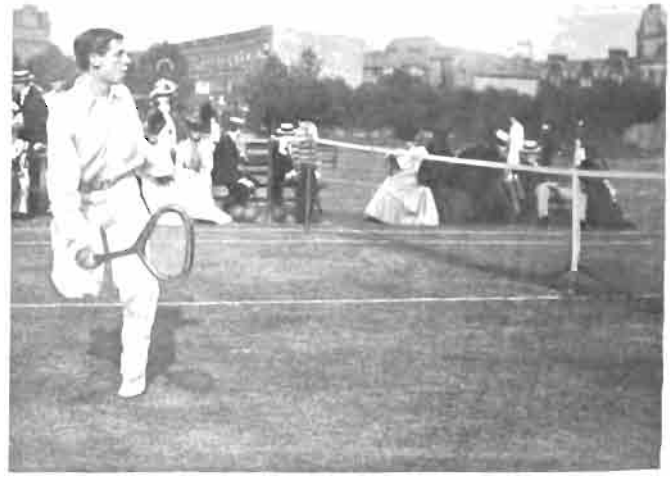
THE LAWN-TENNIS CHAMPIONSHIP MEETING AT WIMBLEDON, 1903

The Dohertys v. Smith and Riseley

R. F. AND H L DOHERTY

small space indeed. When, again, we reach the idea of the attack being different from the defence, we get a new family of ball games altogether, beginning with rounders, in which one player throws a ball towards another, who hits it away with an implement made for the purpose. From rounders two great games descended. The Americans, who love fast play, and have no time to waste, developed the attack, and produced baseball, in which the art of manipulating a sphere with the hand and arm alone has reached its highest point. The English, preferring the more passive pleasures of prolonged defence, developed the batting, and produced cricket. The last great family of ball games—the family to which I desire particularly to draw attention here—originated with the use of the simple ball alone, as soon as the player thought of saving himself the trouble of getting a partner by throwing his ball against a wall and letting it come back to him.

No doubt, the earliest form of game produced by throwing a ball against a wall was hand-fives, and the first difficulties were mainly architectural in origin, as in the case of the Eton boys who played in the space between their chapel-buttresses. The use of a glove to protect the hand was an obvious development, and this soon grew into a rough implement for hitting a harder ball, and we get bat-fives. Both these games are still popular at all our schools. The use of "hazards" in the wall suggested by the Eton buttresses was followed by similar natural hazards in the surface of the area of play, which were soon to become the chases of a tennis-court. But the crucial point in the whole history was the introduction of a cord, or net, at some distance from the end-wall. This had several important results. The primitive end-wall itself, often possessing buttresses, had almost spontaneously developed into three walls. When a net was once in position, it was soon realised that each side of the net must be made the same, and the quadrangle of four walls was the result. A roof came later, with increasing luxury. The first glove, and the first fives-bat, together suggested the first racquet, with its face of crossed gut, which put a spin on the ball besides hitting it hard; and tennis, the royal ball game, soon appeared. This was developed in turn, curiously enough, in two very different directions. One reformer took away the net, and began to play racquets with a hard, fast ball, or squash-racquets with a soft and slow one, reducing the expense of his building by making every wall of as even and true a surface as the floor. Another



H. L. DOHERTY AT THE NET

A. W. GORE

J. G. RITCHIE PLAYING BACK

MAHONY SERVING

The old rule : one foot on the line

MISS DOUGLASS

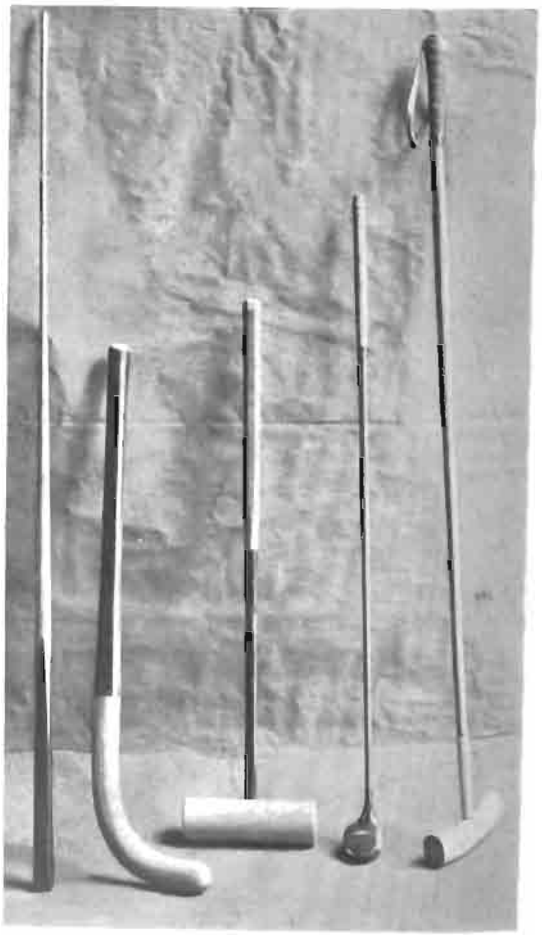
The lady champion at lawn-tennis. Observe the new position in serving

A BACKHAND STROKE AT SQUASH-RACQUETS

reformer took away the walls, but left the net, thus transporting the old game out of doors again, and producing lawn-tennis, the form in which most people know the real, and far more costly, pastime.

However we may have outrun our masters now, we must acknowledge that it was the French who taught us tennis first, though earlier mention of it can be found in English literature than is usually supposed, for, as early as 1365, Edward III. had to discriminate against handball and football as games for the people in favour of archery. A knowledge of real tennis with a racquet can also be confidently stated in the fourteenth century in England; but the hand-origin of the game was long preserved in its French name, "La paume," "*longue* paume" being handball out of doors, and "*courte* paume" (whence our Court) being the word for the indoor game with a net and racquets.

In London there were fourteen courts in 1605. Now there are only those at Lord's (one), Prince's (two), and Queen's (two). Cambridge also rejoices in two courts, the earliest known there being dated 1637 by the fact that Dr. Worthington had a "dangerous blow on the eye" there. At the same time there were no fewer than one hundred and fourteen courts in Paris. Now, in all France, there are but two in the Tuileries, one at Fontainebleau, the historic court at Versailles, one at Deauville, and one at Pau. The court at Cannes has been pulled down. In England we have twenty-three private courts and eleven club-courts, and there may be a very few more of which I have never heard. One of the most interesting re-openings of an ancient court was that of the beautiful building at Falkland Palace by Sir Edward Grey. This was no doubt used in the time of Mary Queen of Scots; and no better example could be given of the quiet persistence with which our best players have stuck to a good game long after its inventors had grown tired of it. It was only in 1866 that the old tennis-court in the Haymarket was pulled down. So



IMPLEMENTS USED IN VARIOUS BALL GAMES

Billiards, hockey, croquet, golf, polo

Lillywhite's shop stands near hallowed ground, for that old court was built in 1635; and Pepys describes Charles II. playing on the new court which extended over Lord Sandwich's garden at Whitehall. In the Haymarket building Barcellon of Paris beat "Mr. Cox of London" for a match for a hundred guineas. The stone floor had been brought from Germany, and was particularly well polished and quick in play. When it was bought by Lord Warwick, at the demolition, it was found that the feet of over two centuries of players had worn it so thin that nearly every stone cracked in the raising. In 1838 Mr. Aislabie laid the foundation of the court at Lord's, on which the great Barre played, and modern tennis began.

The game is far faster now than was ever the case before. A match between our two leading amateurs, Eustace Miles and Sir Edward Grey, would astonish the old school; and such players as Latham or Pettitt have still further developed the rapidity of play. Pettitt is one of the great players of America, with Alfred Tompkins his rival; and Johnson, Moore, and Kirton have been added to them. Sears, De Garmendia, and Stockton are among the highest names in their list of amateurs.

The moment tennis was taken out of doors, and turned into lawn-tennis, it reached a wide-spread and amazing popularity, for the chief element of expense was taken away, and less skill was exacted as essential. Ladies gladly welcomed the opportunity of trying their strength upon the grass with men. The Renshaws showed that the game at its best needed as much skill and endurance as any other form of ball game; but by degrees other sports, notably golf, and the new croquet, infringed upon lawn-tennis; and then came the inevitable result of specialisation. The brothers Baddeley and the Dohertys continued to improve and elaborate the art and science of play. Such ladies as Miss Lowther, or Miss Douglass, the present lady-champion, frightened most of the gentler sex off the court for good; and now lawn-tennis is paying for the great improvement in its skill, by a slight and temporary loss of general popularity. Ritchie, Riseley, Smith, and Gore may be picked out as a representative four of the highest class; and that brilliant Irishman, Mahony, is, as I write these lines, in America with the brothers Doherty, who are playing for the championship Cup against our Transatlantic cousins.

I have mentioned the popularity of golf. There is not much doubt that we got this from a Dutch game, called "kolf," played on a level area of sand or clay, in a rectangle 60 ft. by 25, enclosed in polished stone, or sheet lead walls, 2 ft. high. This is still played in Holland with clubs 3 or 4 ft. long, which have brass faces like a putter. The object is to hit the two posts symmetrically placed in the ground in the lowest number of strokes. In early seventeenth-century pictures by Van der Neer, and Van Valckenborgh, a ring is shown on the ground, which may prove to have been the germ of croquet. In Belgium both players use the same ball; and when one has had three strokes forward, the other may play one back. This implies a wide extent of area, and indeed it seems clear that primitive golf was played across country from one church door to another. The hoop is to be found again on the top of a post, in the old "Jeu de Mail," the object of the game being to loft a ball through this elevated iron ring in the fewest possible strokes. The Mall was made in London for this game after the Restoration, and the boxwood ball used could be hit as far as four hundred yards at a stroke. Our best modern drive was over 341 yards, made at St. Andrews by the late Lieutenant F. G. Tait Scotland was, of course, the home of the first game that answers to modern golf at all, and there it was already popular by the middle of the fifteenth century. In 1503 the king is known to have played a round against Bothwell with leather balls, stuffed with boiled feathers, a queer arrangement which was used until gutta-percha was invented. Garrick invited six of his north country friends to play golf at that villa near Hampton Court where the Temple of Shakespeare still preserves the actor's memory; and the old club at Blackheath was the mother of the game in Bombay, Westward Ho, Wimbledon, and Hoylake.

I have now only to say something of racquets. As we saw, this variety was developed, through bat-fives, and hand-fives, from play in a tennis-court, and a game in precisely these conditions was to be seen in Leicester Fields in 1788. But the earliest form of racquets as we know it is apparently that played out of doors by prisoners in Fleet Prison, and King's Bench Prison. There was also play at taverns like the Belvedere at Pentonville, and the Bear at Kennington. But the primitive front wall alone did not last long after Harrow School had taken it up; and as soon it was taken out of Fleet Prison (where Dickens saw it), it was itself incarcerated in four walls and developed into the fast hard-hitting game we know. Robert Mackay, of London, was the first professional champion, and the court at

Lord's was built in 1840. In 1862, amateur play had so much improved that Erwood, the best professional, was beaten by the old Harrovian, Sir William Hart Dyke. But since then this has never recurred. In real tennis, billiards, racquets, baseball, and bowling at cricket, the professional can beat the amateur. Only his long practice can make certain of that fast half-volley, that beautiful back-hander off the back wall, that deadly service clinging to the side-wall all the way. But the slower variety, squash-racquets, played in a smaller court, and with a softer, slower ball, is within the competence of every active man for a very long while. The newer possibilities involved by electric-lighting also enable this form of ball game to be played in the winter months after 4 P.M. Finally, a clever adaptation of American ideals in architecture has enabled the Bath Club to offer its members squash-racquets, followed by a swimming-bath within a few steps of St. James's Street. This last development is chiefly owing to the energy of Mr. W. H. Grenfell, M.P., who has built, at Taplow Court, a variation of the real tennis-court, without its hazards, which provides excellent play off the penthouse, and the addition of the wall-game to playing on the floor across the net. There are some enthusiasts who continue hand-fives after they have left school, where it forms one of the best possible forms of training for both sides of the body and each hand. But the gloves are usually thrown aside when a man goes up to his university, in favour of the harder and more skilful game of racquets.

Even now I have reached my end without being able to mention many varieties of ball-games which will doubtless occur to my readers. The slowest, perhaps, would be push-ball; the best, pelota, that glorious form of basque racquets in which each player has a long curved basket bound to his arm, with which the ball is hurled with enormous force and great accuracy. But I have, at any rate, hinted at the extraordinary variety of balls employed, and a glance at the five typical implements used in manipulating them will still further emphasise the delicacy of modern developments. The result of selection, and the survival of the fittest, have rarely been more humorously exemplified, for the five are about as different from each other as can well be. The largest ball used with these five weapons is the croquet-ball, which has a diameter of $3\frac{5}{8}$ inches, and weighs $15\frac{3}{4}$ ounces, which is more than the largest ball in the whole set reproduced in these pages. The mallet used for striking it is an appropriate implement, but the careless observer need not imagine it implies nothing but strength. The exact spot on the ball has to be hit with the exact spot on the mallet to ensure accurate direction, and the way the mallet should be held has not yet been decided by any unconquerable expert. A polo ball has a diameter of an eighth of an inch less, but is also far lighter because it is made of willow, and the head of the stick used for hitting it is evidence that the player on horse-back cannot be as accurate as the player on foot, indeed a good general direction and length, with a clever use of the spring of the stick is all this implement can promise the best player. Hockey, played with a cricket ball, appears at first sight to employ an implement less accurate than a bat, as would be natural considering the difference in area of play and in the size of the goal. But a good player can be far more accurate than would be imagined, and the hooklike termination is the natural form for hitting a ball on the ground; indeed the cricket bat itself did not quite lose its curved end until the bowling of "daisy cutters" underhand had gone out of fashion. Scornful critics have often described a golf club as the most inappropriate weapon possible for its purpose. But a good driver will propel a ball further than can be done in any other game, the furthest hit in cricket being C. I. Thornton's 168 yards, and the furthest throw, G. J. Bonnor's 130 yards. To propel $27\frac{1}{2}$ dwt. of solid rubber twice the former distance, the golf club must be exactly right, and a knob of hard wood at the end of a long, springy shaft is evidently the correct development, if the player can always hit his ball accurately. Much mathematical calculation has been wasted on golf; but it is evident that the underspin imparted to the ball by the stroke has a good deal to say to its pace; and now that the solid rubber variety is replaced by the Haskell ball, which has a separate core, Mr. W. J. Travis has driven 382 yards in the United States. A billiard ball, exacting as it does the greatest accuracy of all ball games, has a higher specific gravity than any other ball. Though the first necessity is that all these balls should measure and weigh the same, the average weight is $4\frac{5}{8}$ ounces, with a diameter of $2\frac{1}{16}$ inches, and the only way to ensure both accuracy of direction and delicacy of touch was to propel it with an instrument which presented an extremity of scarcely half an inch—or even less—at the point of contact. What can be done with this, you cannot imagine till you have seen John Roberts at work in

the middle of a long break. There is a fascination in it only equalled by Ranjitsinhji or Grace in cricket, or by Vardon in golf. The real beauty of other ball games should similarly be sought for at the hands of their best exponents: Eustace Miles, in racquets, Peter Latham in real tennis; Captain Miller, in polo; G. O. Smith, in Association football; H. L. Doherty, in lawn-tennis. It is a long cry from Nausicaa to her modern representative, Miss Douglass; but it will ever be counted an added charm to the fascinating history of ball games that what the Phæacian princess began the modern Englishwoman has developed; and we are evidently still some distance — fortunately for the race — from finality or perfection in many forms of ball games.

# THE CONDITION OF BRITISH FRUIT-GROWING

GOOD BUSINESS AND A PROMISING FUTURE—TOO MANY WORN-OUT TREES—THE BLESSINGS OF FREE TRADE—THE THINGS WANTED TO-DAY ARE COOL FRUIT-CARS, FREE MARKETS, AND EFFICIENT DISTRIBUTION

BY

SAMPSON MORGAN

THE fruit-areas of the United Kingdom are represented by about 80,000 acres planted with bushes, and about 240,000 with orchard trees, or an aggregate of 320,000 acres. At first sight it may be thought that the industry is more important than it really is, but when we dissect the statistics relating to orchards in a practical manner we do not find so much cause for congratulation. Although during the past quarter of a century our fruit-producing areas have increased considerably, thanks to the "Fruit Growing Movement," which I inaugurated, yet the gigantic and increasing foreign imports are the result of failure on the part of the British fruit-grower to satisfy efficiently the wants of the public through the market distributors and trade dealers. The secret of success as far as the foreign producer is concerned lies in these facts: (1) he aims at quality rather than quantity; (2) raises his fruit under skilled systems of culture; and (3) grades, packs, and markets it in a business-like manner. In addition his one aim is to satisfy the market's need, and this he does chiefly by planting only those money-making varieties which meet the quickest sale, and obtain highest prices. Now, when we turn to the British fruit-fields we find that more than one-half of the fruit-trees are unsuited to the wants of the present day. Millions of them might be grubbed up with advantage. They consist of useless and unsaleable varieties, and the produce when grown is an annual source of dissatisfaction and trouble to every one who handles it. I have no hesitation in saying that useless and worn-out trees occupy 100,000 acres of land, entailing a preventible annual loss of £1,000,000 at least.

Carried out on right lines, commercial fruit culture is a lucrative rural industry. The British climate and soil are perfectly adapted to the growth of apples, plums, cherries, pears, currants, raspberries, and strawberries of the finest quality. No foreign samples are ever marketed that are in any way comparable to them in flavour. The British apple is the finest fruit the world produces. The industry is being extended, and planters are paying more attention to the claims of dwarf trees and saleable kinds. The demand for choice fruit in the wholesale markets throughout the United Kingdom is limitless and at excellent prices. I calculate that the financial receipts from British fruit-farms range from £3,000,000 to £6,000,000 a year. The smallness

of the total is due to the fact that the poor returns from the almost countless numbers of useless trees which encumber the ground tell upon the average. Though improvements are being effected, it will be many years before the business is put upon a proper basis. When this time comes, however, the receipts of the industry should easily reach a total of £25,000,000 per annum. At one time the Thames Valley was the centre of the fruit-growing industries of the United Kingdom, and at the beginning of the past century the bulk of the fruit marketed came from Richmond, Twickenham, Hounslow, Feltham, Kingsland, and kindred places. At Kingsland were the market-orchards of Mr. James Grange, who introduced the Grange's Pearmain, a very popular apple in his day and one that is still listed by some fruit-tree nurserymen. Previous to that the fruit-gardens at Holborn, Horselydown, Westminster, and Chelsea produced the necessary supplies for the metropolis. With the growth of London and the development of city industrial concerns, commercial fruit-growing has been pushed further afield, and the counties generally have now become the producing centres for the huge supplies which are poured into the wholesale markets throughout every month of the year. There are individual fruit-growers in the home counties who work from 500 to 1000 acres each. I know of some who farm from 250 to 500 acres for raspberries, and from 100 to 300 acres for strawberries, season after season. In one instance, from five to six tons per acre were gathered of the last-named fruit. At £16 a ton the value would nearly be equal to £100 an acre. There are fruit-farmers who carry on the business on an even larger scale, cultivating from 2000 to 3000 acres, which are chiefly devoted to soft fruits. When I state that there are men who raise 500 tons of fruit each year the extent of the areas dealt with may be imagined. As to strawberries, the production of this fruit by British growers has now assumed such proportions that as many as fifty tons are put into the railway-trucks at several centres daily in the height of the season. The earliest strawberries come to market from Cornwall. Then from the Southampton district. At Botley, Swanwick, and Sarisbury this fruit is grown on small fruit-farms occupying over 1500 acres of land. As the growers expect to get 1000 gallon-baskets per acre, equal to two tons of fruit, the total annual output of this one centre alone is something like 3000 tons.

The production of orchard fruits has become an important industry in Kent, Hereford, Worcester, Cambridge, Essex, Norfolk, Surrey, Warwick, Gloucester, and Oxford, though generally the business is being carried out on extending areas in most counties in the four countries. In Scotland the growth of strawberries, raspberries, and tomatoes has been attended with excellent results. In the Blairgowrie district thousands of tons of soft fruits are raised to perfection. This centre bids fair to rival Southampton and Pershore. Devon, Hereford, Kent, Somerset, and Worcester have over 20,000 acres each devoted to orchard fruits. Kent, Devon, and Hereford exceed 27,000 acres each, but as far as dessert fruit culture is concerned Kent takes the lead. The counties on the south-west of England include a large number of cider fruits in their plantations. Somerset is credited with 24,894, Gloucester with 20,174, and Worcester with 21,786 acres. The total of the English counties for orchard fruits is 230,673 acres.

As to small fruits, such as gooseberries, currants, and raspberries, Kent has 22,495 acres devoted to them. Middlesex comes next with 4372, Worcester has 4063, Cambridge 3876, and Norfolk only 3629 acres. In the English counties the total is 68,263 acres. In Wales the industry is in a very backward condition, although there is great scope for development. At present it flourishes best at Brecon, Montgomery, and Glamorgan. The total for Wales is 4970 acres. In Scotland the business receives most attention at Lanark, Perth, Aberdeen, Haddington, Edinburgh, Forfar, and Fife. The two leading centres, however, are Lanark and Perth. The fruit-lands of Scotland are represented by 8328 acres. In Ireland fruit culture is not very extensive, but the new departure which I am now advocating in the Irish Press to secure the development of the industry and the creation of an export fruit trade with the markets on the west of England will most probably end in making Ireland one of the finest fruit-producing centres in Europe. In 1873 British fruit-lands were represented by 148,221 acres; now they exceed 300,000; they have thus been doubled in a quarter of a century.

With the present unsatisfactory system of tabulation in the Agricultural Returns it is impossible to draw reliable conclusions in respect to the profitable nature of the industry. So with regard to average financial returns. The thousands of acres of fruit-land occupied

by worn-out trees produce such poor results that only those practically acquainted with every detail can throw any light upon the matter. That excellent profits are being made by fruit-growing is beyond dispute. When a grower can with standards get from 250 bushels per acre from apple-trees, and the fruit is worth from 3*s*. to 5*s*. per bushel, it is clear that there is money in the business. The returns are proportionately larger with 302 trees to the acre, each tree yielding 5*s*. or 6*s*. each, for these totals range from £75 to £90 per acre. I know of cases where an average value of 10*s*. per tree is often secured. That is equal to a gross return of £150. In Ireland a yield of £100 per acre has been secured for cherries, and in some cases of £60 and £90 from plums. In Lincolnshire a well-known strawberry grower testifies that he realised £80 from an acre of strawberries. I have heard of £600 and £800 being obtained from ten acres of plums in Cambridge, where are to be found some of the most expert growers in the United Kingdom. The Wisbech fruit-farms are most extensive, and the growers there can put from 50 to 100 tons of gooseberries in the railway-trucks in a day in the season if needed.

There are over 1400 varieties of apples that have been named. Of this number not more than 100 are of any use to the market grower. The best list that can be made would not exceed twenty kinds. Among those I advise should be grown in this country none will give greater satisfaction than Barnack's Beauty. These apples weigh from four to six ounces each, the bulk possibly coming out at four ounces when well grown. Thus for marketing in boxes they are perfect, on account of their rich, sweet vinous flavour, their size, and their deep, rich scarlet colour. I should like to see 10,000 or 20,000 boxes of evenly graded apples of this variety put on sale for the Christmas trade each year. They would make as much money as the famous Newtown pippins from the Pajaro Valley. With Barnack's Beauty and kindred high-grade varieties home growers can easily hold their own against outside competition from any quarter. By the method of culture that is popular in Jersey and Guernsey immense yields of choice fruits are readily secured. In some instances, the net returns range from £100 to £125 an acre. The tree is simply fastened to wooden stakes driven into the soil, to which the branches are trained. When grown as pyramids or bushes the crops are simply enormous. In corroboration of this, a fruit-grower having read a note of mine in praise of this apple sent me samples of apples he had raised, and stated that from ten trees he gathered over one ton of fine fruit. "But," it may be said, "one ton from ten trees is nothing out of the way." That is true. Yet when we consider the value of the fruit itself we must admit that it is remarkable. Reckoning forty-four pounds to the bushel, we shall have as nearly as possible fifty bushels to the ton. Now, if we put the value of the apples at 10*s*. a bushel in the markets the ton will be worth £25. The trees from which the fruit was gathered are pyramids, and reckoning 193 trees to the acre, that is, having them set fifteen feet apart each way, we should, if the yield is proportionate to the ten trees referred to, get apples of the value of £475 from one acre of land. I did much to bring Cox's Orange pippin into popularity for commercial culture, and I predict that Barnack's Beauty will in the near future rank with it as one of the best money-making apples that can be grown. We import millions of bushels of apples from foreign producing centres annually, chiefly because our own apple-supply would not last us three months. When British fruit-growers extend operations and plant such fine-cropping kinds as the Early Victoria, they will enable the trade to be less dependent upon the foreign shipper. This is one of the earliest and largest culinary apples we possess. It blooms late, fruits early, and has yielded 200 bushels to the acre. It is a good type of the early apple that ought to be raised by growers desirous of meeting the lucrative demand which exists at the opening of the season. The Early Victoria is sent out from Wisbech.

A revolution is being quietly wrought in British fruit-growing by the supersedure of the tall, or standard, by the dwarf and bush form of fruit-tree. The miniature trees yield finer fruits and consequently a far higher return than the tall trees can. The use of the dwarf form of tree is one of the chief features of the Fruit Growing Movement, and in spite of opposition at the start it has been recognised by the leading men in the business as the basis of all profit. As these diminutive and early fruiters are being set by hundreds of thousands each season, there is every prospect of British fruit-growing industries being brought to a high state of perfection within the next ten or twenty years.

The growing demand for fruit on the part of our industrial communities is undoubtedly

due to Free Trade. As the result of the increasing popularity of fruit we pay over £10,000,000 per annum to foreign fruit-growers, and in a few years' time, unless the home industries are developed as they should be, the fruit bill of the nation will not be met even by a tribute of £20,000,000. What has been the effect of Free Trade upon British fruit-growing industries? It has stimulated skill in production, and skill in production is the basis of prosperity in fruit-growing. Protection does not protect the cultivator; it is skill which protects. The Protectionist aims at raising values by fictitious and unnatural means. I believe in high prices. I have, by recommending the cultivation of high-grade money-making kinds, contributed materially in sending up values in a natural and business manner. To-day choice apples in quantity are worth 25 and 50 per cent. more than they were two decades ago, and at these prices they meet an insatiable demand. Never in the history of the trade was the industry as prosperous as it is to-day. High prices, the result of protective measures, are not synonymous with high wages, and those workers who feel inclined to support the plea for a protective measure upon the ground that it will ensure a rise in wages, would, if such a measure were passed, soon feel the effects of their error. Preferential patronage cannot bring any improvement to the fruit-grower, the farmer, or the labourer. Good profits and high wages depend upon skill. If Free Trade is detrimental to the interests of fruit-growers, how is it that values for best fruit are as good, and in many cases better, to-day, than ever they were? Only recently apples made as high as 15*s.* and 18*s.* a bushel in the English markets. It is not unusual for dessert apples to be sold from 10*s.* to 15*s.* per bushel in the opening months of the year. If our growers raised such sorts as Winter Quarrenden and Newton Wonder they could get from £50 to £100 from an acre in an ordinary season. Such returns under Protection were never dreamed of.

Three things, however, must receive attention from producers, if our British fruit-growing industries are to be developed on modern business lines. They are free markets, cool fruit-cars, and efficient distribution. No one has seen more than I of the pernicious effects of the market-toll upon fruit-growing. The market-toll is a tax upon the food of the people, in a country glorying in the possession of Free Trade. These tolls ought to be abolished, and the public markets thrown open to English produce free. The market-men pay good rents for their holdings, so that there is no excuse for this charge. It is not right that any owner should be allowed to put this burden upon the English fruit-grower. We want free markets and a reform of the land laws; without these, fruit culture in this country must be carried on under conditions fatal to perfect extension. I go further, and say that not only do we need free markets, but we need more markets. If the doctrine that the permission granted by Royal prerogative to hold markets implies the prohibition of competing ones is permitted to pass unchallenged, then the prospect for market-growers in this direction is most depressing.

The refrigerator fruit-car has worked wonders for the foreign fruit-grower. In hot weather it is an absolute necessity, for then soft fruits, as strawberries, cannot be sent long journeys and at the same time arrive at their destination in a perfect state without the aid of the cool car. If we wish to bring the county grower into touch with distant markets, then during summer time the English railway companies should provide these cool cars, as the foreign companies do. The successful expansion of fruit-growing industries depends as much upon efficient distribution as upon efficient production. The one is useless without the other. Foreign growers are enabled to cater for the English markets, thanks to the use of the refrigerator railway-car which enables them to send us fresh plums and pears in perfect condition, although grown over 6000 miles away. I have seen tons of English strawberries enter the Midland markets with that "gone off" appearance which is fatal to their sale and which would have been prevented had the fruit been despatched under refrigeration. These cars would meet a great trade want. Country market senders would derive immense benefit from their use and so would the market salesman and the fruiterer.

Improved methods of transit are essential, and fruit-farmers rely upon the railways for a quick and efficient despatch of all the perishable produce they have to market. The railways will benefit with the progress of the movement. To regard them in anything like a hostile spirit is a great mistake. A ton of choice apples worth £25, made up of fruit that commands 10*s.* a bushel costs no more for transit to market than does a ton of common apples worth £5 and equal to 2*s.* a bushel. The grower who raises and despatches apples

that secure 10*s.* a bushel in the markets will never complain of the railway charges if the delivery is quick and satisfactory. It is the grower of the common low-priced stuff who complains. Similar results can be obtained with strawberries. Fruits can be raised for market which if of ordinary quality only and put up in peck baskets will sell from 3*s.* to 4*s.* a peck of twelve pounds. They will cost just as much to market as twelve pounds of choice fruits put up in flat pound punnets, though these would secure from 6*s.* to 12*s.* a dozen punnets, or on an average four times as much as the inferior berries would bring. Even after more efficient distributive services are provided the proportionate expenditure on transit should be reduced by the skilled production of better fruits.

As the result of the present land system, production and distribution are not carried out in an efficient manner. In the majority of cases it is not to the advantage of the grower to pay much attention to these matters, though they are of the utmost importance. It suits him better to do the best he can without putting himself to trouble, and as to improvements, why, their utility is not even considered. The conditions under which he holds his farm offers no proper incentive to improvement, or I should be able to assert, as Arthur Young did, that "sand has been turned into gold by liberal and just covenants between landlord and tenant, and by securing to the tenants the *bonâ fide* improvements which they had made." In seventy-five instances out of every hundred, production is carried out on primitive lines, for under efficient and thorough systems of culture the productive powers of the soil could be increased threefold. Taking the average output per acre, I am satisfied that the monetary returns from the majority of our fruit lands could, if every encouragement were given to the cultivator, be doubled and trebled. In the aggregate through the present system, millions of money are lost every year, the whole of which ought to go into the pockets of the English fruit-growers. Still Free Trade has proved such an incentive to skill that I am satisfied that a huge development of British fruit-growing industries on phenomenal lines is imminent.

With regard to our import fruit trade, I am glad, in concluding this article, to be able to bring out in so appropriate a publication as THE WORLD'S WORK a remarkable fact forming as it does a new and hitherto neglected, factor in the Free Trade problem. It is that *the profits of distribution are greater than the profits of production, and that the cost of distribution often equals the total market value of the products handled.* As we pay £10,000,000 a year for fresh fruits alone, and at the present rate this sum will soon be doubled, the profitable nature of the foreign import industry to us is apparent. We are a nation of traders. The foreign producers send us their goods, which we manipulate for our own advantage, extracting huge profits in doing so. Therefore, instead of the foreign producers benefiting exclusively by Free Trade with this country to the extent that is so often inferred, we are the greatest gainers, for these profits provide wages for hundreds of thousands of workers, and have created the modern retail fruiterer, the representative of a prosperous section of city and town traders who contribute materially to the national exchequer. It is through the large profits extracted from the distribution of foreign fruits that the immense retail fruit-distributing industry of Great Britain has become what it is to-day. *The industry has been started and built up at the expense of the foreign producers.* They have provided the necessary capital to run and extend these concerns. They have acted as financiers—interested financiers, but still financiers—of a movement that primarily benefits the British merchant. The Free Trader is satisfied with this equitable system of working; the Protectionist objects to the share that goes to the prime actors in the movement, that is, the producers, and yet the profits which come to the British distributors equal or exceed those profits which go to the foreign producers! Let a similar test be applied to other branches of the import trade of the country, and the mighty influence of Free Trade will be more readily acknowledged, compelling even the boldest innovators to hesitate ere they attempt to tamper with those principles which are the undoubted cause of our commercial ascendency.

# THE VOLUNTEER TRAINING-CAMPS

WAR OFFICE THEORY AND VOLUNTEER PRACTICE—HOW THE NEW CONDITIONS BEAR UPON THE ATTENDANCE AT CAMP—A SPLENDID TRAINING AND EXCELLENT RESULTS—ROUTINE AND FIELD DAYS IN THE AUGUST CAMPS—IS THE SACRIFICE TOO GREAT?—SUGGESTIONS FOR THE FUTURE

BY

A VOLUNTEER OFFICER

*Illustrated from photographs specially taken for* THE WORLD'S WORK

ONE summer afternoon a few weeks before the outbreak of the Boer War, our King, then Prince of Wales, reviewed the London Volunteers on the Horse Guards Parade. Some 20,000 men marched past the saluting-point. The confined space made the manœuvre of the "advance in column" singularly difficult for so large a force. It was executed with admirable precision. The military critics of the London Press were enthusiastic in their praise of the Volunteers, but more than one of them expressed a regret that of all these thousands not one would be available for active service except in the remote contingency of invasion. Before a twelvemonth had passed the London Volunteers had sent some thousands of officers and men to fight side by side with the regulars in South Africa. They quitted themselves like men, and for the first time the country realised the enormous reserve of fighting strength that it possessed in the Volunteer force. The old gibe that they were "Saturday afternoon soldiers" disappeared for ever. The men who through good and evil report had kept the force together for years in the hope of its some day doing solid service at last had their reward in this public recognition of the results obtained by their persistent and self-sacrificing efforts.

It was this moment that the military authorities chose for the issue of a new code of regulations that made the conditions of Volunteer work more rigidly exacting than they had ever been before. The Volunteers were told that they were to be taken seriously; that their training had so far not been sufficiently thorough to fit them for active field-service, and that they must make further sacrifices of time on the parade-ground and in camp if the force was to be maintained as a practical part of our military system. There is no need to reopen here the vexed question of the new regulations. Suffice it to say that their immediate effect was the resignation of many thousands of the best men in the force. Their zeal was in no wise diminished, but they were compelled to face the fact that the civil occupations on which their livelihood depended would not allow them to give to Volunteer work the increased time required by the new code. The authorities themselves practically admitted that they had made the mistake of asking for too much. Twice the regulations were modified; a considerable dispensing power was given directly to the Secretary of State for War and indirectly to the Generals commanding districts. Finally the whole question of the conditions of service for the Volunteer force has been referred to a Royal Commission.

The modifications of the original code and the subsequent reference to the Royal Commission are a clear confession that the regulations were issued without due consideration. The intentions of those who framed them were excellent, but they failed to realise that the Volunteers are for the most part men who are not masters of their own time, and who can do their military training only in what are for other men intervals of leisure, evenings after work, Saturday afternoons and a few days given up from the all too brief annual holiday. It was, in theory, an excellent idea to lay down as a condition of efficiency that every officer and man should go into camp once a year, but there was the practical difficulty that to bring a battalion into camp hundreds of men and officers have to arrange to take their holidays in the same week. The difficulty presents itself in many forms. Several large business houses have in the past encouraged the forma-

tion of Volunteer companies among their employees. In case of imminent danger of invasion or a great national crisis they would be willing to make any sacrifice, but they can hardly be expected to paralyse their whole business organisation for a week in each and every year by sending eighty or a hundred of their staff away to camp. In some corps the difficulty is still greater. A very high compliment has been paid to the Volunteers by including six Volunteer brigades, that is, twenty-four battalions, in the Home Defence Field Army and calling upon them to be prepared to manœuvre and fight side by side with brigades of regular troops. These selected battalions are required to send into camp for a fortnight in each year a minimum of 15 officers and 490 men. How severe the strain is may be judged from the fact that this year the Queen's Westminster Volunteers, who have upwards of 1600 officers and men on their rolls, were unable to bring into camp for the fortnight the required 505 officers and men, and had to content themselves with spending one week in camp with the other Volunteer battalions of the 23rd Field Army Brigade at Shorncliffe. The Westminsters are one of the best of our London Volunteer regiments. There is no lack of zeal among officers and men, but hundreds of the rank and file are junior employees in banks and other business houses, and the juniors are lucky if they are allowed to take their holidays in August. Under the strict letter of the regulations the Westminsters lose the higher scale grant allowed to the Army Corps battalions and are in danger of being struck off the list for the field army. It is to be hoped that this last step will not be taken, for, though they have only done a week in camp this year, they did a fortnight each year in the last three years, and it would be no easy matter to find an equally good battalion to replace them in the 23rd Brigade.

For those who can afford the time the week and still more the fortnight in camp is a splendid training, and the effect on the physique of the men of these days of open-air life and steady work is most remarkable. It is difficult for those who have not seen it to imagine the excellent results obtained even by a week's work. A battalion from London or one of the other great cities has not done more than half its training before a great change comes over all ranks. In even three or four days the men are bronzed with exposure to sun and weather, they march with a brisk swinging step, they have the alert cheerful air of good physical training and perfect health. One feels that it would be a solid gain for the country if business conditions allowed all our young men to have such an experience. Roughing it in camp is a better holiday than lazy lounging at the seaside. There is a magic in this open-air existence. Even in the worst weather with wild wind squalls shaking the tents and drenching showers of rain soaking the canvas and the ground, there is no illness. It seems impossible to catch cold. To get wet through only gives one a

AN EASY HOUR OF THE DAY

The band playing in the recent camp at Shorncliffe

good appetite. Men who have never before spent a night without a good roof over their heads quickly make themselves at home under the novel conditions of tent life. The first day or two they do not know how to make themselves comfortable, but they soon learn from the older hands, the time passes quickly and pleasantly in health-giving hard work under regular discipline, and when the day comes for striking camp and marching down to the station there are few who do not look forward with pleasant anticipations to next year's training.

The routine of the training varies a good deal in the different brigades. In the case of a brigade formed by county corps which are made up of scattered village companies, a considerable part of the time has to be spent in drill. Such corps can hardly ever work as a battalion except when the companies are grouped together in camp. In the case of the corps from London and the great cities where the ordinary weekly parades in the summer give sufficient opportunities for battalion drill the whole of the time can be given to field-training, and the working out of simple tactical schemes in combined manœuvres. Such work is specially important in the case of the field army brigades and the fortnight's camp gives time for a fair number of interesting field days. In these brigades it is the rule that at least six hours shall be spent each day in work in the open. The camping-grounds are usually near one or other of our great military stations so that sufficient ground can be made available for manœuvring, but except at Aldershot and Salisbury Plain private rights interfere somewhat with the work, and far too much uncertainty is introduced into the tactical training by forbidden ground, and arbitrary boundaries. When a defending force can secure both its flanks, by resting them on the boundaries of forbidden ground, and the attack must be made directly in front, the lesson is at least a little misleading, and this is a not uncommon incident of our Volunteer training-camps. A revision of the manœuvre act is very badly wanted.

THE CAMP BUTCHERS AT WORK
Queen's Westminster

In order to give some idea of how a training-camp is worked let us take one of the field army brigade corps. This year the two Volunteer brigades supplied by the London volunteers to the Fourth Army Corps have trained at Shorncliffe and Salisbury Plain. In both cases Government land was available for the camps, so that the brigade staff had not to begin by hiring land for the purpose. A few days before the training-camp opens the quartermaster of each battalion in the brigade proceeds to its camping-station with an advance party to make all ready for the arrival of the men. But this is only the final stage of preparation. Months before, every man in each battalion has received a circular reminding him of the date of the camp, and there are endless negotiations with employers to secure the necessary leave. None but those who have had practical experience of it can realise the difficulties which the company commanders have in getting together a fair proportion of their men for camp. By the time that sufficient names are on the list the commanding officer, the adjutant, and the permanent staff have completed the arrangements for railway transport, for drawing tents and equipment from the Government stores, and for securing by contract supplies of all kinds that are required during the busy fortnight. It needs a good business man at the head of affairs to make the Government grant cover everything. The mess president has also been busy arranging the catering for the officers. At last, on the first Saturday in August, all is ready. In an average London battalion most of the officers and men are busy with their ordinary civil occupations on the very morning of going into camp. They have all done a fair day's work before they fall in at the place of assembly. If the battalion is

THE PIPERS AND DRUMMERS OF THE LONDON SCOTTISH

READY TO TREAT THE WOUNDED

The newly formed Bearer Company of the 3rd London Volunteer Infantry Brigade

THE CAMP COOKS IN THEIR STORM OUTFIT

Queen's Westminster

THE BREAKFAST HOUR
The London Scottish at Seaford

lucky the muster will be at five or six o'clock, and all will be settled down in camp by midnight, but if it happens to be last on the list for the special trains, it may be ten o'clock at night before it leaves London, and it will reach camp in the small hours of the Sunday morning.

On the parade-ground the companies fall in and are inspected by their officers, and as soon as the adjutant reports all present and correct, the colonel calls the men to attention and reminds them that for the next fortnight they will be under military law. Then comes the march to the station and the wearisome journey down the line, for these special trains are invariably very leisurely in their movements, and as it is a case of mere manœuvres the line is not cleared for them, but they pick their way in the intervals of the ordinary traffic.

At last, at ten or eleven, the camp station is reached. The men detrain and form up on the platform, and then tramp along the dark country roads to the camp. It is fortunate if the night is fine. To march through drizzling rain into a wet camp is a discouraging experience for men fresh from city life. But if the night is fine this first march in the country is a cheery affair. The drums and fifes or the bugles are playing a stirring march. "March at ease" has been given as soon as the last company is clear of the station, pipes are lighted, and there is a hum of talk in the ranks. At last, out in front, big marquees and rows on rows of bell-tents are seen shining in the darkness like dim white Chinese lanterns. The battalion is called to attention, there is a sudden silence, arms are sloped, pipes put out, and presently the command to halt is given and the battalion "stands easy" on a great stretch of grass, with the officers' tents on one side and on the other the eight rows of tents that form the company lines.

And now as quickly as may be the men are to be told off to their tents, given something to eat, and settled down for the first night under canvas. In a good battalion all this is accomplished without disorder or delay. Led by men of the advance party, lanterns in hand, each company marches into the lines and is halted facing its tents. The captain and his colour-sergeant tell off eight men to each tent. They fix their rifles round the tent-pole, take off and place their kit under the tent curtains all round the circular boarding of the floor, and unroll the mattresses and blankets, so that the eight beds make a star radiating from the tent-pole. There does not seem to be much room to spare, but the volunteers in their training-camps are given more tent-space than the regulars. Fifteen men to a tent is the army limit—a very tight fit. While these arrangements are being made the company orderlies, one for each tent, have been told off and marched to the camp kitchen, an open-air cooking-place where the "sergeant cook" and his mates, most of whom have done a course of army cookery at Aldershot, preside over the rows of camp kettles, fixed across trenches in which the wood fires are blazing.

A CRACK COMPANY ON THE MARCH
E Company of the London Scottish

or grouped on and around a kind of portable cooking-range that can be taken to pieces and set up again as easily as if it were an iron bedstead. They bring back supplies of hot cocoa and bread and cheese. There is a kettle for each tent, and the cocoa is ladled into the mess-tins, the bread and cheese distributed. The first meal is soon over, the men roll themselves in their blankets and the officer on duty makes his round to see that all lights are out and all quiet for the night.

Next day is Sunday, but there is no chance of a long sleep in camp. At 5 A.M. the bugles sound the *réveillé*, and a few minutes later the fifes and drums are marching up and down the central parade-ground playing a lively air that effectually prevents any one from going to sleep again. An hour later there is a parade, at which some of the leading clauses of the Army Act are read, and then the parade is dismissed, the company orderlies bring the breakfasts to the tents and an officer visits the lines to make sure that all is in order and there are "no complaints." The first day there always are complaints—chiefly from newcomers who have not yet learned their way about, and who do not quite know how to get all they want from the camp kitchen. But these little difficulties are soon smoothed over. There is only one more parade on Sunday—the open-air service with the brigade drawn up in a great square, and a short sermon from one of the chaplains.

The real work of the training begins on the Monday. At first each battalion acts independently. There is an early parade and some steady drill, and then, after breakfast, the battalion is divided into two sides, which act against each other in carrying out some simple tactical scheme. These minor exercises are often more interesting and more instructive than the more ambitious field-days towards the end of the training, when the whole brigade is in action together. In the smaller affairs it is easier for every man in the ranks to understand the scheme. There is a marked contrast between the methods now used in these exercises and the tactics of the old-fashioned and somewhat stagy field-days of a few years ago. Each company is a fighting unit. Every officer, every sergeant, has opportunities of acting on his own initiative and showing what he can do. Cover is carefully used, flank attacks are given their due importance. One feels continually the impression that has been made upon all our accepted military theories by the experience of the South African War.

"COME, WATER YOUR HORSES AND GIVE THEM SOME CORN"
Mounted Infantry of the Queen's Westminster

As a typical exercise let us take one of these battalion days at one of the recent training-camps. The scene is broken country, chalk downs with deep valleys cutting them up into wide plateaux, roads deep between banks and hedgerows in the hollows of the ground, some scattered farms, an old castle, and clumps of wood. Some waggons to represent a convoy have gone out early from camp. The escort is formed of three companies, a section of cyclists, and a section of trained scouts, all under the command of a senior captain, who has to get his convoy safely back to camp through the

FIVE O'CLOCK TEA IN CAMP
Queen's Westminster

broken ground. A major with three other companies is to try to intercept him. The task of the convoy commander is by no means easy, for there is really only one good road, and it winds through some difficult country. The convoy commander calls the other officers together and tells them he means to push on his scouts and cyclists, get touch of the enemy, and then use every available rifle to attack them, instead of waiting to be attacked and acting on the defensive. For awhile there are no signs of the enemy. At the top of a long lane descending into a valley of the downs a halt is made, for there is a dangerous place in front. A mile away the road runs through a small village with the towers of a castle rising from the woods to the westward of it. The scouts move down towards the village, the cyclists sweep round to the right rear of it by a narrow cart-track hidden by clumps of wood and high hedgerows. In ten minutes a cyclist comes back with the news that the village is clear, and then, guarded by a company extended on its flanks, the convoy moves down into it. Meanwhile, the scouts and cyclists have pressed on, and soon report that a hostile force is moving down a slope among the woods on the left flank. Led by the scouts a company extends under cover and moves out to check directly its advance; on the left of this company another is pushed forward to take the enemy in flank. The leader of this flank attack is a young captain who has taken his part in many a guerilla fight in South Africa. The cyclists dash forward for a turn of the road on the rising ground in front where they will be on the other flank of the attack. The advancing enemy, a company and a half, is caught in a circle of fire from front and flanks; its retreat is cut off, and an umpire rules it out of action. The march continues. The enemy's scheme has miscarried and it looks as if the convoy will get safely home. But one more attempt is made to intercept it. Here again the attack is outflanked by the convoy escort, one company holding the enemy in front while the rest of the force swings round on to his right flank, and the convoy is safe and in sight of camp. The lesson of the day is obvious to all—the danger of divided attacks, the deadly effect of an enterprising flank attack, the value of the initiative. Every man has learned something about the methods of working through broken ground, collecting and passing information, co-operating with commanders on the left and right. Other exercises are outposts by day and night, attack and defence of small positions, entrenching, working of advance and flank guards in close and open country and at least one day's field firing on the ranges. Each day's work is explained in advance, the colonel giving his orders to the company officers, and these explaining them in brief sections to their men. All mere ceremonial routine is dropped and every available man is kept at the field work. Men's time is no longer wasted by mounting guards and sentries in the camp. Order and security are obtained by a sergeant and a few veterans in each battalion acting as military police.

THE DUTY AFTER TEA
Washing the mess tins

In the late afternoon and the evening the men are free from all but the most necessary duties. "Sing-songs" and smoking concerts are organised in the canteen and the sergeants' mess, but lights are out by 10.15 P.M., for work starts each day at 5 A.M. The effect of this continuous training is seen in the steady improvement of the work in the field. After the first week the men march in fresh and fit from an exercise extending over eight hours with a march of over twenty miles as part of it. In the last two or three days there are more ambitious schemes, in which the brigadier takes command. Then comes the last busy day.

STRIKING CAMP—THE LAST LUNCH

4th West Middlesex

Tents are struck, stores returned, baggage packed, and one by one the battalions march down to the station to go back to the round of civilian life. As they march out of camp they look like soldiers, and it is clear that in case of mobilisation for real work they would be ready to take their place beside their comrades of the line.

The experience in camp, as we have said, is the best of training for our Volunteers. The only question is whether the cost in the sacrifice of time and the interference with the men's civil occupations is not too great. Already some employers are beginning to give the preference to those who are not Volunteers, and it is clear that it will be by no means easy to enforce the attendance at camp of more than a relatively small portion of each battalion. Possibly a solution might be found in requiring regular attendance at camp on the part of officers and section leaders, and being content with a smaller number of men. Battalions of four provisional companies instead of the usual eight would still be excellent training-schools. The brigades would be smaller, but would be large enough to give good training to all concerned. Every man would attend at one time or another, even if he could not put in an appearance year after year. Possibly, too, a short training at Easter might be allowed as well as the August camp. A week or a fortnight in the summer for every man is the ideal, but we shall have to be content with what is practically possible and trust to the whole force being leavened by the higher training of those who are able to take full advantage of the annual camps. We must not lose sight of the fact that if ever the Volunteer force is mobilised for home defence it will not be to meet a danger arising in a single night. There will be the opportunity of placing whole brigades under arms for training, and even a fortnight will do wonders if officers, sergeants, and a certain portion of the men have learned well the lessons that are so practically taught in the brigade camps year by year.

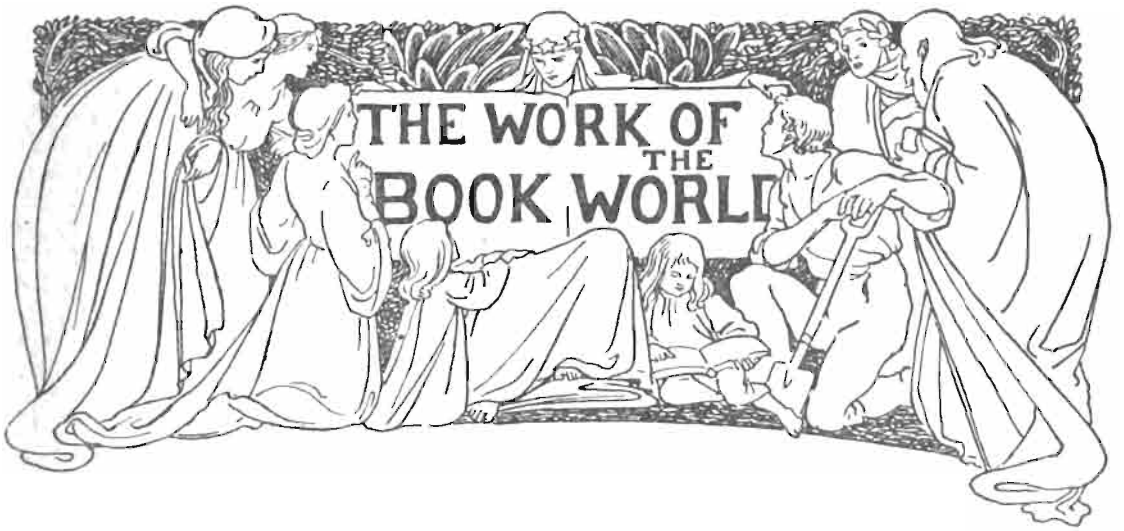
Annan

MR. NEIL MUNRO
("Children of Tempest")

MRS. CRAWFORD
("Victoria, Queen and Ruler")

MR. JACK LONDON
("The Call of the Wild")

MR. CHARLES MARRIOTT
("The House on the Sands")




LONDON, *August* 14

THIS is the holiday month, when London is freely handed over to the visitor. Publishers do not bring out many important books in August. They rely upon the accumulated reserve; as business men they know the capacity of the sixpenny reprint for satisfying the holiday taste; and they save up their literature for a grand burst at the more congenial season one month or two months hence. From here and there, however, we have gathered in a surprising number of good books to recommend.

### The End Crowns the Work

A book which certainly depends upon no fortuitous fashion of publishing for its interest is Mr. Charles Booth's final volume in his *Life and Labour in London* series (Macmillan). If Mr. Booth has a solution for the problems of London life, which are probably too perplexing for any one man to declare upon, it is, we may be sure, as far removed as possible from what Mr. Morley calls the merely "Christmas philanthropy" solution of Charles Dickens. He is cool and practical to the last degree; a patient investigator rather than an anxious inventor of schemes of reform. In his consideration of the Social Evil, for example, though he does not recommend regulation he goes the length of advocating a measure of recognition as the least of possible evils. Mr. Booth is sanguine enough to hope for London a future greater than its past. His inquiry has lasted seventeen years, and occupied an equal number of volumes. And in this volume of *Notes on Social Influences, and Conclusion*, he says:

"Improvement there certainly has been at every point. As to drink, although teetotalism no longer arouses the enthusiasm of early days, yet those who abjure alcohol exercise a great and increasing influence; whether it be in the army, or in the police, or in civil employment of every kind, responsibility largely devolves upon them, while with those who take alcohol, though there may be more drinking, there is, undoubtedly, less drunken rowdiness. So, too, in spite of outbursts of 'Hooliganism,' there is much less street violence; and such scenes of open depravity as occurred in years gone by do not happen now. There is greater intelligence, even though it be largely devoted to betting, and wide interests prevail, even if they be too much absorbed in pleasure seeking. Side by side with these improvements the whole level of poverty has been pressed upwards by increasing demands on life—demands which were unthought of forty, thirty, or even twenty years ago. But the gulf is still wide which separates the poor from such a degree of confident comfort as civilisation calls for, as we should wish all men to enjoy."

### Politics and Economics

One of the indirect benefits of Mr. Chamberlain's campaign against Free Trade will be republication of long-forgotten speeches, delivered by the classical masters. Two volumes, just published, are worthy of special attention. One is a selection of speeches and letters by the exponents of the Manchester School, edited by Mr. F. W. Hirst, under the title of *Free Trade and Other Fundamental Doctrines of the Manchester School* (Harper); the other is *Selected Speeches of Sir William Molesworth*, edited by Mr. H. E. Egerton (Murray). Mr. Hirst has been well advised in reprinting Mr. Cobden's

first political pamphlet, "England, Ireland, and America." It is a wonderful piece of political insight and argument. How fresh this sounds, for instance:

"Bearing in mind that the supply of the raw material of nearly one half of our exports is derived from a country that threatens to eclipse us by its rival greatness, we cannot, whilst reviewing the relative positions of England and the United States at this moment, refrain from recurring to the somewhat parallel cases of Holland and Great Britain, before the latter became a manufacturing State, when the Dutchman purchased the wool of this country, and sold it to us again in the form of cloth."

This reflection, be it remembered, was occasioned by the pressure of American competition before English ports were open to the American manufacturer. Or again, in the memorandum, drawn up by Cobden, but presented to the House of Commons in the name of the Manchester Chamber of Commerce:

"That several nations of the Continent not only produce sufficient manufactures for their own consumption, but they successfully compete with us on neutral foreign markets. . . . The cotton hosiery of Saxony, of which, owing to its superior cheapness, nearly four times as much is exported as from this country. . . . Saxon hose, manufactured from English yarn, after paying a duty of 20 per cent., are beginning to be introduced into this country, and sold for home consumption at lower prices than they can be produced for by our manufacturers."

That petition was written in 1838. How old is the latest cry that goods are being dumped on our market!

The *Speeches of Sir William Molesworth*, the defender of a colonial Empire, the disciple of philosophical Radicalism, supply us with the Radical view of colonial trade policy. It is a pity that Mr. Egerton should attempt to attach Sir William Molesworth to the Chamberlain section of the day. Sir William knew his own mind, and selected his own party. He saw that a great expenditure did not mean efficiency; he opposed our expenditure on the defence of the Ionian Isles, and if Mr. Chamberlain and Mr. Egerton had then been speaking and editing speeches in their present frame of mind, they would have supported it; he trusted to the bonds of affection, not to the yoke of a tariff, for Imperial unity. These speeches simply show that the philosophical Radicals, however lukewarm they, in a majority, may have been to an Empire, as a matter of practical fact, saved that Empire by their sagacity as statesmen. "Surely, sir," said Sir William Molesworth in the House of Commons, "the emancipation of colonies must be a question of time—a question, in each case, of special expediency." That is Little Englandism, but Mr. Egerton claims the speaker as a predecessor of Mr. Chamberlain. Sir William Molesworth's speeches are full of pregnant thoughts upon colonial government; they ought to be widely read now; but it is futile to uproot him from the soil in which he grew—the soil of philosophical Radicalism—the soil in which the seeds of our present Imperial greatness have undoubtedly been nurtured.

The English people have some reason to congratulate themselves that at last a German writer has been bold enough to face Gneist and to explain to the German student that that great authority on English government neither understood his subject nor the country he was writing about. It is curious that since 1860 no German has faced the problem of English local government. Gneist did it a few years before that. He came as a Prussian civil servant, steeped to the lips in the "Kaiser-idee," and he told in philosophical language and form how representative government was to ruin England. He found the English golden age of politics in the days when the Justice of Peace ruled the land. Then, he fancied, he saw a time when men of property, taking wide social views of their responsibilities, governed the people for the good of the people; and in 1850 he only saw classes striving for domination—the economic interests of the merchants and manufacturers being pushed with might and main against the interests of the State. To this day, Gneist has been the interpreter of English institutions to the philosophical German. Dr. Redlich has now, one hopes, taken his place. *Local Government in England* (Macmillan) is a work of truly German industry, German philosophy, but of English knowledge, and, edited and rewritten, as well as translated for English readers by Mr. F. W. Hirst, it is now the standard work in English on the subject. To criticise it here is impossible. It deals with the rise of local government in early times, its threatened submergence under the Tudors, its prospects after the "glorious Revolution," its triumph after the Reform Bill; it explains in detail the present mechanism of local councils and the law under which they meet; it traces the evolution of local government powers from stage to stage, their conflict with and relation to the central authority; it discusses such questions as why party politics enter more

into borough than into county council fights. The only regret is that such a work on the mechanism and philosophy of essentially English institutions should have been left for a German to do.

One of the most important problems which we shall have to face in the future is how to fix a just price for labour, and Professor Ashley has just published a course of lectures he delivered on this subject at Oxford. The title of Professor Ashley's book, *The Adjustment of Wages* (Longmans), is somewhat misleading, as the lectures which it contains deal only with the attempts made in England and America to adjust wages in the coal and iron trades. And even within the limits he has imposed upon himself, he leaves some of the most important economic problems practically untouched: he does not grapple, for instance, as does Professor Smart in his *Economic Studies* and his *Distribution of Income*, with the question of how intimate is the connection between the adjustment of wages and the adjustment of prices. The two methods employed for settling wages in the trades dealt with are the sliding-scale and the conciliation board. An interesting point, fully brought out by Professor Ashley, is that whilst in the iron trades the sliding-scale based on prices seems to be satisfactory, in the coal trade it has always broken down. The explanation is to be found in the industrial differences between the trades. In the iron trades the cost of the raw, or semi-wrought, material is great compared with the cost of labour, and it also fluctuates considerably. It is, therefore, impossible for the iron-masters to enter into large contracts ahead as the coal-owners do, and the former are not tempted like the latter to undercut each other in offering tenders, and assume that low prices can be met by a low wages bill. To some extent, however, the conciliation boards in the coal trade are but sliding-scale arrangements. But they are a good deal more because they consider the whole circumstances of the trade—for instance, the volume upon which profits are made, and not merely the price paid for each ton sold. These boards, successful so far, have, however, been working during a period of exceptional prosperity, and the real test of their efficiency will be applied when prices fall a little more than they have yet done. But what of the trades not so well organised as iron and coal? They present the greatest difficulties, and of them Professor Ashley says nothing. The American chapters are both the most interesting and the most important to the English reader, and the appendices of scales and agreements are even more valuable than the lectures themselves.

### Railway Management

In England, railways were built after the country was developed; in America, they preceded development. That is a great difference, and it influences the question of English and American railway management to-day. Mr. Pratt, whose articles in the *Times* attracted a good deal of attention, has now given us a book upon *American Railways* (Macmillan), full of figures and yet lightened with vivid description. From it we learn that the capital sunk in English railways is greater than that in American, we having put £28,008 into every mile of rail, they only £11,108. It is a great comfort to find a critic so sympathetic with American methods as Mr. Pratt daring to doubt the absolute supremacy of the check system for baggage and disputing the comfort of the sleeping-car. The present writer can speak of both from bitter experience. But let Mr. Pratt himself tell us of the latter. It is bad enough for gentlemen to undress lying on a shelf, or standing behind a curtain bulging into a narrow passage in a suffocating atmosphere.

> "But they are still more inconvenient in the case of ladies, and especially of ladies travelling alone, for there is no special accommodation for ladies in the standard sleeper. . . . Climbing into an upper berth is a procedure to be specially avoided; but it may so happen that a lady will find that all the lower berths have been already taken and that the only one available for her is the upper berth in a section where a gentleman has the lower berth."

He is supposed to give it up, but the writer has seen instances where the supposition did not hold good. The American passenger, in spite of the luxuries thrown at his head (he himself may have the use of a typewriter, and the Wall Street quotations follow him; while his wife is supplied with a lady's maid and an electrical contrivance for heating her curling-tongs), does not make the railways. In fact, he is only carried because the companies argue that if they are good to him he will send his goods by them. It is the produce traffic that pays, and the chapters in Professor Ashley's *Adjustment of Wages* dealing with the part played by railways as owners of coal-fields should be read along with Mr. Pratt's book by those who desire to understand the important part played by railways in the wonderful industrial mechanism of America.

## Biography

*Victoria, Queen and Ruler*, by Mrs. Emily Crawford (Arrowsmith), has all the attraction of garnered gossip about royalty told in the style of the trained journalist. Mrs. Crawford has been the Paris correspondent of the *Daily News* and of *Truth* for many years, possessing ample opportunity for meeting the notable people of her generation and learning of "the ceremony that to great ones 'longs," as well as a woman's curiosity for finding out details. Among the many good stories told for the first time is this one of the Queen as a matchmaker:

"The sad lots, their fine titles notwithstanding, of the Princess Royal and the Princess Alice set the Queen thinking what matches she could find at home for the younger Princesses. She wished for wealthy sons-in-law of high aristocratic standing. One of the noblemen she thought of had £80,000 a year, and was highly accomplished. . . . He had a place in Scotland. When the Court was there he was astonished to receive an invitation to Balmoral, which he of course accepted. In the course of the evening a member of the household, high in the confidence of the Queen, went to see him in his room. He was sent to throw out hints about the high honour her Majesty wished to confer upon him. A shy man, he was thunderstruck, and knew not what to say or think, but had presence of mind not to commit himself. The idea seemed appalling, to be brought into frequent and close connection with the Queen. What he could never brook would be finding himself on an inferior footing to the German sons-in-law. Next morning at dawn he took a heroic resolution. It was to ride thirty miles across the hills to propose for a young lady who was staying at a shooting-box. It did not occur to him until he arrived that he was unacquainted with her. Still his sister was her best friend. I am not aware in what terms he introduced himself or what conversation took place. But he was able when he rode back to the Royal castle to tell the gentleman who visited him the evening before that he was engaged. He was never since at Balmoral."

Nothing but thanks and praise are due to Lord Monson and his relative, Mr. George Leveson-Gower, for giving to the world the *Memoirs of George Elers* (Heinemann), which, with the accompanying correspondence, his lordship found recently among the family papers of Burton Hall. Captain Elers, a connection by marriage of the Monson family, lived an interesting life. He was a close friend in India of Colonel Wellesley, better known to history as the Iron Duke, and he lived until 1842. His memoir and letters present a valuable picture of life under the reigns of "Farmer George" and his sons. Many interesting characters enter into the narrative, which is filled with the frankness of a frank time, and extends its list of personages from the Regent and the Sailor King to prim Miss Maria Edgeworth, the captain's cousin. Captain Elers tells a noteworthy story of the Duke of Wellington's gratitude:

"I believe Colonel Wellesley was very much in debt and embarrassed when he left England, and a small tradesman in Dublin was of great assistance to him by the loan of four or five hundred pounds, which on his arrival in India in due course of time was repaid; and I have heard that on his return from India he walked into the shop of the tradesman, a boot and shoe maker, and asked him if he recollected him. The man said 'No.' 'Well,' said Sir Arthur, who was Secretary to the Duke of Richmond, 'can I be of any service to you?' The man said: 'I want nothing for myself, but I have a son.' 'Give me his name,' said Sir Arthur; 'you did me a kindness once, and I do not forget it.' He got the man's son a place of £400 per annum. It gives me pleasure to record this anecdote of the Duke of Wellington, who has not a very tender or feeling heart. And in this instance I think he felt himself under an obligation to the man he did not forget, and it was his pride as well as principle, together with the man's answer, 'I want nothing for myself,' that determined Sir Arthur to provide so handsomely for his son."

In spite of a feeling which, justly or unjustly has connected itself with the memory of Stevenson—that all who knew him are turning their recollections into pounds and shillings—one cannot but enjoy the little volume of *Memories of Valima* (Constable), compiled by Stevenson's step-children, Mrs. Isobel Strong and Mr. Lloyd Osborne. The atmosphere of the home in Samoa is charmingly retained, and in extracts from her journal Mrs. Strong has preserved some conversation of "Tusitali" which was well worth preservation.

"*April* 20, 1893.—I was pottering about my room this morning, when Louis came in with the remark that he was a gibbering idiot. I have seen him in this mood before, when he pulls out hair-pins, tangles up his mother's knitting, and interferes with whatever his womenkind are engaged upon. I gave him employment in tidying up a drawer all the morning—talking the wildest nonsense all the time, and he was babbling on when Sosimo came in to tell us lunch was ready; his very reverential, respectful manner brought the Idiot Boy to his feet at once, and we went off laughing to lunch.

"This afternoon Louis was still too much of

an Idiot Boy to write, and he walked about in such a restless way that it occurred to me to teach him to sew. He has done all sorts of things in these moods before, modelling little clay figures, making wood-cuts and printing them, and even knitting. He has often told me of the beautiful neck-tie he knit with his own hands, but he got it so dirty in the course of construction that it was taken away from him and burnt. I cut out some saddle-blankets and taught him to herring-bone them in red worsted. He learned the stitch at once and took an absorbing interest in it, the interest he puts into everything he does. He sat on the sofa by the window in his long blue and white Japanese *kimono*, his bare feet on the tiger-rug, looking such a strange figure at his work. He made loops and then pulled the worsted through as though it was a rope. He remarked suddenly, 'I don't seem to get that neat, hurried, bite-your-thread effect that women do so well.' He certainly did not. 'I think,' he added soberly, 'that my style is sort of heave-ho and windlassy!' He walked out with Aolele to look at her garden, but hurried back, and is now busily at work sewing away.

"Louis will never allow any jokes on the subject of 'wall flowers' or old maids. He reduced me to tears describing a young girl dressing herself in ball finery and sitting the evening out with smiling face, while her breast was filled with the crushing sense of failure. He says he will never forgive Thackeray for the old age of Beatrix, nor W. S. Gilbert for the humiliating personage of Lady Jane."

All collectors of works by and concerning Stevenson must add to their store the attractive volume *Stevensoniana*, edited by J. A. Hammerton (Richards). The editor seems to have kept a wonderful Stevenson scrap-book for years, and his scraps are as well arranged as attractively printed. Of course, many are comparatively unimportant. Among the best is a brief paragraph of a remembered meeting described by Dr. Edward Eggleston, the American author of *The Hoosier Schoolmaster* and other novels of Western America. Dr. Eggleston says:

"I was staying once at a hotel here, when the landlord told me that Robert Louis Stevenson was upstairs, sick. I wrote on my card, 'Not to intrude, but to pay my respects.' He sent word back, 'Oh, but you must come up.' We did not praise each other's books; did not burn any of that incense which we authors sometimes feel obliged to burn as a beginning of our acquaintance. And I never learned to love a man so much in so short a time. He had no fences. He had no secrecy. He gave me out of his heart. 'Oh,' said he, 'you have been on the frontier. You sail your boat every year, don't you? You take your life in your hands. You are rugged. To write novels a man has to take his life in his hand once a year at least. He does not know how it feels if he does not. You can't live in a city and write novels'—meaning romances. And so he spoke, in his broad way, according to the enthusiasm of the moment. His was a sweet personality—a singularly unveiled soul. There were no hedges about him. He was a Scotsman in Scotland, an Englishman in England, an American in America, a Samoan in Samoa. He had no thought of remoulding America—of turning a new country into an old one. I can sound no note of pathos. Some lives are so brave and sweet and joyous and well-rounded that death does not leave them incomplete. Stevenson had no claptrap in his stories, no great cause to advocate or exploit, no pruriency of the sort that came into fashion with Flaubert and Guy de Maupassant. He simply told his story, with no condescension, taking the reader into his heart and his confidence."

## Humour—English and American

It may be the cover, or the use in one place of old and familiar advertisement blocks for illustrations, but the reader of *The Mad Annual*, by Mr. E. F. Benson and Mr. Eustace Miles (Richards), is inevitably reminded of recent skits upon the *Encyclopædia Britannica*. And in the text itself the same influence is seen by frequent jeers at this well-advertised commodity. The little book is funny—in spots—and quite mad in the silly fashion which the author of *Dodo* knows so well. The funny spots are those of least effort—for the longer attempts are somewhat tiresome. One recognises the *Dodo* note-book in such proverbs as:

"In for a penny, *infra dig.*"
"Paint marks never made fair lady."
"Punctuality is the thief of time."

The "Tid-Bits" of science and useful information given to imaginary inquirers are sometimes quite amusing:

"Camels cannot swim. But the flounder is said to be the most industrious animal, laying upwards of 7,000,000 eggs each year.

"A human body is so wonderfully constructed that if its veins and tubing were laid out in a straight line, starting from St. Paul's and going in the direction of Camberwell, long before all the veins and tubings had been thus arranged life would be quite extinct."

*A Few Remarks* by Simeon Ford (Heinemann), is a collection of after-dinner speeches by one of the Americans best known for this accomplishment. It is only fair to remember the circumstances for each utterance: a dinner

audience is pleased with a sort of humour which would soon pall upon the reader in cold blood. Even making this allowance there is many a smile to be had out of the volume if taken in small doses. In one of the earliest of the speeches Mr. Ford gives an account of his experiences in a Turkish bath.

"I was next ushered into the 'hot room,' where a number of gentlemen were lolling about and perspiring affably and fluently. Being of a timid, shrinking nature I was somewhat embarrassed on entering a room thus filled with strangers, and the more so as I realised that my costume was too *bizarre* and striking for one of my willowy proportions. So I flung myself with an affectation of easy grace upon a marble divan but immediately rose therefrom with a vivid blush and a large blister. I then sat upon a seething chair until I came to a boil, when I rose up and endeavoured to alleviate my sufferings by restlessly pacing the room. A few towels were scattered about, and as the nimble chamois leaps from crag to crag so I leapt from towel to towel to keep my feet off the red-hot floor.

"Having basked in this room until I was quite aglow, I summoned the attendant and told him to take me out at once or to wait yet a little longer and remove me through a hose. I then passed into the 'manipulating room,' where I was laid out upon an unelastic marble slab like a 'found drowned' at the Morgue and was taken in hand by a muscular attendant, who proceeded to manipulate upon me with great violence. He began upon my chest, upon which he pressed until he lifted his feet off the floor and my shoulder-blades made dents in the marble. I mildly asked if it was necessary, absolutely necessary that my respiratory organs should be thus flattened. To which he replied with a rich Turkish accent: 'Come off, young feller; I know my biz,' and swooped down upon my digestive organs. Manipulation consists of disjointing, dismembering, bruising, and rending limb from limb, and may be healthful, but it is not popular with me. The man said he was a pianist also, and that he could manipulate and at the same time strengthen his fingers and improve his technique, and to illustrate he struck a few resounding chords in the small of my back, and then proceeded to interpret Wagner up and down my vertebræ, running scales, twiddling up in the treble and thundering down in the bass, just as if I were the keyboard of a Steinway Grand, an illusion doubtless strengthened by the ivory whiteness of my skin. He wound up by playing that grand, show-off piece the 'Battle of Prague,' while I joined in with the 'Cries of the Wounded.' It was a fine rendering, no doubt, but next time I am played upon I shall ask for a soft, *andante* movement—a Chopin nocturne, say."

*The Log of the Folly*, by Allen Upward (Isbister), is one of the "mad" volumes of humour which this publishing-house has lately made a speciality of, and recounts the screaming adventures of "three (lands) men in a boat" in the encircling seas.

### Fiction

*The MS. in a Red Box* (John Lane) represents an unusually successful novel advertisement. For this Mr. Lane is to be warmly congratulated. All we know—and ostensibly all he knows, for he dedicates the book to its unknown author—is that the MS. in a red box, was dropped into his letter-box. The rest is silence—and paragraphs. One thing, however, is fairly certain; the MS. is the work of a veteran hand—or else of a singularly gifted novice. It is a rattling tale of adventure, thrilling from cover to cover, with one excessively gruesome incident. The *genre* is that of Mr. Stanley Weyman and the style and sentiment those of Mr. Crockett. Indeed, while cordially recommending the volume to all lovers of the fiction of adventure, we will hazard a guess that Mr. Crockett will in due time come forward and admit that he stole on tiptoe one night down Vigo Street, enveloped in a cloak, with a slouch hat pulled down over his eyes, and dropped the red box at the Bodley Head. At any rate, the adventurous hero is precisely in his style, and so is the heroine, who inspires in the hero a chaste but volcanic passion which nothing that the author says about her enables the reader to comprehend.

The brief bibliography of the dog receives an important addition in *The Call of the Wild*, by Jack London (Heinemann). One may number on one's fingers all the dog books which really count, from *Rab and his Friends* down to *Owd Bob*. In this book Mr. London again describes life in the Klondike regions, but it is life from the point of view of the dog which is so prominent a factor in the situation there. This description, however, gives but a vague idea of the imagination, poetry even, with which the author has invested his work. It is safe to say that this dog will secure a lasting place in the written records of his race.

Mr. Charles Marriott is a novelist to be reckoned with in casting up current accounts of British literature. *The Column* was a work of great promise, nearly marred by a sense of effort and artificiality. *Love with Honour* showed creditable progress. *The House on the Sands* (Lane) is achievement. There is

here a firmness of artistry, a cleansing of style and diction; and an absence of insincere sentiment which leaves no doubt as to the arrival of the young writer. It is a political novel of such striking up-to-dateness that the reader almost confuses it with his morning paper. Yet the public issues in the book are, as they should be, of secondary importance, and the theme treats of much more eternal questions. It is hard to say what is best in so good a novel, but perhaps better than all else is a happy knack of description, such as that of khaki-mad London, in the first chapter, or the frequent choice of just one word which fixes a whole page of description in the reader's mind. For instance, no one who ever saw the white sand dunes and cliffs of the Cornish coast can fail to remember Mr. Marriott's description of the "air of chastity" which overhangs them.

Mr. Neil Munro has been generally known as a young writer with a style. If he continues his present development he is in danger of having no other literary reputation. In his new novel *Children of Tempest* (Blackwood) one finds all the same charming characteristics of his earlier work but little of the hoped-for progress to clearer diction and better characterisation. Scenery, weather, and the like are rather out of fashion in fiction, but Mr. Munro's clouds and skies and crags and storms are much more effective than his people, who yet fail to move you as living flesh and blood. But for all this *Children of Tempest* is a stirring tale of stirring times.

The main theme of Mr. Thomas Nelson Page's *Gordon Keith* (Heinemann) is the contrast between the old-fashioned gentle life and character in the Southern States of the American Union and the new industrial life, full of energy and full of vulgarity. Young Gordon Keith who had no patrimony except the birth of a gentleman, has to win his fortune by receiving financial aid in New York to develop coal-mines. He finds entrance into New York society by reason of old family acquaintances; and its confusion of good breeding and social charm with the degradation of sheer commercialism is presented to the reader with great elaboration and by a host of characters. After one has read the book and put it aside for some time the two pictures of inefficient dignity of character in the old South and the degrading worship of success in modern New York stand out clearly. So much could not be said about *Gordon Keith* without saying that it is a novel of serious import and of deserved popularity. It has a large and high purpose and leaves a permanent impression.—If one is constantly reminded of another chronicler of Ghetto life in *Idyls of the Gass*, by Martha Wolfenstein (Macmillan), one can also give credit for much originality and freshness of observation to this new writer upon Jewish life and character. Some of the idyls are charming, others tragic, others sordid, but all have the old, old fascination which clings to records of the chosen people.—*The Duke Decides*, by Headon Hill (Cassell) is a sensational story of the unexpected inheritance of a dukedom by a man charged with the delicate mission of palming off bogus United States Treasury Bonds (whatever these may be) on the Bank of England. Granted all these initiatory improbabilities (and what reader of sensational stories gives a fig for probability?) the author works out his plot very cleverly with the conventional number of thrills and surprises.—The subtle, very feminine realism which, even touching on heavenly things, made Elizabeth Stuart Phelp's *The Gates Ajar* widely popular all over the world, lends great distinction to her short novel *Avery* (Richards), which deals with miraculous dreams of this world rather than the next. That a man having out a troublesome tooth at the dentist's, should under the influence of gas dream a dream of sufficient strength to change the course of his conduct towards an invalid wife, sounds horrible, inane even. The author lends to the theme a weird fascination and gives moving strength to the story.—Miss Selma Lagerlöf has been called the Kipling of Scandinavia. Her latest novel *Jerusalem* (Heinemann) has all the stateliness of a Norse Saga. It is much too long, the characters far too many, and after the fashion of Scandinavian and Russian novelists, the time of action extends over several generations. But Miss Lagerlöf makes alive her simple-minded peasants, and in this novel of religious mania she has occasion to contrast their sturdy honesty with the devious-minded Levantine guardians of the Holy City. The book has all the fascination of her former novel, *From a Swedish Homestead*, and much more strength.—There is a stirring vitality in American novels which furnishes a great deal of their attraction to European readers. In *Maids of Paradise* (Constable) Mr. Robert W. Chambers transfers these stirring scenes to the Continent, and we have Germans and Frenchmen whirling through its pages quite in the accepted bustling American fashion. The story is concerned with the Franco-Prussian war, and it overflows

with romantic adventure and carries the reader breathless to the end.

### The Business of Writing

Not for many a day have we met so refreshingly candid a book as *The Truth about an Author* (Constable). The writer lays bare his inmost literary soul, and the only evil effect that might be feared from the perusal of his confessions would be that any budding author should start life with the expectation of being similarly successful. For it is a record of astounding success. From beginning in London as a clerk at 25*s*. a week the author rises in ten years to the position of editor, novelist, dramatist, critic, and connoisseur of all arts. And it seems so easy! He meets with an amusing idea for a curtain-raiser in the morning, and in the afternoon writes the piece complete. He writes 500,000 words a year, of which 150,000 are reviews.

"Have I been reading novels for bread and cheese all these years and not learnt to judge them by any process quicker than that employed by you who merely pick up a novel for relaxation after dinner? . . . The title-page—the conjunction of the title, the name of the author, and the name of the publisher—speaks to me, telling me all sorts of things. The very chapter-headings deliver a message of style. The narrative everywhere discloses to me the merits and defects of the writer; no author ever lived who could write a page without giving himself away. The whole book, open it where I will, is murmurous with indications for me. In the case of nine books of ten, to read them through would be not a work of supererogation—it would be a sinful waste of time on the part of a professional reviewer."

By-and-by the young lion becomes dissatisfied with London. "The distractions are too multiform. One never gets a chance to talk common sense with one's soul." He is prosperous enough to resign the editorial post, so he quits his surbuban residence and retires with his work to the country. Witness the delights of the life:

"You invite an influential friend down for the week-end. You meet him at the station with a nice little grey mare in a phaeton, and an unimpeachable Dalmatian running behind. The turn-out is nothing alone, but the pedigree printed in the pinkiness of that dog's chaps and in the exiguity of his tail, spotted to the last inch, would give tone to a coster's cart. You see that your influential friend wishes to comment, but as you gather up the reins you carefully begin to talk about the weather and prices per thousand. You rush him home in twelve minutes, skimming gate-posts. On Monday morning, purposely running it fine, you hurry him into a dog-cart behind a brown cob, fresh from a pottle of beans, and you whirl him back to the station in ten minutes, up-hill half the way. You fling him into the train, with ten seconds to spare. 'This is how we do it in these parts,' your studiously nonchalant face says to him. He thinks. In a few hours Fleet Street becomes aware that young So-and-so, who lately buried himself in the country, is alive and lusty. Your stock rises. You go up one. You extort respect. You are ticketed in the retentive brains of literary Shahs as a success. And you still have the dog left for another day."

An entertaining and brilliantly written little book, whose surrender to the spirit of egotism is quite charming.

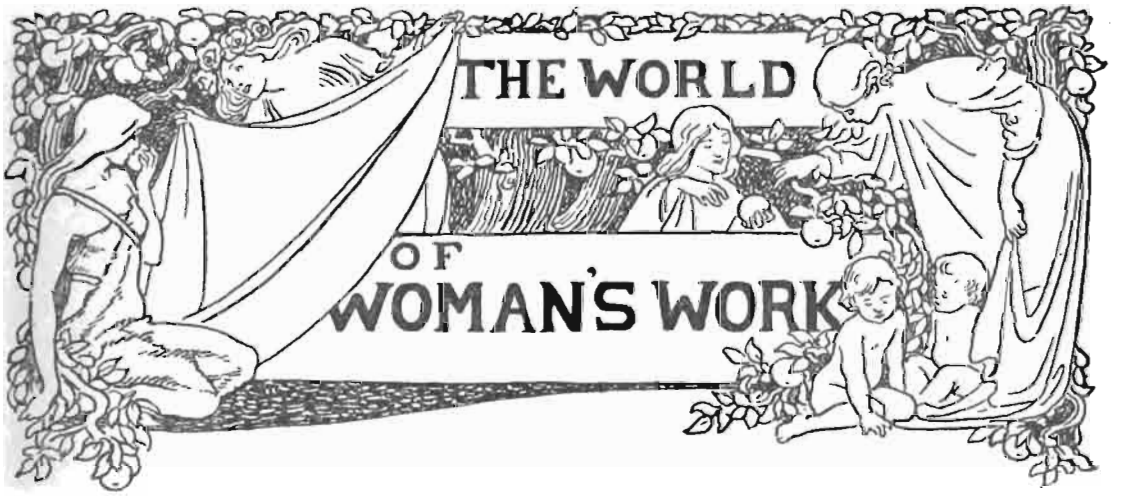
### Miscellaneous

The *Journal of George Fox* (Isbister) preserves to us as nothing else does, the awful earnestness of the man who in the seventeenth century was awakened to a sense of his sin and of the consuming wrath and mercy of God. Perhaps modern pathology would have something to say about this strange man, the son of "Righteous Chrisher" and of Mary Lago, "of the family of the Lagos, and of the stock of the martyrs." It would explain in another way than Fox's own his doings that day when in winter outside Lichfield the Lord commanded him to pull off his shoes and to trudge through the city crying, "Woe to the bloody city of Lichfield!" And when Fox, hearing doctrine which roused his wrath preached in the "steeple-houses," shouted, "Come down, thou deceiver!" the cold mind of to-day would hardly end the tale by: "Thus was he moved of the Lord God." There is undoubtedly an aspect of Fox's life for which we would prescribe the cure suggested by the "ancient priest of Mancetter," when, according to the *Journal*, "he bade me take tobacco and sing psalms." But then the reply of poor Fox was, "Tobacco was a thing I did not love, and psalms I was not in a state to sing." And that was an end to it. The *Journal* is the record of his wanderings, his persecutions, his disputes, his wrestlings with God and with man. It is the fiery imprint of the seventeenth-century soul, which received its commands direct from God, which had its apocalyptic visions of impending doom, which saw swords flashing in the air, blood flowing in the streets, and angels with the scrolls of fate unrolled. It is marvellous that this revelation which charmed Coleridge and captured Carlyle should be so little known,

and it is to be hoped that Mr. Parker's abridgment (from which nothing essential seems to have been omitted) may draw the attention of many to this naïve unfolding of a personality, the strangest and most impressive spiritually of all the strange and the impressive men who took part in the religious movements of "Oliver's time."

A volume on sports edited by Mr. F. G. Aflalo is sure of attention at any time. That just published, *The Sports of the World* (Cassell), is a singularly comprehensive encyclopædia; from Lion Hunting, upon which Mr. Selous writes, to Curling, by Lord Balfour of Burleigh, every form of sport in the world is described in a practical manner by leading authorities. The publishers may be congratulated upon getting Mr. Aflalo to edit the work, and Mr. Aflalo upon the experts whom he has secured to contribute to it. The volume is well and fully illustrated.

*Our Sons: Their Start in Life* (Guardian Office, 1s.) is one of the best volumes on the subject of the professions we have ever read. No parent who has sons to start in life can fail to find it of assistance.




# DOMESTIC SERVICE AS A SKILLED PROFESSION

THE problem of domestic service still cries aloud for solution. Nobody's circle is so limited that she cannot point to a certain number of "mistresses" whose whole conversation is burdened with the iniquities of their maids. When one hears of an old lady who engaged and dismissed thirteen servants within a fortnight, one feels a suspicion of possible fault in the old lady. When another mistress tells you that she allowed her cook to keep a dog and a bicycle, and that the ingrate left because she could not also keep a parrot, one's sympathy weighs on the other side. The modern domestic has certainly turned the tables on her "betters"—she now avenges the wrongs of half a century ago, when a servant in any middle-class household had to get up long before daybreak on Monday morning to do the family washing before breakfast. No leisure time was hers, for in the bare half hour or so free from the drudgery of cleaning and scouring, she had all the family linen to mend; in fact she sold herself and her time for a paltry few pounds a year—not enough to save for her own simple wedding, much less to provide a competency for sickness or old age. And in those days there were no easy aids to work—no electrical fittings, no gas-stoves, no lifts, no speaking-tubes, no carpet sweepers, no easy mangles and washing-machines. Indeed the ancient form of mangle was made with a view of benefiting the linen only; it must have been a kind of treadmill for the poor laundress. It was a world without scrubbing soaps or easy boot or metal polishes or knife machines. Even

hot and cold water circulation was a rarity, so that the morning baths of the family were an added source of fatigue and drudgery for the domestic workers. There is evidence on every side that the modern mistress has realised that she owes a duty towards her servants.

One lady pathetically tells you that she makes it a rule when engaging a coachman, to ask if he would like to wear a livery or not, and of her women, she asks would they like to wear caps and black dresses. Another gives her servants periodical holidays in addition to the stated afternoons and evenings off. This all indicates a desire to meet modern demands, but it scarcely covers the question. If a coachman is ashamed of his livery, then he is ashamed of his service—the same with a woman who won't wear a cap. Surely a neat livery is more in harmony with the eternal fitness of things than a coachman with a straw wideawake, faded morning coat, parti-coloured waistcoat, and red cravat. The real element of wrong is that people should think labour dishonourable. Until we all realise that work of any kind—hand as well as head—has a place of dignity in life, there will be continual war between employer and employed. Harmony should be the aim of both, and so long as any woman degrades her sex by acting the fine lady, who thinks that to wet her finger to help herself or another is a disgrace, so long will those who serve her feel themselves a despised race, and naturally rebel against their portion. The modern mistress does much, but only rarely does she touch the problem with real liberality. Even to-day it is a common thing for the servants of some well-to-do households to have scarcely fit sleeping-apartments—so cold in winter as to lay a sure foundation of chest complaints or rheumatism for the occupants. And after toiling all day in a hot kitchen, it is but fair to expect a temperate sleeping climate. There is something unrighteous, too, in the talk of "servants'" bacon, "servants'" eggs. Why should those members of a household who have the longest working day and the greatest self-repression, have also the worst food and sleeping accommodation? Even in these days of degeneracy in the world of domestic service, it is not impossible for a good, kind, human mistress to get loyal service from her women. The thing is to get them young enough, and to know how to train them. It is generally the inefficient mistress who is afraid of her own kitchen. True education of the mistresses of the future is undoubtedly half the problem solved. The complete woman is the educated woman of refinement who can do always and anywhere a woman's work. However learned or accomplished a woman may be, however well she may play golf or hockey, or however many languages she may command, not one of these things will excuse her ignorance of the training of children and servants, or of a real knowledge of the working machinery of her own home.

Great efforts have certainly been made in the provision of cooking-schools and laundries and such like, and these are right, but they are not enough. The higher education for women has brought with it numerous complications that need adjustment. For one woman who sought university education in the beginning of the movement, there are probably hundreds to-day who take it as a matter of course. And yet, as ever, the intellectual prizes are for the few, while there is and always will be a real need for efficient wives and mothers. Modern education is not too high for women, but it is not properly adjusted to women's needs.

It is true that London makes some provision for this side of women's education, but the colleges are, as a rule, rather one-sided. There is the Norland Institute, which is an admirable training-home for gentlewomen who desire to study child nursing. There are also the National Training School of Cookery and Domestic Economy, the Battersea Polytechnic, and others—all more or less schools for special subjects; while at Sesame House for Home Life Training a really excellent work upon a higher scale is being carried on.

Perhaps the nearest to an ideal school for the domestic education of women is "Northfield," a self-supporting school and training-college in North Hackney. It has been founded on Froebel's system, and some of Ruskin's pet ideas are carried out practically. The founder of the school has realised that woman's essential work as a woman must ever be to feed people, to clothe people, to keep them orderly—and for this girls must practise plain cooking, dressmaking, laundry, sick-nursing, and the training of children. A woman's duty is the guardianship of a home, not necessarily her private home—it may be the larger sphere of the poor law guardian, the matron, the ideal school-mistress, the nurse, the inspector, the doctor. For this she needs the head of a statesman to organise her household, the tact of a diplomatist to know the thing to say and to do at the moment, in order to ensure the co-operation of her little commune, the temper

of an angel to sympathise and soothe in times of distress and anger. Although "Northfield" is, correctly speaking, a Kindergarten school, it really cannot properly be said to be cut to any pattern; it is constructive in plan and grows and widens from a sound foundation. Apart from the training of children on sane and healthy principles, there is in connection with it a training-college for teachers, and perhaps most interesting of all, a domestic science school where students have a thorough course of housewifery, cooking, laundry, keeping accounts, sick-nursing, plain sewing, and every branch and section of women's work.

The training is essentially practical, for the students have only the ordinary home life conveniences, and have to meet and overcome daily difficulties without any of the machinery used generally in domestic science schools. They have too what no ordinary training-college can give, a practical outlet for their theory lessons, with the Kindergarten attached where the active interests of the nursery are open to their study. The environment of the place is that of the home on a large scale. A domestic school student writing of her life there describes the week's working programme as follows:

"Monday and Thursday mornings we have practical cookery, and cook the dinner for the students residing at the college, averaging twenty. These are really pleasurable mornings, but then, I must say that all our work is a combination of work and pleasure. Before commencing on cookery mornings, we have a lecture on the theory of cooking, which is of very great assistance to us. The food being prepared, we dish it up ready for the maids to carry to the dining-hall. Each day two of us lay the tables.

"On Tuesday we do laundry work (washing), which we iron on Wednesday. This work is the most re-paying, as the things look so nice when finished. We also have demonstration lessons in cooking and washing, which are of great help to us. One of us assists each time. Visitors also come to these lectures.

"In the afternoon we have, one day housekeeping lecture, another day domestic economy lecture, needle-work, knitting, serviette folding, silver and brass cleaning, scullery work, housecleaning, shopping, &c., all these subjects being of great interest. Something new is always cropping up to make variety and give us a taste for our work.

"Our mistress is really the most perfect mistress in every respect it has ever been my pleasure to meet, and as for knowing her business, I would back her against any lady in the United Kingdom. She strives her hardest to combine our work with pleasure, and she certainly succeeds. I think, in saying this, I am expressing the thoughts of the whole class; in fact, it is chiefly due to her pleasant teaching and our principal's kind and thoughtful arrangements for our comfort, that I can say, without exaggeration, that the last three months have been the happiest I have spent within memory."

The intellectual basis of this special domestic training is to teach women:

(1) Human Physiology, because a woman must understand the mechanism of the body for which she prepares the food, and she is the nurse and must know the best methods of keeping the body in health.

(2) Hygiene, which gives a knowledge of ventilation, drainage, and cleaning.

(3) Social Economy, that she may wisely guide the finances of her household.

(4) Practical Chemistry, that she may know the properties of the various foods.

Such a course of training must produce as nearly as possible perfect housewives. Domestic work, too, under such conditions becomes a skilled profession. And those who do not utilise the experience in homes of their own, may still make it their lifework. There is no reason why systematic and scientific domestic training should not take its place with professional nursing, and the girls thus qualified should be as great an improvement on the untrained servants of to-day as the present trained nurse is on the Sarah Gamp of former generations. How gladly should a profession exclusively for women be welcomed—it might do so much towards lessening the feverish rush in the type-writing world. Only about one in ten of those who take up clerical professions, are decently able to cope with the work. So many of them lack not only the necessary head knowledge, but are quite ignorant of the elements of neatness and propriety. Some get shaped by experience, but the inefficient majority struggles on under trying physical conditions, anæmic in mind and body. Whereas the same girls engaged in the natural and healthy duties of a home would have infinite possibilities of development. Until domestic work loses its odium, and is regarded not only as an honourable profession, but as woman's kingdom, the second part of the problem must remain unsolved.

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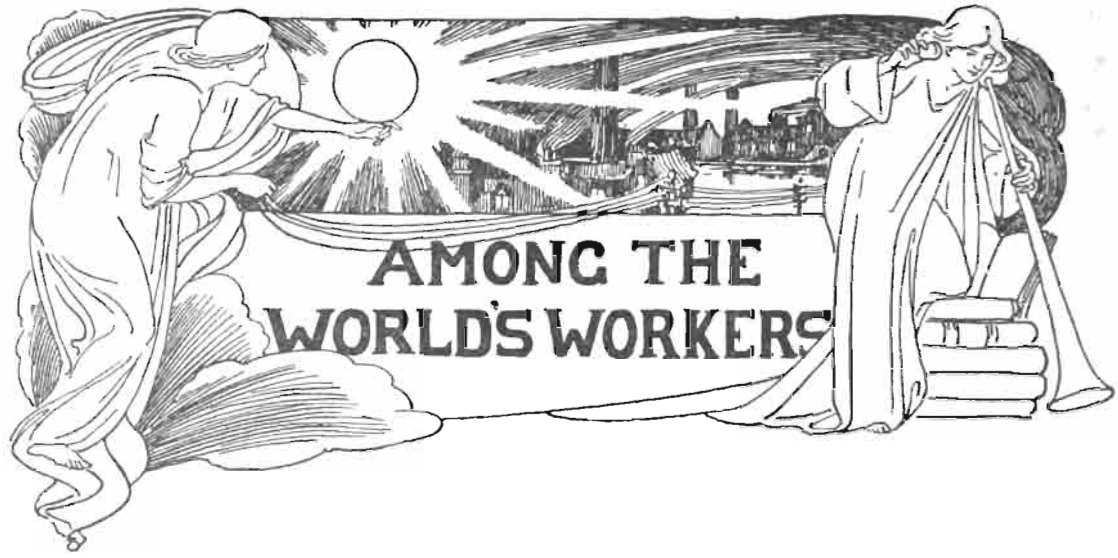
NOTE.—The name of the working girls' club described under this Department in our last issue is the Enterprise Club, 44 King William Street, E.C. This announcement is made in response to inquiries.




## MOTOR-CHAIRS FOR THE ST. LOUIS FAIR

THREE thousand motor-chairs propelled by electricity will be a feature of the World's Fair at St. Louis next year. This chair is the invention of Semple S. Scott and is the result of nearly three years' experimenting and designing. It is said that the machine has a uniform speed of three miles an hour, which is exactly the same running up or down a steep grade or on a level. The occupant has no control over this speed whatever. The simplicity of operation is such that any one can run it readily. The most desirable feature is the fact that the machine is provided with a sensitive guard rail. The latter is deemed the most valuable invention on the machine. If the machine collides with any object or person, a pressure of only a few ounces pushes this guard rail back and causes the wheels to become locked, thus bringing the chair to a dead stand-still before the machine itself strikes the object or person. Each chair will carry two passengers, one of whom may operate the machine, or, if desired, an operator will be furnished, who will not only run the machine but will also serve as a guide to explain all the points of interest. The operator sits on a detachable seat at the rear of the chair, from which point he controls the machine, the controller and steering-bar being removed from the front and attached to sockets in the rear.

## IRON AND STEEL IN 1901

A BOARD of Trade return of statistical tables showing the production and consumption of iron ore and pig-iron and the production of steel in the United Kingdom and the principal foreign countries gives some interesting comparative figures for the year 1901, last year's statistics, particularly for foreign countries, being not yet available. In that year the United States produced 28,887,000 tons of iron ore, Germany 16,570,000 tons and the United Kingdom 12,275,000 tons. These three countries consumed iron ore in the following quantities: United States, 29,789,000 tons, Germany 18,550,000 tons and the United Kingdom 17,812,000 tons. The total quantity of pig-iron produced in the world in 1901, probably amounted to about 40,000,000 tons, the principal producers being the United States, the United Kingdom and Germany in the order named. The United States produced 15,878,000 tons, the United Kingdom 7,929,000 tons, and Germany 7,867,000. In this case the United States shows a steadily increasing production, 13,000,000 tons in 1889, the same in 1900, and 15,000,000 tons in 1901. The production in the United Kingdom falls from 9,000,000 tons in 1899, to 8,000,000 tons in 1900 and 7,000,000 tons in 1901.

At the present time the greater proportion of pig-iron consumed is utilised in the production of steel. In 1901 the United States produced 13,474,000 tons of steel, an increase of 3,000,000. over the amount of 1899 and that for 1900. Germany produced 6,394,000 tons, being practically the same output as that for the two preceding years. The United Kingdom produced in 1901, 4,904,000 tons, which also shows no increase over the production of the two preceding years.

## THE INSURANCE ENGINEERING EXPERIMENT STATION

PERHAPS the British Insurance world is well acquainted with the wonderfully low rates of insurance prevailing in the United States for factory and mill property, but the average reader will be interested to know of the organisation and arrangements by which this comes about. More than £250,000,000 worth of such property is insured in that country at a total cost of less

than £100 in each 20 per year. Thirty-three insurance concerns are associated in giving this rate, and their success has turned upon the simple principle that fire shall be prevented by every feasible means, and that the payment of losses shall be merely incidental. These means include the supervision of construction in such a way that fire is very unlikely. The buildings are not all fire-proof, but are what architects call "slow-burning construction," much cheaper and almost as satisfactory as non-combustible materials. Then all manner of automatic fire-extinguishers and all sorts of precautions with regard to combustible materials are required. It is agreed in every contract of this insurance that an inspector from headquarters may at any time, without notice, examine a risk. If he finds any rule neglected, the policy becomes void. No sooner is a fire reported than the premises are scrutinised minutely so as to learn, if possible, the cause, and eliminate it in future from every hazard in the wide circle of mill underwriting. Monthly reports give these inspections in summary, together with much other information of value. To these issues are added occasional reports of subsidiary interest, those, for example, of the Mutual Boiler Insurance Company treating steam pipe and boiler coverings, comparative values of fuels, suppression of smoke, boiler plates, and so on. With these in his hands an architect or engineer can readily adapt their general directions to the problems bound up with a special business. The investigations recorded in these issues are being continued and broadened at an Insurance Engineering Experiment Station in Boston, directed by Professor C. L. Norton. Its inquiries will be of the highest importance, for new materials are fast being adopted for mill construction.

This whole enterprise is a remarkable example of what business men of the highest ability can do when they join hands with scientific inquirers of equal mark. This mutual insurance of mills can go but little further in its efficiency and cheapness, for it now stands close to zero, both in its losses and in its incidental expenses. Such courses as those now taking form in the Insurance Engineering Experiment Station in Boston might well be embodied in the training of every architect and building engineer. The associated mill underwriters study their problems broadly; they are often able to suggest the best mode of planning a building for its specific purpose, the while that it is thoroughly safeguarded from fire.

## A GARDEN-CITY NAVAL BASE

THE Garden City Association has taken up seriously the suggestion of many newspapers that it lend its services to the building of the new town which must spring up about the new naval base on the north side of the Forth. It will be very different from other towns of the Kingdom. The latter have seen the slow, irregular growth of generations and centuries, and the charm of most of the towns along the southern fringe of Fife lies in the quaint irregularities of the buildings and the lack of plan or method in the streets. But according to the *Scotsman*, the new town will be a sort of Aladdin creation, in which everything may be expected to be thoroughly up to date and to reflect the polish of the new lamp. Sir John Leng has asked whether the Government intend to plan out a model city—a garden city, as it is the fashion to term it in these days—to be built upon scientific principles and to meet all the requirements of modern ideas on the subject of housing the people. He did not receive much in the way of an answer, but his suggestion will not on that account be lost sight of. There is a certain fascination in the idea of making St. Margaret's—for surely the Government will not be inexorable in forcing the name Rosyth, and missing a great opportunity of perpetuating the name of one of Scotland's greatest Queens—a model town. The authorities have unoccupied ground to work upon. Mr. Arnold-Forster was careful to say that until the naval establishment is laid out the question of residential dwellings and the expansion of the new town must remain in abeyance. It is to be hoped that this is not so. The proper course is for the authorities to make provisions now for the reasonable possibilities of the future. A town is going to spring up; and it is well that the schemes of drainage, lighting, traffic routes, open spaces, and public buildings should be thought out from the outset. It is a unique opportunity to escape the dangers and inconveniences of haphazard building. The Government are creating the nucleus of a new town, and every provision should be made against insanitation, overcrowding, clumsy street arrangements, and defective house accommodation. Sir John Leng has done a public service in thus early calling attention to the need of forethought and pre-arrangement in the laying out of the new naval establishment. The idea of a garden or model city has, as we have said, a certain allurement; and it is not often so splendid an opportunity occurs, in this old country at least, of putting it into practice. The Garden City Pioneer Co., Ltd., are not only interesting themselves in this scheme, but are also negotiating for the purchase of an estate of 4000 acres near London upon which to make their first experiment.

## SKIMMED MILK COMBS AND CIGAR-HOLDERS

AT a Hygienic Milk Supply Exhibition recently held at Hamburg, were exhibited a number of objects which apparently had nothing whatever to do with hygienic milk supply. Nicely arranged in glass show cases were combs seemingly

made of horn; cigar-holders with amber-coloured mouthpieces; knives and forks with handles similar in appearance to ebony; ferrules for umbrellas and sticks, and balls, rings, chess figures, dominoes, &c.; also a small table with an inlaid marble slab, and finally a number of thick slabs and staves with every imaginable variation of marble colours, but of considerably less weight than real marble. These objects were made of "galalith," *i.e.*, milk-stone. The principal albumenoid substance of skimmed milk, the casein, is the raw material out of which the new product galalith is manufactured. More than fifteen years ago the idea was originated to manufacture various articles like buttons, handles, ornamental plates, and coloured pencils out of casein.

The method of manufacture as recently described in the *Scientific American*, began with the dissolution in hot soap water of fresh casein, that is ordinary or dried curds. To this solution the required colouring ingredients and a metallic salt were added, and a firm substance consisting of casein and metallic soap was produced which, by drying and pressing into moulds, could be given any desired shape. It is to be supposed that the inventor had found out by continued trials that casein by addition of a metallic salt becomes brittle and softens easily in water. With a view to counteracting this latter drawback soap was added, but the articles produced thus were soft and brittle, and the invention was not a success. The chemical factory of Schering, at Berlin, then invented a process, the idea of which was to make casein insoluble by the addition of formaldehyde, but the disadvantage of this invention was that the articles produced distended considerably in water.

The inventors of galalith succeeded, after many troublesome trials, in doing away with the deficiencies of former methods and in using the good that was in the former ones, for the working out of an entirely new process. Their first aim was to make an insoluble union of casein by the addition of salts and acids. The substance thus obtained was dephlegmated and dried, and, finally, by the addition of formaldehyde, the galalith was obtained. To produce, for instance, a material similar to ebony, which could be used for handles of table knives they proceeded as follows: Dissolved casein was given a dark colour by the addition of soot and, with the help of a metallic salt (acetate of lead), a slate-coloured precipitate was obtained. This was mixed with water, and the thin pap filled into a cloth stretched over a frame. The water becoming absorbed by the cloth, the pap contracted into a uniform, firm, and dark mass; this was placed in a solution of formaldehyde, and after being dried, a product resulted which in lustre and colour was equal to ebony. In this way a raw material is produced which the inventors have protected by numerous patents.

An advantage of the new product as compared with celluloid is the fact that it does not ignite so easily and is entirely odourless. Trials have proved that even when kept for weeks in water, it does not distend more than the best quality of buffalo horn; after one month it had not soaked in more than 20 per cent. of water. Of late, trials have been made to produce, by the addition of vegetable oils, an insulating material for electro-technical purposes.

## POWERFUL NEW EXPRESS ENGINES

MR. WILSON WORSDELL has designed and is now building at the Gateshead Works a type of engine which will increase the locomotive power of the North-Eastern Railway. They are four-wheels coupled with leading bogie, and a pair of carrying wheels under the fire-box. The coupled wheels are 6 ft. 10 in. diameter, the bogie wheels 3 ft. 7¼ in. diameter, and the carrying wheels 4 ft. diameter. The cylinders are placed outside the frames, and are 20 in. diameter with a stroke of 28 in. These engines are fitted with cogmental steam distributing valves. The barrel of the boiler is 15 ft. 10½ in. long, and 5 ft. 6 in. diameter outside. The fire-box is 9 ft. long with a grate area of 27 square feet. The working pressure is 200 lbs. per square inch. Heating surface in tubes is 2275.8 square feet, and in fire-box 180, making a total of 2455.8 square feet.

The first of these engines is expected to be at work immediately. They will be the largest and most powerful express engines ever built in England, capable of dealing with the present heavy fast passenger traffic between York and Edinburgh. The weight of the engine without the tender will be about 72 tons. This traffic is ever increasing in speed and weight, and the engines are built with a considerable margin of power that can be utilised when required. Another powerful locomotive recently built is the Caledonian Railway Company's No. 50—a six-coupled express bogie passenger engine, with cylinders 21 in. diameter by 26 in. stroke; coupled wheels 6 ft. 6 in. diameter; steam pressure 200 lbs. per square inch; heating surface, 2400 square feet. The weight of the engine in working order is 73 tons, and of the tender (which has a water capacity of 5000 gallons) 55 tons.

## THE BRITISH MUSEUM

SIR E. MAUNDE THOMPSON, Director and Principal Librarian of the British Museum, in the annual return upon the conduct of that institution gives some interesting figures and facts. The number of visits to the Museum recorded for 1901 reached a total of 718,614. In 1902 the total was 845,360, showing the remarkable increase

of 126,755 on that of the preceding year. This high figure is no doubt partly due to the occurrence of the Coronation, which brought a large influx of visitors into London; but there is reason to believe that under normal conditions the steady increase of recent years would still have been maintained. The number of visits on week-days rose from 669,719, recorded in 1901, to 786,850, and those on Sundays from 48,895 to 58,519. The number of visits of students to the Reading Room in 1902 was 211,244, being an increase of 11,209 on the total of 1901; a daily average of 699.

Among the more important additions to the several Departments the following may be noted: In the Department of Egyptian and Assyrian Antiquities the collection of predynastic objects from Egypt has been augmented by further specimens of a remote period, and a valuable series of Egyptian antiquities of the eleventh and twelfth and later dynasties has been presented by the Egypt Exploration Fund; and in the Assyrian section upwards of three thousand cuneiform tablets have been acquired, of which the greater number are of the early period of Babylonian history. The collection of English coins in the Department of Coins and Medals has received an important addition in a series of thirteen hundred silver pennies of the reigns of Henry II., Richard I., John, and Henry III., selected from a great hoard of nearly eleven thousand pieces recently discovered at Colchester. A remarkable portable altar of Rhenish work of the thirteenth century has been acquired by the Department of Mediæval Antiquities; which has also received as a gift from Mr. George Salting, F.S.A., most valuable and artistic gold reliquary, of French origin, of the beginning of the fourteenth century. Their Royal Highnesses the Prince and Princess of Wales have been pleased to deposit among the ethnographical collections of the Museum a large selection of the ethnographical specimens presented to them during their tour round the Empire in 1901.

## FRIENDLY SOCIETIES AND TRADE UNIONS

THE report of the Chief Registrar of Friendly Societies for the year ending December 31, 1902, shows that the total registries of new societies, branches, unions, and schemes were 959 as against 873 in 1901. The increase was in Friendly Societies, 7; Working Men's Clubs, 83; Industrial and Provident Societies, 35; and in branches of Friendly Societies, 2. There was a decrease of 1 in specially authorised societies, 14 in Building Societies, 14 in Trade Unions, 4 in Scientific Societies, and 2 in Certified Loan Societies. The total number of rules, amendments of rules, appointments, removals, and special resolutions registered was 9382 as against 9374. The fees received and paid into the Exchequer during the financial year 1901–1902 were £771.

The Chief Registrar adopts the rather unusual method of measuring the work of his office by the weight of its correspondence. According to the report of the Postmaster General, during the year ending March 31, there was carried for the Central Office 172,391 ounces, which was in excess of the amount recorded in any of the previous 20 years and exceeds that of the previous year (which was however below the average) by 42,462 ounces or 33 per cent. The Chief Registrar holds that the increase in the weight of its correspondence affords a mechanical test of the increase in the business of the office.

## THE TRADE OF THE PHILIPPINES

IN common with other reports from the silver-standard countries of the East, Mr. Acting-Consul Firth writes from Manila to the Foreign Office that the abnormal fall in the value of silver has largely interfered with import business and the establishment of a stable currency is essential to the prosperity of the country. On the whole he says that "the year 1902 has been a somewhat unsatisfactory one for the trade of the Philippines. The islands, still far from recovered from the effects of the late war and insurrection, have had many serious difficulties to contend with; lack of capital and labour have, to a large extent, handicapped agricultural and commercial development, capital from the United States not having been attracted hither, and the admission of Chinese labour being prohibited. In addition, rinderpest and cholera have brought agriculture to a standstill in many districts. The continued appearance of bands of marauders has also prevented the country from settling down, and the insecurity of property caused by their raids has had a very prejudicial effect on trade in the interior."

The peculiar instance of the operations of a preferential tariff is mentioned by Mr. Firth. The exports from the Philippines to the United States in 1902 will treble the value of those in the preceding year. This result, Mr. Firth says, "is mainly due to the fact that by Act of Congress, March 1902, all articles, the growth and produce of the Philippines admitted into the United States free of duty, are now eligible for a return of the export duty imposed in the Philippines so long as shipped to the United States direct and proof be submitted of their importation and consumption there. Manila hemp, which constitutes about 75 per cent. of the total value of the exports, is therefore, if shipped direct to the United States, entitled to the return of the usual export duty of £1 11*s.* 2*d.* (approximately) per ton, and in consequence large quantities hitherto shipped

to the United Kingdom for distribution elsewhere have been diverted to the United States."

The total exports to the United Kingdom for 1902 amounted to £1,725,620 as against £1,602,446 from the United States. This shows an increase of about £500,000 of exports to England over 1901. The total imports from the United Kingdom in 1902, amounted to £1,150,658, whereas those from the United States were valued at £840,676, the latter again about double that of two years ago.

## THE WORK OF THE POST OFFICE

THE first annual report from the office of the Postmaster General to bear the signature of Mr. Austen Chamberlain contains for the year ending March 31, 1903, aside from the usual figures, many interesting notes upon the contact of the Post Office with the developments of national life and progress. It is estimated that the number of postal packets delivered during the twelve months under review was 4,143,900,000, which gave to each person an average of 61.3 letters, 11.6 post-cards, 19.3 book packets and circulars, 4.2 newspapers, and 2.1 parcels. Every kind of article transmitted by post has shown a considerable growth. The rate of increase for letters was considerably larger in the rural districts than in the towns, with the exception of London. The large increase in the number of post-cards (9.9 per cent.) is almost entirely due to the pictorial variety. Private post-cards are now estimated to be about 69 per cent. of the whole number.

The figures relating to the Post Office Savings Bank are always of special interest. During the year ended December 31, the deposits numbered 15 millions and a quarter and the amount deposited 42 millions and a quarter. The accounts opened totalled 1,386,962, and those closed 1,041,476. The net increase was thus 345,486. The number of depositors was thus divided: England and Wales, 8,303,586; Scotland, 405,673; and Ireland, 423,902. The amount to their credit was: England and Wales, £129,900,928; Scotland, £5,662,188; Ireland, £9,041,972. The average amount to the credit of each depositor was respectively: £15 12*s.* 11*d.*; £13 19*s.* 2*d.*, and £21 6*s.* 7*d.*, and the proportion of depositors to population: England and Wales, 1 in 4; Scotland, 1 in 11; and Ireland, 1 in 10.

The number of telegrams sent over the Post Office wires during the year was 92,471,000, showing an increase of 23 per cent. over the number sent in 1901–02. On March 31 last the number of Post Office trunk wire centres was 355, an increase of 27 in the year. The total number of trunk-line conversations was 11,574,229. The corresponding number for the previous year was 10,080,716, and the increase in the year was therefore 1,493,513 which is at the rate of 14.8 per cent.

The postal revenue of the year, including the value of services rendered to other departments, was £15,004,938, an increase of £539,068 on that of the previous year. The postal expenditure was £10,818,066, an increase of £352,965 on that of the previous year. The net profit was thus £4,186,872, or £186,103 more than last year. The telegraph revenue of the year, £3,723,866, shows an increase of £153,820, and the telegraph expenditure £4,317,371, an increase of £95,444 on the previous year. The net deficit on telegraphs was thus £593,505, or £58,376 less than last year.

On the subject of wireless telegraphy, the Postmaster General says: "I have provided for the Marconi Company a private wire from Poldhu to Falmouth, on the usual rental terms, and I have explained to the company the conditions upon which the Post Office can become its agent for the collection of messages to be transmitted across the Atlantic by the wireless system. I have found it necessary to impose certain conditions intended to safeguard other national interests, and I have also pointed out that before the Post Office can act as agent for the company, the company must satisfy me that it is in a position to carry on its business and transmit messages from one side of the Atlantic to the other. It is obvious that until I am satisfied on these points I should not be justified in accepting messages and collecting charges from the public for a service which the company might not be in a position to perform efficiently. I have also devoted much attention to the question of the establishment of ships' signalling stations on the coasts of the United Kingdom for wireless telegraphy. This question involves the relations between the Admiralty, Lloyds, and the Marconi Company, and it has not been possible at present to arrive at a definite decision."

## THE SCHOLAR SHIP

IT seems that the idea outlined in an early number of this magazine for a travelling school for boys is soon to find actual realisation in the United States. According to a recent account in the *Daily Mail*, the educational ship, *Young America*, will start next year on her first voyage of 12,000 miles, carrying a number of cadets, who will undergo a preparatory four-year course for a university education. She is a seagoing fully rigged steel ship of 2600 tons, and is provided with every modern requirement. This novel enterprise has the support of many prominent financiers and also, it is said, of President Roosevelt. Particular attention will be given to foreign languages, history, and political economy. The four years' cruising will take the students to nearly every part of the world. They will go ashore in all the large cities to pursue their studies, but will live on board the ship.

GLADSTONE IN HIS LAST DAYS

THIS VERY STRIKING LIKENESS OF MR. GLADSTONE TOWARDS THE CLOSE OF HIS CAREER WAS RAPIDLY SKETCHED FROM LIFE BY MR. A. S. FORREST, AND IS NOW REPRODUCED IN FACSIMILE FOR THE FIRST TIME

The
# World's Work

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## The March of Events

### LET THE PEOPLE SPEAK

IN the present political state of the country and the Empire, there is one thing urgently necessary, alike for domestic and constitutional reasons—an Appeal to the People. The grounds for this are irresistible, and no Minister should be able to retain public respect who ignores them.

The situation is, in the fewest words, as follows. The explosion in the Unionist Party has come at last. The Chancellor of the Exchequer, the Secretary of State for India, the Secretary of State for Scotland, and the Financial Secretary to the Treasury have resigned office because they are Free Traders; the Secretary of State for the Colonies has resigned because he is a food-taxer; and the Prime Minister has—written a pamphlet! Meanwhile, Liberal Free Traders have won two by-elections in rapid succession, in each case capturing a Conservative seat. The Duke of Devonshire, despite his Free Trade speeches, remains a member of a government which is appealing for a mandate to throw Free Trade overboard. And it is confidently anticipated that Mr. Austen Chamberlain will become Chancellor of the Exchequer in the reconstructed Cabinet.

Under any circumstances, so complete a disintegration and reorganisation of the Government should properly be followed by a General Election. But, in the present case, this course is dictated by the fact that the reorganisation has been rendered necessary by the Prime Minister's acceptance of a policy involving a total reversal of the cardinal principle of British fiscal policy during the last half-century. It was bad enough when the Government used a majority they had obtained upon the issues of the war to re-model our educational system in a manner intensely repugnant to the majority of the people, but it will be infinitely worse if they make use of their war-majority to carry on a Protectionist campaign until a cycle of bad trade, or the results of Mr. Chamberlain's unofficial eloquence, lead them to think that they have a good chance of capturing the electorate. Such a course would exhibit a cynical contempt for constitutional precedent. It would be a mere Party trick. There is, however, only too much reason to fear that they hope it may be possible for them so to act. They have not even taken the trouble to conceal their plans. The lead in the matter is taken, not by the Prime Minister, but by Mr. Chamberlain. In his letter of resignation he virtually dictated the policy of the Government he was quitting:

"Accordingly I suggest that you should limit the present policy of the Government to the assertion of our freedom in the case of all commercial relations with foreign countries, and that you should agree to my tendering my resignation of my present office to his Majesty, and devoting myself to the work of explaining and popularising those principles of Imperial union which my experience has convinced me are essential to our future welfare and prosperity."

Mr. Balfour accepted this dictatorial suggestion on the ground that "public opinion is not yet ripe" for the taxation of food; but, he added, "I believe you to be right" in advocating preferential tariffs, and he concludes by encouraging Mr. Chamberlain to go on "pressing your views on Colonial Preference with the freedom that is possible in an independent position." That is, the two Ministers are absolutely at one, but in order the more surely to attain their common end, they agree that one of them shall advocate part of it in office, and the other part of it out of office. If any further proof were needed, it exists in the fact that Mr. Austen Chamberlain, who, of course, shares his father's views, is to be promoted, on no ground whatever of personal experience or proved competence, to the position of Chancellor of the Exchequer, which Mr. Ritchie, the Free Trader, has resigned. Mr. Balfour proposes to keep the ring while Mr. Chamberlain does the sparring. When the Free Trader, the common enemy, has been knocked out of time by the Birmingham method, the two will walk off together arm in arm. Under such circumstances, the statement that preferential tariffs have been "excluded from the Party programme" will be believed by nobody —not even by those who make it. It is not an honest statement.

A proof of this dishonesty has actually been given in less than a week of Mr. Chamberlain's resignation. The Colonial Office has issued officially telegrams addressed personally to Mr. Chamberlain from certain Colonial statesmen, bewailing his resignation, exhorting him to persevere, and completely denouncing his opponents—the opponents being, of course, if the attitude of the Government were an honest one, the Government itself. The ridiculous Mr. Seddon, Prime Minister of New Zealand for the moment, whose political economy was recently the laughing-stock of the community, cables Mr. Chamberlain, "Do not be discouraged, to obtain reforms ever entails great sacrifice," and in another message he describes the people of New Zealand as "abandoned by their kindred." Mr. Seddon's fiscal opinions are not regarded by any intelligent person as worth a button, but the fact that the Colonial Office should officially issue the first of the above messages, shows that though Mr. Chamberlain is no longer there in person, that department of State is still to be used for his personal glorification and the promotion of his policy.

Unless there is a dissolution, it is obvious that the country is to be distracted for a twelvemonth by a vociferous and vehement struggle between Free Traders, food-taxers, trade-taxers, and retaliators, in the heat and smoke of which not only will all pressing questions of domestic reform be in danger of falling completely out of sight, but also the industry and commerce of the country will necessarily be seriously disorganised by the uncertainty as to the fiscal future. Already several great firms are adding a clause to their contracts, guarding against fiscal alterations; and in a hundred industries men will hold their hands, and refrain from investing new capital or laying down new plant which may be endangered by tariff duties or tariff wars. This, following upon the marked set-back caused by the enormous cost of the South African War, cannot but have a marked and depressing effect—even helping toward that depression of trade in which Mr. Chamberlain hopes, as his friends frankly admit, to find support for his schemes.

The above is the main issue, but there are plainly other circumstances in which a scrupulous Premier would see grounds for a dissolution. To mention only one, which is little short of scandalous: the Ministers who, as the report of the Commissioners upon the War clearly shows, were responsible for the gross inefficiency and extravagance of the campaign, retain office. One after the other the by-elections have shown that the Government no longer possesses the confidence of the country. To retain office under such circumstances is intensely unconstitutional.

The majority, however, at the disposal of the Government in Parliament enables them to defy criticism and precedent if they choose to do so. One influence alone can the country look to with any confidence; even under our very limited monarchy the Sovereign has not only the right, but there is laid upon him the sacred duty, of guarding the rights of the people to the control of the Ministry. It is inconceivable that the King should not be regarding the present political situation with the deepest anxiety. His personal influence as regards the dissolution of Parliament is properly very great. Not one of his subjects would consider that he had acted otherwise than with perfect propriety and deep discretion if he used all his influence at such a moment of commercial uncertainty, and even Imperial danger, to afford the country an opportunity of expressing its will. Let the People speak.

## THE MACEDONIAN HORROR

IN two particulars only does the present outbreak in the Near East differ from those which have preceded it during the last hundred years. On the one hand, there is a definite breaking up of the alliance of all the offspring of the old Empire of the Osmanli, hitherto united in sentiment if not in arms against their ancient enemy. On the other, there is a marked diminution of sympathy in Christian Continental Europe with the rebellious subjects of the Sultan. For the rest, the repetition of history is as slavish as it has been these last three centuries, where it has to record the dealings of the Christian Powers with their troublesome neighbour of the Levant. No one who makes the slightest investigation into the diplomatic history of Constantinople will fail to be struck with the constant succession of the same incidents and the same consequences. Ambassadors of Elizabeth and of Philip of Spain were making representations to the Grand Turk in much the same fashion that such representations are made to day, and with as little effective influence. No doubt the Ambassadors met in concert then as they do to-day, and agreed upon certain lines of public Christian conduct towards the infidel, each pursuing privately the most unchristian policy in secret dealings with the Porte—a policy always of aggrandisement at the expense of sworn colleagues. In the present instance more singleness of purpose and efficiency of result was hoped for because the members of the Concert delegated to the two of their number most concerned the settlement of the demands of the revolting Bulgars of Macedonia and the repression of the usual measure of Turkish punishment. But it is lamentable that England and France, the greatest friends of the Sultan's Christian subjects, should do nothing but delegate this power in part to Russia, in view of the recent Russian record on the Bosphorus. Once before, when the whole of Europe was aroused over the wrongs of the Armenians and before punishment of butchery was meted out to them, it was Russia which refused consent to placing force behind representations made to Yildiz. Otherwise a wholesome joint occupation of Turkey in Asia would have given the debauched autocracy of Constantinople a lesson it would not have forgotten so soon. The Russian people, individually and collectively, are sympathetic enough with their fellow Christians in the Balkans, but the Russian government is chiefly concerned to keep the peace of Europe at any price.

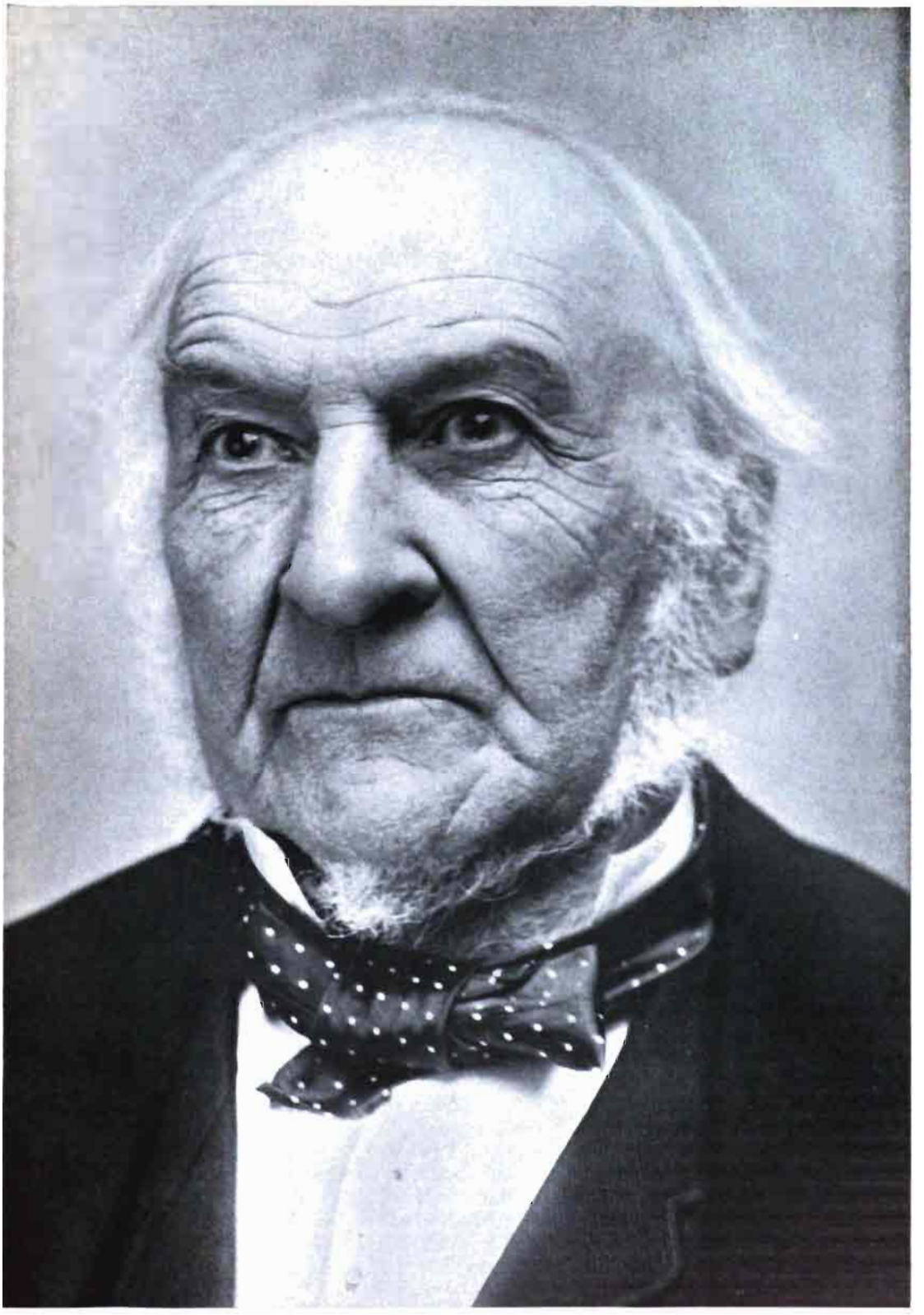
The remarkable position of Greece in this instance should open the eyes of the rest of the world to a fact they have often ignored. This is that troubles in the Turkish Empire are nearly always political and never wholly religious troubles. The briefest knowledge of the history of the Turkish government will show a record for religious tolerance of which many Christian countries might be proud. Perhaps of necessity there is in fact if not in law no such tolerant and harmonious living together of so many diverse creeds in any other country in the world. And the sooner the Sick Man's doctors rid themselves of the heritage of the Crusades and cease listening for the old cry of the Cross against the Crescent, so much the sooner will they arrive at salving remedies. The writer has lived through two separate uprisings of the Turks against Christian neighbours and subjects. And their terrible vengeance was always wreaked upon the race as a race, and never upon them as Christians. When it was demonstrated beyond a doubt that the Armenian revolutionists were bent upon the partial destruction of the Empire of the Son of the Prophet, faithful Turks rose in brutal wrath and tried to wipe out the offending race. But in no proven case were the millions of the other Christian sects intentionally harmed by so much as a hair. When the territorial hopes

of the Greek government grew unbearable at Constantinople, and the Turks, with Germany behind them, set out to punish their encroachments, the war was waged absolutely against Greeks as such and there was never the slightest introduction of religion into the controversy. The fact that Greece is now openly allied with Turkey against Bulgaria, that volunteer Greek regiments are marching with the Turkish army, is full of significance. If there is ever to be an allotment of the province surely it goes in largest part to Greece by sentiment as well as by right. Sentiment remembers Macedonia as the home of Alexander the Great. Right points plainly to the much greater number of Greeks than Bulgarians in the province. But zeal often blinds us to the fact that the Mahommedan population is far greater than that of either of the leading Christian races.

For the rest, that great motive power of the governments of Western Europe, the voice of the people, is strangely lacking, and not without some cause. Late revelations of the use to which the aforetime subjects of the Turk put their hard-won freedom has alienated many of their old sympathisers. The revelation of the height of Servian civilisation has brought home a truth which those unacquainted with the East sadly needed. This is that there is but the smallest choice in civilisation between the Turk and his victims. Then too the methods of the Bulgarian revolutionary committees have naturally shocked many friends of Balkan self-government. Apart from all other considerations, however, the horrible fact remains that within three days' railway journey of London brutal organised massacre and the most abominable passions of lust and greed are devastating a whole province, and that the Christian Powers do not move one of all their millions of soldiers to stop them. If the Powers were only determined, and let the Sultan know it, Macedonia might soon become as peaceful as Bosnia and Herzegovina. Turkish rule must ultimately be confined to the narrowest limits of its own Empire. Macedonia must be governed in some way independently of the personal will of the Sultan—there is no other practical solution. If England and France would only assert themselves, the end would be in sight. Upon England lies a special responsibility, inasmuch as we stopped the creation of Greater Bulgaria after the Russo-Turkish war. It is appalling that the old Eastern cauldron must boil and bubble, toil and trouble, for so many years, and with such suffering before the inevitable clarification and peace can be attained.

## LAW-BREAKING FOR CONSCIENCE' SAKE

THE announcement that there are 40,000 law-breakers for conscience' sake amongst the most serious and religious class of the community, and that in consequence already 5000 summonses have been issued for refusal to pay rates, affords food for most serious reflection. To dismiss this "passive resistance" movement as the work of a lot of fanatics, or to sneer at the "cheap martyrdom" of those who let their own furniture be bought back for them, is to be very blind to a most significant expression of public opinion. The "passive resister" can justify his attitude by unanswerable logic. The right of resistance to unjust law is a primal right of every civilised man. To rebel may be as sacred a duty as ordinarily to obey. There is not a man who will not say that if certain kinds of laws were passed he would resist their execution. To take an extravagant example: Suppose a Parliament could be found to re-establish the press-gang. Everybody would oppose that law by force. The only question is: At what point does resistance to law become a duty? That is obviously a matter for decision by every man's own conscience. When a man says: "I am absolutely compelled by my own sense of duty to refuse obedience to this law, be the consequences what they may," he occupies a position impregnable in logic at least. And in considering a movement of this kind, one's judgment must necessarily be affected by the class of men who feel themselves compelled to break the law. The "passive resisters" stand high, when so considered. Ministers of all the Free Churches, magistrates, aldermen, councillors, overseers, and the very salt of private citizens make up the long and growing list. It is no exaggeration to say that when such a body of men take the step of refusing compliance with a law, there is something in that law which ought not to be there and which cannot permanently be enforced. The revolt of the anti-vaccinators will occur to every one in this connection. They succeeded, though there was far less of principle at stake in their protest. As a matter of fact, no student of politics and life, whether Churchman or Nonconformist, supposes that the obnoxious clauses of the Education Bill will remain permanently on the statute-book. They are surely doomed, and "passive resistance" is at once the symptom and the assurance of their condemnation.



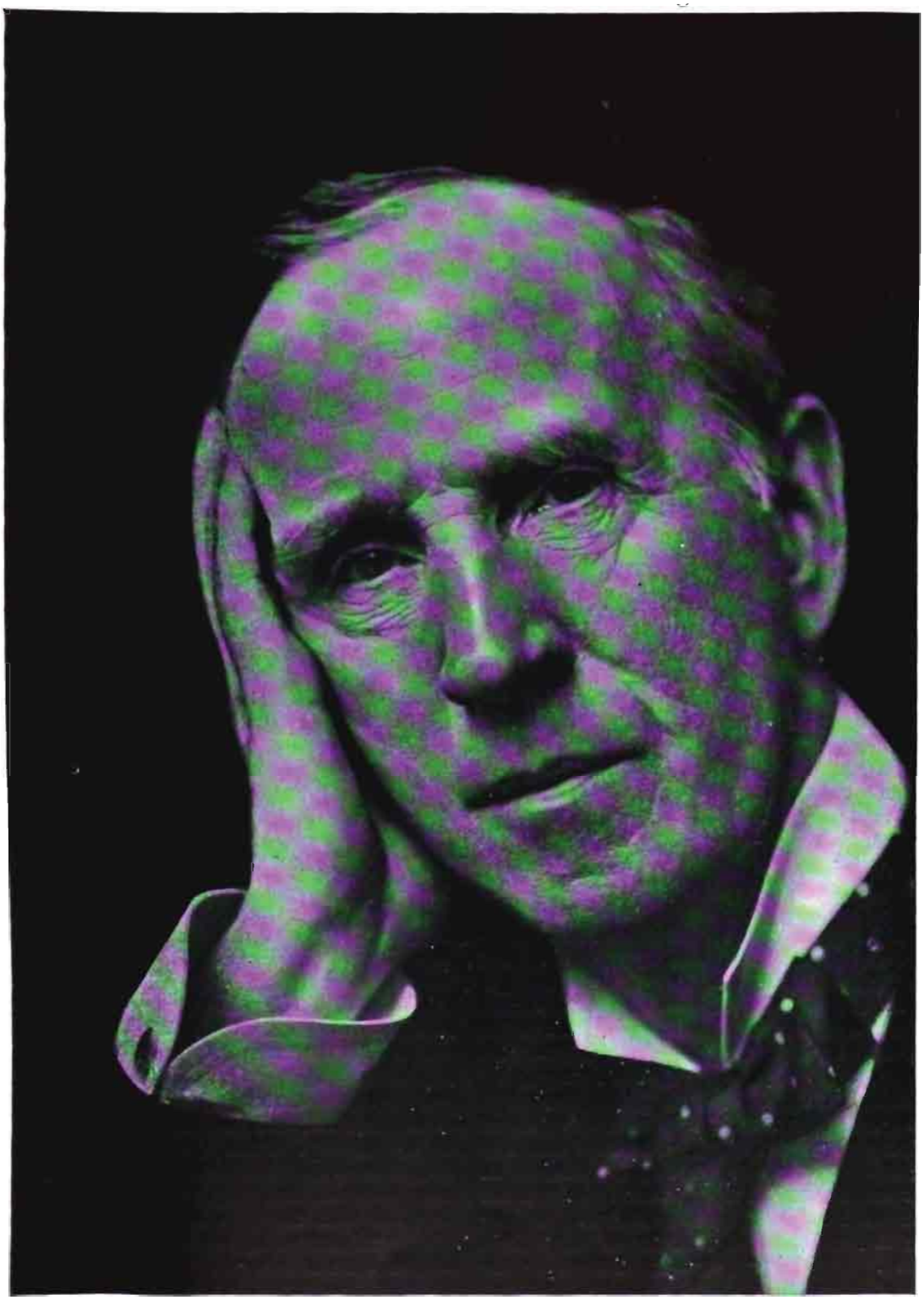
A NEW PORTRAIT OF GLADSTONE

## THE PASSING OF LORD SALISBURY

IN view of the great part played by Lord Salisbury in Imperial and international affairs, his retirement from office evoked curiously little response from public opinion, and his death shows once more how strangely slight was his hold upon the feelings and even the interest of the mass of his fellow countrymen. It is only a month since he was laid to rest with his ancestors at Hatfield, and already his name figures no more in the discussion of contemporary politics, nor does any political organisation exist round his name or his personality. It is difficult to account for this fact, although no doubt his own patrician remoteness from common affairs and his hardly veiled indifference to the opinion of common men is to some extent responsible for it. Probably a further explanation will be found by the historian hereafter in the absence of any great political or social legacy bequeathed by him to his fellow countrymen or to his epoch.

Death, the great solvent, separates infallibly a man's personality from his work, and while one of these was great, it is likely that the other will appear less and less as time passes. The position and influence of Lord Salisbury, apart from the fact that he was the spokesman of a great and powerful Empire, were due in the largest measure to his personal character. He was in truth a man whom to know as even the newspaper reader knew him was to honour, and to know intimately was to honour very much. During a period when ideals of personal character and conduct have unquestionably fallen in certain sections of our society, Lord Salisbury stood as a rock, symbolising "the pitiless exigency of prestige." He was a man to whom intellectual dishonesty was wholly impossible; of scrupulous personal honour; a clean liver; a high thinker within his somewhat narrow intellectual limits; a model of devotion to public duty and domestic life. The influence of a man who to these qualities adds great rank and high political office must be incalculably great and far-reaching, and for this reason Lord Salisbury's memory will ever be held in high regard.

On the other hand, his output as a statesman is already difficult to characterise. He inaugurated no domestic reform; where his Government carried out such reforms, it was because they were irresistibly thrust upon him by forces which, in most cases, he would gladly have resisted had he been able. His ignorance —his almost contemptuous ignorance—of the ordinary affairs of social organisation was occasionally ludicrous. Every one will remember that in a great speech he once showed that he had not the least idea what authority was responsible for the drainage of London. There is a standing joke—and a true one—about him to the effect that he believed for a considerable time that a prominent official of the department over which he presided was dead, while that official was still, and is still, doing his daily work. He brought, on one occasion, so unjust a charge against another department of State that its chief permanent official at once compelled him to apologise under a threat of resignation. It will be remembered how, during the war, he explained that the Government could not possibly be better informed than it was, as not enough money was spent to enable the Intelligence Department to do its work; the fact being that a considerable sum of money allocated to that department had been returned to the Treasury as not wanted. Such examples could be multiplied a hundredfold. Many of the Foreign Office officials he did not even know by sight. On one occasion he sent for the present writer to inquire concerning some personal aspects of a certain foreign complication, and asked, among other things, how a prominent foreign statesman of the time could possibly have made such a mistake as appeared in one of his despatches. I replied that I could only suppose it was due to a complete momentary lapse of memory. "But," said Lord Salisbury, "has he no private secretary who would put him right? I have several, any one of whom would take the greatest pleasure in correcting me upon such a point." Meeting one of his secretaries at dinner a few nights later, I repeated this remark. "That's all very well for the chief to say," was the reply, "but all I can say is that I am one of his secretaries, and I have not set eyes on him for six months." Lord Salisbury was a man of peace, and he kept the peace, often with great difficulty and in times of grave peril. But he was a yielding Foreign Minister, and concession after concession to the national disadvantage was squeezed out of him by greater statesmen who had accurately taken his measure in this respect. The decline of British influence, with the consequent and certain future decline of British commerce, in the Far East, is a long and painful record of his lack of knowledge and his want of strength. He himself frankly, if somewhat cynically, confessed that at a critical moment of British policy he had "backed the wrong horse." It is unlikely that, in future, birth and position



Beresford

THE RIGHT HON. JOHN MORLEY, O.M., F.R.S., D.L., LL.D., M.P.

WHOSE LIFE OF GLADSTONE APPEARS THIS MONTH, AND IS DISCUSSED BY MR. BIRRELL IN THIS NUMBER

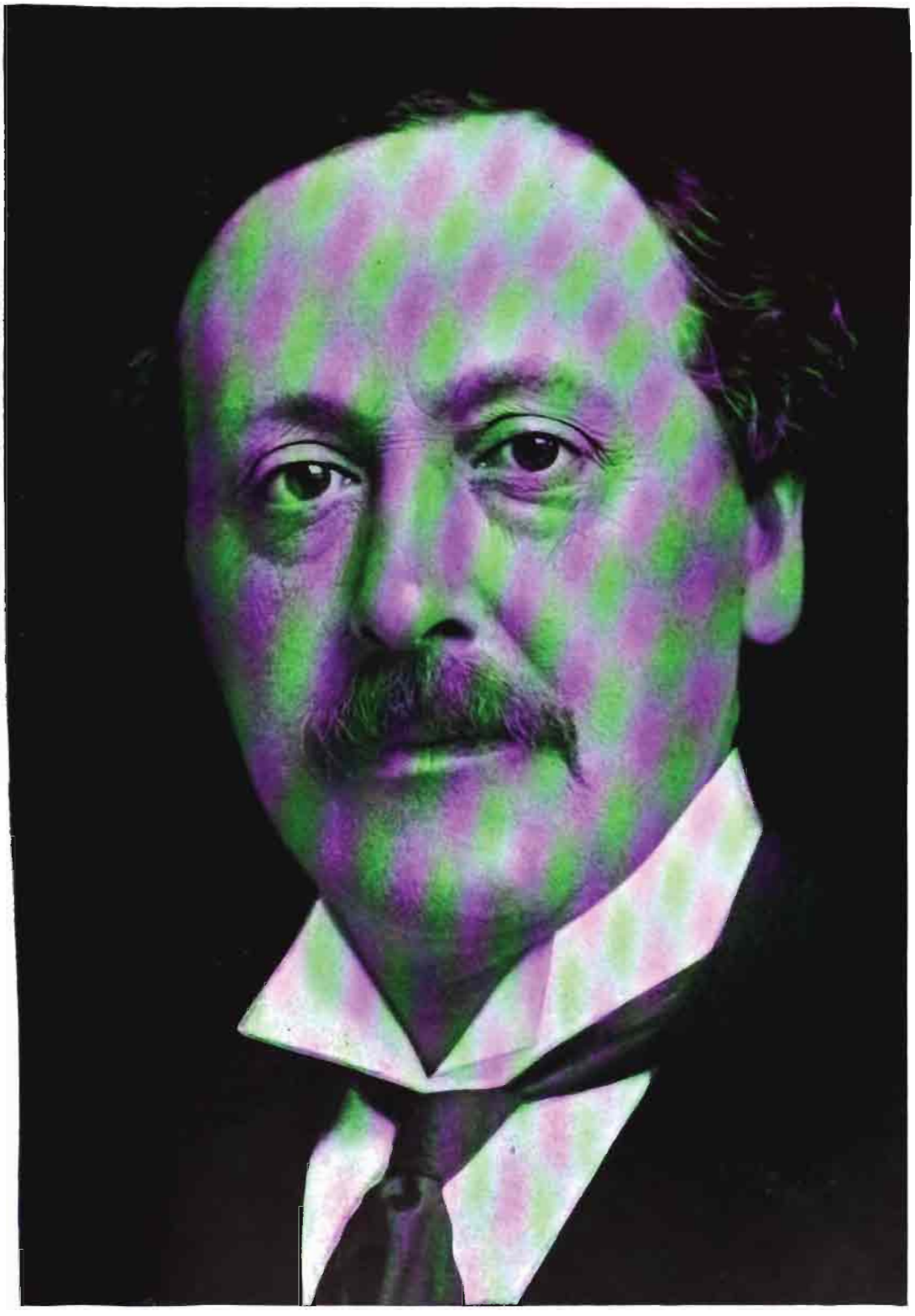
will play so large a part in keeping any statesman in power. We can only hope that those who may direct the fortunes of the Empire will possess Lord Salisbury's great qualities as a man, and that they will be inspired by his own aversion to the drawing of the sword, though, even in the month of his passing, we may hope that their strength and their constructive record may be greater than his.

### A GREAT POLITICAL CRIME

THE Report of the War Commission, of which we give a connected summary elsewhere, startled the country, as it well might, but the publication of the evidence taken before the Commission has aroused a storm of indignation before which it seems impossible that any Government should stand. The evidence is more damning than even the Report had led us to expect. The Commissioners, with but a few marked exceptions, naturally tried to put the best face they could on things. Their statement was an admission of shameful bungling and incapacity, for they could not get away from the facts. It recorded disastrous failure in the past, and, what was worse, it foreboded a future equally disastrous; yet it is possible that an average Government might have escaped on their plea of extenuating circumstances and survived even such a verdict as that. But had the Commission been public, had the evidence been given to the world day by day as it was given to the Commissioners, we do not believe the strongest Ministry of any time could have lived through half the inquiry. After such evidence as Lord Lansdowne's or Lord Wolseley's, to mention but two instances out of many, the nation would have risen and chased every member of the Cabinet from office. Alternative or no alternative, they would have said, it is essential that this particular batch of incapables should go. We could not do worse if we had no Government at all; we should do infinitely better under the first half-dozen honest men of business from the street. Unfortunately the evidence was not published bit by bit. It was thrown upon us in two great volumes of over 1200 closely printed foolscap pages, and few have had the time and patience to discover the real significance of that terrible exposure. Yet those two volumes form an indictment as overwhelming as any ever drawn against a Minister of the British Crown. They reveal such indifference to the highest interests of the State, such ignorance of the simplest affairs of office, such personal jealousies, such negligence of the ordinary duties for which Ministers are chosen and paid, that the marvel is we can continue to hold up our heads as a nation at all. It would indeed be a greater marvel still if the men who have thus wasted our resources, and crippled our power, and degraded our name, should ever again be allowed the chance of working us so much ill.

It is not merely that the army was utterly unprepared in organisation and equipment. That was bad enough, and we know the story now. We know that over a third of the rifle ammunition was declared useless just before the war began; we know that 25,000 rifles were constructed to fire eighteen inches wide at a short range; we know that every cavalry sword was a ridiculous toy, and there were only eighty in reserve; we know that the pouches were so made as to drop the cartridges all over the fields and roads; that the reservists had not a single serviceable kit ready for them, and that, but for the help of the Indian Government, the army would have had no boots to stand up in. For all these deficiencies (and there were many more) Lord Lansdowne was personally responsible. Nine months before the war it seems to have struck him that something might be wrong. He appointed Sir Henry Brackenbury to look into matters at the Ordnance Department, but before Sir Henry could even make up the list of deficiencies, the war began. As Lord Esher puts it, one of two things must be true: at the beginning of 1899 Lord Lansdowne either did not know the truth or did not care. But as Secretary for War it was his duty both to know and to care. He has no way out of the dilemma; in either case he abused and neglected the trust for which he was chosen and paid.

But no mere scapegoat can be allowed to save the Ministry. The men who threw out the last Liberal Government on a small alleged deficiency of cordite cartridges in time of unthreatened peace, are not to get off themselves with a mere conviction of deficiencies. Their crime was of a far deeper kind. As soon as they came into office they were threatened with a Transvaal war over the closing of the Drifts. Then came the Raid, and the disgraceful hushing-up of the inquiry. From that moment war was almost certain. Excellent Intelligence officers were sent out, and they kept the Government supplied with the most accurate estimates of the Boers' increasing strength. At the beginning of the war every Staff Officer had a copy of their report, and it was afterwards proved to have been exact in every essential point, except one: they had overstated (not under-



Bereford

THE RIGHT HON. HERBERT JOHN GLADSTONE, M.P.

CHIEF WHIP OF THE LIBERAL PARTY

THE HON. WILLIAM FREDERICK DANVERS SMITH, M.P.

HEAD OF THE GREAT FIRM WHOSE OPERATIONS ARE DESCRIBED ON PAGE 477

stated) the number of the "Long Toms." Yet with this information before them the Ministers went upon their heedless course, blustering and bluffing as though the Transvaal armaments were a negligible quantity and we had a faultless army ready to our hand. It is pitiful to read Lord Wolseley's series of warnings and entreaties, how again and again he urged upon the Cabinet to send at least 10,000 men, to mobilise an Army Corps on Salisbury Plain, or at lowest to begin gathering transport and stores quietly in Natal. But it was all in vain. In spite of all warnings and information Ministers had comfortably made up their minds that the Boers would not fight, and they themselves did not want to be disturbed. It was especially Lord Lansdowne's duty to know the truth and impart it. Presumably he knew it, and had he possessed the smallest capacity, two courses were open to him; he could either have won over his colleagues to recognise the gravity of the situation, or he could have resigned. He did neither: he went fishing. When at last, owing apparently to General Buller's personal appeal to Lord Salisbury, it was resolved on September 8 to send from India the reinforcements which saved us, not from defeat, but from annihilation, nothing further was done in the way of preparation. No money was voted till September 22, and when Lord Lansdowne was asked by the Commission why this delay of a fortnight had occurred, he replied, "What difference would a fortnight have made?" To those who know what the war meant to brave men at Ladysmith or Magersfontein or Spion Kop, a question like that must appear either incredibly stupid or unpardonably cruel.

But again, let us not forget that the whole Cabinet was guilty. It is sometimes said that Mr. Chamberlain is cleared by his two memoranda to the War Office, in April 1897 and May 1898, when he warned them that he could not contemplate the possibilities of the situation without the gravest concern; and further, that a failure at the outbreak of the war would certainly entail humiliation and increased expense. On the strength of this the *Times* remarks: "Mr. Chamberlain's minutes ought finally to dispose of the fiction that he hurried the country into a war the seriousness of which he did not realise." They may dispose of that fiction; they do not dispose of the terrible truth that he hurried the country into a war the seriousness of which he did realise. That is a political crime immeasurably more grave. Knowing the enemy's strength and our own weakness, knowing the real truth of the matter for at least two years past, and having seen their preparations rapidly increase and ours remain stationary, Mr. Chamberlain, nevertheless, went on driving both nations straight for war, he kept on talking about the squeezed sponge and the sands running out, he continued to play England's cards as though we held every trump, whereas he knew we had not a single honour. Ignorance might possibly have excused him, for he was not at the War Office. But he was not ignorant; the Intelligence reports passed through his hands; his own minutes prove how well he knew our peril, and yet he bluffed and bluffed again. His knowledge, far from excusing his action, is its worst condemnation. He was one with the Cabinet, he was even their guiding spirit. "It was the Cabinet," says Lord Rosebery, "that chose to negotiate through its mouthpiece as if it wielded the thunders of Jove, whereas it knew accurately the doleful meagreness of its resources." Mr. Chamberlain was that mouthpiece. He brandished the thunders as defiantly as any—thunders which he knew had been reduced by the incapacity of his colleagues to a bundle of rotten sticks.

## LISTERISM AT THE TOILET

VERY amusing and satisfactory is the latest development in London of the work of Lord Lister, "who saves more lives every year than Napoleon took in all his wars." That many lives will be saved by the opening of an "aseptic" hair-dresser's establishment in St. James's Street, it would be absurd to pretend, but certainly much discomfort and unpleasantness is averted, whilst the public obtains an opportunity of learning what Listerism or the antiseptic method means, such as could be equalled only by a visit to a modern operating theatre under an expert *cicerone*. Similarly at the Alhambra a crowded house is now nightly studying such phenomena as the protoplasmic movements in a leaf, and the circulation in a frog's foot, which were accessible, a couple of months ago, only in a well-equipped biological laboratory. We recommend a visit to the Alhambra and to St. James's Street on educative rather than more immediately utilitarian grounds.

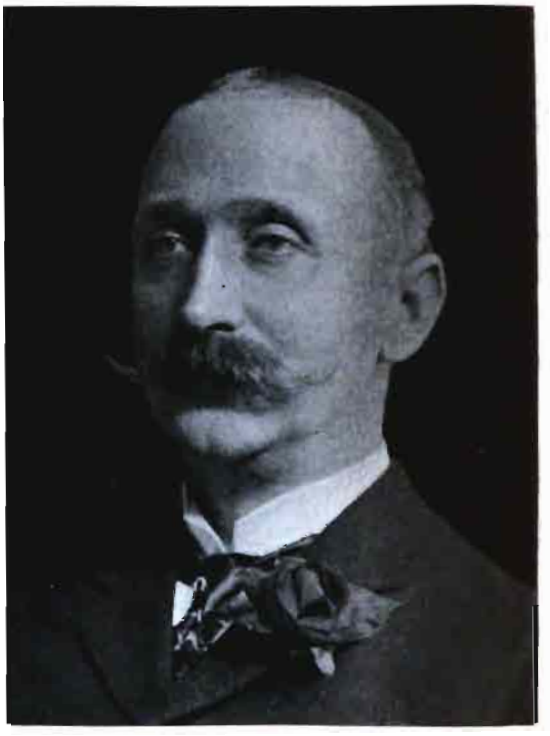
As in a modern surgical theatre, the place is done in smooth white. There are no advertisements, nor indeed any superfluous article on which the ubiquitous germ may settle. The razors are all metal, and are carefully sterilised after use. Your head reposes on an india-

TRADE UNION LEADERS AT THE LEICESTER CONGRESS

MR. W. B. HORNIDGE

NATIONAL UNION OF BOOT AND SHOE OPERATIVES

PRESIDENT OF THE CONGRESS

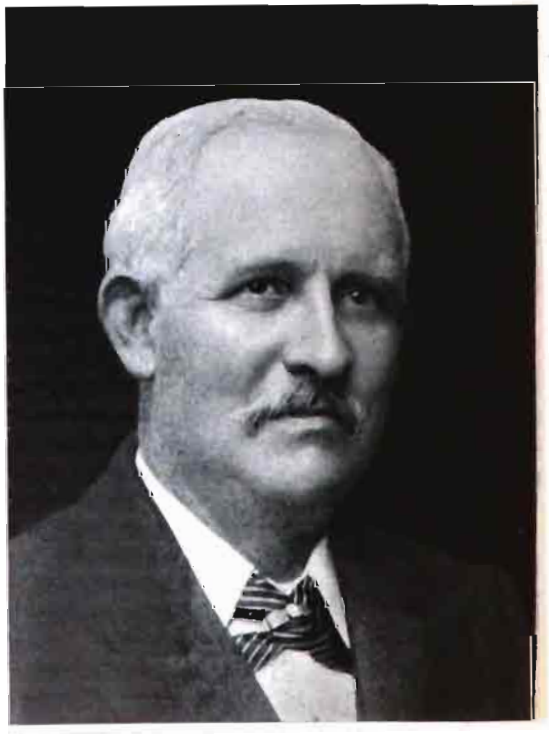


MR. RICHARD BELL, M.P.

THE AMALGAMATED SOCIETY OF RAILWAY SERVANTS

CHAIRMAN OF THE PARLIAMENTARY COMMITTEE

ALDERMAN CHARLES W. BOWERMAN, L.C.C.



MR. SAM WOODS

rubber pad, which is sponged with carbolic acid after each customer's departure. The chair itself is similarly treated. The barber wears a sterilised operating apron. Now all of this is exceedingly good as conforming with a principle; but it is the shaving brush which is the centre of interest from the immediately practical point of view, for it is the brush which conveys the parasites that cause the two skin-diseases specially to be feared—ring-worm or *tinea*, and "foul shave" or *sycosis*. Well, the brushes have detachable heads which go downstairs to be sterilised after each occasion of use. The various fluids employed are all antiseptic, and we may remark in passing that the title *aseptic* is a misnomer. The principle of aseptic surgery, the latest development of Listerism, as distinguished from antiseptic surgery, is that no antiseptic substance is allowed to touch th patient: whereby the devitalising action of these chemicals is avoided. To illustrate the value of using only aseptic or sterile as distinguished from antiseptic fluids we may quote the famous remark of the *Times* in the early days of Listerism: "Mr. Lister's arguments are getting stronger as his solutions get weaker." Of course the antiseptics are used first in the new method, but are then washed off with sterile salt solution.

The place is well worth a visit. May it soon have imitators! We have only two criticisms to make. First, that the linoleum floor—alone of all the appointments of the shop—is open to objection. One would prefer tiles or stone for choice. And secondly, why should the foreigner be the exponent in London of an Englishman's discovery?

# MR. BALFOUR'S ECONOMICS

A BRIEF CRITICISM OF THE PAMPHLET IN WHICH THE PRIME MINISTER HAS STATED HIS VIEWS

BY

ALFRED EMMOTT, M.P.

THE third week of September 1903 saw the most startling political events which have happened since 1886. The Prime Minister published a pamphlet on "Insular Free Trade," marked by great lucidity, as well as by the charm of style and subtlety of argument to which he has accustomed us; there were two Cabinet meetings; and five important Ministers immediately resigned. Taken by itself the pamphlet is more remarkable for what it omits than for what it contains. I shall deal later with its main arguments, with many of which it is possible to agree whilst dissenting from the conclusions.

The most glaring omission in the pamphlet is the complete ignoring of Mr. Chamberlain's views on preferential tariffs with the Colonies. Nor is the omission made good in Mr. Balfour's letter to Mr. Chamberlain, dated September 16. In that letter he declares for interdependence between the Colonies and the United Kingdom finding "expression in our commercial relations as well as in our political and military relations." He believes in closer fiscal union (so do most of us) but only "*if such closer union could be established on fitting terms*"—a phrase which absolutely begs the questions in dispute.

There is no straightforward expression of opinion even in the letter on the desirability of taxing the people's food. Mr. Balfour's sympathies appear to be with Mr. Chamberlain, but he believes the taxation of food to be unpopular and therefore negatives it for the moment and confines himself in a time of crisis to a miserable opportunism for which there is no recent parallel in the case of a Minister in his position. Such a man cannot long remain at the head of the Government of any country. This Government of water-tight compartments is now ended by the resignation of those who have settled convictions on fiscal policy, and all that is left is a body of opportunists, the bulk of whom have ceased to command the respect of the country. On the other hand the Ministers who have retired have compelled the admiration even of those who deplore the disruption of the Unionist Party.

The chief interest of Mr. Balfour's pamphlet lies in the fact that as so much of the intellect of the Unionists has declared itself in favour of our present fiscal policy one wished to see what a first-rate intelligence like that of Mr. Balfour would say on the other side.

Now, I have already said, it is impossible to differ from many of the arguments brought forward. One readily agrees that labour is not fluid and that capital is viscous, that the nation made a wise choice in 1846, that the Free Traders of that day did not foresee everything, that the United Kingdom bears most of the burden of Empire, that foreign tariffs do injure our trade and that "the total wealth and the diffused well-being of the country are greater than they ever have been." One may agree also that freights and commissions should be classed with payments for exports; but Mr. Balfour has quite failed to see that to do so would profoundly alter the tables of figures on which he relies, change to some extent the percentage of distribution and affect the "dynamics of trade" which are the basis of his argument.

There are, however, many points in the pamphlet which are more doubtful. There is no general foreign conspiracy against our trade, even the United States and Russia being still among our larger consumers. There is no possibility of our being absolutely shut out of their markets. Again, I cannot agree that coal and machinery should be eliminated from our exports. Apart from the fact that their cost is largely composed of wages, they also find a good deal of employment for our shipping trade. Nor am I sure that Mr. Balfour is quite correct about the dynamics of protectionism. The forces in favour of Protection will be immensely increased if we alter our policy. If we remain as we are the tendencies in the United States seem against such extreme Protection as they now have, whilst in Germany the rapid strides of Socialism make for Free Trade.

The most disappointing part of Mr. Balfour's pamphlet is the concluding section. After his able economic analysis directed against our commercial optimists we come to the remedy which he suggests for the present state of affairs. This remedy is retaliation, not because it will do us good directly to levy import duties on the commodities we receive from foreign countries, but in order to frighten them into lowering their own tariffs. Mr. Chamberlain recommends a tariff for bargaining purposes, or failing that, to protect our home markets. Mr. Balfour is a Free Trader and believes in free imports (as I understand), but, on the failure of his threats of retaliation, would put on duties in which he does not believe. He would begin, I suppose, with Russia and the United States, and say, "You must reduce your tariffs on our manufactures. If not, we shall feel bound to do injury to ourselves by putting taxes on some of your exports to us." The reply would be, "Very well, we should be sorry for you to do yourselves an injury; you want what we send you, we are only too anxious to do without what you send us. You may do what you please, but we can and probably shall raise our tariff further against you." Look at the underlying facts of the situation. We import preponderatingly food and raw material which we must have; we export manufactured goods which other nations wish to make for themselves; do we stand to make the best bargain? I have often looked through the lists of imports from our principal foreign customers, and it is curious how difficult it is to find articles we could tax without injuring ourselves. The luxuries are so few, the necessities so many and the risk so great.

Mr. Balfour is absolutely beside the mark when he says that it is a secondary point how we are to use our "regained liberty." It is the crux of the whole question and he certainly has not thought it out. There is no historical reason to suppose that threats of retaliation would be effective on any considerable scale. If governments were always wise, there is much to be said theoretically for a limited "freedom of negotiation." Sir Robert Peel, who knew all about retaliation, gave it up before 1846, when he abolished the Corn Laws. I prefer Peel's experience to Mr. Balfour's airy prophecies and lack of experience. A more modern instance is that of Germany, who put up her tariff last year. Russia, Austria, and Switzerland raised theirs by way of retaliation. Mr. Balfour's only plea for retaliation is because it would make for freedom of trade. Germany's new tariff has not made for freedom of trade. Why should an English tariff have a different result?

# GERMAN AGRICULTURE UNDER PROTECTION

FROM 10s. PER TON IN 1880 THE GERMAN DUTY UPON CORN HAS NOW RISEN TO £3, AND THE PRESENT CONDITION OF AGRICULTURE IN THAT COUNTRY MAY WARN US AGAINST THE IDEA THAT A MODERATE DUTY CAN BENEFIT THE CORN GROWER—THE CONDITION OF THE GERMAN PEASANT

BY

WILLIAM HARBUTT DAWSON

THE present condition of German agriculture is a standing warning against the illusory idea that a "moderate duty" can be of any advantage to the corn-grower. All that the Protectionist has yet ventured to suggest in our own country is just such a duty; any hankering after extreme Protection he disavows; the most modest restriction of imports, he quite honestly assures us, will satisfy him. It was exactly so that the German corn-growers spoke when they succeeded in introducing the thin edge of the Protectionist wedge twenty-three years ago, and they likewise were entirely sincere. We know the result, and are now able to appreciate it. The first duty upon corn, imposed in 1880, was one of 10s. per ton. Five years later it was found necessary to treble this duty; in 1887 there was a further increase to £2 10s. (reducible for treaty purposes to £1 15s.); and now, under the new tariff, the duty has been raised to a minimum of £2 10s. for rye, and £2 15s. for wheat, with maximum rates of £3 and £3 5s. respectively. As compared with 1880 the duties have increased sixfold. To talk of the success of Protection under such circumstances is to imitate the unhappy Napoleon, who fed his credulous Parisians with telegraphic victories when, day after day, overwhelming reverse was attending his arms. Yet Germany's example Great Britain is invited to follow.

It is not the purpose of this article to trace the effect of Protection upon the cost of living, though a few figures will effectively dispose of the convenient assumption that import duties do not necessarily fall upon the consumer, and so will confirm Mr. Chamberlain's candid warning that, "If you are to give a preference to the Colonies, you must put a tax on food." According to Conrad, the prices of wheat per ton in Berlin and London at various times during the era of Protection have been as follows:

| | 1879-83. | | | 1884-85. | | | 1886-90. | | | 1891-95. | | | 1899. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | £ | s. | d. | £ | s. | d. | £ | s. | d. | £ | s. | d. | £ | s | d. |
| Berlin | 10 | 5 | 0 | 8 | 1 | 6 | 8 | 14 | 3 | 8 | 6 | 2 | 7 | 15 | 3 |
| London | 10 | 0 | 0 | 7 | 13 | 5 | 7 | 2 | 8 | 5 | 19 | 9 | 6 | 0 | 8 |
| Higher price in Berlin | | 5 | 0 | | 8 | 1 | 1 | 11 | 7 | 2 | 6 | 5 | 1 | 14 | 7 |
| Amount of duty | | 10 | 0 | | 10 | 0 | 1 | 10 | 0 | 1 | 15 | 0 | 1 | 15 | 0 |

£2 10s. reduced to

Between 1879 and 1899 the price of wheat per ton fell in Berlin £2 10s., in London £4. Again, while in England during the years 1890–1900 wheat ranged in price in the open market from £5 7s. to £8 13s., falling to £6 7s. in 1900, the corresponding prices in German States were:

| | Maximum. | | | Minimum. | | | 1900. | | |
|---|---|---|---|---|---|---|---|---|---|
| | £ | s. | d. | £ | s. | d. | £ | s. | d. |
| Prussia | 11 | 2 | 0 | 6 | 15 | 0 | 7 | 15 | 0 |
| Bavaria | 11 | 15 | 0 | 7 | 2 | 0 | 8 | 3 | 0 |
| Baden | 11 | 11 | 0 | 7 | 9 | 0 | 8 | 11 | 0 |

showing an advantage in favour of the English consumer of £2 16s. 4d. in the case of the mean maximum for Germany, £1 15s. in the case of the mean minimum, and £1 16s. in the case of the mean for 1900. Evidently, therefore, though duties have made the price of corn dearer as compared with a Free Trade country, they have not protected the producer against the general downward movement. Nor have they kept the foreign grower out of the market, which was the main thing. Of Germany's total corn supply 9 per cent. still comes from abroad in the case of rye, 6 per cent. in the case of oats, and no less than 30 per cent. in the case of wheat and barley.

The experience of Germany is eloquent in confirmation of the fact that artificial measures of protection defeat their own end. The imposition of duties upon imported corn inevitably incited the foreign producer to

improvements and economies of every possible kind, and he did not rest until he had overcome this unnatural hindrance in restraint of trade. On the other hand, the duties which on the foreigner acted as a tonic and a stimulant, acted on the home-grower as a sedative and a soporific. Protected artificially against competitors alive to technical and scientific progress, and moving with the times, he went on farming in the old way, forgetting that it was largely to this old way of farming that he owed his inability to farm remuneratively. The consequence is that any sudden withdrawal of Protection would unquestionably prove, to all but the most progressive class of agriculturists, a rude shock which quite conceivably would be more than the majority of those who rely upon corn for their chief revenue could stand. Nevertheless, the future of German agriculture depends upon the willingness and the ability of the most conservative class of the community to adapt themselves to conditions which hitherto they have resolutely ignored.

No one can fairly deny that the duties which constitute so heavy a charge upon food in Germany, and consequently so harsh an impost upon the slender earnings of the working classes, are in the main a tribute paid to the large proprietors. To represent them as a measure for the protection of agriculture in general is entirely misleading. It is too little known—though the German Protectionist has no interest in dispelling the prevailing misapprehension—that these duties, after all, benefit but a small section, numerically, of the agrarian class. Both Count Caprivi and Prince von Hohenlohe admitted that corn-growers whose holdings were below five hectares (or 12½ acres) run a risk of suffering rather than profiting by the duties, while farmers who look to stock-raising, butter, and milk for their revenue unequivocally lose every way. In rough numbers, 25,000 large landed proprietors divide a fourth part of the country between them; to them come 281,000 large peasant proprietors, who together own a third; so that the great estates are represented by 306,000 persons, whose share of the soil is 54 per cent. The interest of these proprietors in the corn duties is obvious enough. The remaining 46 per cent. of the land falls, however, to no fewer than 5,250,000 small peasant proprietors and tenant farmers; 1,000,000 with medium holdings of from five to twenty hectares (7½ to 50 acres), who own a fourth of the total area between them, 1,010,000 with from two to five hectares (5 to 7½ acres), and 3,240,000 with two hectares and less. Most of these produce no corn at all, and if they produce it have none for sale, while a vast number are compelled to purchase for their own use. At the highest computation, a million members of the agrarian class, or less than a quarter of the whole, monopolise the entire advantage of the duties, and do this to the direct prejudice of the majority of their fellow agriculturists and to the injury of the entire consuming community. As to population, this privileged class represents at the outside between four and five million persons—the estimate of Prince Hohenlohe was only four millions—out of a total population of fifty-six millions.

Returns obtained from 1524 holdings by the German Agricultural Council—of course, with the object of supporting the demand for severer protective measures—yielded the unexpected and unwelcome information that only 26.4 per cent. of the receipts from these farms, which had an aggregate area of 518,000 acres, came from corn; 40.6 per cent. came from cattle, butter, and cheese, and 16.3 per cent. from rape seed, sugar, beet, and potatoes. The proportion which fell to corn in so pastoral a State as Bavaria was as low as 15.5 per cent.

Again, Dr. Rubow, who recently investigated the agricultural conditions of the Pomeranian rural commune of Schwessin, with a view to discovering the practical value of the corn duties, found that only one farmer regularly produced corn for sale, and even he could only spare from two to three tons of rye a year, though he had twenty-four hectares (60 acres) of arable land. Only in time of financial need did any other of the peasants sell either rye or oats, and then only a few hundredweights. Taking the whole of the 205 farmers, he found that they did not sell ten tons of grain a year, and that the total revenue from this source was only £60, or 6s. a head. Not only so, but every single peasant was compelled to buy grain of some sort in order to supplement his own produce. Hence the corn duties are a positive injury to this rural commune, and there are hundreds like it. Dr. Rubow found that the aggregate produce of the commune amounted to 713 tons; while, on the other hand, the consumption of corn for bread, for stock-feeding purposes, and for seed was 925 tons, leaving 212 tons to be purchased. The duties upon this purchased corn represented a loss to the commune of £334 10s., and the new duties will increase this loss to £476, or as much as would liquidate the whole of the communal taxation.

Facts like these—and it is the small peasant's tardy recognition of them which denotes the decadence of the so-called "agrarian movement" in districts which were formerly strongholds of the Landlords' League—not only emphasise the unfairness of these taxes upon food, even from the cultivator's standpoint, but the hollowness of the cry of "Agriculture in danger!" which imposed upon the too ready credulity of Count von Bülow, who throughout the recent Tariff controversy acted rather as the advocate of the great proprietors than as the spokesman of the common interest.

It is not German agriculture, but the system of large, ill-managed estates which has been handed down from feudal times, that is imperilled, and to the latter every successive increase of the corn duties, though it may afford relief for the moment, is in truth both a warning and a menace. The healthiest part, perhaps the only healthy part, of the agricultural industry in Germany to-day is the so-called *Kleinbetrieb*—that system of *petite culture* of the value of which John Stuart Mill was so sensible, and which accounts so largely for the comparative wealth of rural France.

"In all German States [wrote a German economist recently] the larger the system of agriculture the more it is threatened by forced sales. The large system of farming cannot compete with the small, because corn growing is not as remunerative as the breeding of cattle and the production of meat. . . . To-day the peasant, in spite of his less intelligence, is economically superior to the large proprietor. Hence in the East of Germany every division of a large estate must be regarded as a sign of economic progress."

It is significant also that Prince Louis of Bavaria, who is a practical agriculturist of acknowledged skill, is a warm advocate of peasant proprietaries.

The fact is that most of the great estates, in whose interest the corn duties exist, are condemned alike from the economic and the social standpoint. There is happily nothing in England that can be compared with the system of semi-feudalism which still prevails in North Germany east of the Elbe, a system under which progressive agriculture is almost unknown, and the labouring class is kept in a condition hardly to be distinguished from the serfage of a hundred years ago. "Protection," wrote some time ago Professor Adolf Wagner, one of the few academic advocates of the corn duties, "will secure the home grain-market, and so increase the income of the entire agricultural population." But the labourer, at any rate, has waited in vain for his share of this promised gain. In 1892 the Association for Social Policy carefully investigated the wages of the agricultural labourers in Prussia generally, and found that the following rates per day ruled in the various provinces of the monarchy:

| | Summer. | | Winter. | |
|---|---|---|---|---|
| | Without board. | With board. | Without board. | With board. |
| Provinces. | *s. d.* | *s. d.* | *s. d.* | *s. d.* |
| East Prussia | 2 0 | 1 2 | 1 3 | 0 7½ |
| West Prussia | 2 3 | 1 6 | 1 3 | 0 7½ |
| Pomerania | 2 3 | 1 9 | 1 4½ | 0 11½ |
| Posen | 1 11 | 1 3 | 1 0 | 0 8 |
| Silesia | 1 6 | 1 0 | 1 2½ | 0 7½ |
| Brandenburg | 1 9 | 1 3 | 1 4½ | 1 0 |

But in Upper Silesia to-day there are hundreds of farm labourers who receive only 6*d.* or 7*d.* a day. In Saxony and the West of Germany the average is still 1*s.* 3*d.* or 1*s.* 4*d.* a day, and from 1*d.* to 3*d.* less in winter, while women receive about half the rate for men, and children one-fourth. The plan of partial payment in kind is also very common, this taking the form of corn and potatoes, or a piece of land in which to grow them; at times, it may be, even enough to keep a cow or pigs and geese. There is a disadvantage in this arrangement, however, in that the land is not given by way of encouraging the labourer in thrift or increasing his interest in rural life, but as a part of a very penurious pay, and the farming of his croft or "acre," when added to his ordinary daily work, converts his life into an absolute burden, where the help of wife or children is not available. Add to this that the housing is, as a rule, a disgrace to civilisation, and the discipline exercised by the land-owners and their agents not merely tyrannous but too often barbarous.

That agriculture carried on under the combined disadvantages of unscientific methods, an oppressed labouring class, and incompatibility with the changed needs of the times, could prosper is a flat impossibility, and it is only by the fallacious policy of increasing the protective duties from time to time, as the pressure of circumstances has increased, that the great corn-growers have been enabled so far to stave off the necessity of looking the hard facts of their position fairly in the face. But agriculture, as the great land-owners understand it, will continue to be "in danger" so long as they refuse to take a lesson from the book of the small cultivators, who in Germany as in Denmark and Holland have held their own in spite of every disadvantage of restricted capital and lack of mechanical appliances of the most improved kind.

# THE LIFE OF GLADSTONE: MR. MORLEY'S TASK

THE ATTRACTION OF BIOGRAPHY—WHY ARE MOST BIOGRAPHIES FAILURES?—MR. MORLEY'S TASK IS ONE OF EXTRAORDINARY DIFFICULTY—THE MANY-SIDED GLADSTONE—WANTED: A REVELATION OF THE LOST SECRET OF LIBERAL LEADERSHIP

BY

AUGUSTINE BIRRELL, K.C.

IT is a commonplace of literary criticism how few good biographies there are in the library; good even in the humble sense of being able to maintain their interest for a poor twelve months after the date of their publication. It is strange that this should be so, because to start with, there is everything in a biography's favour. A man must be born somewhere, and all places are capable of interesting description; progenitors of some kind or another he must have had, and in skilful hands pedigrees are fascinating; his school-days ought not to be dull, in the retrospect, whilst, if he was what is called "self-educated," it is all the more romantic; and so, right onwards through the fascinating, yet familiar, drama of life, until the same inevitable end that awaits us all puts a joyful period to the toil of the biographer, who released from his labour leaps from his chair with an exclamation of delight.

I do not believe there is any description of book known to Mudie which is taken up so readily as a biography, or which has so good a beginning. All biographies start like epics, but alack! before many pages have been turned the reader becomes uneasily persuaded, from signs and tokens with which he is only too familiar, that what lies before him is no true or even plausible life of a man, but merely a dreary, conventional record of a few carefully selected things the man did or said before he disappeared.

Was there ever a human being truly made known to succeeding generations in the pages of a biography? Is *Boswell's Johnson* a life-like representation or a consummately artistic substitute for reality? As cannot be too frequently pointed out, we have other sources of information about Johnson besides Boswell. There are Johnson's books, instinct with character, there are his letters, full of humanity; we have notes of his talk by other reporters, and the testimony of many friends, and we have Sir Joshua's portraits. Instructed by these independent authorities, and by the light of these revelations, we can read and judge Boswell for ourselves.

In the same way with Scott, admirable beyond praise as is Lockhart's elaborate and sincere life, we are not wholly dependent upon it for our image of "the good Sir Walter," whose character forms a background to his novels and lurks so delightfully in every one of his notes and illustrations.

Sir George Trevelyan's *Macaulay* supports, expounds, and humanises an impression of character already made upon tens of thousands of readers by the *Essays* and the *History*.

To create a character, if he can, is the business of the dramatist; to exhibit one is the humbler task of the biographer.

How are we to account for the wholesale failure of the biographers? Is it that most men have no characters at all, and are, as it were, but dull weeds floating for a while down-stream, or is it that they never say or do anything capable of artistic record? Why are one mother's letters to her daughter classic literature, and another's (probably the more loving of the two) dreary ditch-water?

It cannot be a question of character *simpliciter*, for great merchants and famous philanthropists must have had characters of their own, and yet how seldom do they lend themselves to artistic biographical treatment. There is an aridity about their soil, fatal to any such aftermath. The lives of the clergy and of successful lawyers seldom excite more than professional interest; *Dr. Pusey's Life* may pair off with Twiss' *Eldon*, and Hook's *Archbishops* with Campbell's *Chancellors*. On the other

hand engineers and travellers are fine subjects for biography. There is something in their achievements which appeals to the imagination and flings back a lustre upon their personalities.

Whatever the reasons may be, it is now generally admitted that it is a difficult thing for a biographer to succeed in exhibiting a character.

Biographies are often composed or compiled at the instigation of publishers who see their way to sell two or three editions, or to please relations, or to maintain parties, or to encourage religious organisations or philanthropic enterprises—sometimes to record events. None of these are legitimate objects. A biographer should have but one object, to make his man live. The laws of dignified reticence, of good feeling, even of decency, press heavily on the biographer, unless he chooses as his "biographee" some kinless loon long since dead. Wives, daughters, sons-in-the-Church, old colleagues, the biographer's own friends and connections, crowd upon his mental vision as he writes, and again and again constrain him to put his pen through passages which might have saved his book. It rarely happens that biographies are books of entire good faith. Any real criticism, all true in sight, every frank revelation of human nature is stuff far too perilous to be admitted into biography.

What are the qualities of a biographer? Should he have imagination and a style of his own? Vivid writers, with devouring eyes like Carlyle, produce splendid books, but are they biographies? Their countless humours crackle merrily under the pot—but what do they brew? *Per contra*, your dull biographers, your Tomline writing a Life of Pitt, your unutterable Harris writing a Life of Hardwicke; the appalling lives of poet Wordsworth by his nephew, and of Lord Sherbrooke by Mr. Patchett Martin (to name no others)—the very thought of these things is enough to make a man curse the day he learnt to read.

The "reverential" biographer may be dismissed, like the admiration of a good private secretary for his chief, without imprecations.

This is a dangerous prelude to Mr. Morley's forthcoming *Life of Mr. Gladstone*.

It is impossible to help forming great expectations of this book which, as I write, is trembling on the verge of publication. A splendid and exceedingly difficult subject for a biography, whilst as biographer we are provided with a distinguished and experienced artist in literary portraiture, who was also an intimate friend, and a close political colleague. Never before in political biography has there been so happy a combination.

With existing political biographies indeed there can be no rivalry. Where are they? Sir Spencer Walpole's *Life of Lord Russell* is the best, and far better than Lord Russell deserved, who in his day had murdered Fox and ruined Moore, but it was a frigid subject. Palmerston's life, though conscientiously composed, attracted little attention. It had come to be understood in Palmerston's own day that as soon as he was dead he was to be forgotten. It would be cruel to refer to Mr. Torren's *Melbourne*. There is no life of Sir Robert Peel, only a masterly sketch by Mr. Thursfield, and a burning portrait by Mr. Disraeli, whose own life remains unwritten. Where is Canning's Life? Lord Stanhope's Pitt deserves, if ever book did, the adjective meritorious—but though it is better to be meritorious than meritricious, the epithet at the best is but a second-class one. Of Burke there are lives, but no life. Fox is still a fragment. Lord Shelbourne, despite the ample justice done to him by an accomplished relative, remains a shrouded figure. Lord North we can pick out for ourselves from his correspondence, but the most remarkable and pertinacious politician of them all, Farmer George himself, no man has tackled.

Mr. Morley has the field to himself and need fear no unkind comparisons save with his own *Cobden*.

The *Life of Gladstone* must of necessity be a political biography. If ever man sacrificed himself to the House of Commons it was Gladstone. He mutilated himself in this branch of the public service. He died daily. We have seen nothing like it since, and until some working-class leader takes to politics, not as a class-interest, but as a national concern, we probably never shall. Mr. Gladstone lived the political life, and did not hesitate to deny himself whatever stood in the way of the absolute supremacy of that great interest. He was tempted astray more than most men, for his eager temperament found life fascinating in all directions, but he triumphantly resisted temptation and he had his reward. As politics dominated Mr. Gladstone's life, so must they dominate his biography.

This greatly adds to the dangers of Mr. Morley's situation. It will be very difficult for a political biography to become a classic. There is nothing "eterne" about politics. They are shifting sands. No man, however great, can have his own way in politics. He may struggle as did Cromwell with his Parlia-

ments, or he may half lead by appearing to follow, but whatever he does, in the end, the statesman must be submerged by the course of events. Hence it comes about, that after the result is known, the personal interest begins to drag heavily, and the politicians of the past, however eminent, and sometimes they were really eminent, though selected from a narrow class, wear a somewhat futile aspect as we are invited to study in their biographies their very partially enlightened efforts. We know, as we read, more than they knew. We cannot help doing so, for we know what has happened.

Politics are seldom cast in an heroic mould. When we think of the Front Benches in the House of Commons, of the passage of a Bill through Committee, of the conduct of Public Affairs, of the two wars with America, of the Chinese Wars, the Crimean War, the war with the two South African Republics, of Russell and Palmerston, of Aberdeen and Lansdowne, of our educational policy and temperance legislation, of parliamentary programmes, and of parliamentary performances—we are not conscious of breathing a divine air or of being introduced to the high table-lands of lofty endeavour. It is, however, a strenuous life, demanding many manly qualities. To form a Cabinet on one of those famous Sundays, a man must have bowels of brass or a conscience of steel.

Mr. Gladstone lived in the thick of party strife and parliamentary tactics for half a century and more. He loved the battle and he was a master of the tactics.

How is the biographer to strike the right note for this mundane history? If Mr. Gladstone had been another Walpole, or a shrewd unscrupulous worldling like old Pam, or an outlandish figure of genius triumphing over all obstacles, including a tendency of his own to be occasionally not a little absurd, as was Disraeli; so old a literary hand as Mr. Morley's would find no difficulty in hitting on the right key from the first, and in keeping the slightly mocking music going until the time came for the dead march.

But Mr. Gladstone was none of these things—parliamentary gladiator though he was. He was a serious man, and especially did he hate, abhor, and despise a light, cynical treatment of human life or public affairs. To depict a man of his temperament and beliefs holding his own amidst, and sharing in and benefiting by, the chops and changes, the givings and takings, the parliamentary expediences and electoral devices, not to say dodges, of the nineteenth century must be a difficult job.

That Mr. Morley will successfully accomplish it I am confident—but do not let the difficulty be minimised. An Athanasius *contra mundum* is easy to describe, but it is not so easy when you find the saint in company with Tadpole and Taper, still saintly, but somewhat deeply involved.

The fact that Mr. Morley will have to narrate a great deal of political history in some of which he himself played a considerable part, will lend great interest to his book, and secure it, apart from its literary merits, a permanent place in the list of authorities hereafter to be consulted, but to weld this narrative into the sinews of a biography so as to compel the politics to reveal the man will be another task of huge difficulty. If anybody can do it, Mr. Morley can.

Mr. Gladstone's own style, though magnificent and splendidly impressive in speech and conversation, will not, I expect, be found of the kind that most benefits a biographer. He was a great artificer, but no great artist. He rose to the occasion. He spoke to the House of Commons or to the voters in public meetings assembled. He had always an immediate object, not unfrequently he was in what he would have shuddered to hear called "a tight place!" On those occasions it was glorious to hear him. It was, perhaps, better to see him. But from a biographer's point of view, Gladstone's speeches will be stiff quarrying. Many of his letters are already in print. They are not of the kind that lighten the toil of a biographer. Two more voluminous letter-writers than Carlyle and Gladstone cannot well be imagined. They must sometimes like the divine Clarissa have written from morn till dewy eve, but Carlyle was an artist.

On the other hand Mr. Gladstone's wide range of interests, his eager, almost passionate, admiration for every kind of art and industry, his constant devotion to the causes which have animated humanity since history began to keep a record, afford a fine field for his biographer. Here Gladstone leaves Carlyle far behind, for the elder Scotsman when he was not usefully employed in composing books or writing letters describing what he had actually seen, spent his time in abusing, ridiculing, and belittling the faiths, passions, and pursuits of all other men. It was simply his humoursome way of occupying his leisure, but he had better have translated Homer. The photograph of Mr. Gladstone, an aged

figure, bending over his desk, enthusiasm in his eye, preparing his edition of *Butler's Analogy* is full of a sad yet noble philosophy of life.

The interest excited by Mr. Morley's biography is necessarily great. The number of people who will turn to its pages for one purpose or another will be enormous. All the "worlds," except perhaps the "sporting world," will read it with some of the eagerness with which Gladstone himself devoured the life of Manning. Many readers will be fiercely critical, if not actually hostile. Gladstone was a vulnerable man exposed at all points to the shafts of his enemies. The good churchman and the good dissenter, however favourably impressed by Mr. Gladstone's lofty character and devout turn of mind, will both alike find much to qualify their admiration. Tens of thousands will expect to find in the book a living picture of the man who was to them a fountain of inspiration, and as it were, a pillar of fire in the night. These men will read the biography hoping to discover in it the lost secret of Liberal leadership.

All these readers cannot be wholly satisfied, and they would be unreasonable to expect to be so.

The book is certain to be one of good faith—no party tract, but an honest endeavour to represent the life of a great man. That it may prove the enduring record of a famous name and a fascinating personality must be the wish of every lover of Great Britain and Ireland.

# WHY THE BRITISH NAVY COSTS SO MUCH

WHAT THE BRITISH TAXPAYER GETS FOR HIS OUTLAY OF 34½ MILLIONS—THE MEANING OF THE TWO-POWER STANDARD—NAVAL EXPENDITURE IS INSURANCE UPON OUR COMMERCE, AND IN PROPORTION TO OUR TONNAGE OF SHIPPING WE SPEND LESS THAN OTHER GREAT POWERS—YET THERE IS ROOM FOR RETRENCHMENT

BY

ARCHIBALD S. HURD

LORD BRASSEY, who has done so much to educate public opinion on naval questions, has called attention lately to the vast sum which is spent annually on the British Fleet. Mr. Chamberlain has been impressed with the same thought, and he told the Colonial Premiers that "the weary Titan groans beneath the orb of his too-vast fate." For the past summer's manœuvres, we collected in Lagos Bay all the men-of-war in permanent commission—month in and month out, winter and summer—in the Mediterranean and the English Channel, and it is an amazing fact that these twenty-six battleships and forty cruisers could probably have swept the combined active squadrons of Europe off the seas. They formed the greatest fleet ever mobilised in peace or war, and yet did not include any of the warships in the Far East or on the other six foreign stations.

This year the outlay upon the fleet will amount, roughly, to 34½ millions sterling, apart from the amount spent on naval works, and it is not surprising that the business man, who is accustomed to make rough and ready calculations, should be perplexed to understand how it is that while the Admiralty state that they are building ships up to the two-Power standard only (repeatedly affirmed by Parliament), the estimates for the Navy equal the aggregate sum spent upon the three strongest fleets in Europe, those of France, Russia, and Germany. The heavily burdened taxpayer may well wonder how it is that while shipbuilding is said to be arranged on a two-Power standard, the British expenditure reaches a three-Power standard although men-of-war are constructed in this country cheaper than anywhere else; he may also inquire, cannot some economy be effected?

In the first place, the two-Power standard is a loose term and used loosely it is misleading.

It means literally that Great Britain must have as many *battleships* (and a few over) as her two most formidable rivals and that each of her battleships must be larger and more powerful than its hypothetical antagonists. Consequently when one of the other Powers lays down an armoured ship of the first class, Great Britain lays down a yet greater one. This is how it has come about that the Admiralty have now in hand five battleships of 16,350 tons displacement and costing £1,500,000 each, and that they are thinking of yet larger ones of 18,000 tons, since Russia and America have now advanced to 16,000 tons. The two-Power standard, as the Earl of Selborne has definitely stated, takes no account of the outlay on cruisers, torpedo craft, or auxiliaries; these must be provided in sufficient numbers to meet the strategical necessities of the Empire. The British Empire needs (*a*) a fleet of heavy ships of the line with a proportion of cruisers and other ships to meet successfully the enemy's battle squadrons, and in addition (*b*) it requires cruising ships of the highest possible speed, gun-power, and defensive qualities, for the protection of over-sea commerce. No other country is dependent on outside sources of supply for the very food-stuffs without which its population would starve and for the raw material also without which the great bulk of that population would be idle just at the time when it is well men should be active, have their pockets well lined with money each week-end, and their stomachs full. This is the best protection against disorder and disaster in face of a threatening enemy at the doors.

Naval expenditure is a question of insurance against the risks of war. A vital difference exists between this national insurance and the risks of loss of life, of old age, and of the destruction of property by fire against which the individual provides. If the sum set aside for the security of the nation and its trade is sufficiently large and is well expended, it prevents war, the danger insured against; whereas, however high the premiums paid by the individual, he cannot ward off death when his hour comes, he cannot postpone old age, and he cannot so insure as to render his property absolutely immune from the liability to damage or destruction by fire. Therefore the Admiralty provide battleships on the two-Power standard, and also set aside a large sum for other vessels for service with the battle-fleets and for the protection of commerce. In the estimates for the current year, for instance, £10,136,430, or including establishment charges, £10,540,770, is allotted to "new construction," that is, to the building of men-of-war, some of which will merely *replace out-of-date vessels*, while others will be *net additions to the fleet*; and a further amount of £3,300,964 is required for guns and torpedoes. The sum set aside for new construction is made up of the following items of expenditure:

| Old Programme. (*Ships authorised to be built in former years.*) | | New Programme. (*Authorised this year.*) | |
|---|---|---|---|
| 13 Battleships | £3,249,268 | 3 Battleships | £133,980 |
| 21 Armoured Cruisers | 3,985,381 | 4 Armoured Cruisers | 379,780 |
| 6 Protected Cruisers | 650,709 | 3 Protected Cruisers | 17,240 |
| 6 Unprotected ships, 11 Torpedo boats, 23 Destroyers, and 9 Submarines, &c. | 1,548,547 | 4 Unprotected ships, 15 Destroyers, and 10 Submarines, &c. | 564,598 |

It is to be regretted that the figures as to shipbuilding are not set out in this manner in the estimates, since it explains in a measure how the large sum needed for new men-of-war is appropriated. Only about one-half of the total sum for "new construction" is to be spent on the armoured ships which are being constructed so as to give Great Britain such a number as will equal those being built by the two most important rivals, the ships being larger and more powerful than the foreign ones. The remainder of the money which has been voted for construction does not directly depend on the two-Power standard; Great Britain must not only provide vessels to act with the battle squadrons, but has to keep in readiness a large margin of swift, well-armed cruisers and other ships for the protection of commerce.

In reality the whole of the naval expenditure may be regarded as insurance on over-sea commerce, since it is that which provides the sinews of war, and is the secret of our wealth as a nation. On this basis the sum spent on the British Navy amounts to less than £3 10*s*. per ton of shipping, while in France the proportion is as much as £12 17*s*. 5*d*., in Russia £15 13*s*. 9*d*., in Germany £4 19*s*. 2*d*., in Italy £4 18*s*. 9*d*., and in Austria £7 0*s*. 3*d*.; so that compared with the Powers composing the two great Alliances, Great Britain is paying the least insurance on her commerce which is her life-blood as their commerce is not the life-blood of France, Russia, Germany, Italy, and Austria. In America they are paying as much as £18 0*s*. 2*d*. per ton, in fact they are building up a navy to protect shipping which has yet to be constructed, for the "combine" ships

are still under the British flag and the White Star is still a British company enjoying British subsidies and under contract to the Admiralty to provide armed merchant cruisers in time of war.

In addition to new ships under construction, Great Britain, having a large fleet already in existence, has to spend more relatively on the repair of ships than the other Powers, and consequently in the current year no less than £3,156,008 will be devoted to this purpose—an item which amounted to only £678,476 in 1889. This is an indication of the increase in the size of the fleet and of the upward tendency of wages and the cost of materials. Similarly while France can concentrate in the Channel and the Mediterranean, Germany in the Baltic, and Russia mainly in the Far East, at the same time threatening the Mediterranean from the Black Sea, this country has interests in all parts of the world—some of them trade interests as in the Far East and the Persian Gulf, and others purely colonial interests—but her Imperial safety depends on her supremacy in the Channel and the Mediterranean. Great Britain keeps in commission permanently, summer and winter, a far larger force than France, Russia, and Germany combined. This means a great outlay on coal for cruising, on sea stores and on ammunition to enable the men to learn to shoot, and provision has to be made for new machinery and building in the home dockyards and foreign bases. Out of the total estimates we may set aside for armaments, repairs, shipbuilding, stores, coal, &c., the following items :

| | |
|---|---|
| New construction . . . . | £10,540,770 |
| Armaments . . . . . | 3,300,964 |
| Repairs to ships . . . . | 3,156,008 |
| Coal . . . . . | 1,844,000 |
| Projectiles and Ammunition . . | 1,435,000 |
| Sea stores . . . . . | 1,147,486 |
| | 21,424,228 |
| Works, buildings, and repairs at home and abroad . | 1,527,000 |
| | £22,951,228 |

In this manner nearly 66 per cent. of the total expenditure on the fleet is accounted for, and all this money goes in payments to contractors for material, the wages of mechanics and miners, and the workers in a host of industries.

One of the most expensive features in the British Navy is the voluntary system of service as distinct from the conscriptive method on the Continent which gives rivals a large *personnel* at relatively small cost.* The British naval authorities have to go into the labour-market and (particularly in the case of skilled mechanics, whose numbers increase each year as the ships become more essentially highly complicated boxes of machinery) they must compete with private employers. Consequently the pay of the Navy goes up year by year as the rates ashore advance, and in addition to the rise in pay, it is necessary to improve the conditions under which men live afloat and in the barracks ashore, as the nation's standard of living advances. This movement may be seen from these figures quoted from the estimates for 1889, the year of the Naval Defence Act, and for 1903 :

| | 1889. | 1903. |
|---|---|---|
| Numbers borne . | 65,400 | 127,100 |
| Wages, &c., of officers and men . | £3,201,700 | £6,312,800 |
| Victualling and clothing . . | £1,061,100 | £2,292,500 |
| Shooting prizes . | £1,200 | £5,500 |

In face of the growth of naval expenditure since 1889—£13,685,400 to £34,457,500—a section of politicians sometimes cry out at the expenditure of " untold millions " on the naval defence of the Empire and lament that all this money has been wasted, since no country has attempted to wrest from Great Britain her claim to be mistress of the seas. The continuance of peace on the seas for so many decades is the highest testimony to the manner in which the Navy has done its work, often with most inadequate resources, and the anti-Navy politician could adduce no more conclusive proof of the wisdom of the expenditure of these " untold millions " he is in the habit of deploring than these unruffled hundred years of peace afloat.

By good fortune rather than good statemanship this long peace has been achieved, but a change has come over the scene, and

* In this connection it may be interesting to quote from Lord Brassey these figures of the strength of the different *personnels* and their cost, which illustrate the cheapness of conscription :

| | Number of officers and men on active service. | Manning, pay, victualling, and clothing. |
|---|---|---|
| Great Britain . | 127,100 | £8,864,300 |
| France . . . | 53,247 | 2,972,714 |
| Russia . . . | 65,054 | 1,341,224 |
| Germany . . | 33,542 | 1,192,114 |
| France, Russia, and Germany . . | 151,843 | 5,506,052 |

whereas throughout the last century we had one, or at most two, probable antagonists on the European seas, now there are five, and these five Powers have in a sense "pooled" their fleets. On the one hand we have the Dual Alliance and on the other we have the Triple Alliance, while Great Britain stands alone in Europe. Nor is this a complete statement of the situation, for there is a growing feeling that one of the Triple Allies might, in an emergency, leave her consorts and throw in her weight against Great Britain in the event of war with the Dual Alliance, thus combining against this country three fleets of impressive power. This is a dim possibility rather than a probability.

In spite of all assurances, is there not a feeling among a certain class of the public—those who have a special dread of militarism—that they are being taxed for the upkeep of the fleet more heavily than is absolutely necessary, and that the reasonable safety of the Empire might be assured at a less expenditure than is now being incurred? This opinion has been expressed in the Houses of Parliament, and Lord Brassey, in particular, has urged economy. National expenditure in all departments has grown so rapidly that a questioning attitude towards the heavy demands of the Government of the day is natural on the part of a great commercial nation, whose highest wisdom in the past has been to leave the wage-earners free from enforced military service of the Continental type and to conserve the nation's resources, its liquid capital, in times of peace so as to be able to meet the strains inevitable in war, however successful in its issue the war may be. At the same time it is also the highest wisdom to watch rivals closely and to augment the fleet so that it may avert by its very menacing supremacy all the terrors and financial burdens of war. Peace with heavy naval expenditure and no war to follow to engulf all petty economies is greater wisdom than a false peace which, owing to neglected forces, is but the precursor of disaster.

It may be accepted as beyond dispute that Great Britain, in face of the activity of other Powers, cannot cease to build armoured ships for the battle line, nor can she slacken her activity in the construction of swift cruisers for the protection of her over-sea commerce. This is not an admission that no economy is possible. Candidly, there is room for retrenchment. The home taxpayer pays all the expense of the general naval defence of the whole Empire, and far too large a share of the cost of the purely local, and, in a great degree, unnecessary, naval defence of self-governing colonies. The people of the British Isles ought not to pay for squadrons of weak cruisers to hang round Halifax, Esquimalt, Vancouver, or Sydney. Canada is defended by the forces maintained in the English Channel and the Mediterranean, and Australia is protected by the powerful squadron in China waters. In place of the present large squadrons a few small cruisers are needed, thus saving the expense of three expensive naval commands. India should pay the entire cost of the up-keep of the East Indies Squadron, England providing the ships and crews of trained officers and men. Money might also be saved by reducing the number of ships kept permanently in commission, especially in the Mediterranean. This could be a matter of arrangement with other Powers most nearly concerned. To-day we have not a single modern battleship nor half a dozen effective cruisers in reserve; in time of peace the fleet is on a war-footing. Economy might be practised in the construction of new ships. More care should be exercised in the preparation of designs so that the country may obtain the men-of-war it urgently needs. Between 1895–1897 we built eleven cruisers of what is called the "P" class, vessels of just over 2000 tons displacement, and not until they were all either completed or in hand was it discovered that they were such bad sea boats and poor steamers, besides being absurdly weakly armed, as to be practically useless. In the nation's books they represent two millions sterling. Again, the ill-fated *Condor* showed that she and her sisters ought never to have been built, and there are a score of protected cruisers built in the last ten years so poorly armed that they must be taken in hand at the first opportunity and strengthened or they will fall preys to a foe in war time. Large sums have also been spent upon sloops which have no fighting value. The contest for sea power has become so keen that even the British nation, rich as it is and rich as the Admiralty knows it to be, cannot afford to spend money on ships which do not represent the best fighting value.

British supremacy must be maintained, but it could be maintained at less cost. On account of the relatively high pay of the crews, the extent of the Empire, the magnitude of its sea-borne trade, and the possibility of a naval combination, the outlay must in any case be great, but it might be reduced without detriment to the supreme position which the British Fleet must hold.

# THE DAY'S WORK

## VII.—MESSRS. W. H. SMITH & SON—THE GREAT DISTRIBUTORS OF LITERATURE

"SMITHS"—THE CHIEF RESERVOIR OF LONDON LITERATURE—STRENUOUS WORK IN THE GREAT STRAND BUILDING BY NIGHT—RECEIVING THE PAPERS AND PARCELLING THEM OUT—ONE MAN ONE JOB—BEATING THE CLOCK—THE RUSH TO CATCH THE TRAINS—HOW THE FLOOD OF PRINT IS DAILY POURED THROUGH THE COUNTRY

*Illustrated from photographs specially taken for* THE WORLD'S WORK

IN a former article I have tried to sketch the production of a newspaper, the issue and course of the various runlets of intellectual material that you assimilate with the morning cutlet or put in your pipe and smoke in the morning train. But I omitted something. There is a very important interval. At three o'clock in the morning, to write in round figures, the editor, having surveyed the universe for your entertainment and instruction, the leader-writers having insisted on the opinion you should hold about the universe, the sub-editors, having eliminated all that should not be presented to you, have snapped the prescient cabs and gone home. The paper has gone to press. It is swung in lumps on to carts, while the men who printed it are looking for the coffee-stalls or the early "houses." The day's work is over. But there is the paper, a million of it. Within an hour or two it must be on your breakfast table. And no one seems to worry. Editors, writers, compositors, machine-men, office boys depart, and go to bed, taking no thought for the rest. The job is passed on. It is the business of some one else to see that all this labour is brought in its concentrated result under the finger of the man who has a copper to spare.

What happens, then, between the moment when the editor catches his cab and the moment when the early boy delivers the morning paper or the bookstall man pastes the world's news

on six square feet of board? The question had not occurred to me until one morning at about two o'clock I was seeking a cab in the Strand. I came to a brilliantly lighted building. Outside two ragged men were watching in wonder. Presently the wonder of one turned to contempt. "I'm glad," he said, "I ain't got no shares in that place. All that blanky gas goin' all night!" It was the headquarters of Smith's—the bookstall Smiths. And it struck me that I had missed some very important hours in the life of a newspaper. Of a newspaper! of magazines, books, literature—why bless me! we sit down and write and go to bed, but if it depended on us, the writers, you would be none the better, nor should we. This then, must be investigated. So with the knowledge that the block of buildings that fronts the Strand and fills the rectangle of which Arundel Street is the eastern line, forms the chief reservoir of London literature, and having secured permission, I walked in to see how my own ideas were conveyed to you after the printer has done with them.

THE SECRETARY IN THE MIDST OF THE CORRESPONDENCE

It averages 2000 letters every morning

I was greeted with astonishment when I sat down and said I wanted to see how ideas were disseminated. Humility was the note. It was pointed out to me that the "day's work" was always interesting, but that no one could take any interest in such a day's work as Smiths undertake. It had nothing to do with literature. They add nothing to the wealth of the world; they produce nothing. They simply perform the function of the milkman who conveys a product from one point to another. The retort was an obvious one; and it was based on a cow I have known in Buckinghamshire, and a baby I know in London. A whole cartload of morning papers in Fleet Street is not worth a single copy to a man at Harlesden.

"Smiths" then, is one of the few great distributing agencies that link publisher with public. In order to gain some idea of what happens to a newspaper, a magazine, or a book between the moment that it leaves the printer's hands and the moment when it reaches its readers, let us suppose you are about to issue a new publication and wish to place it advantageously before the world. You will reflect that "Smiths" have cut the channels through which literature flows to its appointed end; they know all about trains, they have their bookstalls; and a very large proportion of every issue from the press is gathered in the Strand reservoir and thence set to percolate the general mind. Your new venture, we will suppose, is a daily paper. Turning down Arundel Street you will enter the first door on the right, and be at once conducted to an ample room in which is seated a courteous partner who knows his newspapers. A calculating sympathy is what he gives you. It is by no means his business to correct your politics or argue about your religious belief. If you have anything to say which is likely to attract an audience, the sympathy calculates the probable dimensions of that audience. This is a very important moment in the early life of a newspaper. For "Smiths" may take a hundred thousand and set the bookstalls of the United Kingdom ablaze with your venture—or they may make a courteous offer to supply any customer that orders a copy of the paper. Is it a magazine you project? Then you must go upstairs and find Mr. Kingdon. It is your business to persuade him that a large number of people will share your enthusiasm, and storm the bookstalls for copies of your magazine. It is Mr. Kingdon's business to calculate—with sympathy—the number of people who are likely

THE RECEIVING ROOM OF W. H. SMITH & SON

Where stacks of weekly papers and periodicals are handled every day and night

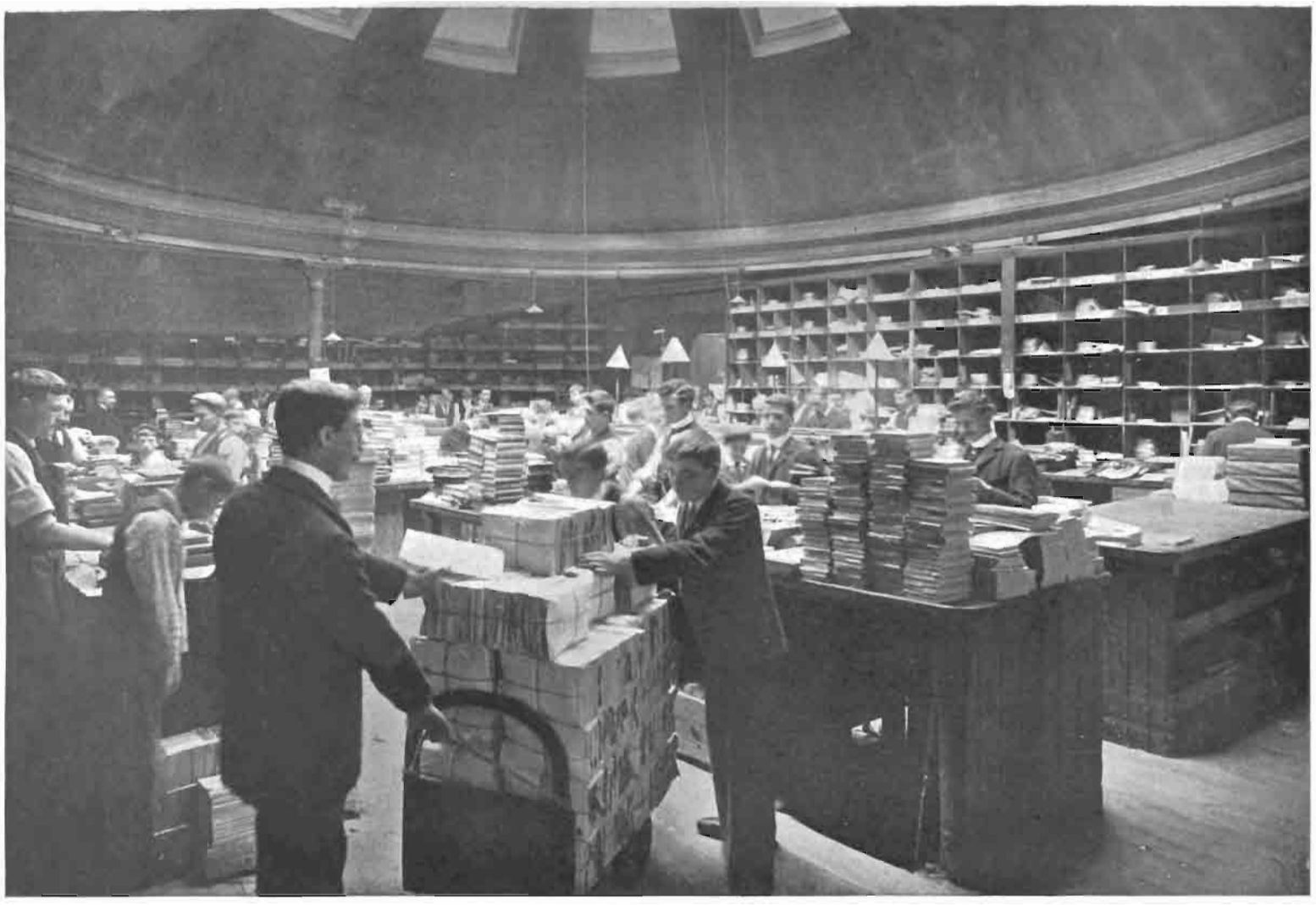
to be interested to the extent of a sixpence or a shilling in the purpose of your life. That crucial conversation lingers in the minds of many projectors of magazines, and THE WORLD'S WORK has particular cause to remember its presentation of the daring scheme for an assault on the serious side of the British nation. Would this record of toil, this fountain of ideas for further toil, arrest the shilling of the hurried passenger at the bookstall. Mr. Kingdon was lating library that spreads light throughout the kingdom. We mount to the floor above, and find Mr. Faux behind rows of books. Mr. Faux has to glance over new books and estimate how many happy English homes will require copies at once from the nearest bookstall clerk. The bookstall clerk supplies evidence of the local taste, sending up regular statements of demand. And the bookstall clerk, when he is an observant man, attains a marvellous

MR. KINGDON, HEAD OF THE BOOK DEPARTMENT, CONSIDERING A NEW MAGAZINE

A conference with Editor and Publisher

perfectly right. His initial order was for ten thousand copies, and no one has ever regretted the decision.

The average new novel has a surprisingly small sale on the bookstalls. At the house in the Strand one can get a bird's-eye view of the reader. And after glancing over many documents which it would be unfair to reproduce in detail, I came to the conclusion that the person who will pay six shillings for a novel to read in the train is one in a million. Of a promising novel of the week I found that only one copy had been placed on a certain prominent railway bookstall in London. But Smiths have also the circu- faculty of prophecy, knowing all his clients and their tastes. There is one, for instance, at Paddington Station who can estimate the commercial value of a novel in five minutes, and directs the reading of a large proportion of Bayswater. Now and again it has been said that "Smiths" exercise a censorship over novels. It is only when people write to complain of the evil tendency of a novel that Mr. Faux sits down to investigate its morality. In other cases it is a mere matter of the supply covering—and not exceeding—the demand. The printed thing will be sold, so off it goes.



THE BOOK AND MAGAZINE FLOOR AT "SMITH'S"

Just behind the lad on the right is the shoot for the parcels, which descend to the next floor as shown on page 485

And on the magazine floor we see it going off, quietly at present, for it is Thursday forenoon, when the weekly rush is only beginning. But you may see the system on which the work is done, moving with the speed that does not escape the unpractised eye. Before each man at the long counters lies his list, which covers places, magazines, and demands. Each man has his own magazine to deal with, and the complete list would astonish you with the names of magazines of which you have never heard, for which "Smiths" confidently expect sixpences. And when the parcel has been pitched from this man to that along the tables, and has finally arrived at the hands of the man who hurls it into the hole in the wall labelled with its destination, you may feel sure that every one who wants to read can read what he wants within the next few hours. There is a little parcel for Mrs. Jones, a newsagent somewhere in Wales, who has her name permanently emblazoned on a brown-paper covering. There are two thousand six hundred copies of the *Strand Magazine* (a fraction of its total order) that go down in the lift and are quietly hoisted on to a van. But the real stress of work has not yet come, though if we cross Arundel Street and dive into the side street where "Smith's" stables are we shall find a building in which carpenters are hard at work making bookstalls; for all the "Smith's bookstalls" throughout England are made in this building and so constructed that the most elaborate piece of architecture will allow itself to be disintegrated and placed on a single cart. On another floor you may learn the merits of pills and mustard and soap and steamers, which blaze and shout at you from piles and stacks of framed advertisements. These adornments of our railway stations are made on the premises and distributed therefrom. And in one room are huge stacks of framed tin-ware that has done its duty and is to be made ready to do it again, and the notice board that implored you to take Brown's Liver Tonic, will presently change its coat of three colours, and warn you

MR. HORNBY IN HIS OFFICE

One of the principals of W. H. Smith & Son


PACKING NEW BOOKS FOR THE BOOKSTALLS AND CIRCULATING LIBRARY

Parcels up to a hundredweight are made up here all day long

against such worthless imitations of Robinson's Elixir of Life.

The real stress begins at the moment when the rest of Fleet Street and the Strand takes its hour or so of repose and cleansing. At a quarter to three "Smiths" claim the district, and divide the lordship with the few men who squirt the street with hoses and shout "off-side" as the clatter of hoofs comes near. Most of the weekly papers which are nominally published on Saturday go to press on Thursday; and by a quarter to three the big room on the ground floor in the Strand is piled with stacks of weeklies. Nor, until I saw those piles, and read the names of the publications, had I any conception of the flood of print that is poured over the country week by week. Outside, the carts are continually coming and going. Some of them "Smith's" carts, others belonging to the prouder weeklies, which are, so to say, carriage folk. All alike come to the trolley shoved by the sweating porters, and take their place on the counters. How on earth is the job to be managed between now and breakfast time? A young man, blazing with energy, in whose hand the question rests, assures me that the work has not yet really begun. They have not yet thought about the morning papers.

"HOW MANY COPIES SHALL WE ORDER?"

Mr. Faux (and his successor Mr. Palmer) estimating the demand for a new book

And then I noticed that no one was at a loss what to do. An hour remained to clear the room. And the method of one man one job, carried the business through. Indeed the man and the job are so identified that the name of the one is the name of the other. "What's your job?" asked the head of the department, catching sight of a man in an unusual place. "Davis', sir," was the reply. Davis was on his holiday. What then was Davis' job? Davis' understudy had by his side three piles of papers, one devoted to dogs, another to women, and the last to Jews. He had also a pile of wrappers, each of which bore the name of a customer or a bookstall, and a list of all the weeklies sent out, with the number of copies required by each. It was his job to supply each wrapper with the number of copies of the papers at his own elbow that each wrapper demanded. I followed a wrapper round, as it grew in bulk and was slid along the tables. The walk was a long one, and a quick one. Finally the wrapper came to a checking-counter, a packing-counter, and before I could catch my breath again it was tied up, and pelting on a trolley to the attendant cart. The cart is always there with its tail-board down. For the carts work on the minute margin, and each driver knows that these minutes are the daily crises of his life. He has to catch the train, and be back again for the morning papers.

By this time "Smiths" have the Strand quite to themselves, and the small man who with voice and hand organises the victory of the carts from the pavement gives a startling word of command. "Trucks up." The men who are munching supper, or breakfast, and sipping strange compounds from cups they rest on the window sills, finish their meal in a swallow and a gulp. From the adjacent coffee-stall come yet others. The trolleys are under their hands. The clatter of hoofs increases. The young man in command looking out to see that all is ready, informs me that the real work is coming now. It is five minutes

THE SHOOT FOR PARCELS, AND THE PRINCIPLE OF EVERY MAN HIS JOB

past four; the weeklies are all off: now it is the morning papers. Already the *Daily Graphic* stands outside in huge piles. Inside there has been a curious transformation within ten minutes. Round the room every man stands ready for his job with a clear field. By his side lies his list, in his waist-belt he has stuffed his collar and his tie. For he is going to fight the clock that from the end of the room points its warning. "Three minutes late," remarks the blazing young man pleasantly as he ranges the room, explaining in an aside, that these are the moments worth living for. In his early youth he was a clerk with regular hours; now, about twenty minutes later, he spends his time, without regular hours, beating the clock, and the fun of victory makes him joyous. The lust of conquest enters into the blood of every man in that room in the Strand. For as for a moment or two the room was


MAKING ADVERTISEMENT FRAMES
For display at the railway stations

quietly waiting for the morning papers, I noticed a grey-bearded man. He has earned his pension, and he draws it. But he cannot do without the fun of winning the daily race for the newspaper trains. At the moment of waiting there are two men who are working at full tilt. I notice them in a gallery in a far corner of the room, sprawling and scratching like demented cats. They are packing the contents bills which are to excite your morning interest. Round them are spread the shrieks of the morning papers. This way, that way, go clutching hands, and if Armageddon were billed they would not stop to exchange more than a wink.

Then comes the flood which fills the reservoir to overflowing. It is seven minutes past four, and the men are standing shoulder to shoulder with their lists before them, while the trolleys are running in with the morning papers. Outside the Strand is deserted by all but a friendly policeman and the furious carts that twist and turn and back and heave their contents into the laps of recipient trolleys. Inside each man has his railroad and his papers to think about. *Standard*, *Telegraph*, *Chronicle*, *Mail*, *Daily News*, *Advertiser*—the energetic youth ranges the tables whereon they are piled, carrying in his head the problem of catching the successive trains. Five o'clock is the first, and there is just three-quarters of an hour to serve a line. It is a matter of minutes; and round and round the tables go the bundles as each man serves this railway or that, this newsagent or that, with the papers at his elbow that are required. For now, at the moment of supreme pressure, the tables are arranged on the basis of railway systems, here the Midland, there the South Eastern, and so forth. And minute by minute the head of the department with one eye on the clock, starts along the room with the cry "two minutes late for the 5.12," and heaves a bundle with his own hands on to the waiting trolley.

For a moment we will descend to the basement, whither the main swirl sends an eddy. For here are long rows of boys who are graduating for higher employment, wrapping up papers for individual subscribers. They are already stamped—and the stamps are effaced—by the post office; and the boy who can wrap up most in a given time will go up higher. For "Smiths" pride themselves on giving the chance of a career to any one in their employ who shows conspicuous merit.

In the big distributing-room the work of catching train after train, with an eye on the

clock, goes forward, with speed and method. Piles of print come in; piles of print go out, and even the driver of an obscure cart on the outskirt of the throng chucks "one bundle? Two bundles!" over his shoulder, and is right. And from the Strand only the smaller lines of railway are served with their morning papers. The space available is so limited that it has become necessary to build railway-vans in which the same system can be carried out. At Euston, for example, at a quarter past five in the morning you may see the morning papers cast in bundles into the hands of clerks who have special vans at their disposal. Their task is to serve the bookstalls as far as Crewe; as the train spins along, the bundles are sorted until each bookstall has its deserts thrown at it.

As a motto for "Smiths" one might quote Mr. Gilbert's lines:

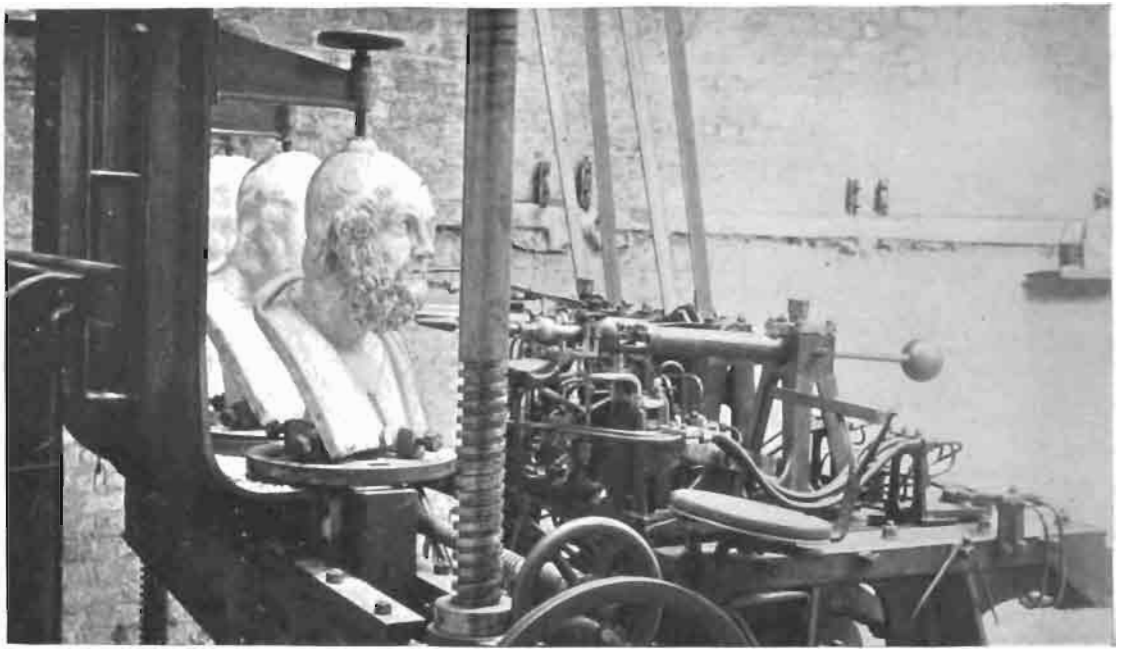
"Politics we bar,
They are not our bent"

Anything that anybody wants to read is supplied in careful wrapping; and even if you are in Dublin or in Paris, you are not beyond the kindly and lucrative ministrations of the firm. And a night and morning spent in watching the flood of print which remains for a moment in the Strand reservoir and is thence directed to all quarters of the kingdom has made me wonder why anybody is ignorant of anything. At six o'clock at the coffee-stall there were tired men resuming collars and ties and wiping the sweat from their brows. "I shall get two hours sleep this morning, and I shall be in bed for twenty hours at the week-end." said the young man who had beaten the clock. For he had given you your morning papers.

WHERE THEY MAKE THE STATION BOOKSTALLS

This department and the one shown on the opposite page have a building to themselves in Water Lane, near by the Strand house

SIDE VIEW OF THE SCULPTURE MACHINE
Showing model and two marble blocks for reproduction



# SCULPTURE BY MACHINERY

*Illustrated from photographs specially taken for* THE WORLD'S WORK

ONYX REPRODUCTION OF A BRONZE STATUETTE
Finished as far as the machine finishes

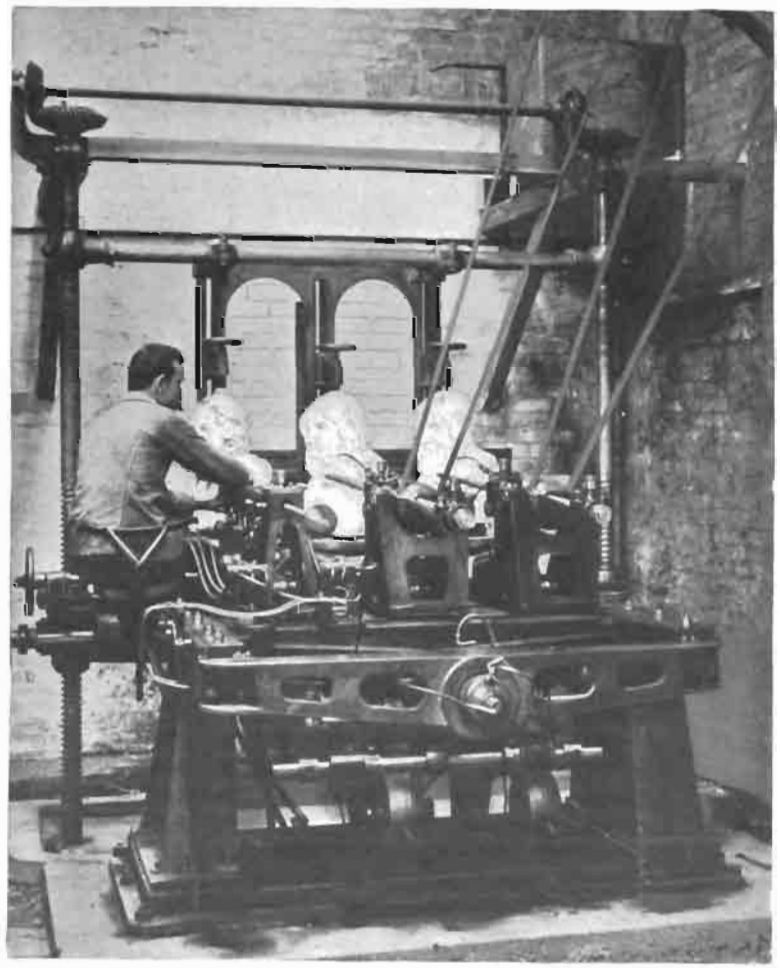
THE effect of the camera upon the art of the portrait-painter has long been a subject of discussion, and now the realm of the sculptor has been invaded by an ingenious invention which is likely to bring there a similar situation and argument. Sir Arthur Conan Doyle is the most prominent member of a syndicate which has purchased from an Italian inventor a wonderful machine for the reproduction of statuary and probably of living models. This has been set up in a machine-shop in Bayswater. There have been sculpture machines before, but they have all been operated upon the percussion system—that is, an imitation by machinery of the sculptor's chisel and hammer. The new invention does not use this principle, but is rather an extension of the idea of the pantograph.

Its operation can be best described by giving an instance of reproduction which the writer witnessed. A plaster cast of the well-known bust of Homer was made firm in the first of a series of vices, small plaster rolls protecting both the top and bottom of the bust from

damage by the tight grip of the screw. Two blocks of marble, shaped roughly for an ordinary bust, are placed in vices to the left of the first. A workman takes his seat upon a swinging chair opposite the model. The proper rough chisels are selected and fitted into two braces projecting opposite to the blocks of marble. The hydraulic power which operates the machine is turned on. The brace in the hands of the operator is pointed with a bit of wood, corresponding to the chisels on the two other arms. The operator then takes the wooden point in his hand and passes it slowly and easily over the surface of the model, beginning with the most prominent parts—in the case of a bust, the tip of the nose. As the pointer is gradually passed over the surface, so do the corresponding steel chisels facing the marble block move in harmony with the pointer, tearing away the stone or marble almost with as much ease as a knife cuts through cheese. Too much marble cannot be removed, as the chisels operating upon the blocks must work in perfect sympathy with the wooden pointer, which, of course, cannot go below the surface of the model. A bust which, in the ordinary course, will take two or three months to complete, can, by means of this machine, be turned out in duplicate in a day, needing only the ordinary small chisel-smoothing to finish it after it has left the machine. The saving in cost is very marked. Leaving out the question of the quality of the marble employed, a figure that would cost £20 may be turned out for as many shillings.

It must not be imagined that a finished product leaves the hand of this cunning mechanism. From our photograph of a bronze statuette copied in onyx, it will be seen that the onyx figure must be thoroughly gone over with the smoothing chisel. But all the heavy part of the work is done, although of course there is scope for artistic talent in the proper finishing of small details—of the face in this figure, for instance. The proprietors of the machine believe that it may also be adapted to use upon living models, but only tentative experiments in this direction have been made.

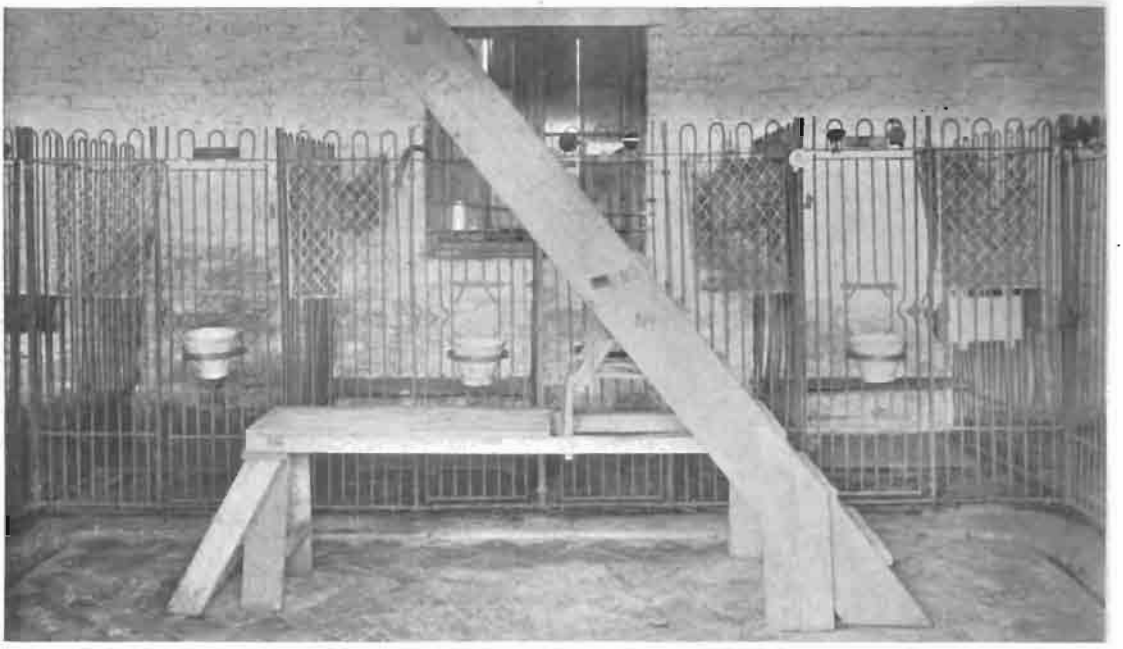
As the invention stands, it is of great importance, both commercially and artistically. If it only reproduces the work of great artist minds it will in no way interfere with artistic invention, and yet will bring a beautiful and hitherto unattainable branch of art within the reach of the multitude. It does not require a highly skilled man to work it, for after an hour or two of practice anybody of average intelligence could grasp its details. Then the machine will certainly be of great importance for architectural decoration, and ornamental stone-work need no longer be so prohibitively expensive.



FRONT VIEW OF THE SCULPTURE MACHINE, WITH OPERATOR IN THE CHAIR

PART OF MR. H. E. HUGHES' GOAT-HOUSE

Note the wire rack for hay and the unsoilable pail for corn or water. The goats stand or lie on removable wooden rames, and the whole place can be washed out. Two stalls contain a shelf for the occupant to sleep on. The stairs lead to the granary on the second floor. The bench below the stair is for milking



# "THE POOR MAN'S COW"*

THERE ARE NEARLY 300,000 GOATS IN IRELAND, AND THE NUMBER IN ENGLAND IS STEADILY INCREASING—GOATS GIVE MILK TWICE AS GOOD AS COW'S MILK, AND SPECIALLY VALUABLE FOR CHILDREN—HOW TO FEED AND KEEP GOATS IN OUTER LONDON AND MAKE THEM PAY

BY

"HOME COUNTIES"

*Illustrated from photographs specially taken for* THE WORLD'S WORK

THIS month's Dairy Show will be visited by many folk who are drawn to the Agricultural Hall not by cows, churns, cheese, or poultry, but by goats. The exhibit of these animals—" the most intelligent, engaging, and picturesque of our domestic cattle," as Mr. Bryan Hook says—is steadily becoming one of the most interesting features of the big yearly Show. Nor is it only at Islington Show that classes are provided for goats. During the year several of the leading provincial agricultural societies have provided facilities for goat entries, respectable prizes being offered for competition.

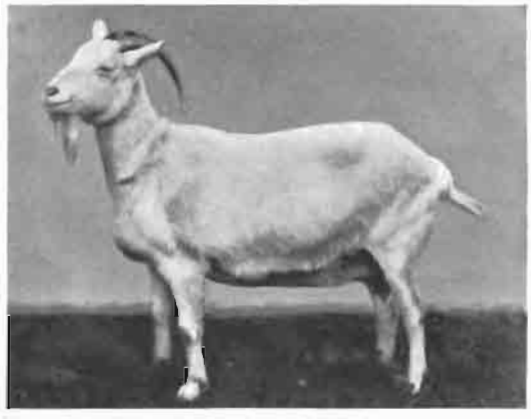
There is another indication of the interest taken in goat-keeping. There has long been in existence a successful British Goat Society,† among the members of which, known outside

* *Vacca pauperis* is the motto of the British Goat Society.

† Secretary, Mr. H. S. Holmes Pegler, Allerton House, Kingston-on-Thames.

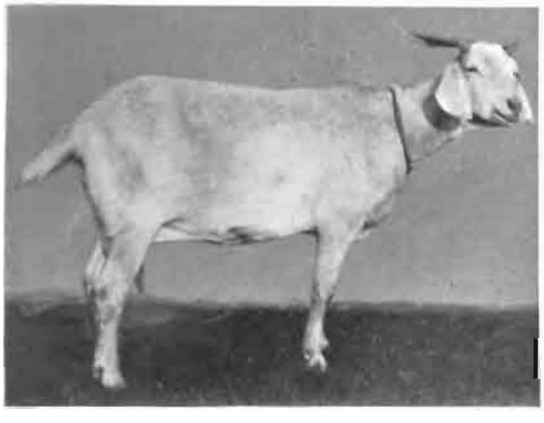
A GOAT BELONGING TO THE KING

One of the splendid animals brought from Egypt to the King. It is at present staying with Mr. H. E. Hughes, of Broxbourne



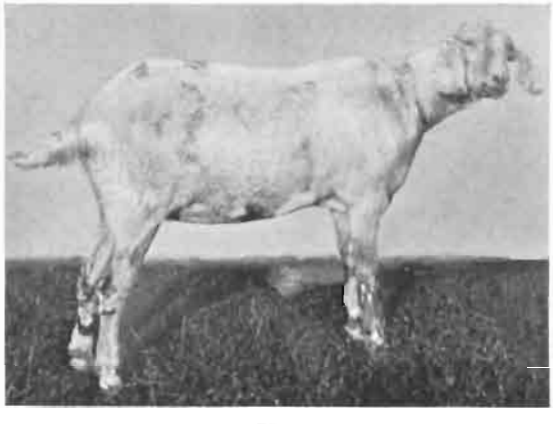
GINNEY

An English nanny, winner of first prize at 1902 Dairy Show or best milker. Nearly a year after kidding (346 days) she gave 2.7 lbs. of milk in the day. Owner, Mr. J. G. Dawson, Aske's School, New Cross



GEISHA QUEEN

Nubian type. Winner of first prize at 1902 Dairy Show for best horned she-goat over two years old in October 1902. Owner, Mr. H. E. Hughes, of Broxbourne



PATTI II

Nubian type. Won first prize at last year's Dairy Show for best female kid not more than a year old in October 1902

GALATEA

Pure Toggenburg, belonging to Mr. Paul Thomas, of New Malden. Her performances as a milker are described in his letter on page 496

SKIP

Winner of first prize at 1902 Dairy Show for best Toggenburg she-goat (pure or half-bred) over two years old in October 1902. Owner, Mr. Thomas Langridge, of Broomhall, Sunningdale, Berks

THREE ANGLO-NUBIANS

Arranged to show rate of growth. Unmated nanny with extended ears is daughter of nanny at back, and was born March 1902; young one in front, born May 16, 1903. A yard measure is fastened against the weather boarding in order to give some notion of the height of the animals, but they have unfortunately moved forward

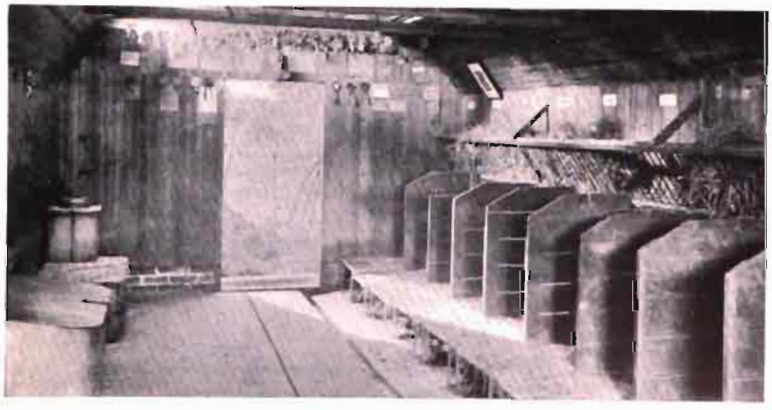
goat-keeping circles, are the Baroness Burdett-Coutts, Sir Walter Gilbey, Sir H. F. de Trafford, Sir Henry Isaacs, and Lady Vincent. The *Herd Book* published by the Society, which contains the names of goats with pedigrees, only registered after careful scrutiny, numbered a thousand entries a year ago, while the "Certificate of Entry" I have received with a kid which lately reached me is numbered 1888.

Although the English Board of Agriculture is above taking any notice of goats in its annual stock-census, in Ireland officialdom is more highly impressed by the merits of "the poor man's cow," and the Irish Agricultural Returns, just issued, show that there are nearly 300,000 goats in Ireland. The Dublin authorities have also shown a desire—following the example of the Swiss Government—to encourage goat-keeping, and to improve the stock in the hands of the peasantry and farmers.

In England—goats are, of course, largely kept in Wales, and two types of Scottish goats are recognised—goats are usually found in the hands of four classes: cottagers who experience a difficulty in getting cow's milk; well-to-do folk living in the country and Suburbia who appreciate the superior qualities of goat's milk: livery-stable keepers and farmers who believe in the old tradition that the presence of goats with cattle or horses keeps them healthy; and

A SUBURBAN GOAT STABLE

Mr. J. G. Dawson's, at Aske's School, New Cross. Note arrangement for preventing the upsetting of pails



MR. BRYAN HOOK'S GOAT STABLE AT CHURT

The frames on which the animals stand in their stalls are removed daily into the open air, the whole place being washed down. The picture also shows the milking-bench. Note the open gutter. The horizontal railings of Mr. Hook's paddock can be seen through the open door

enterprising cow-keepers who find that there is a demand for goat's milk for children or who understand its value, mixed with Shorthorn milk, in raising the value of that article.

The goats of Ireland and Wales are rough, horned customers, and the English goat—or what remains of the English goat, for it has now been so much crossed with foreign and Keltic blood that the original animal, like the British bee, is not easy to discover—is a creature of much the same kind. The interest which has been developed of

late years in goat-keeping has resulted, however, in the importation of large numbers of Swiss, Pyrenean, Maltese, and Nubian goats, with a few animals of the "long-haired" Angora and Cashmere type as well, and the stock of intelligent English goat-keepers is of a largely foreign strain, which is a marked improvement on the old-time blood. Trouble has been taken, as in Switzerland, to breed for good milking qualities—just as many poultry-keepers now go in for utility rather than show-types in the case of their hens—and the value of the goat as a milk-producer has risen accordingly.

Many of the foreign goats brought here being without horns, a large proportion of the best goats in this country are now minus these awkward, and in a domesticated state useless, ornaments. For example, the photograph on page 492 of one of my adult goats, her own and a strange kid—the larger one is hers—shows that all these three Anglo-Nubian animals are hornless. The animal of middle size, having had an English father, has less Nubian in it than its companions. The biggest nanny—they are all she goats—is black, the hair of her daughter is brown and black intermixed, while the youngest goatling is sable-coloured. The Swiss Toggenburg (usually hornless and mouse-colour with patches of white) seems to be agreed upon as the best type of milch goat—but the Appenzell (white and hornless) has its advocates; while Anglo-Nubians (hornless and horned) figure largely at the Shows and in the stalls of goat-keepers, and are commended in the *Book of the Goat* * as "undoubtedly the best of the different crossbreeds." The colour of the pure Nubian is given by Mr. Pegler as black or black and dark red or dark tan, with some few marks of white, but he adds that for practical purposes a pure specimen is not always the best.

English folk come at the very end of the list of peoples converted to goat-keeping—as to some other things, the advantages of which have long been realised abroad. On crossing the Channel one has to go a very short way to find milch goats parading the streets with their milk-seller owner. What are the merits of *vacca pauperis* which gain the animal such respect from foreigners, and it might be added from the Irish, Welsh, and Scotch?

First, undoubtedly, the quality of the milk goats give. It is much richer than cow's milk. The vulgar notion that it has a peculiar taste is all moonshine. In countries where cleanliness in utensils and the washing of the hands before milking are not thought much of, the milk may possibly acquire an objectionable flavour; but after repeated experiments on friends with milk from various goats I have never heard people who tasted it for the first time say any more than that it was excellent, that it resembled ordinary cow's milk with cream added to it, and that it seemed perhaps a little sweeter than cow's milk. This is my own verdict, and the verdict of every other goat-keeper.

The richness is not, of course, a matter of opinion. Here is Dr. Voelcker's analysis:

| | Cow's Milk. | Goat's Milk. |
|---|---|---|
| Water . . . | 87.40 | 82.02 |
| Fat (pure butter) . | 3.43 | 7.02 |
| Casein (cheese) . | 3.12 | 4.67 |
| Milk sugar . . | 5.12 | 5.28 |
| Mineral matter (ash) | 0.93 | 1.01 |
| | 100.00 | 100.00 |

In other words, on every point—except that of water!—goat's milk is the superior of cow's milk. In butter-fat its value is more than double cow's milk. In the nutritious cheese-forming substance its better quality is also marked. As is well known, the owners of cows have often the greatest difficulty in keeping the milk they sell up to the standard of fat which the Adulteration Law requires, and are occasionally fined although they have not added water. Goat's milk, on the other hand, is almost invariably twice as good as the inspectors demand that cow's milk shall be. It should be added that Dr. Voelcker's analysis is not made from the milk of ordinary cows, but of the best milking cows at the Dairy Show.

Three other good qualities of the goat are its inexpensiveness, its small size—its actual stall need be no bigger in area than a packing-case, if the stable in which it is built is large and airy enough—and its willingness to eat almost anything, and thrive on it. From prunings and hedge-clippings—privet is not a desirable food, however—to apple parings, from thinned spring onions to ivy, bread, and grain to mangolds and potatoes, bran mashes to the hardest tree-bark, horse-chestnuts and acorns to garden weeds and the rankest grass, nothing which is clean—the goat is fastidious on this point—comes amiss to *vacca pauperis*.

Its also saves expense to its owner by preferring a box or a sparred frame to sleep on rather than a "comfortable bed" of litter,

* Published by Upcott Gill, 4*s.* 6*d.* There is also a paper-covered abridgment at 1*s.*

and as its droppings resemble those of the sheep it does not make the mess a cow does.

If it cannot be given its liberty to graze, it will prosper on a chain like a big dog if its tethering-iron be shifted twice, or if the chain be short and the feeding poor, thrice a day. Some goats never see a field from one year's end to another, being kept in a stable and yard. It seems, however, a more natural life for a goat to lead—as it is also a more economical way to keep it—for it to be put out in a paddock or field on dry days, or taken along the lanes to graze, led with a rope, in the French fashion.

In speaking of the milk of the goat we omitted one thing in its favour, and this is the freedom of the animal from almost every sort of disease, particularly tuberculosis, the scourge of cow-houses. "A very large number of milch-cows are tuberculous," said Dr. Douglas Reid at the British Medical Association in the summer, "and the number so affected is increasing."

"It is through milk so contaminated [said Sir William Broadbent some years ago] that children come to have tuberculous disease. The diseases of bones and joints to which children are subject are probably also traceable to milk; humpback, hip-joint disease, and the diseases of knees, elbows, &c., which cripple so many children; perhaps so is lupus. *Goats do not suffer from tuberculosis.*"

Until more general medical approval is given to Professor Koch's theory that bovine tuberculosis is not transmittable to human beings, the fact is certainly of importance that scientific investigation showed some years ago that among the 130,000 goats and kids brought to Paris for slaughter at the shambles of La Villette every spring, the meat inspectors had failed to discover a single case of tuberculosis.

Goat's milk is without doubt the milk best adapted to the needs of children, not only because of its perfect freedom from the taint of disease but because of the ease with which it is assimilated.

"I am quite certain [says Dr. Lee, of the Children's Hospital, Great Ormond Street] that if a hundred children were fed on goat's milk, and compared with an equal number of corresponding ages (all circumstances being similar) who were fed on any other milk, except that of their mothers, the goat's milk children would, in comparison at least with those fed on cow's milk, have an advantage."

Every goat-owner one meets gives the same testimony as to the suitability of goat's milk for children. The testimonials printed in praise of certain infant foods are tame compared with the kind of thing one has heard from parents concerning the milk of the goat, and every year doctors are getting more enthusiastic about it.

What difficulties there are in regard to goat-keeping are not insurmountable. The milk, by reason of its greater richness, may possibly not keep as long as cow's milk, and will not perhaps bear transportation as well. One ought to bear in mind, however, that cow's milk which travels by railway is commonly treated with a preservative to make it keep; and that as the object of my paper is to commend the goat as a milk-producer for private families, not to recommend the starting of goat dairies and goat farms, matters which would require treatment from a different standpoint, the fact of goat's milk having the defects of its qualities does not matter very much. The tendency of goat's milk, by reason of its richness, to curdle in milk puddings can be got over, with a little care, I am assured by an experienced housekeeper. When the cream is made into butter, the product, although excellent to eat—it has Devonshire cream flavour—and superior in nutritious elements to ordinary butter, will not last in the best condition more than a day or two. But as only small quantities of goat's cream are available at a time, the frequent churnings required meet this drawback. Goat's cream is white, and the butter is almost as dead a white as lard. A drop of the harmless preparation, annatto, will, however, produce the conventional yellow, if desired. The yellow of a great deal of cow's butter is obtained by similar artificial help.

By reason of its agility and capriciousness (significantly derived from the Latin for goats—*caper* and *capra*) the goat cannot be left so much to its own devices as the steady-going cow may be. I do not mean to suggest danger from the horns, for even horned nannies—and there is no need to buy horned animals when hornless can be got—are gentle and affectionate to those who treat them well. But it is the nature of a goat to bark trees—I suppose the animal never enjoys itself better than when peeling the trunk of a fruit-tree—and if this disposition be not borne in mind, serious damage may be done. Again, very few hedges and no ordinary railings are enough to confine an animal which is at once a born wanderer, enormously strong in the neck and head, and a clever jumper. Horizontal iron railings, too close to be scrambled through and too high to be leapt—four feet may

do—are the only safeguards. Folk who have large meadows can, of course, afford to give their goats their liberty. (Lady Warwick's run loose in a park.) Other people must tether. (A suitable tethering-pin is shown on page 170 of THE WORLD'S WORK for July, which also contains some photographs of my goats, the arrangement for detaining them while being milked, &c.)

The notion that goats have an offensive odour is not true as far as nannies are concerned. They are as sweet-smelling as Jerseys. Billy-goats are, however, objectionable, both in smell and in some of their habits. But then, few goat-keepers need to have a billy of their own. Goat-breeding at present is only for a few experts. Other folk have such a difficulty in getting rid of their nanny, not to speak of billy kids, that they kill most kids, female and male, at birth. The alternative is to keep them until two or three weeks old, when they resemble the finest spring lamb. If brought up to maturity each kid will consume 15*s.* worth of milk before weaning. They are killed by being knocked with a heavy stick behind the head like a rabbit. The death is perfectly painless, and if the little animals are despatched as born, the mother misses them very little. The goat-keeper cannot as yet command a large enough price for his young stock to tempt him to bring up his "calves" like the farmer.

In making a start with goats, it is perhaps desirable to experiment with an animal procured at a moderate price. But this must be only a preliminary measure, for a good goat costs no more to keep than a bad one, and it is doubtful whether many folk other than cottagers, who pay for hardly any food for their "cow," can make cheap goats meet their expenses. Whatever goat be bought, it should be bought on a milking warranty. It is hardly worth while bothering with one which is not guaranteed to give a couple of quarts in the day (taken in two milkings). If she is between two and four years old she is worth £3 in the winter. The same animal would be worth less in the spring and summer, and 15*s.* should be struck off her price if she is dry. Of course, the two quarts a day means more or less, according as the date when the goat kidded is distant or recent. Her milk-supply gradually falls off until she dries off or is dried off by her owner, preparatory to her next kidding. Taking the case of a £3 10*s.* goat, I reckoned in an estimate made in the *County Gentleman*—and I do not think I can improve on the figures—that she might be expected to give an average of a quart and a half a day for six months, a quart for three months, and half a quart for a month—the total, 379 quarts for ten months. The expenses might be set down as follows:

*Expenses of a £3 10s. Goat.*

| | £ | s. | d. |
|---|---|---|---|
| To yearly loss on three years' old goat, bought for £3 10*s.*, and sold locally in about two years' time at £1 10*s.* (reckoning interest) . . . | 1 | 2 | 0 |
| „ food, stud-fee (1*s.*), and incidentals | 2 | 12 | 0 |
| „ contribution in respect of labour and housing (say) . . . | 1 | 0 | 0 |
| | 4 | 14 | 0 |

The other side of the balance-sheet can be made to read in different ways, according to whether the goat's milk is credited at the price of cow's milk (4*d.* per quart), or as it ought to be—when it is double the value and will stand watering down to double its bulk—at twice the price of cow's milk. Here is a table showing the milk revenue and profit thereon at four different prices per quart:

*Revenue from a £3 10s. Goat.*

| | | £ | s. | d. | | £ | s. | d. |
|---|---|---|---|---|---|---|---|---|
| 379 quarts | @ 8*d.* = | 12 | 12 | 6 | Profit | 3 | 4 | 6 |
| „ | „ 6*d.* = | 9 | 9 | 4 | „ | 2 | 8 | 4 |
| „ | „ 5*d.* = | 7 | 17 | 11 | „ | 2 | 0 | 3 |
| „ | „ 4*d.* = | 6 | 6 | | „ | 1 | 12 | 3 |

Of course, the amount of milk given and the money value of goats vary enormously. All goats give less after their first kidding than after their second. (They are sent to the billy at sixteen months, go twenty-one weeks in kid, and are at the top of their milking form from their second kidding onwards till their sixth year.*) "Just under a gallon" is the largest yield which the author of the standard work on goats has ever seen milked in a day; but more than one goat-keeper declares that a goat of his has given a gallon. The goat which took second prize in the milking trials at last year's Dairy Show gave in a day there 3 pints $2\frac{6}{11}$ gills six months after kidding.†

In some official particulars published in Ireland regarding the March to November yield of the goats of Wicklow county supplied by two different authorities, it was stated by the one informant that an "exceptionally good

* There is a plan of goat's months from their first year upwards in Mr. Bryan Hook's *Milch Goats and their Management* (Vinton).

† I do not cite the winner of the first prize as she had kidded as long as 346 days before, and the novice would hardly appreciate at a glance the real value of her yield.

goat" would give from 540 to 800 quarts according to pasture, and a "fairly good goat" from 180 to 266 quarts. The other answer was simply 270 quarts for a "fairly good goat" and 540 quarts for an "exceptionally good goat." (Our £3 10*s.* goat, it will be remembered, was credited with 379 quarts in a period one month longer.) The first informant said "exceptionally good" goats a month before kidding were worth from 17*s.* 6*d.* to 22*s.* 6*d.*, and "fairly good" goats about 12*s.* 6*d.* The other authority gave the reply: 18*s.* to 21*s.* and 8*s.* to 13*s.* respectively. It will be seen that there is considerable variation in the figures of these authorities. Holiday makers in Ireland might certainly do worse than take an opportunity of witnessing the actual milking of some of the wonderful goats of Wicklow, and of learning on undeniable authority the date of kidding in each case in which the milk yield was exceptional.

A well-known breeder lately offered me an Anglo-Nubian which was giving 2¾ quarts a day five months after kidding for £5. Obviously she was worth the money. Mrs. Earle estimates the value of a good Toggenburg at from £7 or £8. Goats have, however, been priced at £12. A pair of goatlings were sold at the Dairy Show some years ago for twenty guineas. £30 was lately paid for a champion stud-goat, and £25 refused for a first-prize nanny.

With regard to food the expense must vary with the circumstances of the goat-keeper. If kept in Suburbia, with a small garden only to furnish provender, the cost would obviously be greater than farther out of town where there was a paddock for the goat, or goats—two or perhaps three animals are required to keep up a regular supply of milk. Right out in the open country, where the goats run with the cows, the expense of food would reach a minimum. It is not easy in these different circumstances to arrive at the cost of food. In this article, I have reckoned 1*s.* a week.

The author of the delightful *Pot Pourri from a Surrey Garden*, already quoted, writes to me: "My goats live in my field with the cows, and we give them leaves, &c., from the garden, and they have a little corn every evening. I have no house for them. They go in with the cows." Mr. Birkbeck Ravenscroft, who is well known as a goat exhibitor, and has seventeen goats, has not worked out how much a head they cost him. He keeps his kids in a barn. His adult goats he has made a practice of stalling for twenty-five years. Mr. Bryan Hook also keeps no separate goat food account, but when he took his goats, with his family, to the sea-side, the milk-producers cost 9*d.* a week.* Mr. H. E. Hughes, who has been winning a lot of goat prizes lately, puts the expense of food in the case of his herd at 6*d.* each. He has two small fields for the use of his score or so of goats, and a specially built stable with a granary on top.

The following is an extract from an interesting note with which I have been favoured by Mr. Paul Thomas, who has kept goats for a quarter of a century:

"I generally keep ten or twelve goats, sometimes more.

"The cost of a goat is about 3*d.* a day in winter, but in summer-time when grass is plentiful you can keep a goat for a penny daily. I let my goats pasture in a large meadow all day and they are stalled for the night. In my case I consider that the sale of the kids and the stud-fees pay for the hay, corn, and bran, and that the milk is the profit. A herd of common goats would not pay, but the Toggenburg goats, a hornless variety of the Canton St. Gall, in Switzerland, are the only goats I keep.

"I imported this breed into England in 1884, and I exhibited the female, Linda, the same year at the Dairy Show, where she took first prize. I have since imported several other goats of the same breed, but the importation of ruminants is now prohibited by the Board of Agriculture.

"I enclose you a photograph of a remarkable goat, named Galatea, who took many prizes. This is a pure-bred Toggenburg. After her first kidding her yield was eight pints daily and she kept up this yield for five months and stayed in milk till her next kidding."

Goats in milk should have a handful of oats night and morning, and if pastured on an ample

* Prospective goat-keepers will find the account he gives in his book of the mode of feeding these animals instructive. "The two goats," he says, "were allowed the run of a little yard with shelter from the wet. Their breakfast, given while they were milked [mine are allowed during the operation to lick rock salt, of which goats are very fond], consisted of a good half-pint of oats or scalded maize, with a double handful of coarse bran, to which was added any available kitchen refuse. At mid-day they received an armful of weeds cut from a disused piece of garden ground—some thistle, comfrey, dandelions, cleavers, and coarse grass. At about six o'clock they were allowed to follow some of our party to the beach, and range the neighbouring waste land for grass, thistles, bramble, horned poppy, and other sea-side fodder, following us home at dusk. Their supper consisted, like their breakfast, of corn and bran. One of these goats was yielding after six weeks of this life exactly 6 lbs. 14 ozs. of milk, or nearly 5¾ pints daily. Thus it will be seen that this one animal yielded produce to the value of £2 7*s.* (cow's milk price) during our stay of seven weeks, the total expense for food, hay, corn, and bran being 5*s.* 4*d.*"

area—pegged goats must be moved twice or thrice a day—need little more than the grass they get. In wet weather—goats detest rain and wind and do not do well on soft ground *—the animals will cost more. They will also be more cheaply kept in the summer than in winter, when there are fewer pea, bean, and potato stalks, thinnings, prunings, and leaves to give them, and mangolds or carrots—turnips are less good—have to be bought. Goats not in profit need less, of course, than goats which are being milked or are about to kid. Good hay necessarily bulks largest in the winter dietary, but acorns at 6*d.* a bushel are a cheap and excellent makeshift food.

But whether hand-fed or field-fed, goats must have variety in their food, or they will fail to yield a satisfactory return, and will eventually go off their appetite, lose flesh, and if not provided with the change of diet they require, become dangerously ill. A goat will never satisfy itself with one kind of food, even the best clover-hay or the finest lawn-grass. When it is loose it never crops steadily like a cow, but takes a bite here and a bite there, and is ever moving on. The ideal food for goats is the wonderfully varied, well-grown herbage of the roadside, and the nearer their diet can approximate to the fresh and mixed food to be found in a lane, the better they will do. Again, the careful keeper of goats will notice that every one of his animals has its own particular fancy in food. My black goat in the picture is so fond of stale bread that she will stand on her hind legs begging for it until she has eaten the best part of a loaf; but none of my other animals specially cares for this kind of food. Goats also differ in their liking for sloppy food—the great milk-producer—some liking it immensely, and others having to be coaxed to consume it. Whatever food is provided must be clean and in a clean pail, and it must be given in such a way that the goats cannot put their feet into it. Immediately food is touched in this way, or immediately hay or grass fall under foot, goats will refuse to eat it, even if rather hungry. As wasters of food no animals eclipse goats. Their owner must devise racks and food receptacles accordingly. Useful diagrams of these and plans of the best sort of houses are given in the books I have mentioned. These particulars and the photographs accompanying this article should enable the novice to make a beginning with his goat-keeping in the best possible way.

In conclusion, a word or two more may be added about the choice of a goat. Even if an Irish goat gave four quarts of milk, it would not necessarily be a superior animal to a foreign or first-cross goat which gave less. It is not milk only, but milk at the right time that the goat-keeper wants. Ordinarily, our home and often half-wild goats will only breed from September to March. Therefore by the time the winter comes round the keeper of goats of the Irish, Welsh, Scottish, or English strain is likely to be short of milk. He has goats, but no milk. The difficulty is met by using foreign strains.

"The effect of domestication, high feeding, and especially of Oriental blood [says Mr. Bryan Hook] is to induce an inclination to breed at other than the normal season, and it is undoubtedly quite possible by choosing the breed with this view to obtain kids in any month that may be desired (indeed, I think I may say that I have bred kids in all twelve months of the year), but it must be remembered that goats vary very much in their powers of resisting cold, and those that suffer most from this cause will be the first to fail in the milk-supply. In the exceptionally severe winter of 1894–95 I had three Spanish goats and one English that had kidded in November and milked well until the severe weather set in, and then, being more affected by the cold than my Swiss goats, they gave less milk, though the Swiss (Toggenburg and Appenzell) had been eight months longer in milk, having been kidded in the previous April, and being due to kid again in the April following. Indeed, these animals would undoubtedly milk the whole year round until their kids were born, were such treatment advisable."

But, of course, we are talking of goats which are worth more than the £3 10*s.* of our balance-sheet. The goat-keeper must set the advantages possessed by the better-class goats against their higher cost.

It goes without saying that goat-keeping, like everything else, requires attention to be successful. If the interest which the purchaser of goats takes in this breed of milk-producers is not likely to last beyond the period when they are a novelty on his premises he had better leave goats alone and go on taking the risks of what is delivered at his door under the name of cow's milk. On the other hand, the benefits to be derived from goat-keeping are worth taking a little trouble for, and there are no real difficulties. I have said nothing of milking because a little patience—and if possible, practice with a milkman or milkmaid—will lay bare the whole art and mystery in a very short time.

* The hoofs of goats require paring more than once during the year, the frequency of the operation depending on the amount of exercise they get on hard ground.

# THE TRADE UNION CONGRESS

A PARLIAMENT OF LABOUR—THIRTY-FIVE YEARS OF PROGRESS—THE UNIONS HAVE TWO MILLION MEMBERS, £5,000,000 OF FUNDS—WHAT THEY HAVE DONE IN SECURING INDUSTRIAL LEGISLATION—LAST MONTH'S MEETING AT LEICESTER —THE GREAT QUESTION OF THE LEGAL POSITION OF TRADE UNIONS

THE annual Parliament of Labour met this year at Leicester. It is thirty-five years since the first Congress met, and twenty-six since the delegates of the Trade Unions came to Leicester. Here are some figures which show the growth of the movement since then. The first Congress at Leicester assembled 141 delegates representing 112 societies, which had a membership of 691,000. This year there were 460 delegates present, representing 250 societies, and a membership of 1,500,000. The membership is greater than appears on the surface, for at the first Congress, Trade Councils as well as Trade Unions were represented, and hence there was a considerable duplication of membership. But Leicester Congress this year contains evidence of the growth of the labour movement, and of the fact that trade unionism has come to stay, and is a great force to be reckoned with in the future history and development of this country. The ordinary idea of a trade union as being a machine for the manufacture of bad blood between employers and employed, has long since been exploded. Most of the great societies are organisations for the protection of the worker. They provide for him in sickness, or when slackness of trade throws him out of work. They insure his tools against loss from fire or other causes. They provide his funeral expenses when he dies, and above all, they do at any rate greatly help to place him in a position to make something like an equitable bargain with his employer as to the conditions of his employment. They have accumulated funds amounting to over £5,000,000, and their membership all told approaches to nearly 2,000,000, or one-fourth of the adult male wage-earners of the United Kingdom.

Sufficient has been said to show that the meetings of a body like the Trade Union Congress are worthy of study. It is curious to note that the first Congress was held under conditions similar in some respects to those which obtained in this present year. The meeting of the first Congress had its origin in the attack which was made on Trade Unionism in 1867, after the Sheffield outrages had prejudiced it in the eyes of the public. The last Congress met when trade unions are faced by a fresh attack on another point, and when the law has been interpreted in a way which is hostile to their continued progress. But there is a marked difference in the attacks of 1867 and 1903. Then, they were upon the personal liberty of the trade unionist. Now, they are upon his pocket through the funds of his union.

When the Congress held its first meeting, the leaders of the movement—Allen, Applegarth, Newton, Howell, Shipton, and Odger—were fighting for the right of combination. They claimed the right for the working man to make his own bargain with his employer—in any way he might think fit. In this, they were backed up by men like Lord Elcho, now Lord Wemyss, who belonged to the strictly individualist school of thought. They succeeded. Successive acts of Parliament—the Master and Servant Act, the Trade Union Act, and the Employers and Workmen Act—placed trade combinations on a legal footing, and protected their rights and their funds. The movement maintained its *laisser faire* colouring until 1889, when the rise of the new unionism under the leadership of Burns, Tillett, and Thorne, led to a revolt, which came near to producing a split. But the good sense of the leaders on both sides triumphed. The old unionists learnt breadth of view and a wider outlook, whilst the new found that the walls of the capitalistic Jericho were not to fall at the blast of the trumpet of aggressive labour. The point of view of factory legislation, of municipal activity, of the fair treatment of labour by Government and by public bodies employing it, and of the interference of the State in the regulation of the hours of labour and the conditions under which work is carried on, may be said to be entirely changed since trade unionism became a force. The Workmen's Compensation Act, or the Railway

Servants (House of Labour) Regulation Act, would have been impossible thirty years ago. To-day, both parties vie with each other in their devotion to industrial legislation which in the 'seventies would have been denounced as communistic and predatory.

Yet the movement has always been self-contained. There was a time when there was danger of the Congress becoming the hunting-ground of the idealist and the doctrinaire. But the self-denying ordinance which Mr. John Burns and Mr. Mawdsley pushed through at the Cardiff meeting in 1895, confined it strictly to trade unionists, and now none can sit as a delegate unless he be working at the trade he represents, or a permanent paid official of his trade union. On the whole, this has been to the good. Some men, including Mr. Burns himself, have been kept away from the Congress, but those present can claim that they represent the trade union world in the fullest sense, and that their decisions may be accepted as its matured wishes. It is this which gives importance to the gathering. Resolutions and motions are circulated to the societies, and debated, and if necessary amendments sent in, before the Congress meets. There was a time when the delegates had to face a whole mass of ill-digested resolutions, none of which they had seen before. But Mr. Sam Woods has altered all that. Resolutions and amendments after being circulated to the trades, are considered by Committees or Bureaus appointed by the Congress at its first sitting, which group them and rearrange them. The resolutions dealing with housing, seven in number, sent up to the Leicester Congress, were, for instance, considered by the Housing Committee, and made into one which covered the whole ground.

The collecting link between one Congress and another is the Parliamentary Committee, which is elected from amongst the delegates, and acts as a sort of Cabinet of Labour in the interim. To it is entrusted the carrying out of the wishes of the Congress. It drafts Bills, and gets them introduced into the House of Commons. It issues whips to Members of Parliament. It interviews Ministers. And it carries on a general supervision of trade union politics. It has also power to arbitrate in cases of disputes between unions. The character of this body remains fairly stationary from year to year. There are many candidates, but a man has to prove his worth before he is elected. The system of voting at Congress is by means of cards. Each union has one vote for every thousand, or part of a thousand members, it represents. This gives the control of the Congress to the larger organisations. The huge Miners' Federation, which includes all the coal-miners in Great Britain, with the exception of those employed in Durham and Northumberland, has 330 votes, whilst the textile trade unions have 132 more. On this account it is said that the cotton and coal trades rule the Congress. Its income is derived from the payment of one pound per thousand members by the affiliated societies.

At the beginning of every Congress, the Parliamentary Committee presents its report of the work done in the past year, and during the debate on this report it receives praise or blame according as the delegates feel inclined. The Chairman's address is given at the opening of the second day's proceedings—the first day is taken up with the election of officers, and the official welcome from the heads of the Corporation in the town where the Congress is held. The Chairman this year was Mr. W. B. Hornidge, the Secretary of the National Union of Boot and Shoe Operatives. His speech, which is submitted to the Parliamentary Committee, may be taken as the annual message of the body to the delegates. It outlines future policy. Three great questions came before the Congress this year—the Legal Position of Trade Unions, the New Fiscal Policy, and Labour Representation in Parliament.

As to the first, it was incomparably the most serious one. Lately, the enemies of trade union have been attacking it by means of civil actions at law. Thirty years ago the attack was made by criminal prosecutions, and that may be the reason why the new attack is not appreciated as the earlier one was. If, instead of the Amalgamated Society of Railway Servants having to pay the Taff Vale Railway Company £22,500 damages for the strike on the Company's line in 1901, Mr. Richard Bell, M.P., the Secretary of the Society, had been sentenced to six months' imprisonment, all the trade unionists of the country would have been aflame with indignation. Yet the present method of attack is serious enough. Beginning with the case of Temperton and Russell, a long series of adverse verdicts in civil courts did something to undermine the strong position which trade unions had held, or thought they had held. But until the case of the Taff Vale Railway against the Railway Servants' Society was decided, it had always been held that a Trade Union was not a corporation and could not sue or be sued. This was the evident intention of the framers of the Act of 1871, as may be gathered from the

words of Mr. Bruce and Mr. Russell Gurney, in the House of Commons. The Duke of Devonshire's Royal Commission on Labour was evidently of the same opinion, for it reported in favour of trade unions being given the status of corporations so that they could sue or be sued. A long series of legal decisions such as those given in Lyons *v.* Wilkins, Wernham and Stone, Flood *v.* Taylor and Allen, and in the Taff Vale case itself up to the Court of Appeal, showed that the judges were of this opinion. But the Taff Vale Railway Company appealed to the House of Lords on this point, which held that the funds of a trade union were liable for torts committed by its officers, and thus the legal presumptions of a quarter of a century were upset by the Law Lords. A distinguished Conservative King's Counsel is said to have remarked, after hearing the judgment, "Bad law and worse politics." Be this as it may, the immediate result has been a serious crippling of the position of trade unions as fighting organisations. The Railway Servants had to pay £22,500 damages. The South Wales Miners' Federation have had an adverse verdict entered against them in an action for £76,000 damages, for having advised their members to stop work for four separate days in order to limit the output of coal, the Courts holding that this was a breach of the contract of service. The Amalgamated Labourers' Union have had to pay £100 damages and seven times as much in costs, because the men in one yard were called out on strike against the employment of a non-unionist, who had previously been an officer of the union, and had misappropriated the funds of a branch. Many other similar cases might be mentioned. The Leicester Congress decided to press for an amendment of the law placing the unions in the same position as they were thought to be before the Taff Vale decision was given, and it is certain that in some way or other the present state of the law must be altered, and that soon.

As to Labour representation, the Congress decided to uphold the decision of the Labour Representation Committee, of which body it is the parent, that trade union members standing as candidates for Parliament must be independent of either political party. And the Congress with almost absolute unanimity pronounced against Mr. Chamberlain's fiscal proposals.

# A TEETOTAL ISLAND

A NEW UTOPIA WITHOUT THE PUBLIC-HOUSE—MR. CHARRINGTON'S ATTEMPT TO IMPOSE PROHIBITION UPON HIS TINY DOMINIONS OFF THE ESSEX COAST

BY

CHARLES T. BATEMAN

"DEFEATED conquerors" have been exiled to distant islands on many occasions. But to preserve the isles for temperance in the manner proposed by Mr. F. N. Charrington, of the Great Assembly Hall, Mile End, affords quite a new condition of English social economics. By the purchase of Osea Island, off the coast of Essex, he can say, like Robinson Crusoe,

> I am monarch of all I survey,
> My right there is none to dispute,

and, moreover, he intends to make it "a teetotal island." As one remembers his history this intention is not singular. He is an out-and-out temperance advocate. From conscientious motives he sacrificed a large fortune when he relinquished his interest in one of the chief brewing companies of the metropolis. The story has been often told of his seeing a drunken man stagger out of a public-house "tied" to his firm, and of the revulsion of feeling it produced. In a moment he was changed from a brewer to a teetotaler, and the mission at the Great Assembly Hall, Mile End Road, has been one result.

An American friend first suggested the idea of a "teetotal island" to Mr. Charrington. In the States he learnt that inebriates were successfully treated in homes erected on an island in New York Harbour and within easy access of the city, but cut off from communication with

it. There the temperance organisations have placed inebriate homes and convalescent institutions absolutely free from the influence of the drink, and separated from its sphere by a streak of deep blue sea.

This fact suggested to Mr. Charrington a similar retreat near the English coast, and immediately he searched the maps for an island close to London, and suitable for the purpose in view. When he came across the name of Osea Island, he thought of osiers and a low-lying piece of ground off the flat Essex coast, but personal inspection agreeably changed his first impressions. He found that in many places the land was fifteen to twenty feet above sea level, and its prospect afforded just the conditions desired. It seemed curious that the place had not developed earlier as a health resort. But it transpired that the owner did not answer letters, so that when people wrote him concerning the sale of his property he allowed their communications to remain unanswered. The applicant when he did not receive any reply considered that the property was not for sale, and consequently turned his attention elsewhere.

Mr. Charrington explained these facts to the writer to show that the island has often attracted the builder and that its associations, position, and natural advantages are not in any way prejudiced because it did not sell earlier. His agent, a relative of Mr. Spurgeon, the great Baptist preacher, managed to secure the property by seeking a personal interview with the owner, who, as a matter of fact, really wanted to sell. A moderate figure was named and agreed upon, and the new landlord is satisfied that the purchase price will permit a fair return upon the outlay.

This teetotal island, which opens up visions of a new Utopia, without the public-house or the drink, is only forty miles by road from the Royal Exchange, and is nearer than Southend, the nearest seaside town for the Londoner. It is approached from Liverpool Street *viâ* Maldon, a quaint old market-town, whence there is a sea passage of five miles. The length of the island is about a mile and a half, with a breadth of about half a mile and a circuit of sea-beach extending to four miles. This affords suitable accommodation for sea bathing. Mr. Charrington is especially pleased with the south side, which rises by a green slope to fifteen or twenty feet above the sea. There is always deep water here just off the coast, though the bathing is perfectly safe. On the twenty-foot ridge plots have already been marked out for villas, whilst just below a miniature salt-water lake seems to lend itself to the owner's plans for making this the centre of a marine park, in the creation of which nature and art will assist in forming an extremely pretty bit.

The vegetation is ample and varied. Marine shrubs and wild flowers are found in profusion. Approaching from the mainland a file of fine old elm-trees seems to stretch from length to length of the island. These will be utilised as in American cities to form the centre of the streets. The fishing is good, so also the wild fowl shooting. From the health viewpoint nothing could be better. The island is swept by breezes from the North Sea—somewhat cold at times, it is true, but bracing, fresh, and full of pure ozone.

Osea has not been absolutely uninhabited. There is a farm of about 350 acres upon it, rented by an Essex farmer, who controls it by deputy. The latter lives with his family at the farmhouse, whilst one or two labourers obtain accommodation close at hand. During harvest operations this number is largely increased.

The wild life of the island, which is surprisingly abundant, has been left undisturbed for generations. The other day the farmer accompanied Mr. Charrington to the extreme end of Osea, and as they approached the spot the sea birds, who were nesting in the marine grasses and objected to the invasion, circled above their heads in a great state of excitement. The farmer states that when he has visited the same spot with his dog the birds have not only sailed angrily around him, but uttering shrill cries have attempted to attack the dog with their beaks.

In bygone days the island belonged to distinguished noble families. Dating back to the Norman Conquest, it came into the possession of the nephew of William the Conqueror. In turn, later, the Earls of Gloucester and Essex held it, but during the last three centuries it has been in the possession of a private family.

Reverting to Mr. Charrington's original idea—he is satisfied that Osea Island presents the advantages necessary to treat the bad cases of drink which he meets in his work at the East End, and which are unmistakably evident in every part of the country. He says that in London the temptations are all around the drunkard, and it is very difficult for him to master the craving for drink. Again and again he breaks out, but isolated in such an island it will be impossible for him to be tempted by its sale. To secure his purpose and to banish

drink from his territory Mr. Charrington will enforce stringent conditions in all his sales of land, and also in the covenants of the leases. These will bind the holders not to allow any part of the premises, erected or rented, to be used for the sale of intoxicating liquors. No club either will be permitted where these are sold. It will, of course, be impossible to obtain an ordinary licence as the magistrates would not grant it under the circumstances.

The idea of districts without the drink is not new. For instance, the Corbett estates near London are protected in this way. A large number of other estates, industrial as well as residential, have been laid out upon this basis. But under such circumstances it is usually but a short distance to licensed houses, and oftentimes these are found on the very borders of the circumscribed area. In the present case, Mr. Charrington triumphantly points to the fact that different conditions affect Osea Island. "Here," he says, "we have a mile of deep blue sea between the island and the mainland, and to reach Maldon is a distance of five miles by steamboat. Thus we are cut off entirely from the public-house."

Mr. Charrington's proposals have aroused considerable interest throughout the country, and he has already received a number of inquiries respecting available sites. One has reached him from Birmingham concerning the erection of an inebriate home for residents from that locality. In another case a celebrated lady doctor at the West End proposes to erect a ladies' home for the treatment of nervous diseases. The pure air and bracing surroundings of Osea she considers would admirably conduce to the natural requirements of such a home. Mr. Charrington's mission at the Great Assembly Hall is requiring a convalescent institution, and this it is proposed to erect on a suitable site there.

In addition many inquiries have reached him from yachting people who are anxious to secure accommodation. The island has several advantages to offer yachtsmen—especially Londoners. In the first place it provides a safe anchorage. Owing to the deep water surrounding it close to the shore, a landing can be effected in all weathers without difficulty. It is already well known to yachting people. They have been in the habit during the season of running down to Osea, landing, lighting a fire, bathing, and picnicking on the coast. Nor does Mr. Charrington intend placing any restriction upon these frequent visitors.

Building operations have already commenced. Two or three ornamental cottages for the use of workmen, who will presently be located in the island, are in course of erection. When these are completed, several bungalow residences will be commenced, and Mr. Charrington contemplates the stipulation that these shall be built on the lines of the old English style of timbered architecture. In the course of a few months he hopes to have his plans in good working order. He has purchased a steamboat, and this is now making a daily journey between Maldon and the island. She is licensed to carry 170 passengers, possesses a 12 ft. 3 in. beam, is 60 ft. long, and only carries a 3 ft. draught.

At present there is naturally some difficulty in relation to supplies, but this is being met by the erection of a village shop for the supply of immediate necessities. Whilst admitting this drawback for the immediate present, Mr. Charrington is sanguine that it will soon be removed. "Presently," he says, "things will cost no more than on the mainland, because our provisions and other requirements will come down by barge from London, and as you know, this is the cheapest form of transit. We also hope presently to obtain a better service of trains between Liverpool Street and Maldon."

The local authorities in Essex are keenly watching the scheme, believing that the habitation of the island must increase their prosperity. Two of the district councils are in dispute concerning the authority for local government purposes to which the island must become attached. As both are persistent the decision is to be announced by the Local Government Board. Mr. Charrington prefers that Osea should remain a district of its own. This he maintains would admit of a better start, and prevent unfairness, which must result if they are attached to an authority which has obtained an unenviable notoriety for the number of public-houses within its area.

Mr. F. N. Charrington's attempt to impose prohibition upon his tiny dominions off the Essex coast will be watched with considerable interest by social reformers.

# WHAT THEATRES COST

NEARLY FOUR MILLIONS ARE SPENT ANNUALLY, AND 28,000 PERSONS EMPLOYED, IN PRODUCING THEATRICAL ENTERTAINMENTS IN THE UNITED KINGDOM—LUCK AND UNCERTAINTY IN THE PROFESSION—ACTORS WHO PAY TO "WALK ON"—THE METHODS OF ENGLISH AND AMERICAN MANAGERS

BY

FITZROY GARDNER

NO ordinary playgoer can form anything like an accurate idea of the amount of money involved in theatrical enterprises in this country or of the number of individuals and variety of trades more or less dependent on the stage. In London, which is the centre of the theatrical enterprise of the English speaking world, sending companies and plays to America, Australia, India, and South Africa, we have twenty-seven playhouses in what in technical as well as common parlance is known as the "West-end," and twenty-six outside the West-end area but within ten miles of Charing Cross. And these represent but a small proportion of the commercial and industrial aspect of the drama in the United Kingdom.

The expense of running a play in a West-end theatre varies between about £400 and £1500 per week, including rent of the theatre, but apart from the expenses incurred in putting the play on the stage, known as "cost of production." The first-named sum would represent a farcical comedy with very few characters in one of the smallest theatres, the other sum, a piece at, say, His Majesty's or Drury Lane. Thus, with seven performances a week it costs from £57 to £214 to "raise the curtain" at each performance. Taking the average expenses at £800 per week and allowing for an average of twenty of the twenty-seven West-end playhouses being open at one time throughout the year, we have £832,000 as the approximate annual cost of running all the West-end houses, excluding the refreshment departments which in most cases are let out to contractors who pay a fixed sum per week for the right to sell refreshments and programmes and to take cloak-room fees. To this we have to add the cost of "producing" new plays, which varies even more than that of "running." In some instances the whole of the expenses of rehearsals, scenery, properties, and dresses are covered by a little over £100, while in others the amount exceeds £7000; pantomimes costing considerably more. Taking the average cost of production as £1400 and the average number of new London productions as 60 per annum, we have a total aggregate of £916,000 expended in the year by managers of West-end theatres—nearly one million sterling.

Among the "running" expenses in the West end, the two heaviest items are actors' salaries, totalling at from, say, £60 to £400 or more a week, and the rent, from £80 to £400 or £500 a week. Advertising and bill-posting dispose of from £50 to £150, the 'atter sum having been exceeded in cases of exceptionally heavy "posting." Lighting is, comparatively speaking, a heavy item in big spectacular productions; limelights alone may dispose of £25 a week. Then there are the salaries of the managerial staff, which in two of the West-end theatres amount to over £50 a week each. The author's fees, amounting to from 5 per cent. to 15 per cent. on the gross receipts, sometimes account for as much as £300 a week. As regards the details of a production, one scene may cost from £30 to £300, the costumier's bill will sometimes run into thousands; rehearsals, when a number of supers and a big band are employed (supers and musicians, but not actors, are paid for rehearsing) will cost hundreds. At His Majesty's several hundreds have been spent on a special electric light installation for a particular piece; a Drury Lane pantomime may cost even more in this respect.

Statistics are perhaps even more interesting when we deal with the *personnel* of the London theatres, of which the actors represent but one department. In London theatrical management one rarely has occasion to go into the numbers, apart from the salaries of a staff. I remember one Christmas when I was

associated with the management of the Haymarket, how surprised I was on Mr. Tree deciding to present every one engaged in the theatre excepting the actors, with a goose, to find that 120 geese had to be purchased. But the average would be about ninety-six. If we include the actors, chorus, &c. (averaging, say, thirty-one), the average total number would be about 127 in a West-end theatre. So in the twenty West-end theatres which we have taken to be open at one time we have altogether 2540 persons employed nightly. But this does not cover all the *personnel* employed indirectly in connection with these theatres. Apart from the actors, orchestra, stage employees, dressers, attendants, firemen, commissionaires, money-takers, clerks, box-office manager, business manager, stage manager, &c., there are the outside professions and trades—the authors, costumiers, dressmakers, artificial jewellery dealers, wig-makers, scene painters, scene makers, limelight contractors, artificial florists, "property" makers, firms which lend stage furniture, the ticket "libraries," theatrical printers, bill-posters, board-men, advertising-agents, theatrical photographers, typewriters,and representatives of other trades and callings exclusive of those connected with the building and furnishing of theatres. Indirectly theatres give employment to cab-drivers, supply customers to restaurants, and provide the police with means of earning money by "overtime," and soldiers with employment as supers. Then too there are the critics and the theatrical and quasi-theatrical newspapers.

In the provinces, including the London suburban and "outlying" theatres the entertainments of which, like those of the provincial houses, are supplied almost entirely by travelling companies, there are 326 houses open simultaneously during an average of ten months of the year; also some 650 halls licensed for stage plays (known in the vernacular as "fit-ups") in which small travelling companies give occasional performances. Taking the expenses of a certain number of theatres, halls, travelling companies, and local companies (confined almost entirely to local pantomimes), representing various classes, and striking an average, I arrive at the following figures:

| | Per annum |
|---|---|
| Aggregate expenses of provincial theatres (rent and working expenses) | £1,380,000 |
| Aggregate theatrical share of total rental value of up-keep of provincial licensed halls (taking into account the proportion of theatrical performances in the year to other purposes for which the halls are used) | 38,600 |
| Aggregate cost to travelling managers of the companies playing in the above theatres and halls (including scenery, dresses, &c.) | 1,446,300 |
| Total aggregate cost of theatrical entertainments in the provinces and London suburbs | £2,864,900 |

On the same basis of calculation I find that the provincial ("bricks and mortar") managers have in the aggregate 16,900 persons (other than actors) in their employ, and that the average number of actors, chorus, and supers playing in the above theatres and halls at one time is approximately 9400.

The following is a summary of London and the provinces:

EXPENDITURE.

| | Per annum |
|---|---|
| Total cost of theatrical entertainments in London West-end theatres (including rent) | £916,000 |
| Total cost of theatrical entertainments in suburban and provincial theatres and halls (including rent) | 2,864,900 |
| | £3,780,900 |

PERSONS EMPLOYED.

| | | |
|---|---|---|
| Actors, chorus, and supers in London theatres at one time | 620 | |
| Actors, chorus, and supers in suburban and provincial theatres at one time | 9,400 | |
| | | 10,020 |
| Other persons (managerial and stage staffs, &c.) in London theatres at one time | 1,920 | |
| Other persons (managerial and stage staffs, &c.) in suburban and provincial theatres at one time | 16,900 | |
| | | 18,820 |
| | | 28,840 |

Thus nearly four millions sterling are annually expended, and twenty-eight thousand persons employed, in providing theatrical entertainments (excluding grand opera, and music halls) in the United Kingdom. And apart from this *personnel* are the professions and trades already referred to as more or less dependent on the theatres.

No one who is not behind the scenes of theatrical work, can understand the actual circum-

stances of the actor's calling—that is to say (1) the salaries paid; (2) the number of weeks in the year an average actor may expect to earn his salary, and (3) the proportion of the number of persons engaged to the number of those who are legitimate members of the profession. London salaries have lately reached an artificially high figure, especially when compared with those paid in the provinces. This is due partly to the unjustifiable faith of many managers in names—not only as regards "stars"—and partly to the London manager often knowing little of the talented actors who may be found among the provincial companies. Over £100 a week has been paid to an artist "with a name," as to whose drawing power the manager has been sadly disillusioned. The name has sometimes the opposite effect to the expected one. Certain types of characters, apart from their importance, are difficult to cast—such as what are now known as "Gertrude Kingston," or "Aubrey Smith," parts, which thus have a legitimately high value. The artificial value is acquired mostly by means of a complimentary photographer and a friendly contributor to the illustrated papers, and to optimistic interviewers and theatrical paragraphists. An artist's salary may take a sudden jump after a success in an exceptional opportunity, which may never be repeated. In some cases private means expended on judiciously arranged supper-parties, or smart clothes, or on a motor-car, account for otherwise unaccountable engagements at surprising salaries. Good looks, especially among the more favoured sex, count not a little.

From the "extra" gentleman or lady who "walks on" at a guinea a week, the figures on the salary list rise in rapid stages to ten, fifteen, twenty, and thirty pounds, the second leading part costing sometimes over £50 and in rare instances as much as £100 a week. But it does not follow that the actor or actress who draws between £10 and £50 a week has a professional income of between £500 and £2500 a year. The actor's year, with very rare exceptions, consists at the best (in the case of an annual contract) of forty-two weeks. If his engagements are only for particular plays—"in and out" work—he may find that his year has only twenty weeks, so that £10 a week means only £200 a year. I could name a "star" who when working receives from £60 to £80 a week, but who has not worked for two of the past five years. In the provinces uncertainty of engagements is even greater and the salaries are far lower, the competition being in the proportion of about four legitimate members of the profession to one part. Three pounds a week is a very fair salary in the majority of provincial companies, and the actor or actress who earns it may be doing so for only half the year. Many so-called actors and actresses seen on the boards of provincial theatres are beginners receiving one pound per week. Some of them have paid a premium for their engagements; I know of one case in which a youth recently paid a manager of provincial reputation £100 to be allowed to play the part of a servant with twelve lines.

It is impossible to give any accurate numerical information as regards the theatrical profession, because even the census is unreliable owing to the impossibility of distinguishing between what I have described as the "legitimate" members and persons who claim to be "actors" or "actresses" on the ground of having once or twice "walked on," sung in chorus or played a small part more or less indifferently. But it may be roughly stated that there are 20,000 men and women, including a large number of young girls, in this country seriously trying to live by a profession which cannot find employment for more than about 7500 (exclusive of supers), at one time, and then at salaries on which many of them can barely exist.

Coming to the profit and loss aspect of the stage, there is no field of enterprise carried on upon so large a scale—with the exception, perhaps, of gold prospecting—with a result on the whole so disastrous. In London and the provinces together the odds are two to one against the "backer;" in London alone they have been three to one during the past five years, but the last season was abnormally successful. In the West-end theatres, with £1400 as the average cost of production and £800 as the average weekly "running" expenses, and writing off the production costs in the first six weeks (if the piece runs so long), the average manager has for the first six weeks to take £1033 per week of seven performances—that is, £148 per performance—to pay his way and recover the cost of production during that period. With a decided success the average West-end theatre takes about £180 a performance, and with a very big success it may take within from £10 to £20 of the holding capacity, which averages £260—some theatres holding only £200, while, for instance, the Haymarket holds £250, His Majesty's £400 and Drury Lane considerably over £600. On the other hand it is easy to play to £30 in a first-class

West-end house; there is a case on record of one of the best West-end theatres (with a holding capacity of £260) having one evening about ten years ago held exactly five shillings with a piece that cost £60 a performance. The "gold mines," such as most of Mr. George Edwardes' productions and several of Mr. Frohman's, Mr. Beerbohm Tree's *Trilby* and *Julius Cæsar*, Messrs. Harrison and Maude's *Little Minister*, Mr. George Alexander's *Prisoner of Zenda*, some of Sir Charles Wyndham's, Mr. Wilson Barrett's *Sign of the Cross*, Miss Julia Neilson's and Mr. Fred Terry's *Sweet Nell*, Mr. Curzon's *Chinese Honeymoon*, Mr. Penley's *Charley's Aunt* (which cleared over £50,000 profit), Mr. Forbes Robertson's *Mice and Men*, and some others in recent years are far outbalanced by minor and major failures.

But this large proportion of the disastrous ventures is by no means inevitable. Theatrical undertakings must necessarily be to some extent speculative. It is the uncertainty, even with the wisest and most experienced manager, as to how a play will turn out when it is put on the stage that constitutes the legitimate risk. Beyond this there is a far more effective and avoidable cause of disaster—in the marked absence of ordinary business principles and methods which characterises British theatrical management as a whole. In fact, as at present conducted in this country it is not a business. Many theatrical managers judge a play or an actor from a standpoint of their own, and, in many cases, seldom seeing anything of human nature outside their own little Bohemian world, do not know their public. The actor-manager has more than his fair share of failures, mainly for the obvious reason that he is tempted to take a play and cast it in his personal interests. But in referring to actor-managers, I have not the most distinguished "stars" conspicuously in my mind as many writers appear to have who attack the system of actor-management. London actors who are not stars, and the minor provincial stars or would-be stars who "manage" as well as act, can account for a considerable proportion of the annual loss in theatrical enterprises. It is remarkable that the bulk of theatrical managers are gambling with other people's money, and, as a rule, owing to the one-sided agreements consented to by "backers" on the principle of "heads I win, tails you lose." Plays are not only frequently bought and actors engaged regardless of their intrinsic value, but expenses are incurred without method or restriction. The estimate for "production" is often exceeded by 40 or 50 per cent. and that of "running" almost to the same extent. Advertising experts are surprised at the futility of much of the theatrical advertising in newspapers, on hoardings, and by circular, as regards not only the wording, but, in the case of posters, the ignorance of the first principles of type-display and colour-contrast, and an indifference to the non-effectiveness of certain pictures. Many of the inspired Press paragraphs seem equally futile, and very tiresome to the reader.

The remarkable want of general knowledge of the first principles of law, to say nothing of business, and the manner in which theatrical contracts are drawn and subsequently defied are frequently brought to light in the law courts. There is a classic case of a well-known manager having engaged a "star" actress on the condition (on which he set great value) that he had the option of re-engaging her for a further period "on terms to be mutually agreed!" Another manager, on being sued by the proprietor of a theatre for not fulfilling a contract to play with his company in that theatre during a certain week, stated in court in defence that the matter had slipped his memory. A particularly instructive illustration of managerial methods recently came to my notice. The lessee of a London theatre seriously contemplated superseding the business manager because his "free list" was not sufficiently large! Good management would in that case have obviated the necessity of what is termed "papering the house"—a system that is answerable for much of the bad business in theatres. "Paper" makes "paper;" playgoers who have once had free access to a theatre are inclined to wait for more "orders" before doing any more theatre-going.

While some managements are cursed by too easily found capital, others start with insufficient; and by foolish economies "kill the goose." Secret commissions are, I regret to say, far from unknown. There was a well-known case of a "backed" manager, happily not a representative one, having, when informed by a firm dealing with his theatre in a large way that they could not give him more than 10 per cent. commission, insisted on the price of the goods being put up by 20 per cent. so that he could have 30 per cent.

In the name and interests of art and literature considerable sums have been lost from time to time by Quixotic managers. But neither art nor literature is necessarily disastrous to theatrical treasuries. Mr. Tree and a few others have made Shakespeare pay, and even *Everyman* has proved a very success-

ful speculation. Finally, what is significantly known in the States as the "angel" system of management cannot be ignored. The "angel" is generally the means of introducing all or part of the capital required for a particular venture, and can seldom act, sing, or dance. The costliness of the system doubtless accounts for its having been lately less conspicuous than in former years.

There is another side to the picture—in proofs that theatrical ventures need not be carried on at a loss. For instance, I have reason to believe that the original "backers" of Messrs. Harrison and Maude at the Haymarket, whose methods are strictly business-like, had a very pleasant experience of backing; and Mr. George Edwardes' shareholders, another haphazard instance, need not grumble. These by no means exhaust the London list. Through want of capital and enterprise theatrical business outside London is being seriously damaged by cheap companies and bad plays. But there are many successful provincial managers, for instance the Hutchisons—sister and nephew of Sir Charles Wyndham—whose excellent little comedy-companies make money consistently "on the road," where also popular melodramas are very remunerative under several sound managements. The most cheering lesson we have had as regards the possibilities of dramatic enterprise has been from Mr. Charles Frohman. A few years ago, when in America, I was greatly impressed by the sound common-sense principles of his great system of theatrical management and the perfect organisation of his managerial staff, divided into several more or less independent departments in capacious offices in Broadway. Since then he has come over to show us what can be done in England, mostly with good English plays and some of the best of English actors. After, at some expense, acquiring a knowledge of our requirements and tastes, he has scored a series of triumphs, never sparing necessary expense and never wasting money—and above all "playing fair" in all his dealings. My relations with him are *nil;* I refer to him merely as a public man whose successes promise to contribute to the welfare of the theatrical profession and the entertainment of the public. His influence has already been felt; one sees it in a slight improvement in English theatrical management in several directions. In America theatrical enterprises are managed for profit—to capitalists as well as managers. Messrs. Klaw and Erlanger, who represent another widely successful theatrical institution in the States, have, it is said, also an eye on this country. There is plenty of room in spite of the limited area covered by our islands.

Another form of theatrical enterprise does not call for detailed treatment here as it is only indirectly connected with the stage, namely, "bricks-and-mortar" management. This is conducted mainly by proprietors or lessees of provincial and suburban theatres in which the travelling companies supply the entertainment, receiving a share of the gross receipts which is regulated by the drawing value of the attraction, and ranges from 35 to 75 per cent. In some areas, notably in the London suburbs, theatres have lately been over-built; but on the whole this form of speculation is far more lucrative than more strictly speaking theatrical management. In the West end of London where the bricks-and-mortar manager acquires a long lease of a theatre and sub-lets it on short tenancies to managers for sometimes double the rent he pays, it is exceedingly profitable. In the present epidemic of "theatre hunger" in London no rent seems too large for syndicates or managers to pay; and there would appear to be no limit to the cost of new playhouses, seeing that £70,000 is to be spent on the new Gaiety, whereas His Majesty's cost only £55,000. In all parts of the provinces, new theatres are being built or projected; some of them on very sumptuous lines.

# RUSSIA IN MANCHURIA

THE PROVINCE TO BE "EVACUATED" THIS MONTH—THE FIRM HAND OF RUSSIA IN THE GARDEN OF CHINA—THE CHINESE-EASTERN RAILWAY—NEWCHWANG AND ITS RIVAL PORT OF DALNY—THE INFLUX OF CHINESE INTO SIBERIA—THE QUESTION OF RACE THE GRAVEST DANGER

BY

ALFRED STEAD

MANCHURIA is to be "evacuated" by the Russians on October 8 of this year, but it may be taken for granted that the evacuation will, if carried out at all, only be a paper movement. Manchuria, the garden of China, a territory as large as the Austrian Empire and Italy combined, has been absorbed in the "relentless Russian advance to the unfrozen waters of the Yellow Sea." To the seventeen millions or so of its inhabitants, chiefly immigrants from Shantung, the Russian occupation has been beneficial. The old brutal oppression and grinding taxation of the Chinese *régime* have passed away, and besides the decrease of the latter, the settlers benefit largely from the increased influx of money. Wages are very high for North China, and there is a sense of security which was not known before. This advantageous side of the Russian occupation must be frankly admitted, whatever the international or moral aspect may be. From the point of view of international law, Russia can claim considerable rights in Manchuria—rights, that is, that are recognised in published treaties. Compared with our position in Egypt, for instance, Russia has a surety of maintaining her hold in Manchuria. These rights were obtained by her diplomats at a time when Manchurian affairs were not receiving such keen attention as later, and passed with practically no comment. Since then, Russia has by means of her railway and her financial system succeeded in Russianising the entire Manchurian province, and no amount of evacuation to the railway will ever restore the civilisation there to the same conditions as existed before the occupation. Manchuria is thoroughly permeated by the influence of the Russo-Chinese Bank, which has branches everywhere and largely fulfils the duties of the old Chinese authorities. In addition to the power acquired by a collector of taxes and payer out of Government dues to the Chinese, the Russians possess a wonderful assimilative force in the ability of their soldiery to "get on" with the Chinese populace in general. The high officials also realise the necessity of meeting Oriental cunning with Oriental-plus-Occidental intelligence, and so wresting the advantage. This is the secret of Russia's bloodless victories in Asia, and it is left to the moralist to decide whether chicanery is more harmful than the slaying of men.

To the outside world, however, Russia's hold upon Manchuria is concentrated in the Chinese-Eastern Railway, which traverses the country and along which the Russian Government has obtained the right to place an unlimited guard —really troops, but euphemistically described as "railway guards."

A short account of the railway may be of interest. The line is a very well-built one, far superior to the Siberian line, which looks like a toy railway after the Manchurian section. One reason of the strength of the Manchurian line is that the huge American Baldwin locomotives, of some ninety tons weight, used during construction could not be run on a slight track. There are numbers of bridges, in the line, as the southern portion of the route is seamed with river beds of all sizes. These bridges are good permanent erections, some of them being of stone, and many of them of steel, of every description; in one district there are five bridges in one mile of railway. During the dry season there is little water in the rivers, and this allowed of the construction trains running along the river beds on slight temporary tracks. In the northern sections there are three very large steel bridges, one of which, near Harbin, crosses the Sungari River, with a length of three-quarters of a mile. It is a splendid bridge, but constructed only for a single track, as indeed are all the bridges in Manchuria and Siberia.

Stations are placed every fifteen or twenty

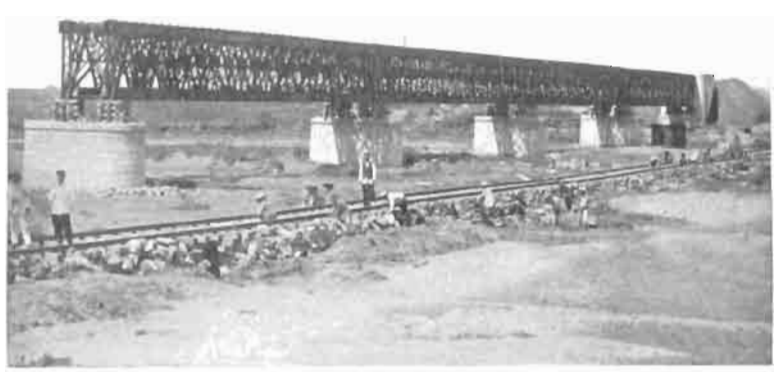
GENERAL GRODEKOFF AND HIS STAFF IN MANCHURIA

Photographed after the military campaign which ended in the occupation

miles, and the buildings are substantial edifices of stone with special arrangements for Chinese and white passengers. Owing to the Boxer troubles many of the old wooden stations were destroyed, only the stone chimneys remaining in testimony of the former habitation. Near the stations are blockhouses for the railway guard, often with a quick-firing gun mounted at one of the corners. This railway guard is a special body of men recruited from the reserves of the Russian army. Its pay is much higher than in the Russian army, since these men are volunteers. They wear a distinct uniform and have special officers, who also receive more pay than an officer in the same position in Russia. The railway guard may not go more than three miles away from the railway, save by special permission. The Chinese-Eastern Railway Co. have a right to guard this line with an unlimited number of troops, and it is probable that since the so-called "evacuation" of Manchuria, there are many more troops stationed along the line than there were during the "military occupation."

In the construction of the line, literally three railways have been built. First there was the line destroyed by the Boxers — not only was the line torn up but the embankments were shovelled away, locomotives were torn to pieces and the flat cars resembled skeletons more than their original selves when the Chinese had finished with them. Secondly, there was, and still is, the "construction" line, by means of which all the materials have been brought into the country to build the permanent railway line. This construction line is often placed simply across the steppe without any preparation of the ground, a system which allows of very rapid progress in laying it down. Thirdly and finally, there is the permanent track, with its high embankments and strong bridges, to which the construction track has given way as soon as possible.

The railway centre of Manchuria is at Harbin, on the Sungari River. Here there were formerly only three or four Chinese houses, but now the Russians have created a large and prosperous town, with public gardens, hospitals, and shops. At Harbin there are three towns or sections:



A TYPICAL RAILWAY BRIDGE IN MANCHURIA

On the Chinese Eastern Railway. This shows the construction line along the river bed and half the permanent bridge across the River Shake

PORT ARTHUR, SHOWING THE HARBOUR AND ENTRANCE

The high hill is called "golden mountain," and, in common with all the hills around Port Arthur, is studded with forts. The vessels shown are a Russian cruiser (in the middle of the harbour), a steamer of the Chinese Eastern Railway (on the extreme right), and a small paddle steamer plying daily to Chefoo, whence practically all the fresh supplies are brought. The coal heaps in the foreground show the beginning of the dockyard and volunteer fleet landing. No steamers are allowed to moor alongside save Russian ones

the old town, where are the offices of the railway, the new town, growing up at the railway station, and the town on the Sungari, which sprang into being during the time of the transportation of railway materials down the river from the Amur. The new town has a large station and a station hotel, while the barracks being built there resemble the Coliseum both in appearance and size. Harbin is at the junction of the three lines traversing Manchuria—that to Port Arthur and Dalny, that to Vladivostok, and that to Siberia. As it has also the river commerce, it is probable that it will grow into an important town, even after its crowds of engineers employed on the construction works have departed. In Harbin is the head branch of the Russo-Chinese Bank, a miserable-looking building, and yet representative of the power that has made Manchuria Russian. Besides constructing the railway, the Bank has established branches in all the towns where it acts on behalf of the Government, collecting taxes, paying out wages, and government dues. The managers have important political positions, and even in Peking, M. Pokotilov, the manager of the Russo-Chinese Bank, is a person of influence with the Tsung-li Yamen.

Russian money passes practically every-

THE RAILWAY LINE TO THE NORTH OF PORT ARTHUR

This shows the proximity of the railway to the Yellow Sea and its defencelessness against any Power which commands the sea. Near this spot the line passes close to the sea on the other side also

where, especially into the pockets of the Chinese officials, who are thus held subservient to the Russian will. The decision of the name and constitution of the Russo-Chinese Bank was the most important step Russia ever took, as far as China and Manchuria are concerned. In the whole of the three provinces of Manchuria, Russia is supreme, save in the treaty port of Newchwang. This is the one weak spot in Russia's defences, and she will not rest content until she has shut it up or else ruined it so that she need no longer fear it. It was largely in the hope of being able to outdo Newchwang that M. de Witte devised his great scheme of constructing as the terminus of the railway a great commercial town ready for the merchants of all the world.

A CUTTING NEAR DALNY AND PORT ARTHUR

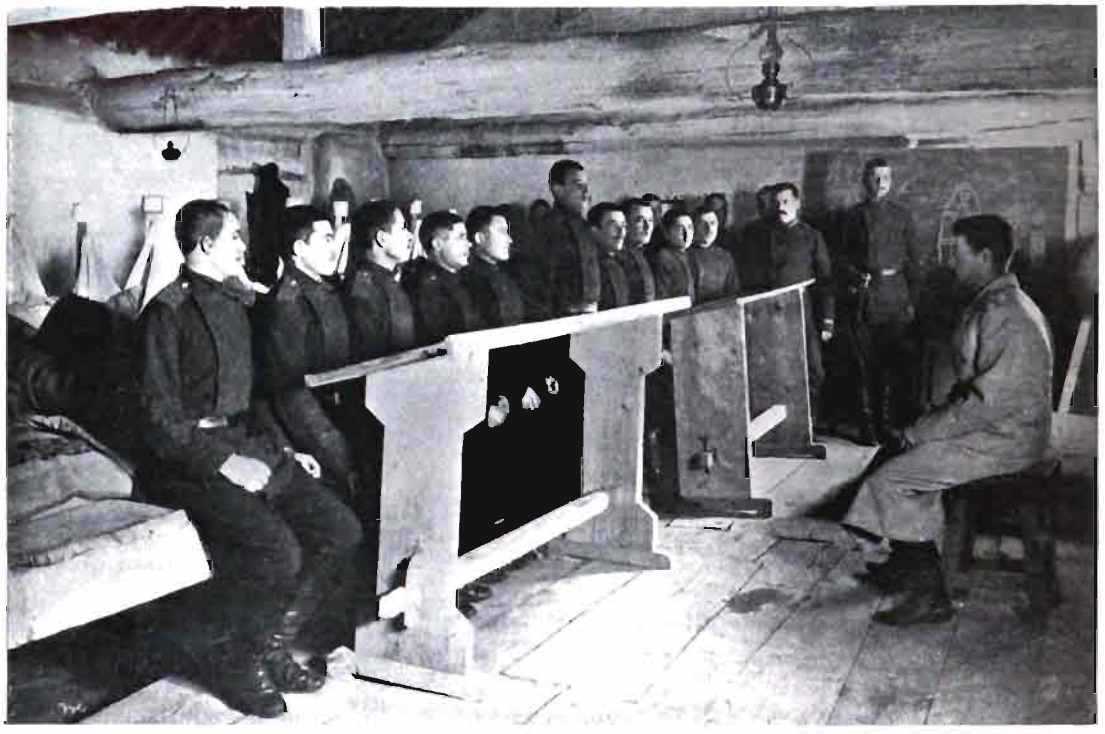
This picture shows the costly construction of the railway through parts of Manchuria

This is Dalny, the free port on Talienwan Bay. Here swift steamers for China, for Japan, and even for Australia will await the arrival of the trans-continental trains to transport the passengers to their destination at a much less cost of time and money than is at present possible. Dalny has the great advantage of being an ice-free port, and the bay forms an excellent anchorage. The town is really an experiment on the part of M. de Witte, the late Russian Minister of Finance, who determined to induce foreign merchants to settle at the railway terminus by providing them with a ready-made town, complete with every modern convenience. Whether the experiment will succeed or not remains to be seen, but certainly merchants should

STONE BRIDGE AND GREAT EMBANKMENT ON THE SOUTHERN MANCHURIAN LINE

There are many miles of great and costly embankments like this. It shows clearly the permanence of the Russian structure

prefer to go to a comfortable town than to rough it in a new-born settlement. The fact, however, that at present, although the sale of lots has commenced, there are only two or three businesses established would seem to prove that Dalny cannot hope to compete with Newchwang. Of these business houses the principal one is a German firm, the others are Russian, and a Russian who used to represent an American firm has since gone into a purely Russian one. The fact that no Japanese were allowed to buy land in Dalny is at once a testimony to the respect in which the Russians hold them as competitors and an explanation why there are no Japanese business houses established. Dalny, in accordance with international assurances, is to be a free port. Those who rejoice at this announcement should reflect that the privileges given for this port only extend to the leased territory of the Liaotung Peninsula; that is until Russia shall annex Manchuria.



RUSSIAN SOLDIERS AT SCHOOL

In one of the Manchurian eastern barracks. The pupils sit on their beds

M. de Witte has caused Dalny to be laid out for a population of 100,000 people—the Chinese town lying outside the town proper. Roads have been made, public buildings constructed, and harbour works have been begun; electric light and a tramway system, sewerage, public gardens, and even parks—nothing seemingly has been left undone. Even before its public works were completed many solid brick houses were already erected and the whole place teemed with thousands of Chinese coolies working over the acres of ground, roads, docks, and houses. The bay of Talienwan is a very safe one, and there is a good depth of water almost everywhere. It is never frozen up in winter, and only occasionally is covered with a thin coat of ice, which does not prevent the passage of vessels. The harbour works are very extensive and include several piers, breakwaters, and docks. The chief pier will allow of vessels drawing 30 ft. of water to berth alongside even at the lowest tides. On this pier will be several railway lines and many warehouses to facilitate the landing and embarking of passengers and goods. On the arrival of trans-continental trains the passengers will be able to pass directly to the steamers for Japan, China, or elsewhere—as do passengers travelling *viâ* Southampton on the American Line to New York. The zero depth is to be 30 ft., but there is nearly always 4 ft. more water. In 1901 the zero depth was

24 ft. and dredgers were at work removing the remaining 6 ft. of bottom. These dredgers came out under their own steam from England. In the early days of the construction of the harbour a small mole was finished with a zero depth of 14 ft., allowing smaller gunboats to lie alongside. All the breakwaters and jetties are faced with artificially made blocks of stone and cement. These blocks are made of uniform size in wooden moulds, the many pieces of stone being held together by cement, the result being equal to solid stone blocks. The largest blocks, of which there were over 4000 completed in 1901, measured about 15 ft. in length by 9 ft. wide, requiring a special travelling crane to load and unload them, and there will be 30,000 of these required in all.

BARRACKS OF THE RAILWAY GUARD IN NORTHERN MANCHURIA

Half excavated and halt banked up with earth for speed of construction and to escape the bitter winter winds

During 1902 no fewer than 717 cargo steamers and 1418 Chinese junks arrived at Dalny—mostly in connection with the construction works. The steamships were divided amongst the various nationalities as follows: 324 Russian, 241 Japanese, 83 English, 49 Chinese, 12 Norwegian, and 2 Danish, Austrian, German, and American vessels. On February 24, 1903, the first express train arrived at Dalny, and on the same day two fast steamers of the Chinese Eastern Railway Company left for Nagasaki and Shanghai.

The name of the town was decided in rather a curious way. When it had been determined to construct a town on Talienwan Bay, it was announced that a name for it would be required. It was necessary that the name of the new town should resemble Talienwan and be expressed in similar Chinese characters. The problem seemed a very difficult one until a bright official in the Finance Department at St. Petersburg thought of the word *dalny*, which means in Russian "far" or "very far." As Dalny is practically the furthest away of Russia's possessions, the name was recognised as most suitable, and the official who thought of it is now pointed out as the "man who discovered Dalny."

The country on the whole is wonderfully peaceful, although it is true that there are brigands in nearly every portion of it. These brigands, however, existed under the old *régime*, and the Chinese authorities used to pay annual subsidies to the chief brigand, for which consideration he kept the smaller ones in order. When the Russians abolished this system the brigands felt naturally they had to do all they could for themselves.

Visits to the other important Manchurian towns show a surprising state of peace and activity. In Kwan-chen-tzu, for instance, the streets, though narrow, are much cleaner than is customary in Chinese towns. Business is in full swing, official carts wind their way in and out, here and there are the doorways of the Yamens with their guards of Chinese soldiery. The people go and come unchallenged—and yet, behind all this outward independence is the firm hand of Russia.

Russian troops are quartered in the city, the Russian flag flies together with the Chinese on the central tower of the town. Russian flags only decorate the streets, and the small Chinese children gravely salute the Russian officials as they pass. In this city are to be seen the ruins of a former missionary hospital and house destroyed by the Boxers. In Russian territory no missionaries are allowed, save only

THE JOINT BOARD OF ADMINISTRATION IN NEWCHWANG

After the Russian occupation

the priests of the orthodox church, but Manchuria not being yet officially Russian does not come under this category, though the orthodox church is spreading its sway rapidly over the country.

It is of interest to note that the opinions of

NEWCHWANG, THE ONE "OPEN" PORT BY INTERNATIONAL TREATY IN MANCHURIA

It is, however, not an ice-free port, being frozen for some months. This photograph shows Customs Buildings, with the flagstaff where the Russian flag was hoisted at the time of the Russian occupation. All the houses in Newchwang are low and insignificant. The river Liao is very swift and deep, and undermines the foundations of the town all the time. When a salute was fired on the gunboats in the river of seventy guns, numbers of houses collapsed. This is the flag concerning which the Editor of THE WORLD'S WORK has asked many questions in Parliament. It ought to be the Chinese flag—the Russian flag being a violation of treaty rights

the soldiers and engineers in Manchuria as to the future of that province coincide with those of M. de Witte. In Manchuria there is no censorship, foreign newspapers come in *uncaviared* and a much freer expression of opinion is possible. All those who, therefore, have the advantage of first-hand knowledge are in favour of a policy of Egyptianising the country, not of annexing it. In the words of a high official in Manchuria, "It is much easier to allow the Chinese *régime* to continue and to administer the Chinese authorities." Russia has neither the trained men necessary to administer Manchuria nor is she prepared to incur the necessarily heavy expenses attendant upon annexation. The military party in St. Petersburg are, however, most anxious for out-and-out annexation, and the fact that Admiral Alexieff, the new Viceroy of Russia's Far Eastern possessions, owes his position to the military party, may lead to measures which the men on the spot do not think admirable. Admiral Alexieff, if left to himself, is shrewd enough and clever enough to put off the day of annexation as long as possible; but whether he has a free hand or not is a point very much in doubt.

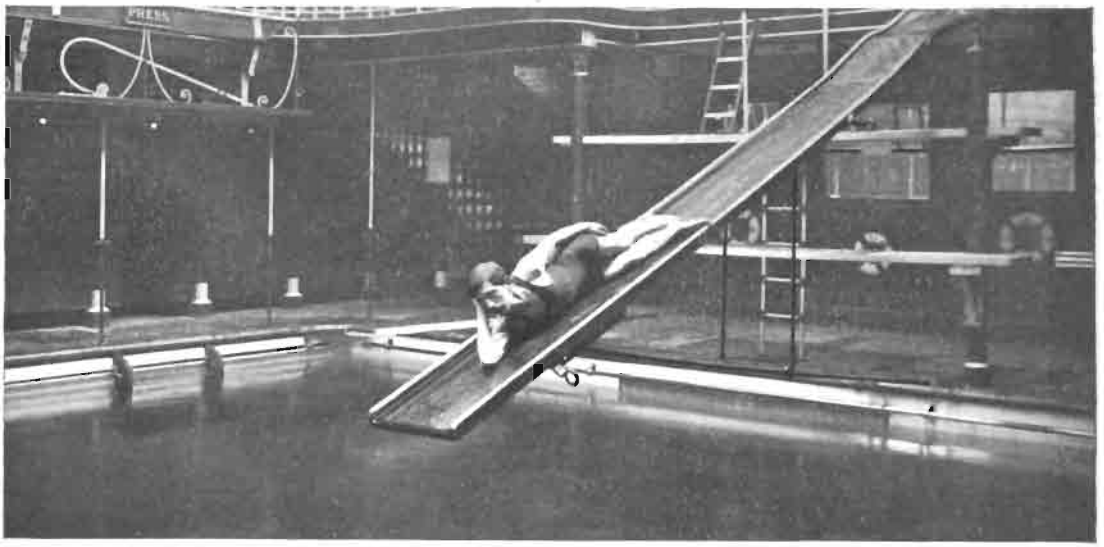
DALNY, THE FREE PORT ON TALIENWAN BAY

A costly city as yet without inhabitants

While the annexation is opposed upon economical and administrative reasons, there is another argument which is perhaps the most weighty of all. At least several of the Russian statesmen of the greatest prominence admit that the problem of coping with the Chinese influx into Siberia has more terrors for them than any international complications raised over Manchuria. If the frontier of the Empire is moved south of the Amur River and is stretched to include the millions of Chinese in Manchuria and on to an undefined frontier with China, how are the Chinese to be prevented from permeating the whole of Asiatic Russia? Already there are numbers of Chinese in Irkutsk where three years ago there were scarcely any, while in the Transbaikal and Amur Provinces the Russian settlers are unable to hold their own against the inrush of thrifty, sober Chinese. Intermarriage gives only further cause for alarm, because the offspring of such marriages are more Chinese than Russian. This question of race is the greatest of Russia's Asiatic problems, and it is this dangerous side to the acquisition of Manchuria which may succeed in settling the question which has baffled the Chancelleries of many great Powers. Has Russia, in gaining a province, won or lost the first move in the great struggle of Slav and Mongol?

IN THE SWIMMING-BATH

One way of entering the water



# THE ART OF SWIMMING

WHY I BECAME A SWIMMER—IT IS EASILY LEARNT IF YOU BEGIN IN THE RIGHT WAY—ENDURANCE IS MORE IMPORTANT THAN SPEED—MY OWN NEW BACK STROKE—PREPARING FOR A LONG-DISTANCE SWIM—MY EXPERIENCES IN THE CHANNEL—WHY ARE WE NOT A NATION OF SWIMMERS?

BY

MONTAGUE A. HOLBEIN

I TURNED my attention to swimming when an accident put an end to my career as a cyclist. Always devoted to some form of athletic sport, instinctively I began at once to ask myself and my medical advisers, to what particular branch of athletics I could turn for the future, and swimming appeared to be the only practicable answer. Having once resolved to take it up, it was quite impossible for me merely to amuse myself with it in a half-hearted way; I could not rest satisfied without mastering the art and attaining the utmost proficiency of which I was physically capable. But in swimming, as in running and cycling, there are two directions in which efficiency may be sought, viz., fast swimming and long-distance swimming. I was better fitted for the latter, both by my physique and by previous training, and it is, therefore, to long-distance swimming that I have specially given my attention. Both, however, involve a study and practice of the various strokes in vogue; while long-distance swimming is, perhaps, the more useful of the two, if not so brilliant, since the ability to remain a long time in the water without exhaustion is much more likely to effect the saving of life than is speed.

I have been a swimmer since boyhood, but I was entirely self-taught, and acquired habits which I have had to unlearn since I commenced swimming in earnest. It is usually the case that the self-taught swimmer, who does not practise under the eye and guidance of an expert, is very much longer in reaching proficiency than if he commenced on right methods and persistently stuck to them. Amongst athletics swimming has this peculiarity, that the training of the mind is quite as important as the training of the body. The natural emotion when one

finds himself in the water out of his depth is a fear of sinking, and any such emotion is fatal to good swimming. You begin to struggle; to take short, spasmodic, and ineffective strokes, and thus bring about the very catastrophe you fear. It is absolutely necessary that the mind should be trained to have perfect confidence, until the feeling of security is just as intuitive as when walking on land. The beginner wonders how this intuitive confidence can ever be acquired, but it goes hand-in-hand with the practice of the art, when that is pursued on right lines, until finally—speedily, in fact—the swimmer no longer experiences the least fear or even uneasiness over any depth of water. It is useless to encourage a novice by telling him that he cannot sink if he tries. He knows that he can, and if he allows that knowledge to take possession of him until he feels that he is sinking, he will forthwith prove that he is right by going down in earnest. Confidence, then—supreme confidence in his entire ability to keep afloat, is very necessary, and the only way to cultivate that perfect confidence is by learning the right methods of supporting and propelling the body in water.

Unquestionably for most persons the swimming-bath is the best place in which to learn how to swim. The depth is graduated; the distances from support to support are short; there is an expert always at hand to give lessons and valuable suggestions, and no lack of good swimmers, from whose methods much may be learned by careful observation. The groundwork of all swimming is the breast stroke, and this is, therefore, the first stroke which the beginner should practise. In this stroke the chief purpose of the hands and arms is to keep the head above water and to act as a cut-water for the advance of the body. They do not add much to the propulsive force of the stroke, which is chiefly exerted by the action of the legs. These are stretched apart as wide as possible and then drawn close together until they touch at knees and ankles. And it should be observed that it is not primarily the kick, or the pressure of the soles of the feet against the water, which does the work, but the squeezing of the water between the legs in bringing them together. When the legs are apart the body of water lying between them is in the shape of a wedge. As they are brought together this wedge of water is squeezed backwards, and the resistance it meets with forces the body forwards. Therefore, the aim of the swimmer should be, not to kick out against the water with great force, which is tiring and exhausting, but merely to bring the legs together smartly and completely, thus getting all the propulsive power possible out of the mechanical action of this liquid wedge. Captain Webb very graphically likened the action to squeezing a wedge-shaped piece of ice between the thumb and finger. The mere squeezing will shoot the piece of ice out of the grasp with considerable force; if the ice be held against a solid substance so that it cannot escape, the squeezing thumb and finger will be forced towards the point of the wedge. In the same way the body is forced forward by the legs squeezing the wedge of water between them. It is of the first importance

MR. MONTAGUE A. HOLBEIN
The famous swimmer

to understand clearly these simple principles, because it is by putting them in practice intelligently that one most quickly learns to swim and soonest acquires proficiency.

When the beginner has gained some degree of confidence by finding that he can support himself and propel himself on the water in the bath, he should take an early opportunity of enlarging his horizon and his experience by putting what he has learned into practice out-of-doors. He should get away from the familiar surroundings of the bath, where the environment suggests the most perfect security, and test his self-confidence in the river or the sea, where he will soon find himself as much at home as

LEARNING TO SWIM

within the encircling walls of his swimming-bath. He will not at first, of course, run any foolhardy risks, but as his confidence grows his pluck will increase, and he will gradually extend his experiments till he can count himself as quite an old salt.

Long before this the ambitious swimmer will have learned and practised all the recognised strokes: the under-arm side stroke, for long-distance swimming; the over-arm stroke, for medium speed; the Trudgen stroke, for sprinting; and the well-known back stroke. Besides these, I have myself invented a new back stroke with special reference to exceptional long-distance swimming. In this I bring the hands up along the top of the body, the fingers almost touching it, and bringing both hands nearly into contact above the head, extend them upwards as far as possible, ending the stroke in a wide sweep of the arms, which brings the hands to the hips again. Though this is a slow stroke, it is somewhat faster than the ordinary back stroke, and is not at all fatiguing when once acquired. An important feature of this stroke is the feathering of the arms in the upward return and the consequent minimising of the forward resistance. For long-distance swimming in rough water some form of the back stroke is decidedly preferable, as the waves then break against the back of the head, and not upon the face. In my long-distance swims I alternate my own back stroke with the under-arm side stroke, and find this limited variation all that I require.

Swimming on the back ought to be acquired, for the further reason that it is the position that must be assumed when saving life from the danger of drowning. In such an emergency, the rescuer has to avoid the risk to both of being seized and rendered impotent by the struggling and frantic individual before him. He must get behind the drowning man, grasp the back of his head with both hands, and, throwing himself on his back, by the leg stroke only, tow the other slowly into safety. It is, in my judgment, to be regretted that so strong a tendency exists to cultivate fifty to sixty-yard dashes in swimming rather than the less-brilliant, but more useful, accomplishment of long-distance work. It is not, of course, open to every one to spend twenty to twenty-four hours in the water at a stretch, but I would prefer to see a tendency to prolong the powers of endurance than to excel in speed.

For very long immersion the body must be well covered with heat-giving tissue, and in training for a long-distance swim I aim to put on adipose rather than work down fine as when I used to train for a cycle contest. Warmth is the great essential; if the body becomes chilled the power of endurance is gone, and I attribute much of my ability to remain so long a time in the water to an exceptionally good circulation of the blood and my system of training.

In preparing for a long-distance swim, I commence practically in February, bathing twice a week in the swimming-bath, changing to out-door work in May or when the water reaches a temperature of about 57°. From then on I swim three times a week, remaining in the water one day for two hours, another for three, and the third for four hours, or ten hours a week in all. On each of these days I cycle sixty miles, thirty before my swim and thirty after. On each of the intermediate days I walk about thirty miles. This year I had 140 hours open-air swimming, or about 175 miles. Always moderate in eating and a plain liver, I make little difference in my food during training from other times, though, in preparing for exceptional long-distance work, I take plenty of farinaceous foods. I have always been a teetotaler and a non-smoker.

Perhaps some mention of my own record as a long-distance swimmer may be expected, and it may, too, serve to encourage others to persevere in a similar direction. For, though I do not expect that swimming the English Channel will ever become the popular method of commencing a Continental tour, I should be very glad to see swimmers of every degree of efficiency giving more attention to endurance

than is the rule at present. My first considerable attempt was to emulate Webb's feat of swimming from Blackwall Pier to Gravesend Pier. This was in July 1899. Starting with the ebb-tide at 3.30 A.M., I swam two miles below Gravesend Pier, a distance of twenty-two miles, and then, turning with the turn of the tide, came up the river, and succeeded in getting within a mile of Blackwall Point before the tide again turned and compelled me to desist. That day I covered forty-three miles in 12 hrs. 27 min. 42¾ sec., facing pretty rough water on the return, and not a very savoury liquid either.

On August 16 of the same summer, as a preliminary to a proposed attempt to cross the Channel, I swam in a heavy swell from Spithead through the Solent, a distance estimated from forty-five to forty-seven miles, spending exactly twelve hours in the water. I was not destined to undertake the Channel that season, however. In 1900 I succeeded in beating Captain Webb's Thames record, by swimming on July 29 from Blackwall to Gravesend in 4 hrs. 46 min. 3 sec., Captain Webb's time having been 4 hrs. 52 min. 44 sec.

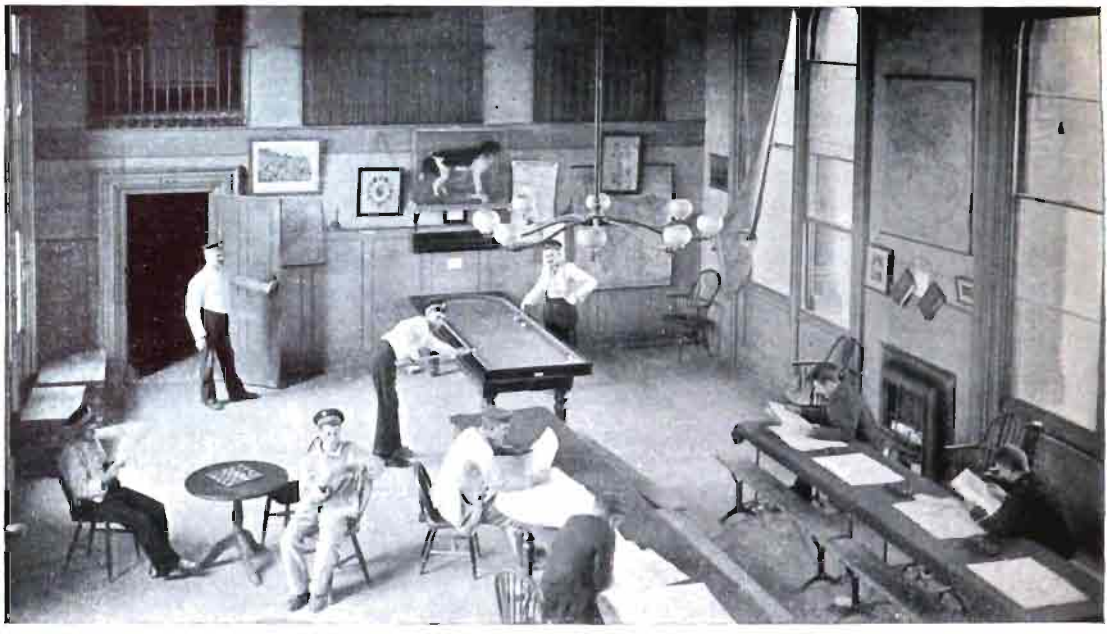
On August 24, 1901, came my first abortive effort to swim the Channel. Yielding my own judgment to expert opinion as to the effect of the Channel tides, I started from Cape Grisnez, at 3.49 in the afternoon, on a flood-tide. The weather proved abominable for such an undertaking. Heavy seas broke over me constantly, blinding and dazing me, and after being for over twelve hours in the water, it was decided by my advisers that the attempt must be abandoned for the time. I covered twenty-six miles on this occasion, and at the finish was within about five miles of Dover. The next year I again essayed this most difficult task, difficult not by reason of the physical effort required or the length of the immersion but because of the force and uncertainty of the Channel tides; for the cross-Channel swimmer is absolutely at their mercy. In the 1902 attempt I again started from Cape Grisnez, and succeeded in reaching within half a mile of Dover Pier, when once more I had the bitter mortification of being swept relentlessly away from the longed-for shore. I was over twenty-three hours in the water, and covered fifty-three miles in all.

This present year I made the attempt from Dover Harbour, reversing my previous course, and should have succeeded in breaking the record for cross-Channel swimming but for the almost heart-breaking coquetry of those unfathomable tidal humours. Twelve hours after I entered the water I was within four miles of the French coast. Then I began to recede again, and as there was no chance of reaching my destination until the flow of the next ebb-tide, which would have prolonged the effort to another twelve hours or more, it was not thought advisable that I should persevere. I have not, however, by any means relinquished my purpose.

LONDON GIRLS AND BOYS GIVING A DISPLAY OF LIFE-SAVING

It is a mystery to me that we are not more emphatically a nation of swimmers. We are, as a people, fond of the sea; we indulge extensively in yachting and boating; we make the best of sailors; but the great mass of the population, even of the males, cannot sustain themselves in the water for a few seconds even, while it is a rare exception to see a woman or child with any knowledge of so useful an art. If I could feel the assurance that the publicity given to my exertions had advanced perceptibly the knowledge of swimming among my countrymen, I should be far more proud of that consciousness than if I should finally succeed in my ambition to swim across the Channel.

THE RECREATION ROOM AT CHELSEA BARRACKS



# THE SOCIAL LIFE OF THE SOLDIER

IT MIGHT EASILY BE MADE BETTER—BAD FORM IN THE ENLISTMENT PROCESS—ST. GEORGE'S AND ALDERSHOT—NO IMPROVEMENT IN BARRACK ROUTINE IN THE LAST TEN YEARS—WHEN HE CAN BE GOT TO SPEAK OUT THE SOLDIER SAYS HE WANTS LESS "MESSING ABOUT"

BY

HORACE WYNDHAM

(AUTHOR OF "THE QUEEN'S SERVICE," &C.

*Illustrated from photographs specially taken for* THE WORLD'S WORK

MUCH has been done within the last ten years to improve the soldier's lot, to render the conditions under which his work is performed attractive to men of a better social stamp than the one from which the Army was formerly recruited. The days when any one was considered good enough to be 'food for powder,' when criminals were given their choice between transportation and enlistment, when the gaols of the country were openly swept to find fighting material, are now happily gone, but much remains to be done before the authorities will be in a position to say an uncompromising "no" to all those applicants who are not desirable in every particular. At present, so far from this being the case, hundreds, if not thousands, of "specials" are, for want of others, accepted annually. Of course, this is to a great extent done in the hope that plenty of drill and rations will bring the physical qualifications of such otherwise ineligible *matériel* up to at least the minimum standard before very long. The confidence, however, is by no means invariably justified, as the medical reports make only too clear.

A good place at which to begin instituting

reform is in the process of enlistment itself. As at present carried out, this is not calculated to appeal favourably to the prospective soldier. The circumstance is regrettable, for on his first impressions largely depends the fact of whether a recruit develops into a valuable acquisition to the Army, or the reverse. Among the objections to the prevailing system, first and foremost, is the patrolling of the streets by the recruiting-sergeants and the solicitation by them—for this is what it amounts to—of likely looking men. It is an undignified course of action at the best and is not resorted to by any other Government department. At any rate, the Navy, the Police Force, and the Post Office contrive to do without it. Why not, then, the Army? There are plenty of recruiting offices in every garrison-town, and the staff at these is quite sufficient to cope with the present demand upon its resources. This leads me to a second point that calls for reform, that is, the improvement of these buildings. In the great majority of instances they are the reverse of attractive. Indeed, the discomfort, not to say squalidness, that marks their internal arrangements must have a decidedly chilling effect on the ardour of even the least impressionable of aspirants for military glory. At St. George's Barracks, for example—where the majority of those who join the Army each year are enrolled—they are primitive in the extreme. The recruit is first taken into a poky little office and briefly interrogated by an ancient warrior, wearing a uniform that is a cross between that of general and a hotel-porter, and invested apparently with the authority of a field-marshal. Having satisfied this individual that his intentions are at least harmless, he is conducted into a "reception-room." This is about as unattractive a place as could be conceived. The apartment in question is small and dingy, and is furnished with nothing beyond the barest necessities. In the centre, underneath a couple of dimly burning gas-jets, is a deal table, on which lie a few tattered copies of illustrated papers, &c. The floor is uncarpeted, the windows uncurtained, and the walls a drab blank. There is a broad arrow stamped on the poker and shovel in the grate, and the coals in the small and smoky fire look as though they had the same sinister mark somewhere about them also. Everything, indeed, is regulation—and depressing.

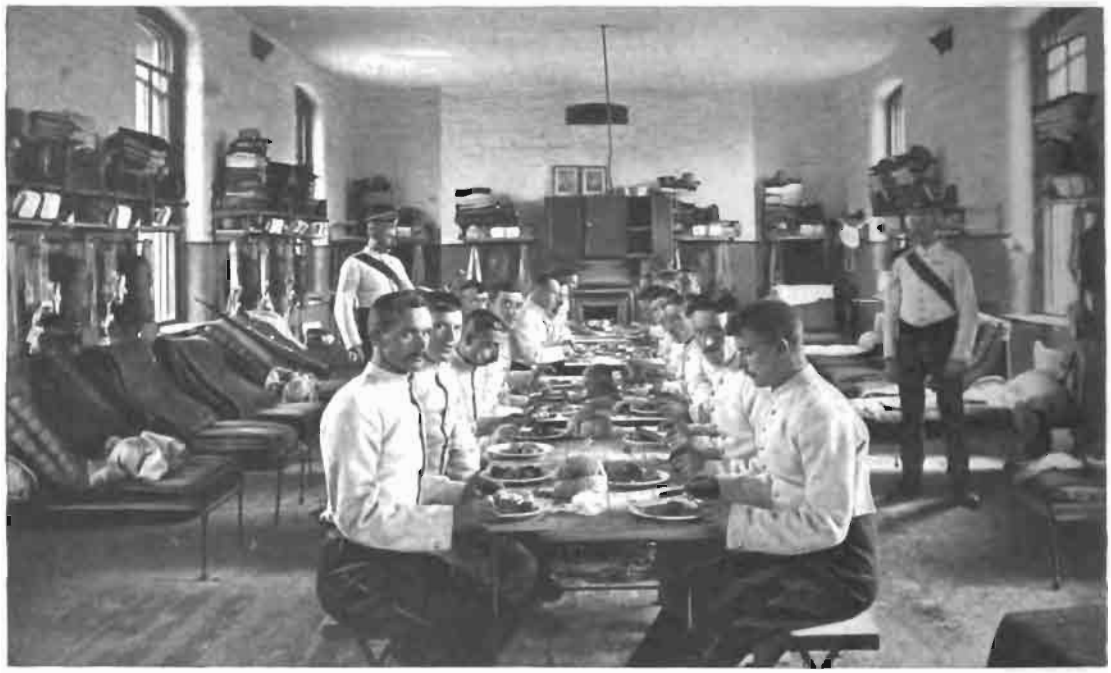
The medical examination to which recruits are subjected is another matter that demands alteration. Without being unduly modest, the average man may well object to being compelled to strip to his skin in the presence of a

BREAKING BREAD WITH THE ARMY FOR THE FIRST TIME

The recruits' room at St. George's Barracks—a miserable and depressing place

number of absolute strangers and to exhibit himself in this condition before doctors and hospital orderlies, who criticise his anatomy as though he were a prize pig. Of course, the examination must be a searching one, but at the same time it might be conducted with a little more privacy than at present obtains. Then the manner in which the "oath of allegiance" is administered is certainly not calculated to impress the subscriber thereto with a sense of its importance. A dozen or more of those who have been pronounced "medically fit" are taken into a small room by a sergeant or corporal and each handed a greasy and dilapidated Bible. An officer appointed for the purpose then gabbles through the terms of the oath in true police-court style, and briefly remarks, "Say 'So help me God,' and kiss the Book"! Before the listeners quite know where they are the whole ceremony is over, and they are from that moment duly pledged soldiers of the King. As to exactly what it is they have sworn, scarcely one of them has any idea. Indeed, if a party of recruits be interrogated on the subject immediately afterwards their replies will make this fact abundantly clear. Even seasoned soldiers are extremely hazy over the matter, and I feel confident in saying that there are not 5 per cent. of the rank and file who could, without notice, give an accurate account of the terms of the oath in question. This might in great measure be remedied by the simple expedient of including the wording thereof in the well-known "Advantages of the Army" pamphlet, and affixing a copy to every barrack-room wall.

Before leaving the recruiting office and going on to matters more intimately connected with barracks there is one more point to which I would like to refer. Once a man is "sworn in" he becomes a soldier and is entitled to the privileges of this position. Why not, then, provide him with a uniform at once, instead of compelling him to travel to the regimental depôt—possibly in some remote portion of Scotland or Ireland—in the clothes he has hitherto been wearing? It is quite possible that the condition of these leaves a good deal to be desired. Every one connected with a depôt must frequently have seen recruits arriving in the depth of winter in garments that offered no protection whatever to the cold and wet in which the journey has been made. To issue the whole of the celebrated "free kit" at once is neither necessary nor advisable. The undress suit of blue serge which forms



ONE O'CLOCK AT CHELSEA BARRACKS

The dinner is served by an orderly under the supervision of a sergeant. Chelsea Barracks are among the best-equipped in the Metropolitan area

A BARRACK ROOM AT CHELSEA ON SWABBING DAY

THE CANTEEN

A SERGEANT IN CHARGE OF THE ROOM
At Millbank Barracks, the most up-to-date barracks in England

the working garb of all arms in barracks might, however, very well be served out on enlistment. No particular trouble would be occasioned thereby, and the boon would certainly be much appreciated by its recipients. If, however, this is considered impracticable, a regulation great-coat, at any rate, might be supplied to each man before he entrains.

There has been an immense amount of talk during the past few years respecting the improvements effected in barrack routine. From some of the descriptions of this the civilian might well be pardoned for forming the impression that the present-day soldier's life is passed amid surroundings that border on the luxurious. I paid a visit to Aldershot a few weeks ago, feeling sure that here, at any rate, the latest improvements would be in full swing. I came away with the firm conviction that the life of the private soldier of the present day is marked by no improvement worth mentioning over that obtaining ten years ago when I had a personal knowledge of it. The food, the pay, the barrack-room furniture, the clothing allowance, and the conduct of the regimental institutes (such as the canteen, coffee-shop, and library) have, to all practical intents and purposes, remained unaltered. My guide, a colour-sergeant in a Line battalion then quartered in the camp, fully endorsed this view. "I have twelve years' service," he declared, "and the alterations for the better that have taken place in the soldier's life during that period amount to next to nothing. Indeed, a man has to work twice as hard now as was the case when I enlisted. All the stories about the improved condition of service nowadays are fairy tales, and are only fit for the marines."

With all due respect to my informant, I thought this view was unduly pessimistic. I readily accepted his invitation accordingly to go round the barracks with him and personally investigate matters. As a preliminary, we visited the canteen. The appearance of this was precisely what it might have been a decade back. A long, narrow room, with two rows of six-foot tables, supported on iron trestles, running down the centre, and hard wooden forms to sit on. The beer was served out in battered tin pots, neither tankards nor glasses being available. Some of the men present were eating bread and cheese; neither plates nor knives, however, were provided for their use. The white-washed walls were bare, save for a somewhat aggressively displayed extract from the King's Regulations headed "Fines for Drunkenness."

From the canteen we proceeded to the cook-houses. Here, under the supervision of an energetic N.C.O., a number of privates were making active preparations for serving up the chief meal of the day. On the concreted floor, arranged neatly in rows and with due regard for the correct alignment, were a number of shallow iron dishes containing the cooked joints which had just been removed from the ovens. There was a regulation look about the very potatoes placed in other dishes adjoining them, also in strictly parallel lines. A bugle blared outside, and, as the last notes died away, a subaltern walked in, cast a hasty glance round, sniffed at the contents of the dishes with an air of supernatural wisdom, initialled a report presented by the senior cook, and hurried off elsewhere. During this brief visit he had "inspected" the rations and certified that they were properly prepared. Such, at any rate, is the theoretical object of this daily visit. As, however, cooking is not yet included in the host of subjects taught at Sandhurst, it does not amount to very much. Another point

worth noting is that, as the dishes are unprovided with covers, the meat is not in the most appetising condition imaginable by the time it reaches the men's barrack-rooms. These may be situated at any distance up to three hundred yards or so from the cook-house. During their transit the joints are necessarily exposed to any wind, rain, or dust that happens to be about.

The table-ware furnished by the military authorities is reduced to the severest possible limits. It amounts merely to a knife and fork, one spoon, one plate, and one basin per man. Neither meat-carvers, soup-tureens, salt-cellars, teaspoons, nor cups and saucers have any place therein. Table-cloths, too, are quite unknown in barrack-rooms. When there is soup it is served up in the same vessel (a lidless tin-can) that, later on in the afternoon, contains the tea. This, by the way, is made with the milk and sugar ready mixed, and each man's allowance is measured out for him into a basin. Salt is provided in large square blocks, from which the diners cut off lumps as it pleases them. Altogether, the amenities are not studied to the extent that they might be.

To the average recruit—who very possibly comes from a decently furnished home—the discomfort of the barrack-room must appeal very strongly. It is probably occupied by from twelve to twenty-four men, and has to serve them as bedroom, sitting-room, and dining-room in one. The floor is either of wood or concrete, the walls bare of all decoration save a coat of whitewash, and the windows have neither blinds, curtains, nor shutters. In place of chairs there are a couple of wooden forms for every six men, and at night the only illumination available is that provided by a couple of dimly burning gas-jets. It is little cause for wonder, then, that every one who can do so keeps out of his barrack-room as long as possible. Short of going into the town, however, there is no place for the soldier to spend his leisure in but the canteen or the recreation-room.

The uniformity that is such an integral part of our military system makes all recreation-rooms alike, so far as their internal fittings go. The chief among these consist of a long table running down the centre, covered with a green baize, and flanked by rows of stiff Windsor chairs; two or three smaller tables in the corners, for draughts, chess, dominoes, &c., and a fireplace or stove near the door. The floor is uncarpeted, but the windows usually have either curtains or blinds. Another concession is made by distempering the walls a bilious blue or yellow, instead of white-washing them. Their surface is also relieved by two or three framed engravings or coloured prints. Such innovations as these, however, have to be introduced "regimentally," for Pall Mall takes no official cognisance of them. So far as possible, everything here, as elsewhere, is strictly "regulation." Thus, when there are pictures, they are hung at exactly the same interval from one another. The very newspapers on the centre table are all folded in the same manner, and neatly laid out in perfectly straight rows. If by chance one of them gets out of "dressing" for a moment, the N.C.O. in charge of the room evinces much distress. A regulation fire burns in a regulation grate, and a regulation set of cleaning utensils stands behind the door. Everything, indeed, is "regulation" and—uncomfortable.

An adjunct of the "recreation-room" is the "library." As often as not, exigencies of space render it necessary to include the two institutions in one. It is not difficult to do so, for all that is meant by the latter term is merely a book-case stocked with a couple of hundred volumes or so. These are obtained from two sources, namely, on loan from one of the large military libraries established at Aldershot, Woolwich, Portsmouth, or Dublin—the stock being changed at quarterly intervals—or by the occasional purchase of second-hand books from Messrs. Mudie or Smith. Regiments quartered in out-stations have to depend mainly on the latter source of supply. The soldier's literary taste, it may be mentioned, inclines almost entirely to novels. Works of travel and biography scarcely appeal to him at all. In his own words he will have "no truck" with such. Every now and again the librarian—usually a lance-corporal—is made the recipient of a miscellaneous assortment of volumes forwarded him by well-meaning, but somewhat indiscriminating, civilians who "take an interest" in the troops. Of course, gift-books should not be looked at too closely in the title-page, but at the same time the fact remains that such are seldom chosen with the slightest regard for the tastes of those for whom they are intended. A large proportion, for instance, consists of devotional works, bound numbers of religious magazines, essays, and poetry. These, as a matter of course, are summarily consigned to the topmost shelf.

It is only by questioning the occupants of a barrack-room themselves that the chief points that call for improvement in their lives can be

elicited. If an officer, however, does this, the attempt is more or less foredoomed to failure, for the average soldier is somewhat suspicious by nature, and is inclined to regard all such inquiries as part of a dark scheme to convict him of complaining. The man who complains, it should be observed, is unpopular with the authorities. Difficulties, too, are put in the way of investigating an alleged grievance, and a great amount of red tape has to be unwound before even the most trivial matter can have any official cognisance taken of it. For a private to go to the General commanding the garrison and say that a corporal has acted unfairly in any particular towards him is held to be a heinous offence—amounting, indeed, in the military code almost to mutiny—against discipline. He must state his case to the colour-sergeant, who parades him before the captain, who takes him before the colonel, who forwards an elaborate report, transcribed in duplicate and triplicate on a special form, to the General. As may be readily imagined, a soldier will put up with a good deal before he will set all this ponderous machinery in motion. Yet his friends in civil life, working, for example, in a factory, are perfectly free to interview the manager whenever they feel inclined to do so. Appreciating this fact, the soldier naturally feels that he, working in a garrison, might be permitted to lay his case before the manager (that is, the General) without being compelled to submit it through half a dozen different channels beforehand.

To a civilian the rank and file will unburden themselves with a certain amount of freedom. Even then, however, it is not very easy to ascertain exactly what they want. Thus, while one man will tell you that the crying need of the Army is increased pay and less work, a second will declare that greater comfort in the barrack-room is all that is necessary, and a third will unblushingly sum up the *desideratum* of Army Reform in the phrase, "Free Beer." Perhaps the most general opinion on the subject is that expressed by the men in the words, "less messing about." This, indeed, is at the root of half the dissatisfaction with the conditions of service that prevails among the younger soldiers of the present day. The constant supervision by non-commissioned officers, the petty details of barrack-room life, and the innumerable "fatigues" which take up so much of the time not actually devoted to drill all exert a most irritating influence. I remember once asking a man who was court-martialled for desertion what had led him to commit himself in this manner. He replied with some spirit that he had enlisted "as a soldier, not as a—well, something—housemaid." Pressed for details, he explained that before he went on parade in the morning the sergeant in charge of his room made him sweep the floor. When he had done this, he was set to scrub the table. As soon as the parade was over, there was another little job awaiting him in the direction of blackleading the grate. Having done this, he was sent to clean the windows in the officers' mess. This was apparently the last straw, for he broke out of barracks that night, and remained absent until apprehended by the civil police six weeks later.

Of course, barrack-rooms must be kept clean, but the actual "housemaid's work" might very well be done by reservists or pensioners. A sufficient number of these could be readily obtained—not more than two per company would be required—in return for their board and lodging and a very small amount of pay. As it is, in many regiments the custom prevails of utilising the services of such men *sub rosa*. The occupants of the barrack-room subscribe a penny a day per head and also set aside a share of their rations. For this decidedly scanty outlay, they are relieved of the incessant floor-sweeping, table-scrubbing, and window-cleaning, &c., that would otherwise be demanded of them. In the cavalry this system is extended to employing such extraneous assistance for furbishing up accoutrements. Although this is not "regulation," it is more or less openly winked at, provided the individuals in question keep out of the way when an inspection is being held.

The subject of improving the conditions under which the rank and file of the British Army perform their work is a very large one. In the course of a single article it is impossible to do more than touch on the fringe of it. Some of the points indicated in the preceding pages may to civilians appear unduly trivial. It must be remembered, however, that in "soldiering"—as in other spheres of activity—it is the little things that count.

# THE ROYAL COMMISSION AND THE WAR OFFICE

### A SUMMARY OF THE TERRIBLE INDICTMENT OF WAR OFFICE SUPINENESS AND NEGLECT IN A GREAT NATIONAL EMERGENCY

IN spite of the formal publication of the findings of the Royal Commission appointed to investigate the conduct of the late war in South Africa, the bulk of the documents, together with the intricate report of evidence which accompanies them, effectually prevent the average reader from making himself acquainted with the result in detail. Four big official Blue-books are enough to frighten all but the most enthusiastic political investigator. We therefore give here a brief synopsis of some of the more important charges in this terrific impeachment of the War Office and the Government.

The Commission sat fifty-four days to take evidence, heard 114 witnesses, of whom they asked 22,200 questions. The Report is signed by all the Commissioners, namely, Lord Elgin, Lord Esher, Lord Strathcona, Sir George Taubman-Goldie, Sir Henry Norman, Sir John Hopkins, Sir Frederick Darley, Sir John Edge, and Sir John Jackson. The Commission was appointed to "inquire into the military preparations for the war in South Africa and into the supply of men, ammunition, equipment, and transport by sea and land in connection with the campaign, and into the military operations up to the occupation of Pretoria." It seems that the Commissioners found these instructions to some extent wanting in precision and they complained also that they were being hurried, especially at the beginning. They however decided among themselves that the chief object of their appointment was "to discover inefficiency or defects in the administration of the Army, and to indicate their cause wherever possible."

They did not consider it their duty to compile a military history of the war, or to bring in a verdict on matters of strategy or tactics or the conduct of individual officers. It may be roundly stated that the findings of the Commission itself are for the most part vague and that any strenuous pronouncements are shirked. The following paragraphs show how far the Commissioners felt disposed to go towards definite opinions. In reviewing the evidence upon the lack of preparation, in spite of repeated warnings and of plans devised for the prosecution of the campaign, the Commissioners say "there is nothing to show that the defence schemes sent in by the officers on the spot had any bearing on the recommendations made by the Commander-in-Chief." And they add the following:

"On the other hand, we were definitely informed by Lord Lansdowne that the papers of the Intelligence Division were never officially communicated to him as the basis of any proposals through the regular channel, *i.e.*, by order of the Commander-in-Chief. There arises, therefore, this somewhat extraordinary state of affairs, that the Secretary of State for War first had his attention specifically directed to important War Office papers by the Secretary of State for the Colonies, to whom they had been communicated in a sufficiently formal manner to enable him to use them officially, and to enable the Secretary of State for War to send an official reply. It is not, of course, alleged that these papers were suppressed; on the contrary, we know that a handbook was prepared from them, which was supplied to officers in South Africa, and afterwards presented to Parliament. . . .

"It is perhaps not altogether remarkable, under the circumstances above described, that no plan of campaign ever existed for operations in South Africa. It does not seem an unnatural supposition that a general who is sent out on an important expedition should receive written instructions showing the objective which the Government has in view. Lord Roberts stated that 'when Sir George White arrived in Natal he had no instructions in regard to the wishes of the Government as to any particular plan of campaign, nor was he aware of any general plan of operations in South Africa.' From Sir George White and Sir Redvers Buller on the one hand, and from Lord Wolseley and Lord Lansdowne on the other, there is the assurance that no written instructions were given or received. . . . But it is submitted that it is perfectly possible to safeguard the discretion of

the general in the field, and yet to supply him with schemes of operations worked out by the most competent officers on the most reliable information, which he can adapt to the changing fortunes of the war."

The only alternative, the Report goes on, is to rely on the impressions which a general may derive from personal interviews with superior authorities before he starts. That was the alternative adopted on this occasion. It resulted in the neglect for all practical purposes of the work of the Intelligence Division, and the following significant comment is added:

"In no other line of life would an agent be entrusted with a difficult and responsible task without some attempt at precise and careful definition of the object in view, and there seems to be no reason why military duty should be a solitary exception."

Upon the question of deficiency of stores the Commission decides that—

"These deficiencies did not arise solely from the occurrence of a great and sudden emergency, but disclosed a condition of affairs justly described by Lord Lansdowne in his minute of May 21, 1900, as 'full of peril to the Empire,' inasmuch as 'we were not sufficiently prepared even for the equipment of the comparatively small force which we had always contemplated might be employed beyond the limits of this country in the initial stages of a campaign.'"

In summarising the whole question of want of preparation, the Commissioners say:

"Whether, if the information collected by the Intelligence Department had been used to greater purpose it would have resulted in a larger reinforcement of the garrison of South Africa it is impossible to say. It certainly appears now that, with a greater amount of forethought in arrangements generally, in the provision of stores and equipment, and with the addition of, perhaps, another brigade, the situation in Natal might have been so strengthened that the whole course of the war must have been altered."

In going over the subject of the supply of men the Commission finds as to *morale* and physique:

"There was general agreement among witnesses that the *morale* of the men of the Regular Army, including in that term the qualities of courage, endurance, discipline, and cheerfulness under adverse circumstances, left little or nothing to be desired.

"With regard to physical condition, the evidence was less unanimous, but also seems to point to certain conclusions. In the cavalry and artillery, which attract a somewhat better class of recruits, the condition was stated by witnesses to have been good throughout.

"Witnesses also agreed in praising the physique of the infantry regiments as they first arrived in South Africa, and concur in thinking that the high average was in great measure due to the large proportion of Reservists in the ranks."

And after a discussion, in order, of the various forces supplied, with an especially good word for the Colonial troops, the Report sums up, again significantly and again cautiously:

"If the war teaches anything it is this—that throughout the Empire, in the United Kingdom, its colonies and dependencies, there is a reserve of military strength which, for many reasons, we cannot and do not wish to convert into a vast standing army, but to which we may be glad to turn again in our hour of need, as we did in 1899. In that year there was no preparation whatever for utilising these great resources. Nothing had been thought out either as to pay or organisation, as to conditions of service, or even as to arms. Even here in England it was to be 'an experiment.' The new force was not to be discouraged, but it was allowed to equip itself, and it was denied anything beyond the barest complement of trained officers. We regret to say that we are not satisfied that enough is being done to place matters on a better footing in the event of another emergency."

The notorious Remount Department gets another severe knock when the Commissioners say:

"The arrangements in the field at first suffered not only by reason of the great pressure, but for want of a special central officer charged with the control of the whole system of remounts. There appears to have been an entire absence also of well thought-out forms and manuals for the guidance of officers at the different depôts in the field, such as those used in the Indian Army. In fact, the real complaint against the Remount Department does not so much relate to its purchases of horses during the war as to the fact that, from first to last, there was not the symptom of an idea in any one who was responsible for its organisation that in time of war there would be necessity for expansion."

On what seems by far the most important subject of all, the organisation of the War Office, the Commissioners speak but gingerly, excusing themselves and it in the following fashion:

"War Office organisation and its reform involve questions so numerous, so important, and so complicated that it would under any circumstances be inexpedient to include their detailed considera-

tion in an inquiry which had to cover a great deal of ground in other directions and for other purposes. But in the present case it would be undertaken under this additional and serious disadvantage, *i.e.*, that the main part of the work of the Commission is concerned with the period before and during the war, and that since that time the circumstances have completely changed. There is scarcely a department of the War Office in which changes have not been effected as a result of, or at any rate following upon, the events and experience of the war. To criticise the conditions prevailing before the war would be to beat the air; to make an examination of present conditions would imply a review of much that is still in the experimental stage, and in which recourse must be had for authentic information, not to the evidence before the Commission, but to statements made in the House of Commons."

The chief difference of opinion among the Commissioners seems to have been upon the position of the Commander-in-Chief. Lord Esher and Sir John Jackson recommend the abolition of the office altogether, and the former proposes a War Office Council on the lines of the Board of Admiralty. In the preface to his notes he says, with more emphasis than his colleagues adopt:

"I have signed this report, in which I generally concur, but I desire to add the following observations: The main defects in the organisation of the War Office, elicited by the evidence, are first the want of co-ordination between the branches of that Department, and the consequent weakening of the influence of the Secretary of State with his colleagues in the Government; and, secondly, the absence of a proper system of inspection, ensuring that the military policy of the Secretary of State, sanctioned by the Cabinet and by the votes of Parliament, is carried into effect.

"When the Secretary of State has made unsuccessful attempts, from time to time, to obtain the assent of the Cabinet to expenditure necessary in the interests of the country, his efforts have been weakened by his failure to show a consensus of military opinion in its favour, as the First Lord of the Admiralty continually does, of the policy which he recommends.

"The condition in 1899, as disclosed in Sir H. Brackenbury's memorandum, of our armaments, of our fortresses, of the clothing department, of the transport of the Army Medical Corps, of the system of remounts, shows that either the Secretary of State was culpable of neglect, or that he was in ignorance of the facts."

And as to the office of Commander-in-Chief, he adds:

"Since the death of the Duke of Wellington the position of the Commander-in-Chief has been gradually becoming more anomalous, until a crisis was reached in the year 1899, upon which it is unnecessary to dilate. The speeches of Lord Lansdowne and Lord Wolseley upon their mutual relations in the House of Lords will not readily be forgotten.

"The only practical remedy is the abolition of the office of Commander-in-Chief, as recommended by the Hartington Commission, and the appointment of a General Officer Commanding the Army removed from the War Office into a distinct building, possibly the Horse Guards, with a new definition by Order in Council, of his duties and responsibilities. He might be entrusted with the discipline of the Army, but his principal functions should be those of an Inspector-General of his Majesty's Forces, and he should be responsible to the Secretary of State."

Undoubtedly it was this effort at smoothing over on the part of the Commission which caused most of the newspapers, upon receipt of the first of the Blue-books, to attach little importance thereto. In fact most of them treated it as merely a repetition of ancient history, and as of little interest to the public to-day. It was only when the subsequent volumes containing a verbatim record of the evidence were published that it was discovered how overwhelming was the combined verdict of blame and guilt. The cautious Commissioners could by no means save the situation, and the country has speedily learned that never in its history has such an instance of muddling and maladministration been placed on record.

By far the most important cause of all the succeeding trouble lay in the lack of readiness on the part of the War Office, which resolves itself into the larger issue of disparity between the progress of diplomacy in South Africa and the preparations being made at home. In this general state of bad government the Cabinet is jointly responsible. There is no doubt that Lord Lansdowne, as Secretary of State for War, was responsible to his colleagues and to the country for the military chaos and the disorganisation of the early days of the war, but this does not in the least excuse his colleagues who saw the conflict approaching and who knew perfectly how unready the army was for the task before it. The usual effort has been made by the Colonial Secretary's followers to clear his skirts of any responsibility as far as the army is concerned, but this effort is even less fortunate than usual. In the appendix there is included a letter from him to Lord Lansdowne as early as April 5, 1897. It seemed that Mr. Chamberlain, to his credit, kept himself better informed than the Secretary of State for War

upon the work of the Intelligence Officers of the latter's department. In this letter he said :

" From a perusal of General Goodenough's despatch to the War Office of September 30 last, and of the reports made by Major Altham to the Intelligence Division, Mr. Chamberlain gathers, that her Majesty's forces at present in South Africa, in the event of an outbreak of hostilities, would, from their scanty numbers, and the insufficiency of artillery and other war material, probably be unable even to protect the frontiers until the arrival of an expedition from home."

And a year later (May 5, 1898) Mr. Chamberlain wrote still more urgently to Lord Lansdowne :

" As his lordship is aware, there are a number of questions, which, despite the anxiety of her Majesty's Government to preserve peace, may lead to a rupture with the South African Republic, and it may be taken as probable that the Government of the Republic would seize any favourable opportunity, offered by reason of her Majesty's Government being involved in difficulties elsewhere, to assume suddenly a hostile attitude. The Government of the Republic believe that they may rely upon the support of Dutch sympathisers at the Cape and in Natal, and they intend to arm any adherents who, in the event of hostilities, may be found willing to join them, for whom they have ample supplies of arms. The number of such adherents would, in all probability, depend chiefly on the turn taken by events at the outbreak of hostilities, and for this reason, and also for the sake of the loyal colonists in the Cape and Natal, it is most desirable that her Majesty's forces should be ready at once to meet, and at least hold in check until the arrival of reinforcements, any movement in force made from the Transvaal. Failure to do this, or delay, would almost certainly entail humiliation and increased expense.

" It is, of course, for the Secretary of State for War to say whether provision should be made for this purpose, but Mr. Chamberlain is of opinion that the expense should not stand in the way of such *minimum* of preparation as may be, in the Secretary of State's opinion, necessary at least to secure this primary object."

It is therefore made plain that Mr. Chamberlain was fully acquainted with the lack of preparation on the part of the War Office, yet continued his fast-progressing negotiations with Mr. Kruger, and talked about the " squeezed sponge " and " the sands running out " just as though our army was fully prepared to meet the Boers. Of course the publication of these letters gives us no inkling of what passed between the Secretary for War and the Secretary for the Colonies during the last year previous to the declaration of war. That promises to remain one of the many mysteries which may survive even a dozen public examinations.

In his evidence before the Commission Lord Lansdowne seems thoroughly to realise his responsibilities and shortcomings, and more than any other witness adopts the tone of a witness's defence. Yet even then he makes what seems a damaging use of the defendant's usual lack of positive recollection. He is unable to tell just when he first became aware that hostilities were probable or possible. In 1886, Sir John Ardagh had fully discussed the subject in a long and able paper. There could be no conclusion from this report from the Director of Military Intelligence save that England must make preparations equal to those the Boers had well under way. Yet it seems that Lord Lansdowne could not even remember when he saw the paper in question.

" *Viscount Esher :* Must there not be something radically wrong with a system under which a paper of that degree of importance does not automatically go to the Secretary of State ? In no other Department would a paper of such importance not go to the head of the Department as far as I know ?

" *Lord Lansdowne :* The question, I think, would be whether the paper was one which the Commander-in-Chief thought it his duty to lay before his Majesty's Government."

Following a time-honoured example Lord Lansdowne attempts to shift the blame from the civil to the military authorities under him. He says :

" I think that the point at which the military authorities failed to appreciate correctly the magnitude of the task that lay before us was rather this—that they did not sufficiently realise the fighting value of the Boers, if I may use the expression, their staying power in the field, and the kind of effort that would be necessary to overcome them."

The famous telegram to the Colonies asking for unmounted in preference to mounted troops, Lord Lansdowne explains as follows :

" We consulted the General who was to have the chief command in the field, Sir Redvers Buller, and in consultation with him it was determined that we should inform the Colonies, who were at that moment offering in some cases cavalry, in others artillery, and in others infantry, that at that particular moment infantry would be most serviceable and cavalry least serviceable. Cavalry and mounted infantry are different things. The reason infantry were asked for was that it was

proposed that we should attach small bodies of Colonial soldiers to the units of Imperial soldiers already at the Cape. It was a proposal very much approved at the time by the Colonies, and it was a reasonable one."

After much cross-questioning he was finally obliged to admit that political considerations prevented the Cabinet from making the necessary grants of money for the proper preliminary steps. The disinclination to admit this is found in the following dialogue:

"*Q.* But for the most effectual use, that is to say, at the most speedy moment, of the force which you had been advised was necessary for the operations in South Africa, the expenditure of that sum of money was necessary at the time at which it was proposed?

"*A.* It would have curtailed the period during which it was impossible to make use of the field-force as a fully equipped army.

"*Q.* And your answer to the question why that was not done, is that it was not done on political considerations on which the Cabinet came to a decision?

"*A.* About which with your permission I should like to say a few words when we come to the Commander-in-Chief's minutes.

"*Q.* I only want to get it here, that it was political considerations which delayed those preparations being made?

"*A.* Certainly."

Lord Lansdowne made a long statement of excuse or justification for the Government's policy of "doing nothing." He concludes by saying:

"The general observation I would make upon that is, we were obliged to consider that advice with some reference to the circumstances as they presented themselves at the moment we received it. We certainly did not regard peace as unattainable; on the contrary, there were moments when we believed that we were very near a settlement which would have avoided all the misfortunes inseparable from a great war, and we realised very deeply indeed that owing to the inflammable state of public opinion in South Africa, we ought to strain every effort to avoid any action which was likely to precipitate hostilities."

But what foreign critics will perhaps consider the most important, and for us the most lamentable disclosure from the former Secretary of State is the following:

"I think it is correct to say that no formal plan of campaign was drawn up in the War Office; on the other hand, it cannot be doubted that the Generals knew perfectly well what they were going to South Africa for."

The most damaging disclosure of lack of supplies comes from the evidence of Sir Henry Brackenbury, which shows that in respect of all ordnance supplies the stock in hand at the beginning of the war was not even sufficient for the mobilisation of the contemplated maximum foreign service force of two army corps and a cavalry division, and was wholly inadequate to meet the rapid consumption in war by a force of this strength. It was, of course, still more inadequate to meet the requirements of the force of far greater magnitude which was soon collected in South Africa. On November 20, 1899, the Secretary of State, in reply to requisitions from Sir Redvers Buller, had to cable that "there is only eight weeks' supply of Mark II. 303 in ball ammunition in the country, and all gun ammunition will be exhausted before eight weeks." In the case of cavalry swords, the authorised reserve was 6000, but in consequence of the fact that a change in pattern had been long under consideration, the reserve had fallen to eighty swords!

In 1899, Sir Henry Brackenbury found that the reserves of clothing were inadequate to meet even peace requirements, and asked for the preparation of a reserve equal to six months' ordinary supplies, at the cost of £320,000. This demand was put forward in February, but does not appear to have reached the finance branch till May 1899. It was considered by officials in that department that as the annual estimates had been framed, and a supplementary estimate would have had to be made to meet this requisition, it was useless to push the matter forward. It was therefore kept back for consideration in the autumn. "Meanwhile the war supervened, and that demand became a thing of the past." It is remarkable that, in a critical time, a demand of this magnitude put forward by the chief of a great supply department should not at least have been brought to the notice of the Secretary of State, even although the estimates had been framed. With regard to boots, Sir Henry Brackenbury explained that before the war:

"The home boot was a great, thick, clump-soled boot. The men liked it at home in time of peace; it did not wear out quickly, and consequently it saved their pocket: but when they went to war these clump soles separated, and they would not stand the tremendous wear and tear of a campaign. The foreign service boot, which was a hand-sewn boot, and a very good boot indeed, we could not get in sufficient number."

The part played by Lieutenant-General Sir

William Butler, commanding the forces at the Cape, 1898–1899, in the steps preliminary to the war are well remembered. Here we have his statement of his views when it became evident that the policy of the Government might lead to war.

"*Q.* Having that present in your mind, did you deliberately come to the conclusion that the number of troops in South Africa was sufficient?

"*A.* No, it was never anticipated for a moment that the number of troops in South Africa was sufficient.

"*Q.* I mean sufficient to make a stand until reinforcements arrived?

"*A.* No, nor did I think that in all contingencies. If the initiative was pressed to a certain point, then it became a question. We were moving at that time more rapidly in one direction than in another, but that we could have held our own on these lines of retirements in face of advances until reinforcements came I have not the least doubt.

"*Q.* Anyhow, you did not advise the Government to reinforce the garrison in South Africa at that time?

"*A.* No; if you turn to the despatch of June 23, you will see I am censured for even suggesting it."

In defence of his position Sir William points out that the Boers did not make a move following the operations of our troops on the frontier, not indeed until we had in Natal 10,000 additional troops from India and the Mediterranean.

"*Q.* What was it made them move in the end?

"*A.* The mobilisation of the Army Corps and the appointment of Sir Redvers Buller to command.

"*Sir John Edge:* And, I suppose, food for their horses, being on the veldt at the time?

"*A.* The idea that the Boers wanted to produce war is to my mind wrong; it is a wrong reading of the situation, and on that all my preparations were based, and I was right. As a matter of fact, the Boers never did move until the reinforcements had arrived and the Army Corps was mobilised.

"*Sir Frederick Darley:* In point of fact, your opinion is that the action of England provoked the war?

"*A.* No, I will not say that. We moved up a number of troops round the frontier."

How the Government treated Sir William when he returned from South Africa, he tells with some heat:

"When I came back I thought I should have been seen by the Ministers. I had many papers marked to be shown, but I saw Lord Lansdowne alone, and only for ten minutes. He asked me the question: 'If we move to the Biggarsberg, what will happen?' I said, 'If you move the force now at Ladysmith?' And he said, 'Yes.' 'Out of a hundred there are forty chances that that will bring on war,' was my reply. 'And if we cross the Biggarsberg,' was his next question, and my answer was, 'Then out of a hundred there are seventy-five chances that it will bring on war.' That conversation took place on September 12. I was treated with suspicion; they would not send for me or ask me anything. Of course, at that time they were being told it was a case of ten millions of money and the whole thing over at Christmas, or at furthest at Easter. Every officer in the Army knows that; any one who told them the opposite was called names, ridiculed, and laughed at; he was either a fool or a knave, or, as they said of me, I was both. I may talk with heat, my lord, perhaps more than I ought to, but things were said of me which I believed were wholly unjust, and for years I have been silent."

From Lord Wolseley's evidence one gets the strongest impression of the War Office muddle and the best explanation of how the tragic consequences came about. Lord Esher's note which we have quoted above, refers to the relations between Lord Lansdowne as Secretary of State and Lord Wolseley as Commander-in-Chief, and of course those relations extended beyond the War Minister and through him to the Cabinet. Here is one of Lord Wolseley's bitter statements:

"We were preparing for a war, as far as we were allowed to do so, with a people who would turn out 54,000 men in the field, very well provided with ammunition, and with a certain amount of very good modern guns. At the beginning of the business, down as late as June 1899, the information given to me officially by word of mouth, was to the effect that probably the Orange Free State would remain neutral. I am only giving you my impression on this point, for I was not taken into full confidence by the Cabinet on these points—in fact, I was very seldom present at any Cabinet meeting during the whole of the business. What percolated to me came from the Secretary of State, and he told me—I presume—as much as he felt justified in telling me. What he gave me to understand up to as late as June 15, 1899, in an ordinary minute he wrote in reference to some expressions made use of in a minute from the Intelligence Department, was that it was by no means certain, and he warned us not to assume too hastily that we should have the Orange Free State as well as the Transvaal in arms against us. I cannot say that we soldiers agreed in that view, but that was the warning we received on the part of the Government, as far as it came to us in an official form whatever.

'I find that even as late as September 28, 1899,

I asked the Government—that is the Secretary of State—officially to be informed of the intentions of the Orange Free State, and I cannot remember having ever received any positive reply upon that point. Amongst the papers I referred to, before coming here to-day, I specially mentioned one I wrote on June 8, 1888 (*vide* Appendix to Report Volume, page 217), in which I pointed out what was, I thought, a very curious fact regarding a nation like ours, and that is so often at war in different parts of the world. It was that we had never formulated to ourselves as a Power, as a people, or as a Government—we had never put on paper to be transmitted from one Government to another, what were the objects for which our Army was created and maintained. In that paper, I say this at the beginning, and go on to say: 'As it has never been done I will do it for you.' I accordingly put down under five heads what I conceived to be the objects for which the Army was maintained. That paper was very seriously considered, I know, by the Government, for I pointed out that the standing Army was then too small to fulfil those objects."

When the war seemed inevitable Lord Wolseley advised the Government to mobilise an Army Corps. In this connection he says:

"Had my advice been acted upon then, this Army Corps could have been in South Africa, and, very possibly, on the Orange River, before Mr. Kruger declared war in October, and he declared war on October 11. There was no danger that our mobilisation of this Army Corps should have hastened Mr. Kruger's declaration of war; and this is a very important point, because I know people would at first say that if we had done so Mr. Kruger would have declared war immediately. But my answer to that is a very simple one, and it will be understood by any one who knows the condition of things in South Africa—that Mr. Kruger could not have taken the field before the time he did; and he took the field upon the very earliest date that the Boer forces could take the field in South Africa, because all their men were mounted, and were dependent entirely upon grass, and they have no grass to eat until early in October; in fact, the 10th is a very early time for grass; and I think that is the answer to the point I am sure would be made by people who heard my statement about this Army Corps being put down at Estcourt at the time I have mentioned. They would immediately say: 'That would have hastened the war;' and my answer to that is that I do not think it could have done so."

Perhaps the strongest remarks of all come from General Sir Redvers Buller—who is, at any rate, as honest a man as lives. The following passages from his evidence belong to the period when he addressed a statement to Lord Lansdowne (July 6, 1899) concerning our lack of preparations:

"*Q.* Would you say shortly what your view of the position was at that time?

"*A.* My view was that we were moving, I thought, rather rapidly towards war, and that our preparations were not keeping up with the situation.

"*Q.* And you had an apprehension that if the negotiations, or any failure of negotiations, led to war, that absence of preparation would be of very serious consequence?

"*A.* Yes, I was impressed with the fact that it was not my duty as a soldier to take any measures to make peace impossible or even difficult, but there were ordinary measures of preparation that could have been done privately and could not really have affected any peace negotiations, and those were not being taken, and, in my opinion, we had not enough time to spare to make it wise to delay them.

"From July 6 to August 15 affairs went on but slowly at the War Office. No Council of War was held; no plan of campaign was adopted: no regular military preparations were undertaken. In the middle of August I heard that all preparations for war in South Africa entailing expenditure had been stopped, and that the Secretary of State for War had gone to Ireland. Mr. Balfour, during his absence, came to the War Office and had an interview with Mr. Wyndham and Lord Wolseley. I also heard that it was believed that an Ultimatum was to be sent to the Transvaal on the 11th September."

The opinion General Buller had expressed, in June 1899, when first he was selected to hold the Command-in-Chief in South Africa, was as follows:

"I said that in my opinion the war was inevitable, but on the question of bringing it on, that I doubted that the Boers would bring it on unless we did."

Lord Kitchener, who because of his impending departure for India was permitted to testify on the second day of the inquiry, has this to say about the want of proper maps in the conduct of the campaign:

"I have just made a note as regards the provision of maps. The Director of Military Intelligence, Colonel G. F. R. Henderson, who went out to South Africa, with Lord Roberts and myself, started immediately on his arrival in Cape Town upon the compilation of a war map from all available sources. That is the only information that I know that would be of assistance to the Commission on that head.

"*Q.* Does that mean that there was no map before Colonel Henderson started upon that work?

"*A*. There was no map before of the Orange Free State. We captured a certain number of Jeppe's maps of the Transvaal at Cape Town, and from those and from all other available sources he commenced to compile a map.

"*Q*. And that map was completed ?

"*A*. The map was sufficiently completed to help us in the advance, and it was afterwards entirely completed.

"*Q*. Does that apply only to the Orange Free State ?

"*A*. No. To the Transvaal and Natal as well.

"*Q*. There was no map of the Colony or of Natal, further than there was of the other States ?

"*A*. I am speaking of the map we made. It was a complete map for Natal, for the Transvaal, and the Orange River Colony.

"*Q*. But before the war, as far as you know, there was no complete map either of the Cape Colony or of Natal ?

"*A*. Of Cape Colony there were always a certain number of maps.

In regard to the men who served under him Lord Kitchener has an excellent opinion in every respect, save that of quickness and accuracy in shooting. Of the officers it is another matter.

"*Q*. What is your opinion as to the quality of the officers ?

"*A*. There appears to be too often a want of serious study of their profession by officers who are, I think, rather inclined to deal too lightly with military questions of moment. The junior officers were, in my opinion, better than the senior officers. The officers on the staff were very mixed. Some were excellent, whilst others had no staff training, and had everything to learn. There was no reserve of qualified staff officers to fill vacancies. The tendency on the part of some generals and commanders to do their own staff work was noticeable, and should be discontinued. I consider that the training of officers to fit them for war can best be provided by manœuvres, which should be made to follow as closely as possible every characteristic detail of war up to the actual contact between the combatants."

He goes on further to insist that :

"Officers should be trained to take responsibility. They should be induced to exercise their brains and to strike out ideas for themselves, even at the risk of making mistakes, rather than to stagnate, or to follow the dull routine which at present affects the officers in our service and moulds them into machines of very limited capacity. The habit of acting on their own initiative should be fostered among officers in every way, and I deprecate taking the judgment on an officer in the field for carelessness, or for other fault, out of the hands of the General Officer Commanding, either by public opinion or otherwise. Such action affects officers in a most serious and vital manner by cramping their initiative, and by making them shun responsibility—thus depriving them of two great essentials for command."

There is by no means space here for anything like a thorough review of the astonishing evidence which the members of this Royal Commission heard. But we have quoted enough to show its character and to emphasise the gravity of the case made out against those who, unprepared, made the war possible; who, incompetent, blundered through its tragic course; and who, unchastened, have thus been dragged to the public pillory.

# A NEW CURE AT SEA

THE NATURHEIL METHODS FOR RESTORING HEALTH — DR. SCHWENINGER AND HIS WORK—HIS SCHEME FOR TREATMENT AT SEA—A SHIP IN WHICH THE LEADING PEOPLE FROM ALL THE NATIONS WILL MEET

BY

## EUSTACE MILES

IT is to the credit of Medical Science (as well as for the benefit of the race) that so many of its recent changes have been in the direction of those simple treatments which the majority can afford and use; and that these treatments are not only remedial but also preventive. The man in the street cannot really afford the most expensive drugs and operations. It is encouraging for him to hear how much he can do *for himself*

by sleeping and—when it is allowed him—working with open windows, by learning how to breathe, by exercising his trunk muscles, and so on. After elaborate researches as to the causes of consumption (to which so many deaths are attributed), it seems that one of the safest remedies is the fresh air which is also one of the safest remedies for most other ailments and one of the surest means to general fitness. It may be that among the most effective and preventive treatments for cancer will be something equally cheap and feasible, perhaps a nourishing but unstimulating diet; and for appendicitis moderation in diet—as Sir Frederick Treves hinted not long ago. For nervousness and breakdown, Dr. Weir-Mitchell advocates and practises, with wonderful success, mental rest and quiet, restricted and special diet, massage, and graduated exercises. While this new century has been flooded with statistics of crime and its causes or incentives, while the writers tell us that the tendency to crime and dipsomania is terribly strong after the second and third generations, we visit a Poor Law School in a London suburb, and see the riff-raff of the gutters, the dirty and anæmic and deformed spawn of generations of thieves, hooligans, drunkards, prostitutes, wrecks, turned out after a few years as respectable boys and girls who are a credit as servants, soldiers, mechanics, and so on. And the means? A few devoted teachers and matrons and physical trainers—better discipline, better food, cleanliness, drill, games.

And so the wisest doctors are working towards the simplicities that are so obvious and sensible when once one hears them, and at the same time so cheap and easily available. It is not that drugs and operations are abandoned; it is that they are used less indiscriminately.

The wisest doctors, who are the advance guard of their profession, are now recognising the claims not only of simple treatments but also of individual treatments. That is where the so-called "quacks" are apt to fail. This extremist has worked wonders by some special water-treatment, that one by some special exercises, that one by some plan of diet or feeding. Well and good. But the mistake is to universalise, to guarantee success in all cases alike.

It is said that on the Continent there are upwards of five million people who understand and practise some part or parts of the Naturheil methods, as they are called. In Germany, Kneipp the priest, following in the steps of Priessnitz the peasant, worked wonderful cures by his water-treatments, and with a great Roman Catholic influence behind him he extended his teachings, while to the Protestants the rather wider knowledge of the Naturheil school has appealed more markedly. A stay at some of the best of the ten or more Continental Naturheilanstalts will show the visitor healthy ways of using water, heat, electricity, light, air, exercising apparatus, massage, diet, and so on. In America the huge establishment of Dr. Kellogg, on similar lines, has been the parent of about twenty other Sanitaria, as he calls them; some of these being in France, South Africa, and elsewhere. Even in England we have one or two places that attend to diet, air, light, clothing, &c., as distinct from the average Hydro which ignores dietary and ventilation.

The best and safest of these systems have for many years been strongly advocated and consistently used by Ernst Schweninger, Professor of the University and absolute manager of a large hospital at Berlin. Consulted by royal and titled people, by generals, statesmen, financiers, newspaper-proprietors, Dr. Schweninger has never swerved, so far as I know, from the simple methods. But, unlike the "quacks," he has always refused to lay down laws as to what will heal an individual. I believe that, though he has "treated"—he refuses to admit that he has "cured"—on an average 10,000 patients in ten years, he has insisted on prescribing for each patient as a unit. And he has trained a large staff of doctors at his Berlin Hospital to work on his lines also; to adhere to simplicity—diet, exercises, breathing, rest, massage, baths, &c.—and to respect individuality.

It is the breadth of his treatment, and its adaptation to the person, as well as the high and established position of Professor Schweninger, as Bismarck's doctor and a university professor, that forbid any one to call him a "quack." Moreover, he could, if he wished, point to leading orthodox physicians and surgeons who confidently recommend his various methods, even if no one of them is equally certain about the value of them all. Open air, for consumption, has hundreds of well-known medical authorities to praise it; deep breathing, for many purposes, is advocated by Professor Hoffmann and others; special exercises have long been recognised as remedial, *e.g.*, by the Schott-Nauheim and Weir-Mitchell systems; the latter system, with many of the best medical authorities, employs massage (at which Dr. Schweninger

himself, with his strong yet gentle hands, is one of the greatest living adepts); Weir-Mitchell freely uses rest and quiet; water-treatments have been scientifically studied and practised by Winternitz and others; light and colour treatments by Finsen; dietetic treatment by Sir Andrew Clark and an increasingly large number of specialists, the principles including moderation and regularity.

Add to this that Schweninger believes in his ways, is an enthusiast, and is absolutely fearless in speaking out what he thinks to be the truth, and even then one has not exhausted his claims to attention. For during the last few years such doctors as Bernheim, Lloyd-Tuckey, Schofield, and numerous French specialists, have laid emphasis on that power which is called by many names, but may here be described as Suggestion. It seems to involve some personal influence such as Napoleon and other leaders of men possessed. Whatever it is, Schweninger has it. Not only does he believe in his ways as being the best he can devise: but his presence gives other people confidence in these ways and in him. He does not shirk responsibility, believing that the healing power lies in the patient if only the right conditions be supplied. His aim is to restore a normal condition of health which shall in future resist disease: to prevent as well as to remedy.

So much for the Sanatorium treatments, and Professor Schweninger as a successful exponent of them, on land. Such successes would have made almost any other physician rest on his laurels. But in this man's fertile brain there seems little rest.

For at least twenty years he has patiently meditated schemes for transferring these treatments to sea. He has seen—who has not?—many good results from sea-side visits and sea-voyages, in spite of the many errors of the latter in particular, for example, the excessive eating and drinking, and the deficient exercise, and perhaps the bad ventilation during sleeping hours. Think of the way in which people live in their vast hotels on land or at sea! It is gross. Only the air and the change and the rest keep them at all healthy.

But, says Schweninger, why make these mistakes? Why not determine to live sensibly at sea? Why not adopt some of the natural treatments (adding to them bathing and swimming, and, where it is advisable, sleeping in a tent on deck)? Because the will is weak, and custom and inconvenience and temptation are strong. Even he who starts on his voyage with the best intentions, soon succumbs to the bestial habits of over-eating, loafing, and bad ventilation. Obviously, special conditions must be provided to prop the weak will, so that after a month of reasonable living the person may profit by rushing quietly through the sea-air, by freedom from worry (even about his health, for that will be thoroughly tested daily), by recreation and society, and, once well, may then continue to live reasonably even in a city, as far as circumstances permit.

I have just been given four very interesting sets of papers. One of these tells about the first trip and some of the royal and other personages who are going on it: a steady, first-class steamer will probably start from Genoa, in March 1904, and spend thirty days in the Mediterranean, touching at Athens. The Company is in process of formation.

The second paper is about the equipment of the ship. All sorts of matters are dealt with—the diet; the ventilation below deck; the tents on deck, the gymnastic appliances, the games, the bathing appliances (including the arrangements for swimming), electric light and heat and colour apparatus, sanitation, and the staff of specially trained doctors and masseurs and masseuses. I have been through every one of the Naturheil methods twice, and not one of them did I find painful, and only one of them did I find unpleasant—that was a cold-water treatment which I liked after it was over.

The third paper mentions the types of passengers who will be benefited. They include the dyspeptic, the obese, the nervous, the sleepless, those who are "run down" by work or society pleasures, the gouty, rheumatic, and neuralgic, and sufferers from incipient kidney-disease; but not sufferers from infectious or other objectionable complaints. Needless to say, the first trip will be expensive, and will appeal especially to the upper classes and the well-to-do in England, on the Continent, and in America. But soon Professor Schweninger, the medical adviser to the Company, hopes that special steamers appealing to special classes, and within the means even of the poor, will be despatched for similar cruises at regular intervals.

Hitherto he has only planned, having little time and perhaps little inclination for business-organisation; so his ideas have gone no further than did the recent conference at Biarritz. Now, however, he has found others who are interested in the idea and who will see that it is properly carried out.

Let the reader just imagine a day of the trip —early rising, in a well-ventilated sleeping-place (no overcrowded cabins allowed!); perhaps massage; some form of bath; a wholesome breakfast, healthy and moderated exercises on deck, followed by health-examination and tests, and then by any form of treatment (*e.g.*, a light-bath or sun-bath) prescribed for the individual case; games on deck or gymnastics or a swim; and so on. Around you, tired as you are by overwork, the restful sea, blue and warm, and within you no anxiety whatsoever. Supervising you, an expert doctor (for there will be one doctor to every eight or ten patients). Even Professor Schweninger himself can scarcely calculate how great and rapid the good results will be.

The chief objection on the part of many, namely, sea-sickness, he has done his best to anticipate. For the fourth paper that I have is an autograph treatise of Schweninger's on the theories, probable causes, and (as far as he has had experience hitherto in over eighty cases) successful preventives and remedies for that calamity which usually prevents an English man and woman from ruling the Channel and other waves with any real dignity. No piece of work could be more characteristic of the man. Once again he insists on simplicities — special diet instructions are given so that the system may be cleared and the stomach reasonably provided with food; deep breathing is to be practised; the patient is to lie down and have compresses applied, so as to equalise the circulation; then, after an interval, there are to be certain exercises to help in the same direction. But throughout he refuses to dogmatise; as there are several causes—including an upsetting of the sense of balance, and several other scientific explanations—so there must be individual treatments, even if these have certain general principles in common.

I should like to quote extracts from his article, showing his power to describe an idea in a few terse and pregnant phrases full of humour. But there is no space. I must finish by alluding to an effect which I think the Ocean Sanatoria will surely have. In this first trip there will join leading people from England and the Continent, including Russia, as well as from America; they will join in the pursuit of better health by a more sane and rational way of living. They will get to know one another (as only fellow voyagers do), and will bring more closely together the nations that they represent, while at the same time they are likely to spread, more widely than any others could, those important ways to general fitness which science and experience are alike justifying more and more completely every year and almost every day.

# THE NATIONAL PHYSICAL LABORATORY

SCIENTIFIC AID FOR BRITISH INDUSTRIES—THE LABORATORY AT TEDDINGTON: ITS OBJECTS AND APPLIANCES AND THE WORK IT DOES—THE "FATIGUE" OF IRON AND STEEL

BY

H. C. H. CARPENTER, PH.D.

*Illustrated from photographs specially taken for* THE WORLD'S WORK

IT was mainly for the purpose of establishing a more direct connection than had hitherto existed in this country between science and our industries that the National Physical Laboratory was founded three years ago. It is not the first institution of its kind in the world, for the Physikalisch-technische Reichsanstalt at Charlottenburg has been in existence some fifteen years, and has done most useful work in rendering scientific aid to some of the most important manufacturers of Germany. Sir Oliver Lodge and the late Sir Douglas

Galton were the two men who, perhaps more than any others, were foremost in advocating a similar laboratory for Great Britain; and, as a result of their efforts Lord Salisbury appointed a Treasury Committee, with Lord Rayleigh as Chairman, to consider the subject. The Committee examined more than thirty leading representatives of science and industry, and reported unanimously "that a public institution should be founded for standardising and verifying instruments, for testing materials, and for the determination of physical constants." The Government acted upon this recommendation, founded the National Physical Laboratory (in which Kew Observatory became incorporated), voted a sum of £14,000, which was afterwards increased to £19,000, for buildings and equipment, and an income of £4000 for five years, and requested the Royal Society to appoint the governing body of the institution.

The Physical Laboratory proper is situated at Bushy House, Teddington, Middlesex. The history of this house dates back more than two hundred years. It was built for the Ranger of Bushy Park, and was inhabited by the first Lord Halifax and by Lord North. In 1837 it was granted to Queen Adelaide, the widow of William IV., who was at one time Ranger, and after her death it was inhabited at intervals by the Duc de Nemours until 1896. At his death it passed to the Crown, and one of the last acts performed by the late Queen was the signing of the transfer of Bushy House for the purposes of the Laboratory.

The Director of the Laboratory, Mr. R. T. Glazebrook, D.Sc., F.R.S., was formerly Principal of University College, Liverpool, and is well known throughout the scientific world for his work in connection with the Electrical Standards Committee of the British Association. The assistants in charge of the various departments are mostly young men with a university training, and if Cambridge and Owens College, Manchester, are particularly well represented, this is only what might have been expected on account of the high standard of physical science at these universities. One of the best indications that a thoroughly satisfactory start has been made is to be found in the fact that although work has only been in progress for some twenty months, and much of the time has been spent in mere organisation, it has been found necessary to appoint several new assistants in the last few months.

Situated about seventy-five yards to the north of Bushy House is the engineering laboratory, almost entirely a new building. Here is the chief source of power—a 100 horse-power boiler, which serves not only for heating purposes throughout the various buildings, but is used for driving a 75 kilowatt condensing turbine of Messrs. Parsons. There is also an 18 horse-power Crossley gas-engine which drives a dynamo of Messrs. T. Parker, of Wolverhampton; and either turbine or gas-engine can be used for charging the storage cells grouped in various batteries throughout the laboratory. These batteries are used for lighting, and also for experimental purposes where currents of various voltages are required. The main engineering laboratory is 80 ft. by 50 ft., and contains a 10-ton vertical testing machine, a shaping-machine, a universal grinder, a pressure-gauge testing apparatus, and a high pressure (400 lbs. to the inch) steam-boiler.

Turning now to Bushy House, thermometry, electricity, and magnetism, optics, metrology, metallurgy, and chemistry are all represented. Thermometry has, perhaps, the best equipped department in the building. The appliances render it possible to standardise and test thermometric instruments over a range between the temperature of the liquefying-point of air and that of the melting-point of cast-iron—broadly speaking, about 2500° F. or 1400° C. The liquid air is obtained from a Hampson liquefier attached to a Brotherhood compressor. Special mention may be made of the electrically heated furnaces, whereby the highest temperatures tested are obtained. These furnaces consist of a series of concentrically arranged tubes of fine unglazed porcelain, the radiation losses being reduced to a minimum by a jacket of crushed quartz. The innermost tube is wound with nickel wire which is heated by a very steady electric current; so well can this be regulated that the temperature can be maintained for an hour together at, say, 2000° F. with no greater variation than one-fifth of a degree.

Allied in certain respects to thermometry, for it is largely high-temperature work, is metallurgy. This laboratory contains various furnaces—heated by coke, by gas with either natural or forced air draught, and by the electric current, in which alloys can be made and subjected to the most varying thermal treatment. An apparatus has also been installed for detecting and recording the energy-changes which take place at certain critical points when such a metal as steel is heated to 2000° F., and afterwards allowed to cool

to the ordinary temperature. Attached to this department is another in which the structural changes that accompany the energy-changes just referred to may be examined and photographed, if necessary under a large magnification.

Close by is one of the rooms which has been fitted for metrology. In it are placed a dividing-engine, made by the Société Genevoise, which will divide lengths up to one metre; also a measuring-machine for end measures with a capacity of four feet, and two measuring-machines of Messrs. Armstrong and Whitworth. A comparator, for comparing line-measures and measuring their co-efficients of expansion, is installed in another room; with this apparatus length differences amounting to not more than $\frac{1}{25000}$th of an inch can be measured with certainty.

The electrical department is the largest, and it has perhaps more attractive apparatus to show than any other. Here are set up the two air-condensers of the British Association, the standards of electrical capacity. For magnetic measurements, particularly those relating to iron and steel, there is a highly sensitive moving coil ballistic galvanometer. Special mention may also be made of a Kelvin Ampère balance (to 100 Ampères), and a Kelvin electrostatic voltmeter (to 160 volts), with a long and open scale. With the latter is used a potential dividing-box with a resistance of 100,000 ohms, extending the range to 1000 volts, if required. In another room, maintained at constant temperature, have been placed the resistance coils of the British Association, together with the bridge and accessories; and resistances varying in value from 0.0001 to 10,000 ohms may be tested. Numerous cells of standard electromotive force, both of the Clark and the Weston type, have been set up. Near by are the magnetographs, designed by Mr. Watson. Since February 1902, records have been taken with these simultaneously with those taken by the British Antarctic Expedition.

The optics department is being organised at the present time. Thanks to the gift of Sir William Preece it will soon be possible to test the light-giving power of various lamps.

What was once the chapel of Bushy House is now, alas! the main chemical laboratory; and the cupboards that once held vestments are now the storehouses of quite different things. Popular opinion associates chemical laboratories with disagreeable smells, but, as has been aptly suggested, the workers in this particular laboratory will be able to plead in their justification that these are "the odour of sanctity."

After this brief summary of the appliances of the National Physical Laboratory, we proceed to consider the work that it does. The scope of this work is so wide that it would have been quite impossible to equip the Laboratory for the whole of it except with unlimited financial resources at command. Accordingly, the plan adopted has been to build up the equipment to keep pace with the demands of the work that is actually undertaken. A few examples may be given of the kind of work which the Laboratory has done, or is doing, at the request of private individuals, firms, and industrial concerns.

A knowledge of the co-efficients of expansion of metals under the influence of rising temperature is essential to the makers of pendulums. The fact that nearly every metal or alloy expands with rise of temperature has made it necessary for them to adopt methods of compensation—for example, with a mercury bob—in order to keep the length of the pendulum constant over the range of temperature in which it is used. Of late years a certain alloy of nickel and iron, in the proportion of about 30 per cent. nickel and 70 per cent. iron, has been prepared, and it was at first thought that it had a zero co-efficient of expansion, or in other words, that its length was independent of its temperature. Strictly speaking, this is not the case, but careful measurements which have been made on bars sent to the Laboratory show that over the range of ordinary temperatures the co-efficient of expansion is so small that, at any rate, as far as pendulums are concerned, it can be assumed to be *nil*, and therefore, that the pendulum-maker has at his disposal a material which does not need to be compensated for.

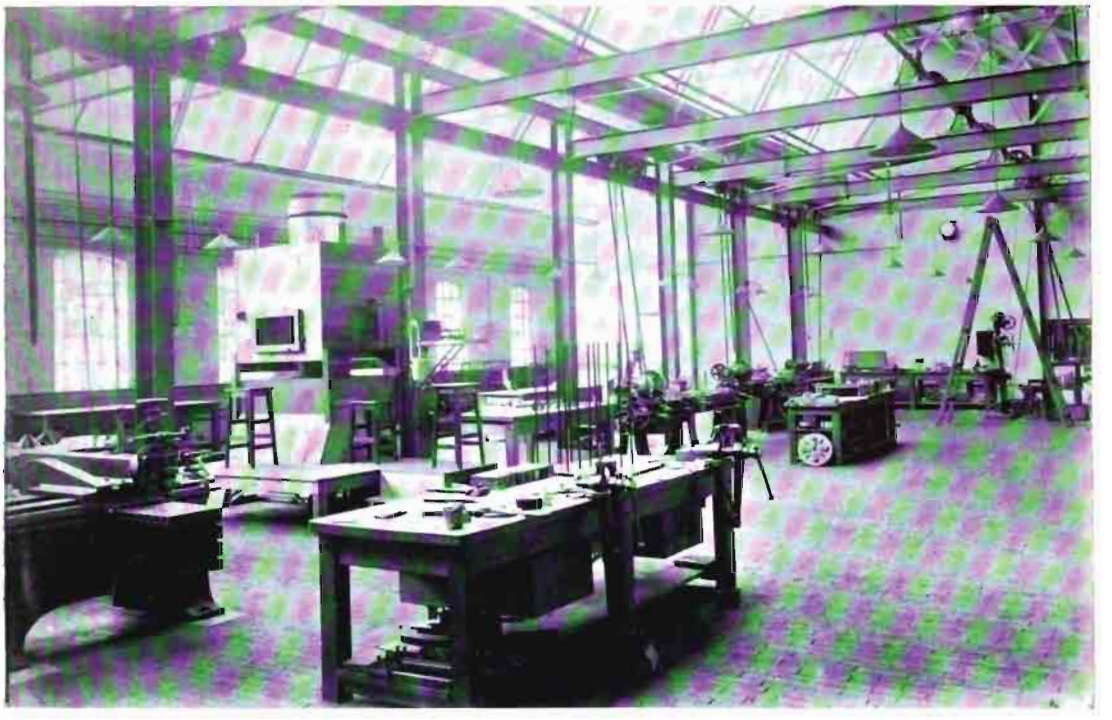
The use of iron for transformers is, as is well known, for the purpose of changing high voltage into low voltage currents. An alloy of iron with a small percentage of the metal aluminium has recently been manufactured, and found to give very promising results for transformer purposes. It is a noteworthy fact, for no one could have foretold that by alloying the purest commercial iron with a non-magnetic metal its magnetic sensitiveness would be increased. A specimen of this material was sent to the metallurgical department for a microscopic test. The structure of iron and its alloys is only visible under a considerable magnification of the crystals of which it is composed. A plane polished

surface of metal has first to be prepared, and a suitable re-agent for developing the structure of the crystals has to be found; next a complete microscopical examination under magnifications of 140 and 1000 diameters is made, and finally photographs are taken. It was found that the action of the aluminium consisted, at any rate in part, in the removal to the interior of the rod of certain impurities, which even the purest forms of commercial iron contain, leaving a ring of pure iron crystals at the edge of the rod; and these appear to have caused the high magnetic sensitiveness of the material.

The more enlightened manufacturers of iron and steel in this country are beginning to realise that for the successful and economical working of their furnaces, and also in order to obtain the most satisfactory qualities of their products, a knowledge of the temperature at which the furnaces are worked is really essential. Assuming that the system of manufacture at present in vogue will not disappear just yet, either on account of foreign competition or because it is replaced by an entirely different method of production, the thermometric department of the National Physical Laboratory will perform a great service if it can construct a thermometer that will record up to the highest temperatures attained in works practice, that will not deteriorate with use, and, if possible, that will not require much looking after. Such temperatures are far above the range over which the mercurial thermometer can be used; mercury would be converted into its vapour, and even the most difficultly fusible kinds of glass would be melted. At the present time the best method in use, namely, the measurement of the electric current produced at the junction of two wires of different metals situated in that part of the furnace whose temperature it is desired to determine is not available above about 1300° C., or about 2800° F. At those temperatures platinum and its alloys with the rare metals, rhodium and iridium, are the only metals which can be used, and they have to be most carefully protected from the action of the furnace gases, which act upon them chemically and cause rapid deterioration. Pyrometers of this kind have been tested at the Laboratory for several works. But this temperature is several hundred degrees lower than that of, *e.g.*, the blast furnace, which is probably over 3000° F. Certain metallic oxides, however, similar to those which are used in the Nernst Camp filaments, appear to give thermo-electrical effects at these very high temperatures, and it is hoped to make experiments with materials of this kind with a view to constructing a pyrometer, based on this principle, that will be available for the highest temperatures realised in metallurgical practice.

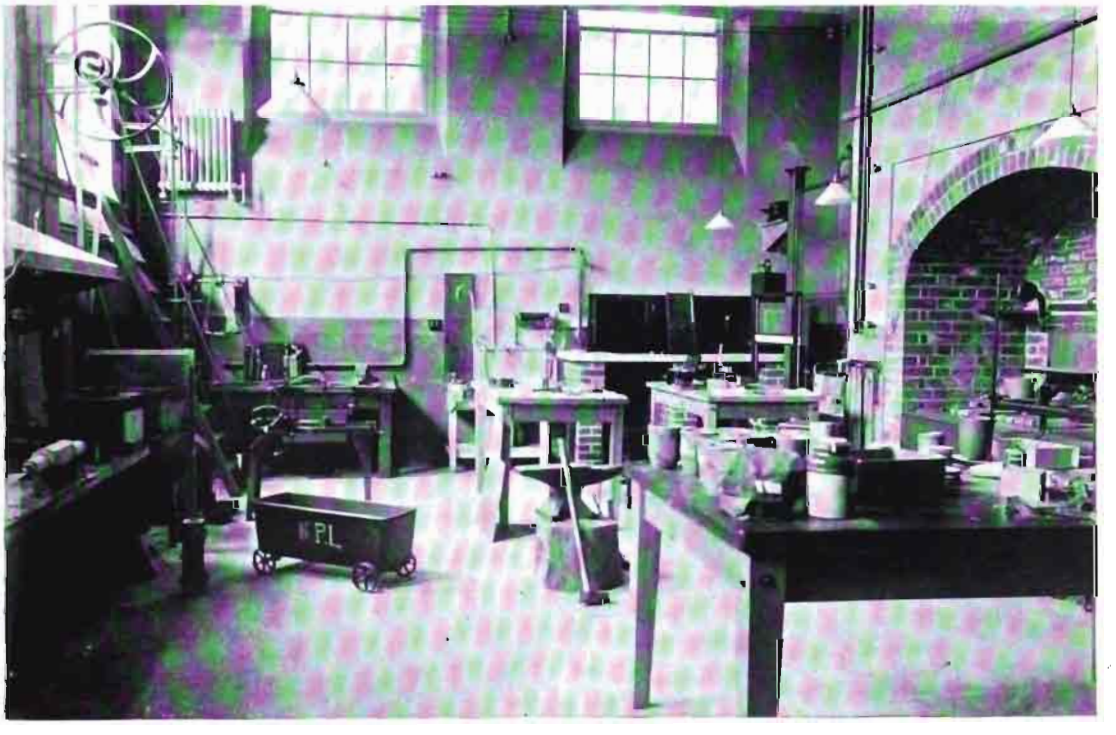
To give an idea of the work of the Laboratory in perfecting instruments, the construction of electrical resistance-boxes may be quoted. The simplest method of determining the resistance of, say, a metal wire, consists in passing an electric current of known strength through it, and determining the fall of potential between two points whose distance from each other is known. Here, again, with most metals the resistance varies if the temperature varies; for example, the electrical resistance of copper is 30 per cent. more at the boiling-point of water than it is at ordinary temperatures. But an alloy of manganese, nickel, and copper, called manganin, has been made whose "temperature co-efficient," as it is called, is only about $\frac{1}{1500}$th part of that of copper. This alloy, although it has found extensive application in Germany, has not been much used in this country. The electrical department of the Laboratory has constructed for its own use a number of resistance-boxes, wound with coils of manganin wire, and has adjusted them to the highest degree of accuracy.

Two scientific investigations which are in progress at the Laboratory are of particular importance to the industrial world. The first relates to the subject of wind pressure. In the construction of bridges and similar structures certain rules laid down by the Board of Trade have to be complied with, one of which is that a maximum pressure of 56 lbs. per square inch must be provided for. It has been pointed out that the Board of Trade rules, which were altered after the destruction of the Tay Bridge by a great gale, may be unnecessarily severe, and that, if this is so, the cost of engineering structures has been unnecessarily increased. An apparatus has been constructed in which thin flat surfaces of metal of various shapes and sizes are placed in a current of air, obtained by an electrically driven fan, whose speed can be varied within certain limits. The total pressure on the surface can be estimated to $\frac{1}{1000000}$th of a pound by balancing the plate against known weights; while the intensity of pressure, that is, the number of pounds per given area on different parts of the plate, can be measured by a sensitive pressure-gauge to $\frac{1}{100000}$th of a pound per square inch. The sum



A VIEW OF THE ENGINEERING LABORATORY

It is divided longitudinally into two bays, one of which is kept for experimental and research purposes, while the other contains the various machine tools. The wind-pressure apparatus is seen on the left of the picture




THE METALLURGICAL LABORATORY

Showing the Recording Pyrometer and the large Muffle furnace

IN THE ELECTRICAL DEPARTMENT

Showing the British Association standard air condensers (left) and the apparatus for testing magnetic qualities of iron and steel (right)

THE CHEMICAL LABORATORY

In the aristocratic days of Bushy House this was a chapel

of the intensities of pressure obtained by the one method should be equal to the total pressure obtained by the other method; and the experiments which have been carried out have shown quite satisfactorily that this is the case. Thus, a good start has been made with this investigation.

The other research is concerned with what many engineers call the "fatigue" of metals, and particularly of iron and steel. Not all engineers, however, accept this term. What is usually meant by fatigue is, perhaps, best illustrated by an example. The connecting-rod and piston-rod of a steam-engine, the propeller-shaft of a steamer, the girder of a bridge, &c., are, before they are actually used, subjected to certain mechanical tests; the load necessary to alter permanently a test sample of the material is determined in the testing-machine. This "elastic limit," as it is called, must be two or three times greater than any to which the rod will be subjected in actual practice. Cases, however, have arisen, unhappily only too frequently, in which, owing to the repeated alternate compressions and tensions to which the materials are, in their ordinary working, subjected, fractures occur under loads which by the usual calculations do not exceed this amount. The *Bullfinch* disaster, which is fresh in the minds of many people, is an instance of such a fracture of a connecting-rod. The Cunard steamship, *Pavonia*, had her propeller-shaft broken in a gale some years ago, and, but for the success which attended the heroic efforts of her crew in repairing the damage done, the Cunard Line would probably not be able to make the proud boast that it has never lost a passenger's life.

Very little is really known experimentally about the change which takes place in metals previous to fractures of this kind. But of late years more and more evidence has been accumulated to show that the properties of metals are connected in the most intimate way with their physical structure, that is, with the nature and arrangement of the crystals—for all metals have a crystalline structure—of which they are composed. Having regard to this a machine is being constructed in which test-pieces of metals can be subjected to alternating tensions and compressions to the number of some 1200 per minute, the weight of the load being capable of being varied. The test-pieces can be removed and any progressive alteration of structure be followed under the microscope until fracture occurs. In this way it is hoped to arrive at an accurate knowledge of the mechanism of the change, and to decide whether it can be properly described as "fatigue."

BUSHY HOUSE, THE QUARTERS OF THE NATIONAL PHYSICAL LABORATORY

GERMAN SCHOOLGIRLS ON THE RINGS

# GYMNASTICS FOR GIRLS

A PICTURESQUE FESTIVAL AT NURNBERG—HOW A FEW ENGLISH GIRLS STARTLED THE THOUSANDS OF GERMAN MALE ATHLETES

ENGLISH newspapers have scarcely mentioned a picturesque gathering that took place recently at Nürnberg, which brought together about thirty thousand German gymnasts—amateur gymnasts—to celebrate the tenth Turn-fest, the German gymnastic festival. From various quarters came the men, from Brazil, from America, from Roumania, and even from China. But England sent the only women who took part in the Turn-fest. Into this crowd of thirty thousand a score or two of young Englishwomen were projected, young women whose purpose in life is—for a time—to educate the bodies of their sisters. And they startled the thousands of male athletes, and doubtless stirred ambitions in the souls of their German sisters who do not at present adopt the short skirt and take physical training with becoming seriousness. The English female contingent was drawn from the Chelsea Polytechnic, headed by Fräulein Wilke, and the Battersea Polytechnic, headed by Miss Morse. But this was only a little leaven introduced into the thousands of men who flocked into Nürnberg for the festival.

The whole thing was managed with German completeness, German order. About forty thousand extra persons had to be accommodated in a small town. The Government lent 15,000 mattresses, and threw open the schoolrooms, while many of the townspeople took in guests without any payment at all. Board and lodging for four nights at 4*s.* 6*d.* was the fixed charge. You might imagine that the incursion of 40,000 people into a small town would disorganise the traffic and make the caterers mad. Nürnberg was ready. Just outside the city was the Fest-Platz, a large open space. To and fro electric trams ran

THE GERMAN CROWD WATCHING THE ENGLISH GIRLS AT DRILL

continually, charging a penny, and never a wait of more than a minute or so. Round about the festival ground were tents, one of them would hold 8000 people. It had a stage at the end, where plays were performed every evening. Did you want to dine—there were tents in which innumerable fowls and geese were being roasted before open fires; you could choose your bird and eat it when the fire had done its duty. Everybody seemed to drink beer the whole day long, and no one ever seemed to have drunk too much. On a Sunday the big procession took place. It was twelve miles long, each section headed by banners. And Nürnberg provided the proper Albert Dürer sky, deep blue, with masses of white cloud, and the red roofs of the houses in the middle foreground. Thirty-two thousand took part in the procession, which was six hours in passing, for Nürnberg streets are narrow, and at every halt jugs of beer were passed to the athletes in mediæval attire, who rode upon horses or were drawn in cars by huge, yellow bullocks. And then came the competitions.

Germany trains its men by way of gymnastics; and the next astonishing thing in this Turnfest was the contrast between the appearance and the achievement of the competitors on the Fest-Platz. The German does not suggest athleticism in his person. But he does the most startling things on the parallel bars. And he retains his skill far on into the approach to the tomb. One of the most remarkable of the sights at Nürnberg was the struggle of veterans. You could see the German editions of Lord Salisbury and the Duke of Devonshire doing the most amazing things with their arms and legs, while one venerable gentleman, who might have been Henrik Ibsen if appearances were not deceptive, stood on his head on the parallel bars until the spectator gasped.

But from the English point of view the central event was the performance of the twenty English girls who, under Fräulein Wilke's direction, showed how the feminine body may be brought to such perfection as human conditions allow. It was a purely educational exhibition, for these are the young women who in a year or so will be scattered through England training their sisters in healthful exercises. To Germany—to feminine Germany—it was quite a revelation. The simple exercises of twenty young and healthy Englishwomen on the platform in the Fest-Platz created such enthusiasm that the performance had to be repeated. And on an evening you may picture these two score of the fairest and finest that England can show in the way of budding womanhood, with a search-light turned upon them, marching and swaying with absolute precision to the German music, while two-and-thirty thousand people look on and applaud. When the man who looked like Ibsen stood on his head no one — excepting the Englishwomen — seemed surprised. The surprise, and the desire for imitation, came when these slim maidens in short skirts projected themselves into the midst of the thousands of their male rivals—and triumphed.

There is nothing so delightful about a German as his childishness. An Englishman in fancy dress always suspects that he is looking a bit

FREE EXERCISES BY THE ENGLISH GIRLS

of an ass, and he is generally right. The German has no doubts, and in a mediæval procession he feels no qualms whatever. At the end of the festival about a hundred and fifty of the best gymnasts were called up to the platform to be crowned. They were really crowned, make no mistake. On each victorious head was placed a wreath of oak leaves, and these simple and sensible people walked about with their wreaths as naturally as you would walk about under a straw hat. Moreover, they were kissed by the portly gentlemen who graced the platform. One watched the American contingent anxiously, for it had come very well out of the competition. It shrank from the kissing, and would not wear its wreath. It had acquired self-consciousness.

The Turn-fest came to an end with the German National Hymn, which the assembled thousands sung. And there are two things that linger in the memory: the splendid order of a crowd filling itself with beer and looked after by an occasional and infantile soldier; and the incursion of those English girls into the midst of thirty thousand male gymnasts. It is so seldom that we can teach Germany anything.

But there is this one thing we can teach the Germans—the physical training of women; and in the crowded town where life is squeezed out between making a living and sleeping off the effects of the effort, such an enterprise as finds its centre at the Chelsea Polytechnic is worth considering. From all quarters of England comes the inquiry of high schools, board schools, and other institutions in which girls are trained to be capable sweethearts, wives, and mothers. And to each of these goes the answer, in human form, of the last expression of physical womanhood. The autumn session, which begins this month, and will train healthy young women in the way that they and others should go, will attract many to the paths of progress, along which they may be directed by Fräulein Wilke—herself German.

LIFE IN THE GROUNDS AT THE NÜRNBERG FESTIVAL

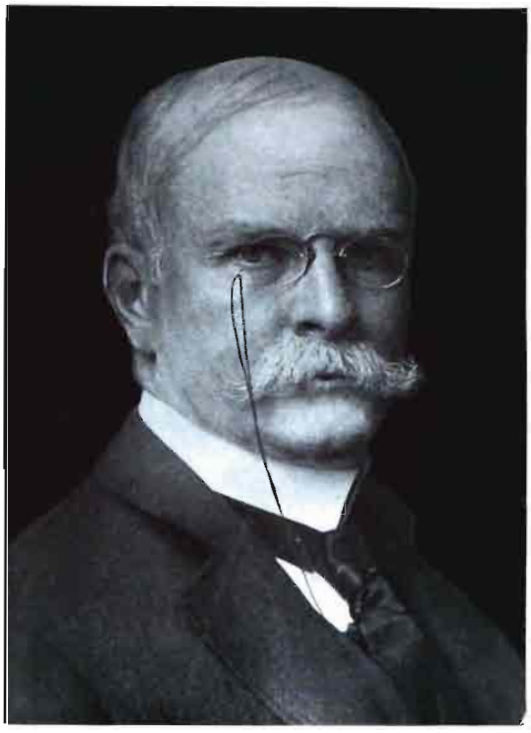
# THE COMING OF THE MOTOR-CAB

A BEGINNING WILL BE MADE BY PLACING FIFTY OF THESE VEHICLES IN THE STREETS, AND ALREADY HUNDREDS OF DRIVERS ARE TAKING LESSONS IN CONTROLLING THE MOTOR-DRIVEN CAB

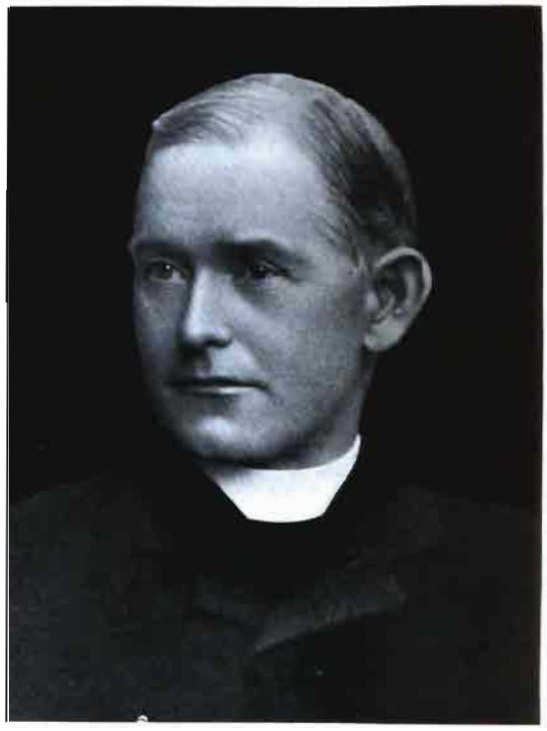
THE London public will soon have an opportunity of trying the motor-hansom. Experiments have been carried out for several months past by a company called the London Express Motor Service, Limited, which is placing fifty motor-driven hansom cabs on the streets a few weeks hence. The prolonged trials with a specimen vehicle have proved that with certain modifications which have been adopted, motor-hansoms can be utilised to great advantage for the heavy work that metropolitan traffic entails. The dimensions of the motor-hansom, as may be judged from our photograph, are somewhat larger than those of the horse-drawn vehicle. There is more room inside, while in case of need an additional drop seat is fixed alongside the driver, who sits before the passengers, but somewhat lower and to one side, so that the view in front is not obstructed. The glass front has a spring attachment, and can be raised or lowered by the passengers. A distance indicator is placed inside the cab, so that there can be no dispute as to the actual distance travelled. Luggage can be carried in the boot at the rear of the body, and there is also room for luggage on the floor in front of the passengers and by the side of the driver. The chassis of the vehicles are being built in Paris, and the whole of the carriage work is being constructed by Messrs. Hy. Whitlock (Limited), Holland Gate, Kensington. The engines are twelve horse-power, double cylinder Astor governed, and slow running. The power is transmitted through a Panhard type of gear to a Cardon driven axle. In order to eliminate any tendency to side-slip, the greater portion of the body has been constructed of aluminium to reduce the rear weight as much as possible. The engines are geared down to give greater hill-climbing power, and there are three speeds, the third giving about twenty-five miles an hour on the level.

THE MOTOR-HANSOM

It remains to be seen how the people will take to the new vehicles, but there can be no doubt as to the danger of travel in the existing hansom, chiefly due to the horse being so liable to fall on the slippery paving. The development of the new business will depend entirely upon the success attending the first twenty or so of the cabs placed upon the streets, but judging from the experience of the past six months' practical experiments, both as to working cost, and favour, there appears to be little doubt on this head. The policy of the company will then be to continue steadily to increase the number of motor-hansoms running; it is anticipated that soon after they begin running there will be demands for at least five hundred. As the working cost is much below that of the horse-drawn cab, there appears to be no reason why the new cab should not gradually supplant the old method. The interest displayed by proprietors of cabs in the motor-driven cab points to this, while hundreds of drivers of the present hansoms have applied to be taught to drive the new motor-hansoms. These men are anxious to secure their new occupation before their old one is gone.

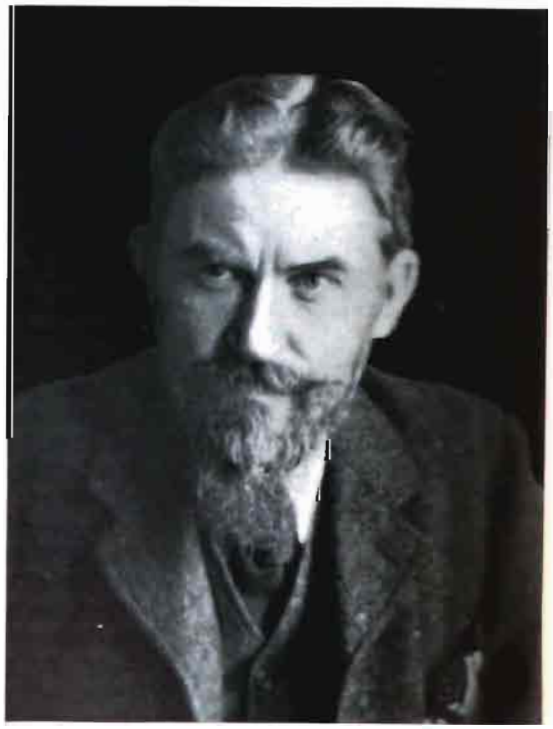


MR. JAMES LANE ALLEN
("The Mettle of the Pasture")



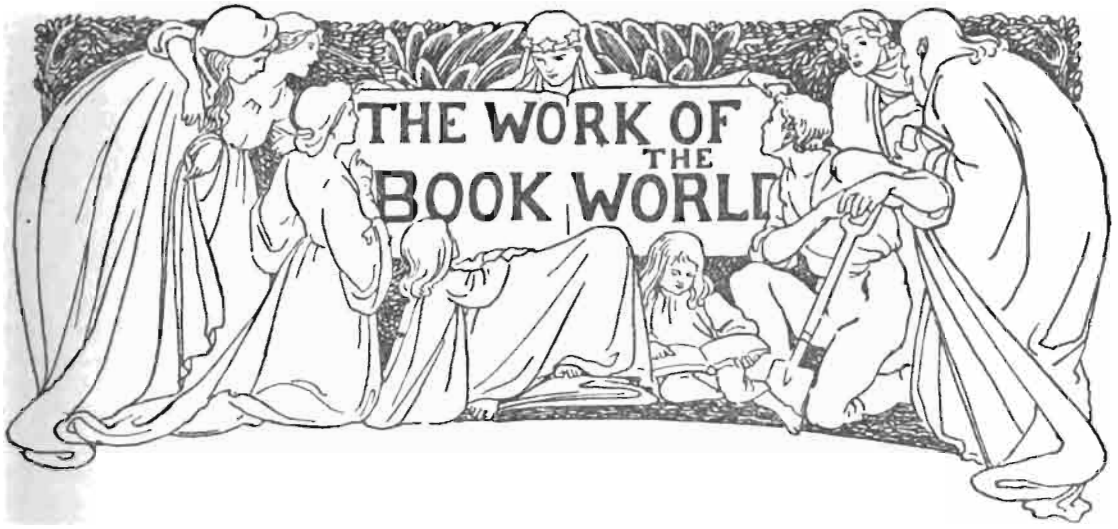
DR. WILLIAM BARRY
("The Dayspring")

ELLEN THORNEYCROFT FOWLER (MRS. FELKIN)
("Place and Power")



F. W. Evans, Epping

MR. BERNARD SHAW
("Man and Superman")




LONDON, *September* 15

THIS month, another contribution has been made to the painful controversy which Froude's indiscretions as an editor and mistakes as a biographer have raised regarding the domestic life of the Carlyles. In *The Nemesis of Froude* (Lane), Sir James Crichton-Browne and Mr. Alexander Carlyle have, we hope, said the last word in this miserable squabble. When the storm-cloud of a man, Thomas Carlyle, married the fitful sungleam of a woman, Jane Welsh, and when their diaries came under the eye of that unsympathetic biographer, James Anthony Froude, what could have been expected but charge and counter-charge, reply and retort? Froude's too frequent alterations of letters and documents (whether knowingly or not is no matter), his inaccuracy of memory, his ungenerous treatment of Mrs. Alexander Carlyle, called for explanations. Unfortunately these explanations have dragged the household of Cheyne Row through the gutter. *The Nemesis of Froude* pursues the unsavoury subject with relentless persistency. But surely the common sense of the public can now be trusted to give a verdict, and surely the decision will be something after this fashion:

"They had their little differences and misunderstandings, and sometimes their sharp encounters. What married pair has not? What man of genius and his wife ever escaped them? . . . Mrs. Carlyle was prone to take offence and could speak daggers. Carlyle, as he said of his wife's grandfather, had a hot, impatient temper, breaking out into fierce flashes as of lightning, if you touched him the wrong way, but they were flashes only, never bolts. But on the whole, they were happy and contented with each other, and it is impossible now to determine which was more to blame for any disagreements that varied the monotony of their existence."

### The Alien in England and at Home

The most interesting portion of the recent Report of the Royal Commission on Alien Immigration was the account by Major Evans-Gordon, M.P., one of the Commissioners, of his journey in Russia and Eastern Europe to investigate for himself the conditions of life of the people who form our Alien Immigrant class, and the causes which drive them from home and attract them to us. Major Evans-Gordon has now published a complete narrative of his journey, *The Alien Immigrant* (Heinemann), combined with a careful study of the question in its personal, political, and international aspects. I may say at once that it is a volume of extraordinary interest to all who are interested in the great racial movements of our time—fascinating as a record of personal travel and showing the greatest sobriety and competence of judgment. It treats of the situation in the East End of London, with its terrible housing problem due in chief measure to the encroachment of the alien and his exclusive dealing with his own race; it tells of the author's journey to the heart of the Jewish Pole in Russia; of the life of the people of Poland, Galicia, and Roumania; of the American system of alien examination; of the "filters" at Hamburg; and it concludes with a thoughtful discussion of the general question. Here are the concluding words of the volume:

"I blame the Jews," Mr. Israel Zangwill said recently to a representative of the *Daily News*, "for always expecting Christians to solve their problem for them. . . . I blame the Jews for not solving their own problems." That is a most concise statement of my case.

There is not a trace of the ignorance or brutality of Anti-Semitism about Major Evans-Gordon, and his book deserves attention by Jews and Christians alike, as a masterly and conscientious study of a question of pressing gravity.

### "G.B.S." at Large

Mr. George Bernard Shaw is a writer of surpassing brilliance. One can never be quite sure of his sincerity. His paradoxes are so dazzling that one always finds oneself reflecting that they are a manufactured article. He is, too, an intensely provocative writer—as he obviously desires to be—provocative both of thought and of strong language. To comment upon his latest volume, *Man and Superman* (Constable), one would wish to write another book equally as long. It consists of a preface of thirty-seven pages addressed to Mr. A. B. Walkley—"You have perhaps said to yourself when I have passed your windows, 'There, but for the grace of God, go I'"—of a play covering 175 pages; of a "Revolutionist's Handbook and Pocket Companion," and of a long collection of "Maxims for Revolutionists," of which the following may serve as specimens:

"Do not love your neighbour as yourself. If you are on good terms with yourself it is an impertinence; if on bad, an injury.

"The art of government is the organisation of idolatry.

"The flunkeyism propagated by the throne is the price we pay for its political convenience.

"Liberty means responsibility. That is why most men dread it.

"He who can, does. He who cannot, teaches.

"Assassination on the scaffold is the worst form of assassination, because then it is invested with the approval of society.

"When domestic servants are treated as human beings it is not worth while to keep them."

To those who can enjoy exceeding wit and brilliance divorced from responsibility, and who can see their convictions upon all grave matters treated with frank contempt without being made either unhappy or uncomfortable, this volume will afford a sharp intellectual and moral exercise. But it is not a book to leave lying about in the family circle, and nobody under forty should be allowed to read it.

### The Question of the Moment

Campaign literature on protection grows apace. *The Protectionist Peril* (Methuen), by Mr. Perris, is a valuable statement of the free trade case. Trade, according to Mr. Perris, follows natural channels and an advantageous price-list, and the figures he produces to show how little the Canadian preference tariff has benefited us are indeed very striking. He sums up in these words:

"Thus we have the very odd result that under a much lauded Imperial preferential tariff poor old Mother Country contributes nearly two-thirds as much as the United States to Canadian revenue, though she sells less than two-fifths as much merchandise!"

Regarding Mr. Chamberlain's promise that the revenues derived from the import duties under imperial preferential tariffs will be spent on experiments in social amelioration, he writes:

"The awkward fact around which the whole speculation revolves is that profit on the preferred trade cannot go up without revenue from the penalised trade going down."

Undoubtedly that is the "awkward fact" which Mr. Chamberlain must face.

Mr. L. G. Chiozza, who has done so much valuable work for the cause of free trade and free food, is content with amassing figures and drawing explanatory diagrams in *British Trade and the Zollverein Issue* ("Commercial Intelligence" Publishing Company). He comes to the same general conclusions, however, as Mr. Perris. Our home market must not be sacrificed; our food and raw materials are drawn mainly from outside the Empire and cannot be supplied from inside for many a long year to come—some of our needs cannot be supplied at all from our own territory; any form of protection would be injurious to our trade. These propositions are established less by argument than by an array of figures. Those who want to think for themselves will find in Mr. Chiozza's pages plenty of raw material upon which to work.

### G. F. Watts

The series of "Temple Biographies" has been projected to bring together into uniform volumes the lives of "God's born interpreters." Certainly G. F. Watts is one of these, and the scheme of these biographies could not be complete without a study of his *Life-Work* (Dent). Watts is a Celt who was inspired by the Elgin marbles. But this study by the Rev. Hugh Macmillan is less a biography of the painter

than a guide to his mind and a handbook to his work. And so he is dealt with in various chapters as a portrait-painter, an interpreter of Greek myth, a creator on canvas of the chief incidents of Hebrew story, the poet-painter of allegories, and finally as the sculptor and literary man. All Watts' pictures are the result of much thought. Every pose, every touch of colour has a meaning. Passing through a gallery of these pictures one beholds on canvas symbols of the great problems of life and death over which men have brooded. For, as Dr. Macmillan well says when emphasising the unity and harmony of all Watts' work:

"All these pictures shadow forth, in expressive symbols, the religion of Watts—his belief in the moral government of the universe, his serene faith that all things come through a divine ordering and in conformity to a divine plan—his artistic solution of the great problems of sin and life and death and judgment, of the ruin and of the redemption of the world."

## A Great Turk

For several reasons this is an appropriate season for the appearance of a *Life of Midhat Pasha* (Murray), by his son Ali Haydar Midhat Bey. Taken all in all Midhat was perhaps the greatest Turk of the last century, and what is rare in a race which seems wholly incapable of government, he was a constructive statesman. There were many of his contemporaries who shone in that chief attribute of his people, soldiery. But this only makes his own achievements more marked. He was only a statesman by comparison, for it cannot be denied that he was woefully deficient in the first attribute of a politician, tact with men. He could build up and carry out a scheme of restricted constitutional government in the nation most hopeless of all ideas of self-government. But he could not surmount the intrigues of the mediocre men under him or guide the inclination of the young sovereign whom he had largely placed on the throne. The result of this deficiency was tragic. Midhat was brutally murdered while an imprisoned exile. His young ward, Abdul Hamid, has developed so far away from his humane teachings as to be known to the world as the most inhuman of rulers. Both men were worthy a better destiny. The author, a patriotic Turk in exile, seeks to show that the Ottoman has been grossly maligned by history, especially as regards his treatment of Christian races, and that the corruptions of the Ottoman system are due to the growth of autocracy, which was entirely alien from the spirit of the original democratic Constitution of the Osmanli. The story of Midhat's early career, and his part in the *coup d'état* of 1876, whereby Abdul Aziz was deposed, and of Murad's three months' reign and Hamid's enthronement, are frankly related. Here is the account of the much-debated death of Aziz:

"Abdul Aziz had already made one or two unsuccessful attempts to throw himself out of the windows of the palace. On the morning of June 5 he asked for a pair of scissors with which to trim his beard. On the attendants demurring to comply with this request, the Valide Sultan (the Queen mother) ordered the scissors to be given to her son. Shortly after this, the ladies of her suite, looking out of a window of a corridor that commanded a view of the room occupied by the late Sultan, saw him sitting quietly in an arm-chair, with his back turned to the window, but shortly afterwards, perceiving that his head had dropped on his lap, they ran to the door and tried to open it. Finding it locked, and fearing a catastrophe, they ran screaming to the Valide Sultan, and informed her of what they suspected. Orders being given to break into the room, they found Abdul Aziz sitting in the posture already described and in a pool of blood, flowing from two wounds in his arms, evidently caused by the scissors, which had fallen beside him on the floor."

Seventeen medical men of all nationalities, including one Englishman, Dr. Patterson, saw the body, and signed the report that death was due to suicide. In later years Abdul Hamid tried to prove that murder had been committed, and that Midhat was privy to it. The author states that Murad's mind was unhinged by the tragedy and by another which immediately followed it, and narrates the steps taken in connection with his deposition. Midhat was commissioned to see Abdul Hamid, the heir-presumptive, and obtain his solemn promise to promulgate without delay the new Constitution; to act in matters of State only with the advice of his responsible advisers; and to assign certain offices to certain people friendly to reform. Abdul Hamid pledged his word—as he has often done since—with no intention of keeping it. "He pretended to opinions more advanced than the most advanced of his Ministers, and in favour of even a more democratic Constitution than the one elaborated." On leaving the Palace of Dolma-Bagtche on the night of Abdul Hamid's investiture old Mehemet Rushdi turned to his colleagues and said, "We have been in a great hurry to get rid of Murad. May we never have cause to repent what we have done!"

Most of them drank deep the dregs of repent-

ance in exile or imprisonment. The book is valuable, apart from the pitiful story of its subject, in that it makes plain the ignoble part Russia has played in the Eastern question during the last half-century; the despotic character of the present Sultan, and the way in which Bulgarian revolutionists work. This last subject is treated in an appendix, written by Midhat himself, the friend of the Bulgars, and it throws important light upon the chief factor in the present situation.

*Belgrade, the White City of Death*, by Mrs. Northesk Wilson (Everett), is a hodge-podge collection, mainly biographical, of the Obrenovitch dynasty. As the title suggests, the author is by sympathy an adherent of the deposed kings. But the scant information given about them is patched out by extracts from Servian folk-lore and even a long repetition of the alleged clairvoyant prophecy of the regicide.

### India

It has been said that Sir William Hunter re-discovered India, and it is certainly true that no official ever sent there by us loved the land more or understood the people better. Unfortunately, Sir William died when he was but beginning in his retired leisure to give us the ripe fruits of his official experience. *The India of the Queen* (Longmans) is a collection of essays and articles upon Indian problems. The first sections, consisting of articles published in the *Times* during the Queen's Jubilee in 1887, sketch in strongly marked outline the changing character of the problem of Indian government. First of all, conquest had to lead the whole peninsula into subjection. That was the Dalhousie epoch. Then, consolidation had to follow; and our great blunder of that epoch was the mutiny, of which Sir William Hunter writes in this suggestive sentence:

"The mutiny of 1857 was the price paid for attempting to unite India under a central Government without the material appliances and the moral influences necessary to maintain unity."

Finally, conciliation had to succeed consolidation: Lord Mayo conciliated the Princes and the Marquis of Ripon won the affection of the people. But the problem of India is far from being solved. There are, for instance, the new social and religious conditions created by our system of education, the quickened political instincts of the people, the rapid increase of population and the frequent famines. As an indication both of the extent and the spirit of recent change, we cannot do better than quote this humorous comment upon railway enterprise:

"For the leading Hindu shrines, convenient branch railways have been constructed which give fair promise of 6 per cent. dividends and shares at 25 above par. . . . The chances of a god doing a large and increasing business are greatly improved by a railway station. Juggernaut himself, after defying the calamities of a century, now finds his popularity imperilled for want of railway communication. The prospects of 'The Lord of the World' rise and fall as the Secretary of State is rumoured in India to be willing to grant terms to the proposers of the branch Orissa line at 3 or 3½ per cent. But pilgrimage by return ticket, with children at half-fares, while it promotes joyous gatherings of the people in honour of the gods, is death to fanaticism."

Sir William Hunter never thought the Indian problem insoluble, and these essays are full of suggested remedies.

From Sir William Hunter's political essays, one naturally turns to the interesting account of religious India which Mr. J. Campbell Oman gives in *The Mystics, Ascetics, and Saints of India* (Unwin). The descriptions of the Sadhus and other similar characters are from personal observation and are accompanied by excellent photographs. Mr. Oman has added nothing to our knowledge of Indian religions, nor has he any fresh light to throw upon Indian asceticism. His special function is to introduce us personally to the saints, and the rogues and vagabonds who pose as saints. Incidentally whilst describing the habits of one of these sects, once famed for its bloodthirsty fanaticism, he illustrates the growing power of Western civilisation in the East.

"Many *akalis*, wandering about the country in comfort with horses and camels, do not hesitate to ask for pecuniary assistance. The leader of one of these bands once paid me a visit, sending in the following visiting-card:

"PREM SINGH
"(NIHANG SINGH),
"VAHIRIYA.

"(Of the party of Nihangs that travel about and have no fixed abode.)"

### Sir Walter Besant's Essays

To those who know the late Sir Walter Besant chiefly by his novels, it will be a pleasant revelation to have the new volume of *Essays and Historiettes* (Chatto). The world was accustomed to regard Sir Walter as a lively and energetic writer who turned out a great amount

of work and took hardly any pause for reflection. The ten essays in this volume show both the practical and the idealist side of the man. Three of them are upon the practical side of the literary profession, and the remainder upon French writers and French history—"King René of Anjou," "The Failure of the French Reformation," "Théophile de Viau," &c. A passage from the essay on Henry Murger (written in 1873) shows at once the style of the essays and the outlook of the author:

"All literary Paris attended his funeral, whither also, out of respect for their *sacer vates*, came the whole of the Pays Latin. The day was foggy and cloudy—a fitting time for the funeral of one whose life had been a long succession of rainy days. . . . His life, with all its embarrassments, disappointments, and miseries, may be taken as a bitter contrast to Marcel's sermon, which he wrote at six-and-twenty. Who would desire such a life? Is it not better to be 'respectable,' when respectability means comfort, ease, dignity, and a decent income?

"He died, and we pity him. Why? Is it not because he lets us see his heart? He was a sympathetic man; so, because he can feel the struggles of others, we too feel for him. And then one fancies that the hand of fate was upon him. In his early lack of education, his isolation from the real world, his entranced absorption in the present, his exaggerated idea of the world of pleasure, we see so many snares and pitfalls, into all of which he tumbles and falls by turns. He should have been taken into the quiet domestic life in which poor France, so much decried in these evil days, is so rich. There he would have found peace and a wider world. But his guardian angel was asleep when he wanted help; so he blundered, naturally enough. What are they about—these guardian angels—that they let things turn out so badly?"

There is in the above a note which was also the note of Sir Walter Besant's professional life. In an age alive to self-interest and disposed to listen to counsels of prudence, he stood for the elevation of the position of authors. They owe to him such a realisation of the money-value of their work as any man less disinterested, less persistent, and less generous than Sir Walter Besant would probably have failed to bring about. Yet no one was more conscientious than he in exercising the responsibility of encouraging the aspirant to depend upon literature for a living; and in that sense we commend the essay upon "Literature as a Career" in this pleasant volume.

In a little volume entitled *Plays, Acting, and Music* (Duckworth), Mr. Arthur Symons gathers together extracts from musical and dramatic criticism which has appeared in various newspapers and periodicals for some years past—many years, indeed, if we are to judge by the portraits given of the celebrities criticised, for none of these are of recent date. Most readers will probably object to the appearance of the words "last night" or "last week" in fragments thus gathered into book-form, but the author no doubt believes they lend a certain present tense to text sometimes in need of revival. Too often the plays and players referred to are part and parcel of the irrevocable past; the author, however, uses them as pegs upon which to hang his views of their art, and of art generally, which he hopes will survive the ephemeral subject of their expression. In fact, he puts forward these views as a sequel to others he has heretofore published upon art, living and dead—as another text-book, so to speak, in his fragile and sensitive school of philosophy.

### The Anabaptists

Although socialist students of history in Germany have been paying particular attention to the democratic religious movements which accompanied the reformation in middle Europe, and have published a very considerable literature on the subject of the socialistic tenets of these sects, the period has been practically neglected by English writers. Mr. Belfort Bax has, however, been following in German footsteps. He has already given us two volumes of studies in German society at the close of the Middle Ages, and now he has issued the *Rise and Fall of the Anabaptists* (Sonnenschein). The Luther ferment gave rise to many strange growths. Zwingli was too radical for Luther, and Zürich became the headquarters of the more advanced movement. But at the end of the fifteenth century the craftsmen of middle Europe were stirred by signs and visions, and Zwingli would go no further than the wealthy guild-masters' sense of propriety allowed him. So, even Zürich became a Nineveh in the eyes of the more extreme brethren. The new Jerusalem was to be founded in Strasburg, then it was to appear in Münster. No stranger chapter has ever been added to human records than that written by the saints who reigned in Münster whilst the soldiery of the powers of darkness lay outside the walls thirsting for the blood of the Lord's chosen people. Mr. Bax tells the story of the government, the siege, the massacre, in chapters that read like a romance; and to those chapters should go all who are interested in the premature outburst

of communism, the sensual abandonment to religious frenzy, the extraordinary pageantry of theocracy which marked the reign of anabaptism in Münster. Let the following extract suffice as an indication of the interest of the tale which Mr. Bax tells. Jan of Leyden, the leading Münster preacher, had been proclaimed King of the New Zion :

"On the *Prinzipalmarkt* a magnificent throne was erected, to which the King repaired three times a week in state, to administer justice. On these occasions his coming was heralded by a fanfare of trumpets. Before him, marched the master of the ceremonies, Hermann Tylbeck, with a white staff in his hand. Immediately behind followed the King, attired in his royal garments, the crown on his head, the sceptre in his hand, riding on a white horse and accompanied by two gorgeously dressed pages, one on either side, one bearing the Old Testament, and the other the great sword of justice. A long procession followed headed by the vicegerent Knipperdollinck, the royal orator Rothmann, and the newly appointed Chancellor Krechting."

Mr. Richard Heath, however, understands the Anabaptist spirit better than Mr. Bax, and his book and essays upon this mediæval sect should be better known.

### A Doctor on Hypnotism

Dr. J. Milne Bramwell's exhaustive study of *Hypnotism* (Richards) is the most scientific contribution to that subject which has been made by a British doctor since the time of Braid. Dr. Bramwell and the small school of medical practitioners to which he belongs are hardly known to the man in the street, by whom hypnotism is still called mesmerism and is valued as the means of providing a good entertainment occasionally. Dr. Bramwell is chiefly concerned in showing its value in medicine, and the striking instances he gives from his own practice are certainly very convincing. The book is by no means exclusively medical, however, and the student of psychological problems will find in it much to consider. We might instance the section which discusses the well-observed fact that a hypnotised subject can be made to respond to suggestions after certain lapses of time. This is one of the experiments recorded in that section :

"TUESDAY ; subject I. ; time 6.30 A.M. *Suggestion :* At the expiration of 1600 minutes J. to pull the cook's nose. *Result :* Suggestion carried out 60 minutes too soon."

J's. haste may be explained by the fact that she was a servant under the cook. Another very interesting point brought out in connection with hypnotic suggestion is, that subjects will not do anything morally repulsive to them. Dr. Bramwell's studies really show us how fearfully and wonderfully we are made. He does not pretend to have any theories of his own explaining hypnotic phenomena, but this book is a record of patient scientific observation conducted by a keenly critical man.

### Fiction

No one of the American writers who in the last decade have come in such flocks to English readers has secured (and deservedly secured) for his own a warmer place than Mr. James Lane Allen, the first and the most loving of Kentucky writers. In his latest novel, *The Mettle of the Pasture* (Macmillan), Mr. Allen still sets his stage in the Blue Grass country, famous alike for its women and its horses. But from some other pen we must look for the sporting novel of the Kentucky horse and race track. In this book it is the beauty, the fire, the passion of the Kentucky woman which give the theme. In fact it is difficult to believe in the actuality of a heroine of these imperfect days who in the face of a great love would reject her lover for lack of the same purity which she is bringing to the marriage. Nor do other of Mr. Allen's characters strike the reader as actual ; the villainess in the person of the heroine's leopard-like grandmother is too irretrievably wicked, and the hero hardly exists at all. Certain secondary characters, however, the *ingénue* Marguerite, the old lawyer and the young scientist-lovers, are admirably realised. And over all, over whatever imperfections there be, the author has spread the mantle of as perfect a style as has ever come out of his country, and has infused the breath of an atmosphere that is charming, his idealised vision of his native State.

In her former novels Miss Ellen Thorneycroft Fowler fully established her ability to adorn a tale with an attractive sprightliness and a sometimes surprising insight into minor characteristics. Most of them were so of the world worldly that their morals were lost sight of. But now comes the author to point her moral so strenuously in *Place and Power* (Hutchinson) that the literary reader cannot but regret the necessarily greater lack of adornment for the tale. Yet even the reviewer does not need the publisher's statement of extraordinary sales to realise how popular this book will be with the great majority which likes a religious novel, a preaching story, far better

than a mere rescript of daily life. Miss Fowler (Mrs. Felkin) has done thoroughly well what she set out to accomplish, and her latest work will surely increase her already wide popularity.

There is a curious demarcation in periods for historical fiction. Certain times have a fascination for the novelist which others wholly lack. In France the two Napoleons seem to have lent this glamour to their reigns which those who ruled between have failed to secure. Dr. William Barry is, therefore—quite aside from his well-deserved fame as the author of *The Wizard's Knot* and *Arden Massiter*—sure of a welcome when he comes forward in *The Dayspring* (Unwin) with a story of the declining days of the Second Empire. But he has mixed other and very attractive ingredients in his latest potion. The hero is a young Irish nationalist with a fervent and tragic record in his own country before he joins in the stirring scenes of the Paris Commune; there is a beautiful French aristocrat for heroine; there is a very finely drawn charlatan of the spiritualist type which obtained its first and greatest power at this period, and a millionaire philanthropist seeking the salvation of seething France by moral suasion. Over and about all of these the life of the City of Light in its gayest day weaves its web until the reader is first fascinated with colour and then, as the early glamour fades away, left wrapt in suggestive thought. There can be no higher achievement for the novel than when it secures this two-fold result.

Mr. Fisher Unwin's Pseudonym Library made some years ago quite a name for itself as a collection of long short stories. It seemed to provide the conventional long felt want. There were many bits of fiction too short to make an ordinary book by themselves and too long to form the small portion considered necessary for a collection of stories in one volume. We may take it that the long delay in the continuance of the series was due more to the scarcity of available material than to any lack of success. For has not the "Library" suffered the flattery of American imitation in name if not in quality? If the resumption of the series promises any further numbers as good as the latest, *Penelope Brandling*, by Vernon Lee, the noble army of readers is meet for congratulation. In spite of the difficulties of space and scope, the lady with the pseudonym (Miss Violet Paget) has notably triumphed in this story, autobiographically told by the heroine, a Welsh baronet's lady of the eighteenth century. It is a story of murder and smuggling and wrecking, but it is filled with a full literary flavour and the seeming artlessness which is the best art.

*The Soul of Chivalry* (Sonnenschein) is an anonymous romance of place and power, evidently the work of an amateur and often crudely deficient, yet at other times full of a not displeasing discrimination and invention.

*The Situations of Lady Patricia* (Unwin) are not the compromising ones which might be expected from the author of *The Letters of her Mother to Elizabeth*. Whatever may be the scandalous circumstances in which her friends and associates find themselves, Lady Patricia is engaged in struggles for a living, and, as the daughter of a dead and bankrupt Marquess, is a lady housekeeper, a lady milliner in Bond Street, a titled companion to an American millionairess and so forth, in turn. After the good work he did in *A Girl of the Multitude* it is regrettable that Mr. W. R. H. Trowbridge has returned to the "Elizabeth" school. But no doubt it is more profitable. And the book is certainly a record of amusing degeneracy.

In *The Rose of Joy*, by Mary Findlater (Methuen), this pleasant writer of Scotch stories continues in the field which she and her sister have made their own. It is a story of the love which is content to live within itself, to renounce and to remember, Emerson's rose of joy in the actualities of life.

Mr. H. B. Marriott Watson is best known for stories of stirring adventure related with that choice of episode and epithet which lead to distinction. His latest book, *Alarums and Excursions* (Methuen), is a collection of short stories in which an excellent style is never allowed to triumph over interesting incident.

One has but to open the first pages of *Barbara Winslow: Rebel*, by Beth Ellis (Blackwood), to find them plentifully sprinkled with "I' faith"s and "Mistress Barbara"s and all the old familiar trappings of the "By my halidom" school. Yet once the story is begun it carries the reader on easily, and to those who like this sort of thing, this is the sort of thing they will like. It tells of the time of the battle of Sedgemoor and the bloody assizes of Judge Jeffreys.

The author of *Eben Holden* and *Dri and I* has established his position more as the creator of some one eccentric character than as a writer of well-rounded romances. This characteristic continues prominent in Mr. Irving Bacheller's latest novel, *Darrell of the Blessed Isles* (Methuen). Here the chorus part of a not too exciting nor well constructed story is performed by an old itinerant clockmaker, who fills the book with

quaint saws and wise instances, expressed this time not in Yankee dialect, but in quaint Elizabethan colloquialisms, often much out of tune with his surroundings.

### "Punch"

The fascination of all that pertains to our famous contemporary of Bouverie Street seems to follow even the individual lives of its editors and contributors. All manner of reminiscences have been published and promised from its leading artists, down to its well-known editor of to-day. But none is likely to be more attractive than the latest contribution to the collection, *The à Becketts of "Punch,"* by Arthur William à Beckett (Constable). This is a compilation of the recollections of a famous father and his sons, and extends over almost the whole life of the great periodical which the elder à Beckett helped to found. The intimate friend of Thackeray and Dickens, all the glamour of the Victorian mid-day extends over those chapters devoted to his memoirs. And, as the book shows, his sons have worthily succeeded to the heritage he left them. The only source of regret to loyal subjects of his humorous Majesty is that the last surviving member of these three courtiers should have, however reasonably, severed his connection with that brilliant court.

### "Crimean" Simpson

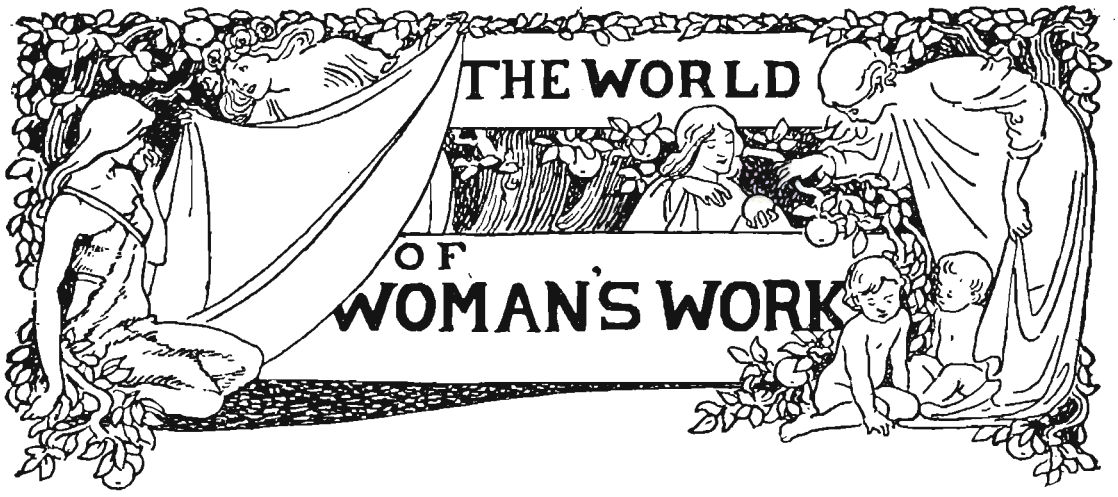
The war-artist has uncommon opportunities for seeing the world, and *The Autobiography of William Simpson, R.I.*, edited by Mr. George Eyre-Todd (Fisher Unwin), is an interesting record of the interesting career of the first of his class. He began nearly fifty years ago in the Crimea, and afterwards saw "service" in India (immediately after the Mutiny, and again during the King's visit in 1875), Abyssinia, the Franco-German War, the Commune, and Afghanistan. The book is replete with personal incidents and accounts of the historic scenes through which Simpson passed to make his sketches for the illustrated papers. There are also reproductions of twenty-two sketches. We must confine ourselves to one extract from these interesting pages. It shows that the war-artist's life is not a bed of roses:

"One day, while sketching in the Malakoff, where I had to stand, I had not been long at work when I noticed that once or twice an itchiness about the ankles caused me to rub one foot against the other. But being intent on my sketch I went on with it. A French soldier passing began to grin, and pointing to the lower part of my extremities, he said, 'V'la les puces.' My trousers were of a light grey colour, but on looking down at my legs, I saw the lower part a deep, dark brown, which graduated to a lighter tint upwards. These were *les puces*. I went off some distance, and picked up something with which I began scraping them off. I moved from place to place during the operation, so that those that were scraped off would not have a chance of returning; but it was impossible for me to get clear of all my friends. While I was at this I saw a French soldier not far from me, *sans culottes*, with his red nether garments in his hand beating them against a Russian cannon. I thought at first that all the fleas in the Malakoff had congregated on my garment, but the action of the soldier showed clearly that there were a few that had not discovered my existence."

### Miscellaneous

Our excellent contemporary *The Car*, the *journal de luxe* of the automobile world, has re-published in an attractive little volume a series of articles upon "Cars and How to Drive Them," forming the first volume of *The Car* Library. It contains practical instructions upon the management and driving of eighteen of the chief types of motor-cars, each written by a man or a lady who has had long personal experience. Not only are these interesting to owners of one of the cars in question, but they form an admirable guide to any intending purchaser by enabling him to judge the points of ease or difficulty of each type. Several short articles upon practical aspects of motoring, such as Motor Driving for Ladies, the Care of Tyres, and How to Build a Motor House, make up the little volume, which should be in every motorist's library.

In *Ten Thousand Miles through India and Burma* (Dent) Mr. Cecil Headlam describes the Oxford University Authentics' cricket tour with Mr. K. J. Key, in the year of the Coronation Durbar. They went "to battle, dine, and dance," and the book is not only an illustrated record of the cricket matches, but contains many interesting impressions and observations by its practised writer. *Annals of Lord's and History of the M.C.C.* (Arrowsmith), a popularly written volume by Mr. Alfred D. Taylor, is particularly strong in the matter of tables of chief bowling feats, hundreds hit in great matches at Lord's, &c. A charming thin-paper edition of *The Novels of Thomas Love Peacock* (Newnes), in blue and gilt leather, should not be missed by any reader of good fiction.




## WOMEN WORKERS IN METAL

ONE of the most interesting developments of modern women's work is their adoption of the craft of the famous Hiram of Tyre, who was "filled with wisdom and understanding and cunning to work all works in brass." *Repoussé* work in brass, copper, platinum, pewter, zinc, silver, and, more rarely, gold, is well within women's compass, but iron work may be counted out, as it demands a different and heavier treatment. Metal work, of all the crafts, offers the easiest encouragement to the many, and the widest scope to the artist. A child of ten may learn its initial range. One of the most promising pupils in the metal workshop of a well-known woman artist was a "naughty, idle" child of wealthy parents. She would not work at school, and was the despair of her family. But a wise instinct guided them to provide her with hand-work. After a few lessons, she proudly displayed a simple candlestick of her own mechanism, and, to her unbounded joy, was able to supply various other objects of domestic use.

Enthusiasm is the first stage of the amateur. In twelve lessons they can acquire a certain facility in what is termed board-work. By this medium they may display to an admiring but uncritical circle of friends various shapes of metal boxes, photo frames, trays, door-plates, &c., and, if unambitious, they may go on multiplying these most useful articles in varying designs for all time. It is even a marketable accomplishment, and a really diligent, tenacious young lady may not only beautify her room and supply wedding presents of her own handiwork, but can find a ready sale for the many pretty objects within the scope of board-work. To master this medium, a few simple tools are necessary, including a special light hammer and chisel, some nails, and the wood-block. The metal is nailed to the wood, and an appropriate design is traced on the metal by means of a carbon paper. This is afterwards etched in, as the carbon marks are so easily effaced, and the design is then outlined with the chisel and hammer. A regular succession of light blows is most effective, and it takes some practice to determine the amount of force necessary. The chief error of the beginner is to strike too hard and wear the metal into holes. For this reason, zinc is the best metal to start with. The term *repoussé* work implies raising the pattern from the back of the metal sheet, but board-work is entirely done on the surface, though producing a raised effect. While the line of the design is being traced, the yielding metal is driven towards the centre to form the raised design. After the main design is effected, a background is hammered in by evenly distributed blows making an effective contrast to throw up the design.

Board-work, however, only lends itself to the simplest of conventional designs, and to obtain what metal-workers term "mass," that is, a combination of raised figures or flowers showing perspective, the more advanced medium of the pitch-block is necessary. By this means, also, the artist may reproduce a natural-form flower or figure. Pitch possesses solidity, elasticity, adhesiveness, and all other qualities necessary to form a proper backing. With the use of pitch it is necessary to have a Bunsen

burner for softening the cement and for annealing the metal, besides a more or less elaborate set of tools.

Many successful *repoussé* workers never get beyond the mechanical part. They have to depend on others for their designs. These naturally are in the majority, and if they are content to recognise their limitations, there is much good work for them to do. Of course, in every good school of metal-work, the students are taught designing. They are given, perhaps, a natural flower, and told to draw it in many different positions. After they have learned the flower by heart, it is put aside, and they are asked to adapt it as a decoration to a piece of metal. The result is, naturally, as varied as the scope of imagination possessed by the different craftswomen. But creative design can never be acquired. In metal-work, too, design means something more than the mere ornamental. One woman artist in *repoussé*, who is an authority and has had many years of experience in teaching and practising the craft, gives it as her opinion that it is just here that the majority of women fail. They have no grasp of construction. They take up the work with enthusiasm. For their two years of studentship they get on well, but after acquiring mechanical skill, it is suddenly forced upon them that the world of art in metal-work is infinitely beyond their grasp. Some never even reach this stage of self-knowledge; but those who do either have to accept the truth and do the best work in their power, or give it up in despair. Others show ability in design, but cannot carry it out practically. For in this work, above all others, the box, or frame, or holder must be thought out in every detail, no joint or hinge overlooked.

As a means for earning a livelihood, experts regard it as decidedly encouraging. The woman who combines practical knowledge and artistic ability—and has not too much of the artist to despise the useful advertisement of exhibiting—may count upon earning a good living at it. On the other hand, it is inadvisable to start with a very slender capital. The women who succeed best financially are those who have even a small private income, to make them independent of slow payments.

To the artist, it offers inexhaustible treasures, and has an inspiring history from the time of Tubal Cain, "the instructor of every artificer in brass and iron," while it numbers amongst its great names that of Benvenuto Cellini, who, in the middle of the sixteenth century, brought the art to its highest point of excellence.

## A LONDON TEA-GARDEN

As a proof that metal-work is not only a pursuit for the *dilettante*, it is of interest to know that one lady, after practising the craft for a few years, has sufficiently increased her capital to launch another and quite different business, namely, a tea-garden. This tea-garden is interesting chiefly because it is run on wholly original lines. The proprietor, after a few years search, discovered a cottage three-quarters of an hour's drive west of King's Cross, and sufficiently removed from London to be truly described as a country cottage. It is twenty minutes' walk from the nearest railway station, and almost ten minutes' walk from a next-door neighbour. It has a large piece of ground attached, part of which has been reconciled to flower and vegetable growing, while the rest—which is covered by some fine old trees—makes a park-like avenue sloping some little distance to a stream which forms one boundary of this miniature estate. The cottage, which was in a state of disrepair when its present owner found it, had at one period of its history been the chapel to an old monastery. Even in its degenerate days, therefore, it had some remnants of nobility left—including a fine old Gothic oak door and quaintly placed windows. It was easily convertible into an artistic dwelling, and the largest room was devoted to the purpose of tea-drinking, in case of bad weather making tea out-of-doors an impossibility.

The tea-room is furnished in a simple fashion. The walls are white-washed; the floor is polished wood with one or two strips of matting; the tables, which are long and narrow, give the room a somewhat monastic appearance, and are covered with holland instead of the ordinary white cloth. White muslin window curtains and a profusion of flowers add the necessary touch of brightness, while the chief decorative feature of the room is an artistic oak cupboard with wrought brass fittings. In fine weather tea is had in the garden at small round tables, and there is an abundance of lounging-chairs where the visitors may recline and easily forget the proximity of London. The tea-garden is meant to be not only a halting-place for thirsty cyclists, but to have in itself sufficient attraction to tempt a few Londoners into the country for a pleasant cup of tea amid healthy surroundings.

The owner of the tea-garden has secured the co-operation of a lady who is an experienced cook and housekeeper. They keep no servant but do all the work of catering and serving themselves, only at specially busy times getting help in the rough work. The refreshments supplied are wholesome and abundant.

The immediate success of this venture, which is as yet in its infancy, is proof that there is a need for such places of refreshment. A number of them

established near the main cycling roads, would make a pleasant alternative to the public-house tea-gardens which so often have a monopoly of such custom. It would be a congenial and healthy occupation for women who have sufficient capital and enterprise to make a beginning.

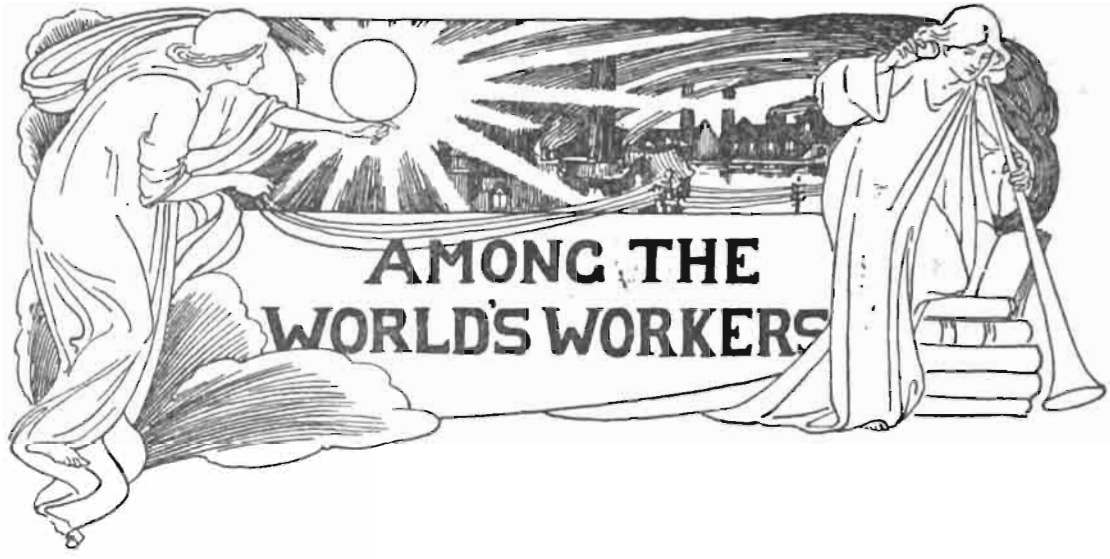
## AMONG THE MEDICAL WOMEN

A RECENT sensational disappearance case has drawn attention to women doctors and their work generally. The Royal Free Hospital, much concerned in this affair, has always treated women medical students with the greatest hospitality, has women house physicians and surgeons on its staff besides women clinical assistants, and anæsthetists, and a woman also holds the important post of registrar. The New Hospital for Women, founded by Mrs. Garrett Anderson, is entirely officered by women, and so is the Clapham Maternity Hospital.

According to recent accounts in the *Daily Chronicle* many hospitals for women and children, both in London and other parts of the country, have also appointed women on their medical staff. Quite a number, too, both of poor law infirmaries and county asylums employ women assistants. Women doctors also hold many posts under School Boards and other local authorities. The London School Board employs a lady as medical examiner for defective children, while another lady holds a similar post in connection with the homes for defective children under the Metropolitan Asylums Board. A lady fills the position of bacteriologist to the Derby Town Council, while another is medical officer and public vaccinator to a district in Perthshire. Two or three ladies are engaged as medical examiners or referees for insurance or friendly societies, while women doctors are also employed by the Post Office for the benefit of the female staff in London, Liverpool, and Manchester. Probably between 200 and 300 medical women are now working in India, some under the Dufferin Fund, some in charge of hospitals, some as medical missionaries, and a very few in private practice. In Persia, in China, in Korea, where a woman is physician to the Imperial Household, and in Equatorial Africa, the British medical woman is also found.

At an inquest reported a day or two ago, it was stated that the post-mortem examination had been made by a woman doctor, a house surgeon at the Royal Free Hospital. Thirty years ago, even the possibility of such an event would have been considered a monstrous idea, but in a quarter of a century the public mind has become so accustomed to the existence of medical women that it is rather inclined to wonder how the community previously managed without them. The London School of Medicine, the pioneer women's medical school in this country, was only opened in 1874, but since then not only have three more women's schools been opened, but there are also six schools of medicine in the United Kingdom where women can study with men, six universities where they can obtain a medical degree, while they can also qualify under the examinations of the College of Physicians and Surgeons of Edinburgh, Glasgow, and Dublin, and of the Apothecaries' Hall, London. According to the census for England and Wales for 1891, there were then 101 lady doctors, but in the last census for 1901, this figure had more than doubled, the total being 212. Whereas in 1891 there were fifty women physicians under the age of thirty-five years, in 1901 there were 120.

It comes upon one almost with surprise to learn that in advanced America the cause of women—which has always been fought there so wholeheartedly—has not yet been fully won. The latest advance is the appointment of the first woman ambulance surgeon in New York. The lady who has won this distinction is Dr. Emily Dunning, a graduate of Cornell University. Dr. Dunning really qualified for the post two years ago, but the conservative protest of the various leading hospitals debarred her from practical work. It was maintained that the daily horrors that an ambulance surgeon has to meet made such a post unsuitable for women. Dr. Dunning took the rebuff quietly, and worked for a year under the leading women physicians in America. On becoming a successful candidate for the second time, prejudice gave way, and she was allowed to accept the post of ambulance surgeon in Gouverneur Hospital, giving six months' preliminary service. Dr. Dunning's working day is from nine to five ; a typical day's work would include thirty-one dispensing and two ambulance cases before eleven o'clock, there might then be two or three "drunks," a crushed leg, cases of heat prostration, and so on. To be a successful ambulance surgeon, it is necessary to show qualities that are not always accounted feminine ; nerve, judgment, unerring accuracy—there must be no fuss. So far Dr. Dunning has proved herself ready for the demands on her patience and alertness.




## THE PROSPERITY OF GREAT BRITAIN

THE Statistical Abstract of the United Kingdom, covering the last fifteen years, shows that the revenue has increased during that time from 88½ millions to 151½ millions. The expenditure has increased from 87½ millions to 184½ millions. The National Debt, after falling steadily from 697 millions to 629 millions, has risen during the past three years to 770¾ millions. We pay to-day 35 millions in Income tax as against only 13½ millions ten years ago. In 1902 estate duty was paid on property of the aggregate value of 278 millions, and during the past six years forty-nine estates of the value of a million sterling and over were vacated by deaths. The nation bought 528 million pounds' worth of goods from foreign countries, £12 11*s.* 11*d.* worth for each of our 42 millions of people, and sold 349 million pounds' worth of goods—£6 5*s.* 1*d.* worth per head, or about one-half what we bought. This great trade was financed by the aid of 37 million sovereigns and 20 million pounds' worth of silver, which passed to and fro across the sea. In fourteen years our shipping increased by over one-third, until last year, when freighted ships of 44 million tons burthen entered or left our ports. A marked change in the source of our bullion imports is shown, for whereas in 1888 we received £9,569,506 worth of gold and silver from foreign countries, last year we got only £4,281,223. On the other hand, while in 1888 our colonies sent us only £6,218,082, last year they sent £17,347,826. Finally the trade of the country is apparently more solvent, for whereas in 1888 the total liabilities of bankrupts amounted to £7,148,950, and their assets to £2,256,379, the indebtedness of last year's bankrupts was £5,434,594, and the realised assets £2,770,881.

## THE EXPANDING ENGLISH LANGUAGE

ONE hears a great deal about the work of the society for the propagation of the French language, but the English tongue seems to make its own headway without any effort being expended especially upon it.

In the one hundred years between 1801 and 1901 the English language has more than doubled its percentage in Europe, where in 1801, 12 per cent., and in 1901, 27 per cent. of Europe's population spoke English. During the same period every other European language suffered a loss in percentage, which shows the victorious progress of the English.

In addition to this, there are far more English-speaking people outside England, in the United States, Canada, and Australia, than in England.

Though France and Spain have lost their American possessions, the French and the Spanish languages hold their own in America. More than 1,000,000 Canadians speak French—the French of Louis XIV.—and there are French universities in Quebec and Montreal. And though there are only 18,000,000 people in Spain, there are, nevertheless, 35,000,000 in America speaking her tongue. There are 110 Spanish-American writers and poets, all born outside Spain, showing the vast colonial resources of the Spanish language.

Similar resources are also to be found in Portuguese, which is spoken by only 5,000,000 people in Portugal and by more than 11,000,000 in Brazil. The victorious spread of Portuguese in Brazil is supported by a flourishing Brazilian literature—chiefly fiction and poetry.

Dutch is also expanding. There are more Dutch-speaking people in the East Indies and in South Africa than in Holland proper.

Similar examples will tend to show that certain

languages have a real power of expansion issuing from the mother country as a systematic effort, and other languages are reinforced by colonial reserves. There are also other tongues, like Danish and Swedish, that have no resources, and are incapable of expansion, and which will die out as soon as the countries cease to exist as independent nations.

## GERMAN COAL IN FRANCE

THE United States Consul at Nantes writes to his government that something akin to consternation has been caused in coal circles in that part of France by the bold and determined efforts of the Germans to capture the market for steam and forge coal. Some months ago the English and French concerns which have heretofore almost exclusively controlled the fine market of Nantes and the entire region of the Lower Loire entered into some sort of an agreement or trust by which they sought to put up prices and at the same time to continue their hold upon the business. The price of fuel coal at Nantes, in pursuance of this agreement, was at once advanced some 14 francs a ton, and the combine was about to put up the price of steam coal when the Germans appeared upon the scene and began to bid actively for the business at much lower prices than the French and English dealers had dreamed of. The result was that they began to get the business then, and are still getting it, much to the consternation of their French and English competitors. The greatest gain the Germans have yet scored was reached when they secured from the state railroad a contract for 8000 tons of steam coal at 23 francs per ton delivered on board the cars at the seaport of La Palisse, near La Rochelle. The next lowest bidder was the Compagnie Charbonniere de l'Ouest, of Nantes and Paris, which handles in France the products of certain large Welsh mines. This company is reported to have bid 23.75 francs, this being 75 centimes per ton above the German price.

As above stated, this German invasion has caused something very close to a panic in French and English coal circles, and the situation is made more serious by the fact that the German coal, which comes from the Ruhr country, has given excellent results at several large factories in Nantes and is preferred by those who have examined and used it to either the French or English coal.

It is stated that at a trial made at the manufactory of the Pilon Brothers some weeks ago 4500 kilogrammes (9900 pounds) of German steam coal gave the same results as 5760 kilogrammes, (12,672 pounds) of Swansea coal. It is rather the question of price than quality that is hurting the English and French dealers, and they admit that they cannot, without loss, undersell the Germans at the prices now quoted by the latter. In explanation of the successful German invasion, it is freely declared at Nantes that the German coal importers are now accorded an export bounty by the German government on coal exported to France, but there is no positive authority for this statement. It is also stated that the purpose of the Germans is to compel the French and English, who have heretofore controlled this market, to take them into their combine and share the business at equal prices.

The following table shows the imports of coal at Nantes and St. Nazaire during the years 1900–1902 :

| Coal. | 1900. Tons. | 1901. Tons. | 1902. Tons. |
|---|---|---|---|
| Welsh and English | 1,528,013 | 1,476,728 | 1,376,317 |
| American | — | 15,000 | 5,000 |
| German | — | 1,905 | 22,452 |
| Belgian | 1,365 | 300 | 725 |

## THE EFFECT OF WIND UPON TRAINS

A SERIES of experiments on the effectiveness of wind brakes in increasing the efficiency of long-distance inter-urban cars, is described by the American correspondent of *Page's Magazine*. The tests were made on the Long Beach division of the Pacific Electric Railway Company's system, extending from Los Angeles to the ocean, where a stiff wind is encountered, and were attended with results of a most remarkable character. Among the different shaped wind brakes that were tried was one which resembled the cow-catcher of a locomotive, its base being on a level with the floor of the car, and the knife-edge backbone extending upward at an angle of forty-five degrees to the top of the car, while the sides rounded off in a convex curve till they coincided with the sides of the car. Eventually the forward part of the structure will be constructed of glass, so that the motor-man may sit within the shelter of this hood, and control the car without being disturbed. It was found that with this shield, it required but 220 horse-power to make a speed of sixty miles per hour, whereas without it 290 horse-power was necessary—a saving of about 24 per cent. in power. At a speed of fifty miles per hour the result in favour of the hood was 137 as against 170 horse-power. Mr. R. S. Mason, the consulting engineer of the company, declares that, in the face of these highly satisfactory results, there can be no doubt that the wind brake will soon be adopted on all long-distance cars.

## THE GREAT WESTERN RAILWAY AND TECHNICAL INSTRUCTION

IN order to encourage apprentices to gain a sound knowledge of technical science, the Great Western Railway Company offer facilities for a limited number of selected students

to attend day classes at the Technical School at Swindon. Candidates must be registered apprentices between 17 and 18 years of age. They must have spent at least one year in the factory, and must have regularly attended for at least one session in the preparatory group of evening-classes at the Technical School. The number of studentships will be limited to thirty at any one time, in groups as follows, for a three years' course: first year's course, fifteen students; second year's course, nine students; third year's course, six students. For each year's course there will be a competitive examination—successful students passing on from one year's course to the next. Candidates must produce evidence of good conduct and attention to their work in the factory, and only those who attain a minimum qualification at the examinations will be successful. The course of study for each year will consist of practical mathematics, practical mechanics, geometrical and machine drawing, heat electricity, and chemistry. A scheme of this description has for many years been the desire of those connected with the Great Western Railway works at Swindon and the local Education Committee, and it is due to the generous encouragement of the Great Western Railway Company that it is now possible to establish it.

## TURKISH TOBACCO AND EGYPTIAN CIGARETTES

THE latest advices from the tobacco centres of Turkey are not of an encouraging character. A correspondent of the *Tobacco Trade Review* writes that this aspect of affairs, due in great measure to the revolutionary and generally unsettled state of the country, and covering as it does to a great extent many of the best-known tobacco plantations, is not brightened by the appearance of the crop itself. Practically the whole of the earlier growths is lost through excessive rains, turning subsequently to blight; and as to the later sprouts, these, we are told, "have shot up like canes," the resultant leaf having developed to unusually large proportions. So that, what with the black cloud of war looming over the country and the partial failure of the crop itself, there is more than passing reason to fear that prices will go much higher still. One well-known leaf merchant, in corroborating this report, added the significant statement that "the Turks will come to a fight without a doubt, and that will mean that the farmers will neglect their fields (of tobacco), and practically there will be no harvesting." At the same time it should be remembered that it is not until the process of fermentation sets in on the hung tobacco that its real quality and value can be properly assessed. The best grades of the September crop this year are not likely to be smoked till twelve months hence.

The German Foreign Ministry has received a report from the German Consul at Cairo on the Egyptian cigarette industry. Since 1890, the report says, no tobacco may be grown in Egypt; hence it is imported, chiefly from Turkey, Macedonia, and Smyrna, and to a smaller extent from Greece and Bosnia. The best cigarette tobaccos come from Xanthi, Kavalla, and Yenidje. It is, however, always mixed or blended, and in the proper blending lies the secret of the cigarette-maker. The expert mixers are without exception Greeks, who are paid from ten to twenty pounds sterling monthly. Germany is the best customer for Egyptian cigarettes, taking 38 per cent., followed by Great Britain and the British Colonies. The few German firms in Egypt who make cigarettes produce about 30,000,000 of them per annum, chiefly for export.

## BRITISH TRADE WITH RUSSIA

ACCORDING to the report of Mr. Consul-General Mitchell, the year 1902 was a fairly satisfactory one for Russia. But the favourable effect of a good harvest on the economic condition of the peasantry was not as great as could have been expected. The manufacturing industry of the Empire is described as being in a state of stagnation, and as acting adversely upon imports for industrial purposes. The foreign trade of both Asiatic and European Russia, export and import, in 1902 amounted to £157,736,622, a slight increase over the year preceding. The exports of European Russia and the United Kingdom in 1902 amounted to £20,057,343 as compared with £16,608,575 in 1901. The imports into European Russia from the United Kingdom must value at £10,551,368 as against £10,967,018 in 1901 and constituted only 18.8 per cent. of the import trade of the country. The Consul-General says that taking into account condition of industries dependent upon the chief articles of British importation, such as coal, cast and wrought iron, steel, machinery, &c., it may be considered satisfactory that British imports did not decline more in value than £415,650 from the preceding year. But this consolation is neutralised by the fact that during the same time German imports, in spite of the adverse conditions referred to, again exhibited augmentation. This can only be explained by the greater activity of our German rivals in the Russian market. And these too, according to the Consul-General, are imports of a class in which we could to a great extent compete were more attention shown to the requirements of the Russian markets by our manufacturers. Some of the articles which drive our own of a similar class out of the market are chemical and pharmaceutical materials, and preparations, dye stuffs, copper, tin, zinc, lead, wool (raw and carded), china, and porcelain, gutta-percha articles, various articles of manufactured iron,

steel, copper, and wire, machinery, and apparatus, agricultural machinery and implements, clocks and watches, musical instruments, paper and manufactured goods of silk, wool and cotton.

## LAYING THE MOTOR DUST

THE effect of crude petroleum in laying dust on public roads, especially to prevent the excessive amount raised by motor-cars, has already been noticed in this department. But the oil is too expensive for general use and the exact proportion of its admixture with water not settled. According to a recent account in the *Westminster Gazette* a liquid has been compounded, under the name of "Westramite," which is not only an effective permanent dust layer but an excellent disinfectant into the bargain.

To demonstrate its powers 200 yards of the road on the confines of Windsor were "treated" recently, after which motor-cars were raced over it at speeds of fifty and sixty miles an hour.

And the result was striking. The cars came at a terrific pace down the "untreated" portion of the road with a thick cloud of dust in their wake, but so soon as they got on to the "Westramite" not a particle of dust was raised and the travelling was as free and clear as upon an asphalted pavement. And even more remarkable was the exhibition of travelling down the "treated" section first. Standing behind a number of cars they could all be seen perfectly until they struck the "untreated" portion of the highway, when they were immediately lost to the spectators in the clouds of dust raised behind them.

By no means the least valuable feature of "Westramite" is the facility with which it can be put upon the roads, nothing but the ordinary water-cart being necessary for the purpose. The liquid is the residuum of petroleum chemically treated, and in appearance it is a dark brown colour. Mixed to the extent of 5 per cent. with water you at once have the solution of requisite strength for the roads; in other words, the cost of each "treatment" works out at half a farthing for each square yard of road. But instead of continual watering, as with pure water, it is held only to be necessary when "Westramite" is used to "treat" the road from five to eight times in a year so that the heavy cost of watering is saved. But more than that is promised—the road surface is preserved, for "Westramite" binds it together, and the dust is effectually laid for all time.

## AN OCTOPUS FISHERY

WRITING from Naples in a recent report upon the trade of Southern Italy, Mr. Consul-General Neville-Rolfe describes the catching of the octopus, which is very largely used as an article of food in his consular district. Its long tentacles are cut transversely so that, when served at table, they have the appearance of rings. The fish when taken by day are lured from the crevices of the rocks by a piece of red flannel at the end of a bamboo which they attempt to grasp, and they are then speared with a trident. At night an iron cradle with a bright flame of resinous wood is fixed to the bows of the boat. This attracts the fish and leads him to his doom. The pine-wood fires of these boats are probably as ancient as they are picturesque, but in the last few months they have been entirely superseded by acetylene gas, which gives a much stronger light and has no artistic pretensions. The first men to use this light secured enormous catches of the fish, and jealously kept their secret. After a while it leaked out, and now it is the general and accepted light for the purpose, and there can be little doubt that the coast will soon be overfished, and that the octopus will be rare instead of cheap and plentiful. In the west of England it is said that the octopus spoils the fisheries by devouring the small fry, and it may interest Cornish and Devonshire fishermen to know this simple means of decreasing the number, and also that the fish itself is an excellent article of food.

## COMMERCIAL TRAVELLERS IN ROUMANIA

THE *Board of Trade Journal* publishes advice to commercial travellers from our Vice-Consul at Galatz. Among other things, he says: "It is very necessary that a commercial traveller in Roumania should be well acquainted with French and German. In order to obtain this result, the firm invokes the aid of a German, who serves his British master for a time and learns where our strength and weakness lie. In the meantime, the commercial traveller does not forget his own interests, and before long he is in the employ of a German firm, who profit greatly by his experience of British and German trade methods. I do not, of course, mean to imply that the same person, when in the employ of a British firm, failed to serve his master with diligence and fidelity. In the case of the commercial traveller being an Englishman, he will often be found to be deficient in knowledge of the language of the country. Unlike the German, he does not think of calling on the consul, invoking his knowledge of the place. He forgets, too, that a firm considered safe a year ago may not be so at the time of his visit. No German or Austrian travelling for a German or Austro-Hungarian firm, would dream of going to various shops, &c., for orders without first paying his consul a visit and making thorough inquiries regarding firms, new and old, and fresh markets. It is a serious want of consideration on the part of British traders to place their agencies in the hands of persons dealing in, or representing the makers of, similar goods in Austria-Hungary, Germany, &c. On the basis that no man can serve two

masters, it would be prudent to refuse to give the sole sale of any particular line of British-made goods to an agent or commission house selling Continental makes at the same time. When a sole agency is insisted upon, the conditions should be binding on both parties."

## A PENNY-IN-THE-SLOT DIRECTORY

HERE is another and what seems to be a useful development of the universal slot for the consumption of stray pennies. According to the *Daily Chronicle*, a private syndicate is carrying out a scheme whereby Kelly's directories will be brought within the reach of everybody in London and the suburbs. The syndicate is placing in all the principal streets a compact automatic box containing a copy of the directory, which can be opened immediately upon the insertion of a penny in the slot at the top of the box. It is a very neat and simple contrivance, and is so arranged that for so long as the person using it keeps his hand on the cover of the directory it remains open for inspection, but immediately the hand is removed, the book automatically closes. It is the intention of the syndicate to place the Post Office London Directory in the London area, and the London Suburban directories throughout the suburbs, whilst outside each establishment where a directory is to be found a conspicuous red sign is being fixed indicating that the directory can be seen within. Messrs. Kelly are co-operating in the scheme, and these automatic directories are already installed in Regent Street, Whitehall, Queen Street, Cannon Street, Poultry, Bishopsgate Street, Ludgate Circus, Strand, Charing-cross Road, and Cheapside.

## EXPORT GOODS AND FOREIGN WHIMS

TRADE obstacles of all sorts have to be encountered all over the world. For years cotton mills persisted in shipping to Chinese ports goods cut in lengths not desired by the Chinese tradesmen. The latter requested lengths that would enable them to cut precisely four shirts out of each piece of goods, pointing to the conclusion that there could be but one size of shirts in China. Exporters demurred, maintaining that it would not pay to cut the goods so frequently without a large increase in orders. After much wrangling, they finally consented to make the change. To-day, all China, having for centuries provided her own cotton stuffs, is dependent on foreign mills for shirts. The Bedouins of Arabia are also in a fair way to become converts, but the obstacle of forfeiture of trade-mark is not yet removed.

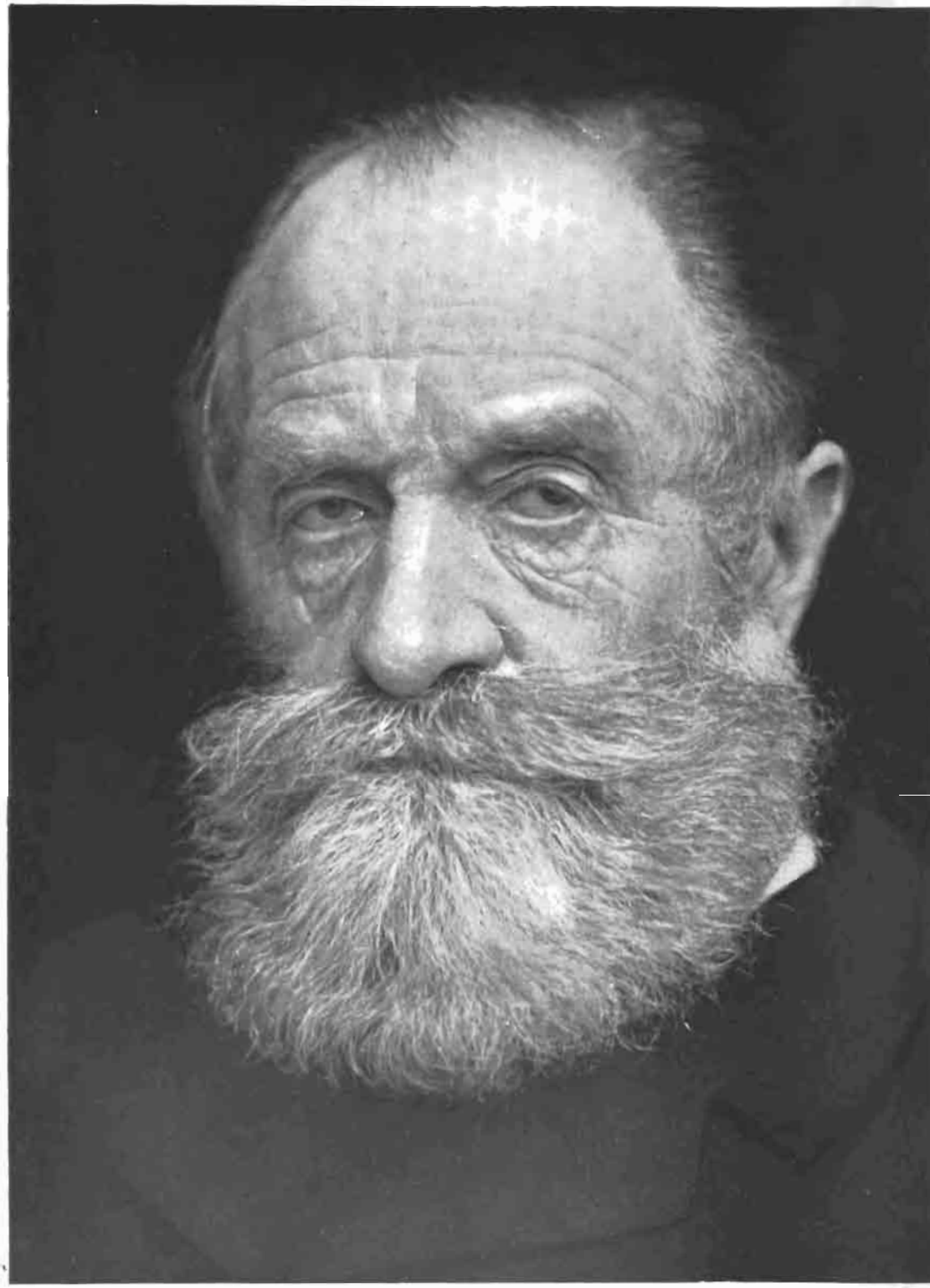
Petroleum has done more for civilisation in Korea than almost any other agent of progress. At first the new illumination was fiercely disapproved by the natives, who saw in its use a profanation of the sun god. Not until they were told that the liquid was extracted from the moon's rays did they dare to employ it. The Koreans were enabled to light their homes and their towns by means of kerosene, which put an end to the nightly disorders, fights, and murders that up to that time discouraged civilisation.

A recent attempt to introduce American gas-ranges in France was frustrated by sheer ignorance of the French culinary custom. The French fry, boil, roast, but never bake anything in a stove. Too much space and weight is given to the oven in American ranges ever to meet the French demand, which is exclusively for cooking, the baking being done by the baker.

## LIVING OBSTACLES ON THE RAILWAY TRACK

NOT many of the world's workers enjoy the excitement which attends service on the Uganda Railway, so famous in Parliamentary circles. It would seem that the great Lion of Westminster is not the only one with which this line is concerned. Sir George Whitehouse, manager and chief engineer of the Uganda Railway, who has recently returned to England on the conclusion of his seven and a half years' work on the construction of the line, discussing with Reuter's Correspondent the difficulties which had to be surmounted, said: "Not the least of these has been caused by the wild animals along the line. Lions very seriously interfered with the work of construction, and at mile 132 once nearly brought work to a standstill. We know of no fewer than twenty-seven railway employees who have been carried off by lions, and probably there are more of whom we have no record. Game now fight shy of the railway, but only the other day, while I was travelling down with Sir John Kirk, the driver received telegraphic warning at one station that he must be careful how he ran into the next station, as there were lions on the track."

According to a recent issue of *Animal Life* no engine-driver has had a more surprising experience than that which recently befell one employed upon the Assam line. He turned a corner suddenly—to find himself just behind a troop of savage elephants. The great creatures, evidently finding the iron road a pleasant path for travelling, had spread themselves across it, making such a considerable obstruction that the train was driven off the rails before the driver could bring it to a standstill. Then ensued confusion amongst the passengers, but still more amongst the elephants. Happily the former were scarcely hurt; the latter fled in wild confusion, utterly terrified by an enemy they did not understand.



THE RIGHT HON. EARL SPENCER, K.G., D.C.L., LL.D.

THE VETERAN LIBERAL STATESMAN WHO LEADS THE PARTY IN THE HOUSE OF LORDS

*A photograph specially taken for* THE WORLD'S WORK

The
# World's Work

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## The March of Events

### THE MONTH IN POLITICS

THE controversy whether the British Empire shall remain under Free Trade or adopt Protection has proceeded apace during the past month. The Prime Minister delivered his long-expected speech at Sheffield, in which he made the "request" that the Government should be given "freedom to negotiate" with foreign countries, that is, to retaliate with import tax against import tax; and further expressed his conclusion that "public opinion is not ripe in this country for the taxation of food." Two comments are obvious and sufficient: (1) that the Government already possesses absolute "freedom to negotiate," subject to the assent of Parliament, and (2) that Mr. Chamberlain is doing his utmost to "ripen" public opinion for the taxation of food, and that if he should succeed, Mr. Balfour's objection will have disappeared. Therefore, as has been urged in these pages from the beginning, the Prime Minister and Mr. Chamberlain are really acting in concert.

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Mr. Chamberlain subsequently announced his scheme at Glasgow. We reproduce this on page 576, and subject it to detailed criticism. The *Glasgow Herald* published a damaging attack upon the scheme next morning, and at Greenock in the evening Mr. Chamberlain made a rather angry reply, without adding any explanatory matter of importance. Since then, he has spoken on several occasions, always to the vociferous delight of vast audiences, but with one exception he added nothing which explained the details or amplified the arguments of his original pronouncement. The exception was his statement that, owing to the absence of preferential trade with the Colonies, many manufactures have sprung up there which would otherwise have been supplied from England, but that if we arrange a preferential tariff now, there is still time to prevent the establishment of other manufacturing industries in the Colonies, and to keep these for England! Needless to say, this extraordinary suggestion—that the Colonies should refrain from manufacturing certain articles in order that English manufacturers might have the benefit of supplying these, and thus restricting the Colonies so far as possible in the future to the supplying of food and raw material—met with such a reception in the Colonies themselves that Mr. Chamberlain has had to explain it away. It has followed old-age pensions, which, when he first produced his plan in the House of Commons, were an integral part of it. With this exception—born like a butterfly in the sunny morning of fiscal enthusiasm, and dying like the butterfly at the cold nightfall of Colonial criticism—his plan remains as it was announced at Glasgow.

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Meanwhile, answers to him have come thick and fast. Mr. Asquith subjected the plan

to detailed examination in a speech of the greatest lucidity and cogency—a masterpiece of analysis and argument. Lord Spencer (whose striking portrait, by the way, as our frontispiece, will be warmly welcomed by the hosts of admirers of this typical great English gentleman and statesman) delivered an impressive address to the Eighty Club, and Sir Henry Campbell-Bannerman followed with a vigorous and stirring attack. Lord Goschen expounded the whole case against food-taxing and Protection with his own unsurpassed authority and economic insight, Mr. Morley dealt with it in words of wise and solemn warning, and Lord Rosebery, to an audience in Sheffield, the home of Protection, every whit as enthusiastic as those of Mr. Chamberlain, set forth the dangers of Protection and Preference, alike to the people of the homeland and to the very fabric of Empire, in a speech of the most convincing logic and the most stirring eloquence. It is not too much to say that if that speech alone could be read in every household of this country, Mr. Chamberlain's proposals would never be heard of again. As Lord Rosebery speaks with unrivalled authority upon the Imperial aspect of this question, we must reproduce here a passage from his speech which, as the *Spectator* says, "deserves the closest attention of all Britons who care for the welfare of the Empire":

"I say you cannot fix an Imperial tariff which will be satisfactory. Still less can you place an Empire on a schedule of forbidden industries. All that is left for you is to try to execute commercial treaties or understandings with each separate colony. Where would be your commercial system then, and where would be the union of your Empire? Everything periodically, perhaps annually, would have to be revised in our commercial relations with every colony. You would at last be subject in negotiation to the threat so unpleasant to hear and realise as a possibility that perhaps after all we had better 'cut the painter.' Your Chancellor of the Exchequer would be unceasingly engrossed in the attempt to conciliate wholly incompatible and antagonistic interests. Heaven preserve us from the bad blood which would be created under such a system. That is the plan, that is the whole plan, which is proposed to take the place of the present system, which is founded on absolute independence of action and absolute conciliation of individual interests. So far from preserving the integrity of the Empire, I honestly and conscientiously believe that any policy such as that advocated by the late Colonial Secretary would almost inevitably lead to its dismemberment. I have only one more objection to mention, and it is this. I, as a profound and convinced Imperialist, do not wish our people at home at any time of scarcity or of depression or famine to weigh the interests of their material well-being against the conception of the Empire. It will be a bad day for Great Britain—it will be a worse day for the Empire at large—when the artisan returning to a stinted meal—stinted by taxation—may say to his family, 'Ah, things would have been very different had it not been for this Empire, for the preservation of which we are now so heavily taxed.' I do not wish that interest and that conception ever to be brought into antagonism. They are in perfect harmony now. For God's sake do not let us disturb that harmony."

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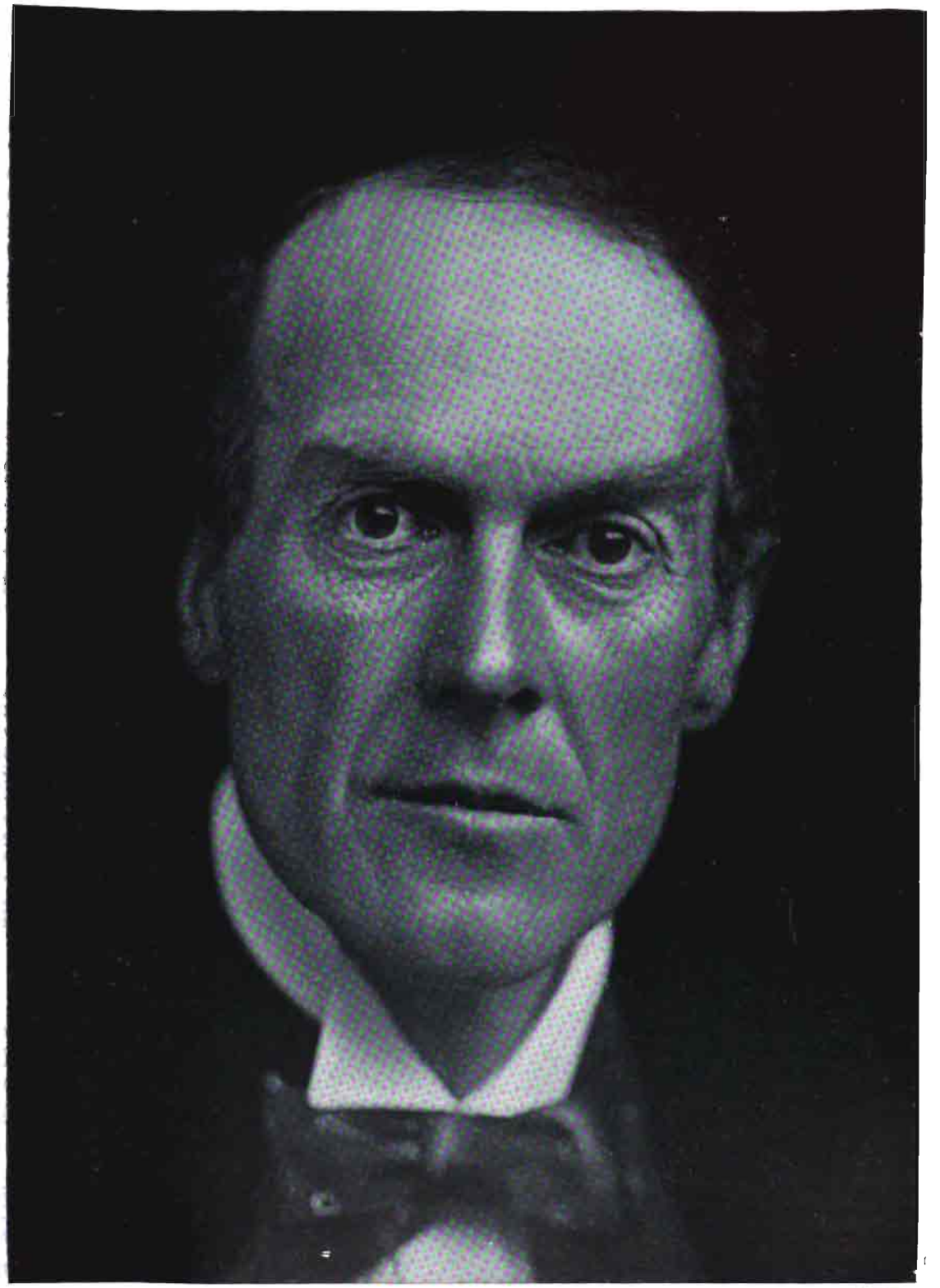
The personal aspect of the controversy has been prominent during the month, and has thrown more light upon the situation. The resignation of the Duke of Devonshire—accepted by Mr. Balfour in a letter which for angry resentment and bitter sarcasm is wholly without parallel or precedent under such circumstances—and his acceptance of the presidency of the Free Food League, makes the Unionist split complete. The vacant offices of the Government have been filled for the most part with supporters of Mr. Chamberlain. The popular Mr. Alfred Lyttelton, who succeeds Mr. Chamberlain as Colonial Secretary (supposing him to secure re-election), whose appointment left the *Standard* in "blank amazement," and of whom the *Times* said that "his prowess at cricket would appeal to the sympathies of our Australian fellow subjects," is a Chamberlainite; Mr. Arnold-Forster, who succeeds Mr. Brodrick at the War Office, is the author of some of Mr. Chamberlain's campaign literature; Mr. A. H. Lee, who, being a recognised military expert, naturally goes to the Admiralty as Civil Lord, frankly followed Mr. Chamberlain from the beginning; while Mr. Austen Chamberlain, whose useful qualities in public life are likely to be lost sight of in the resentment that naturally follows the appointment of so inexperienced a man to the Chancellorship of the Exchequer, of course shares his father's views. With the Prime Minister admitting that his own plan "cannot be tried in its integrity" without a tax on food, and surrounded by a compact bodyguard of Chamberlainites, it is, of course, to all intents and purposes Mr. Chamberlain's Government. Mr. Balfour's position is not a dignified one, and the country still awaits his explanation of the methods he adopted in remodelling his Cabinet. It is



Beresford ]

THE RIGHT HON. ALFRED LYTTELTON, K.C., M.P.

WHO SUCCEEDS MR. CHAMBERLAIN AS SECRETARY OF STATE FOR THE COLONIES

now known that Mr. Chamberlain propounded his original scheme without consulting his colleagues; that he then sent his resignation to the Prime Minister on September 9; that two Cabinet Councils were held at which Mr. Balfour did not inform his colleagues of this resignation; that after the second Cabinet Council, on September 15, the Duke of Devonshire, Lord Balfour of Burleigh, Mr. Ritchie, and Lord George Hamilton conferred and sent their resignations to Mr. Balfour; that next day, Wednesday the 16th, Mr. Balfour told the Duke that Mr. Chamberlain had resigned, and that therefore the Duke consented to stay; that the other three Ministers, not being told of Mr. Chamberlain's resignation, were not offered the opportunity of reconsidering their position, but that their resignations were accepted and immediately gazetted; that on the day of the appearance of the gazette, the 17th, Mr. Ritchie was told *by the Duke* that Mr. Chamberlain had resigned; and that on the following day Lord George Hamilton learned this fact from reading it in the newspaper. The post thus vacated by Mr. Ritchie, in ignorance of the situation, was destined for Mr. Austen Chamberlain. In view of the universal belief in Mr. Balfour's honour, it would be improper, pending his explanation of these remarkable facts, to say more than that such explanation is urgently desirable.

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"Watchman, what of the night?" What is the outcome of the month's political activities? First, it seems clear that Mr. Chamberlain has shot his bolt. If he had anything more to say, he would have said it before now. As has been pointed out, he has added nothing to his original pronouncement at Glasgow. His dates have been shown to be unfairly chosen, his figures to be inaccurate, his economics to be amazingly uninformed. He has not answered any of these criticisms. He is rapidly descending to his familiar platform methods—"When I am hit, I like to hit back"; "Will you take it lying down?"; "They spatter me with their vulgar abuse," and the like. He continues to ask whether we will refuse the offer of the Colonies, without ever telling us when this offer was made, and what it is. As a matter of fact, he cannot, for it does not exist. Free Traders contend that it is absolutely impossible to invent a scheme of preferential trade which would be accepted at home and by the Colonies. Instead of endeavouring to do this, Mr. Chamberlain now says that he wishes a conference of merchants and colonists to produce a scheme for him. He is hedging rapidly as to this "offer." His latest exposition of it (Tynemouth, October 21) is nothing more than this:

> "I want a mandate from you and all the people of this country to give me leave to negotiate with our own people, with our own kinsfolk. What sort of negotiation is that to be? . . . What have I said the Colonies will do? At present I have not got the mandate, and when we come to negotiate, I can speak more positively; meantime I only express my opinion of what I think they will do."

The public is rapidly awaking to the fact that in his Glasgow speech he failed to allow for the rise of price of all colonial and home-grown corn, in response to the tax upon foreign corn, and of all home manufactures, in response to the duty upon imported manufactures; and that this colossal omission invalidates all his statements as to what his scheme would cost the consumer. Moreover, it is being realised that the taxes on tea, sugar, &c., which Mr. Chamberlain proposes to remit as part of his scheme, were war taxes, and ought to be remitted in due course by any Chancellor of the Exchequer as part of his regular procedure. Mr. Arthur Chamberlain's blunt remark, in fact, that "no sane man could think of imposing taxes to make the country richer," sums up the growing trend of public opinion, as the shallowness of Mr. Joseph Chamberlain's economic equipment is being daily demonstrated.

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The second fact now clearly perceived is the striking disparity between the opposing forces in this controversy. On the one hand, there is the entire Liberal Parliamentary Party in Lords and Commons; fifty or sixty members of the Unionist Party, beyond question more able and influential men than any equal number who follow the Prime Minister and Mr. Chamberlain; every living Chancellor of the Exchequer, except Mr. Chamberlain's son; an overwhelming majority of the Professors of Economics and experts in finance; the entire Liberal Press, and such influential and representative Unionist journals as the *Standard*, the *Spectator*, the *Birmingham Daily Post*, and the *Glasgow Herald*; every working-class leader and every workmen's trade organisation, without exception; all the Co-operative Societies and Friendly Societies. On the other hand, there is, so far as makes

Elliott & Fry

THE RIGHT HON. H. O. ARNOLD-FORSTER, M.P.

WHO SUCCEEDS MR. BRODRICK AS SECRETARY OF STATE FOR WAR

for the inspiration of the movement, the direction of the fight, and the platform strength, only Mr. Chamberlain himself. Mr. Balfour's mouth being closed on preferential tariffs till public opinion is "ripe," there is not a single platform speaker of the first, or even the second, rank to help him in his campaign. With such a disparity, and with Mr. Chamberlain's original figures and calculations disappearing piecemeal day by day, under expert examination, the result is a foregone conclusion. If the General Election should come at once, as in all constitutional propriety it ought to come, he would be hopelessly beaten, and every month that passes before the election will increase the majority against him. Despite his matchless platform powers, his cheering audiences, his music-hall songs, his ring of newspapers which exalt him to the skies and exclude all they decently can that tells against him (one of them recently gave more space to a letter of its own proprietor addressed to him than to Mr. Morley's speech), the forces against Mr. Chamberlain are already overwhelming and are growing stronger every day. In his heart, he is probably aware of the fact.

## THE ALASKA DECISION

THE Alaska Boundary Commission consisted of two Canadians, three Americans, and the Lord Chief Justice of England. Lord Alverstone, therefore, had the deciding vote, and was practically in the position of an arbitrator having the decision in his hands. It was universally regarded beforehand as certain that the Americans would not give way on the American case, nor the Canadians on the Canadian case. The decision in the main gives the United States what it claimed—not quite so much territory, not two islands and not one of the channels, but enough to interpose American territory between a great stretch of Canadian territory and the sea. As was only natural, satisfaction in America is at least equalled by disappointment and even resentment in the Dominion. It is beyond question unfortunate that it should be the Lord Chief Justice of England who imposes upon Canada the relinquishment of a vast and important territory and rights which she considers belong justly to her. The two Canadian commissioners refuse to sign the award. This is to be regretted, but it is not surprising, for doubtless the two American commissioners would have declined to sign an award to the opposite effect. For the moment, Canadian opinion seems inclined to blame the Mother Country for what has happened. This is obviously unreasonable, and keenly as we can all sympathise with Canadian disappointment, the consideration of certain other facts ought to mitigate this feeling, and probably will. In the first place, the decision only confirms the existing state of things in the territory in question. Second, the concessions to Canada are by no means without value, and have been for some time strenuously refused by the United States. Third, and most important of all, in Canada, no less than in Great Britain, there is ground for deep satisfaction that at last every outstanding question between the United States and Canada has been settled. The Alaska dispute contained within it the germs of grave disaster to both countries, and everything at stake was of infinite unimportance compared with what might have resulted from an acute quarrel between the English-speaking nations. To turn the award to party ends either in this country or in Canada, would be a crime. To accept the decision of the Commission loyally, to make the best of it, and to rejoice in the substitution of a permanent settlement for a perilous uncertainty, is an Imperial duty. It may further be hoped that the objections of the American Senate to the Hay-Pauncefote arbitration treaty will now have been removed.

## PEACE OR WAR IN THE FAR EAST?

AS is nearly always the case when the possibility of a war appears on the international horizon, an abominable rumour of immediate hostilities between Japan and Russia was launched in London last month, with a view to its effect upon the prices of securities. It was soon shown to be without foundation, but at the same time no one who knows the two countries concerned can fail to realise that the situation is one of grave danger. It has been so for many months or even longer, and nothing has occurred of late to make the danger more urgent. One cause, on the other hand, has been steadily operating, and will operate for a few months longer, to bring the pending question to a head, either of settlement or of war. In the past and at the present time, Japan is unquestionably stronger than Russia at sea, and the command of the sea would virtually decide the issue of any war. Japan, however, has practically reached the limit of her naval expansion. She is as ready as she is likely to be. Russian naval strength in the Far East, on the other hand, is steadily growing, and when her new and old battleships, now on their way to the China Sea, have reached their destination, Japan would have but little reason

to expect a result favourable to herself from the arbitrament of war. It is, therefore, for her a case of now or never, and in this fact lies the urgency of the danger. What Russia wants nobody knows. She has got Manchuria; she means to keep it. Thanks to the fatuity of British foreign policy for years past, her position in China is almost all that she can desire for years to come; she cannot dream of desiring to seize Japanese territory; and what she could hope to get from an occupation of Korea passes comprehension. Japan, on the other hand, deeply and naturally as she must resent the occupation of Manchuria, has never thought of going to war to end it, but for her an independent Korea, or one controlled by herself, is a matter of life and death. And for this she would and must under any circumstances fight, unless her whole future development and security are to be compromised.

The position of Japan indeed, is a trying one. Owing to her alliance with ourselves, which would compel England to take up arms if France should support Russia, every pressure is being brought to bear upon her by England to prevent war, just as undoubtedly France is doing all she can to restrain Russia. But meantime the Russian naval reinforcements are on their way, and when they have arrived Russia will be able to say that she can no longer bear this uncertainty, and that the matter must be settled, by war if necessary. The best solution to be found would be for an irresistible combination of Powers, in which England and the United States would be the chief, to announce that they could not tolerate the occupation by Russia of any Korean territory at any time or under any circumstances. But there is a rooted conviction in European Foreign Offices that America will never go beyond the writing of despatches. Therefore, for some time to come, peace in the Far East will hang by a thread. Perhaps the best hope that the thread will not break lies in the fact that in case of war between Japan and Russia, China would undoubtedly side with the former; that this would almost inevitably drag in other Powers, one after the other; and that in the end, neither Japan, nor certainly Russia, could expect to gain anything from a terrible and devastating struggle.

## THE HOPE OF TEMPERANCE REFORM

THERE is one obstacle that blocks the social reformer in this country at every turn. In comparison with it all others are insignificant. While it lies across the way two-thirds of all social progress in this country are paralysed. Its removal would inaugurate the dawn of an England happier than can be imagined. This obstacle is, of course, drink—the fruitful mother of crime and poverty, of individual ruin and national inefficiency. For a long time the ardent and devoted band of prohibitionists have steadfastly fought it along their own lines, with so little result as virtually to leave the mass of the evil untouched. At last a wiser course has been inaugurated by reformers, and if only all friends of progress and true patriots would unite, the evil could be promptly mitigated and ultimately overcome. These reflections are prompted by the issue of a manifesto upon the licensing question bearing more influential and representative signatures than anything of the kind ever before published. The matter is one of such transcendent importance that we make no apology for reproducing the entire text of it:

"The attention of the country has been increasingly directed of late to the question of Temperance Legislation, and to the urgent need of statutory arrangements which would clear the ground for effective reforms. It is universally recognised that the social and moral evils which flow from intemperance are enormous, and also that the present expenditure upon alcohol cannot be maintained except at a cost to the community which imperils the progress and well-being of the nation. The conviction is widespread that no scheme of Temperance Legislation can be satisfactory which does not provide facilities for (1) a great reduction in the number of licensed premises, and (2) wide powers of local initiative and control. The much-controverted question of Compensation has blocked the way to effective reform for many years past, and still continues to prevent that clearance of the ground without which important progress is impossible. It is not disputed that licence certificates are terminable at the end of the year for which they are granted, and that, subject to a right of appeal to Quarter Sessions, the renewal of such certificates is entirely within the discretion of the Licensing Magistrates. At the same time, we are of opinion that, in connection with and in order to facilitate the passing of a measure of substantial Temperance Reform which provided, among other things, for a great reduction in the number of licences, and gave to localities under clearly defined statutory safeguards, wide powers of local control, it would be possible to consent to a scheme under which the Legislature made provision for constituting an independent authority, similar to the Irish Church Commissioners, through whose agency compensation would be provided entirely out of funds raised from the trade for licence-holders whose licences were not

renewed, solely on the ground that they were not required, or that all licences or any particular classes of licences were being abolished in the locality. Provided :

"(1) That all the money required should be raised from the trade, and should not pass through the National Exchequer.

"(2) That such scheme of compensation should leave undisturbed the present full and unfettered discretion of the Licensing Magistrates in respect of (*a*) applications for new licences, and (*b*) the renewal or transfer of existing licences, and that the discretionary power of the Licensing Magistrates should be extended to all classes of licences.

"(3) That a definite date should be fixed when all compensation should cease.

"(4) That no limit be placed on the amount of reduction that might be made.

"(5) That any new licences that may be issued should be distinctly debarred from any claim to compensation in case of subsequent non-renewal.

"(6) That such scheme should effectually clear the ground, and leave the way open for further reforms.

"We desire to emphasise our conviction that such a scheme of compensation could only be approved by the friends of Temperance in so far as it was accompanied by facilities for those measures of Temperance Reform concerning which there is a widespread agreement.

"The chief of these measures are :

"(1) A large, speedy, and definite reduction in the number of licensed premises.

"(2) Wide powers of local self-government (with provision for their immediate operation), including permissive powers of (*a*) veto, and (*b*) public control under which, subject to the regulations of statutory law, the whole of the retail traffic in a locality could be conducted without the stimulus of private profit, and without direct and appreciable pecuniary gain to the locality itself.

"(3) A scheme of constructive reforms which should include the provision and maintenance of adequate counter-attractions to the public-house.

"The foregoing proposals outline a policy which the signatories of this Declaration are prepared to support, and which they believe will be accepted by the nation as a basis for legislation."

The signatures fill a column of the *Daily News*, from which we take it, and include Lord Peel, fourteen bishops, the Archbishop of Westminster, eight Labour Members of the House of Commons, such life-long advocates of temperance as Mr. T. P. Whittaker, M.P., Mr. T. W. Russell, M.P., Mr. Joseph Rowntree, Mr. Arthur Sherwell, Mr. George Cadbury, Mr. W. H. Lever, General Booth, Mr. George Jacob Holyoake, Mr. Alfred Russel Wallace, Mr. Benjamin Kidd, the Rt. Hon. A. H. D. Acland, and a long list of clergymen, ministers, Members of the House of Commons, professors, doctors, and magistrates.

In the same issue of the paper appears the report of the annual meeting of the United Kingdom Alliance, at which Sir Wilfrid Lawson said : "No compensation scheme had the sanction of the Alliance and never would as long as he was president." Sir Wilfrid Lawson, with the utmost devotion and rare gifts, has devoted his lifetime and led many others to devote theirs to securing temperance reform along the line of prohibition. He has failed. Let him not now block the way of more practical men.

## THE CURSE OF THE FLYING FILLY

IT would be difficult to find a more typically English institution than the Jockey Club. This select body of gentlemen has scarcely ever been without a member of the Royal Family on its lists since its first appearance in the history of the Turf in 1750. Characteristically enough, no records of the foundation of the Club exist. Its name suggests an origin intimately connected with the days when Charles II. and his court carried on the affairs of the State between the intervals of racing at Newmarket, and when the records of the reign read very like a Ruff's Guide to the Stuart period. On the personal prestige of those noble sportsmen, of whom Bernard Howard was the chief, racing society was founded. Every one knew his neighbour on the course. Wagers were settled as between gentlemen. Only those owned horses who could well afford it. In due course "society" enlarged its borders. The era of clubs replaced the age of coffee-houses. Men who were intimately associated at White's or Brooks' sought the guarantee of a similiar bond of union at Newmarket. The Jockey Club and Sir Charles Bunbury ruled racing in the days when the presence of O'Kelly and his friends made the necessity for government apparent. But the Club still governed by the mere strength of its prestige. The first man who was "warned off" was beaten in a plain action for trespass by the stewards. Like all our most fundamental institutions, the ruling body of the Turf had no logical explanation and no real legal power. It therefore succeeded admirably. But the days of Sir Charles Bunbury faded, in their turn, into the past. The popular element he had discerned, without realising its meaning, grew stronger. A third Dictator, of a very

different fibre, became necessary, and in Lord George Bentinck he duly appeared. Many undoubted evils were swept away by that vigorous and haughty patrician. But he betted with the best—or worst—of them, and much of the evil still remained. The fourth controller of the Turf was Admiral Rous, confessedly in the "ten pound line of business," a hater of "big money," an unrivalled handicapper, a small owner according to his means. It is difficult to discover his successor even in Lord Durham, who has perhaps made the boldest pronouncements of any of his colleagues. But the need for a successor was never more urgent than it is to-day.

The slightest consideration of what racing is, and of the place it takes in national life, will demonstrate the national need for vigorous reform among those who control it. The present moment is a good one for a consideration of the kind, for public attention has been irresistibly drawn to the Turf in the last fortnight by the magnificent performances of the flying filly Sceptre. No lady ever born has shown so acute a sense of theatrical effect, or played so deftly on the feelings of a susceptible public. From the days of her first two-year-old victory she became a favourite with every race-goer. As a three-year-old she eclipsed the record of every mare before her by winning all five classical events save one. Her defeat by Ard Patrick again this year only showed that her previous form was true and diminished not one jot the fervour of her admirers. Her victory, under a hunting weight, over this year's Derby winner was a triumph. But her win by a head in the Duke of York Stakes produced one of the most extraordinary ovations ever seen upon a race-course. There is not much doubt that she is the best mare ever bred. Fleur de Lys, Camarine, Beeswing, Alice Hawthorn, Virago, Apology, Achievement, Crucifix, La Flèche—there is not a name in all the list that can compare with hers, and even France's La Camargo must admit a greater rival. But does this mean that all is for the best in the best of all possible worlds? Very far from it. The institution which has produced this peerless animal is slowly but surely sapping the vitality of this country.

So broad a statement stands in need of confirmation. The cause of reform has suffered bitterly from the ignorance of its too zealous advocates. But the best racing men know very well themselves that all is not as it should be in two main directions: horsebreeding and betting. To take the first, the only animal of her own age that could beat Sceptre was sold to Germany, and Ard Patrick's fee there as a stallion will be fifteen guineas. A fashionable sire in our own enlightened country can get five hundred. Flying Fox was bought by a Frenchman for over £35,000. Even when we do get a good one we seem not to care to keep it. But, it may be asked, how do the foreigners manage such prices? The answer is a simple one. Their Governments consider racing as the secondary question, and breeding for remounts as the first. Not one penny of Government money goes to our classic races. Owners over here win in stakes what they have disbursed in expenses. All but a very few bet in order to pay their stable-bills, and race their young stock to pieces in order to see their money back again as soon as possible. The idea that English racing benefits horse-breeding is sufficiently discredited by the abominable scandal of the Remount Department.

Negatively then, the Turf does not do what it is expected to do. Actively, in addition, it is a serious menace to public morality. The scourge of betting has increased of late every year. The evils of the cheap bookmaker in the north of England can hardly be exaggerated. The total sum lost by working men in London over horses they have never seen is vast. The Turf has grown into a monstrous "money-making" machine that ruins more and more homes every racing-season. Its interests have become as widely ramified as they are enormous. Huge sums of money stand or fall on the success of various meetings, and their promoters are not likely to listen to criticism with any patience. But it was not to ruin the homes of artisans that the Jockey Club was founded. Circumstances have altered so enormously since 1750 that nothing less than radical reform will meet the case as it stands now. The man who does not understand racing has had his say. He has done more harm than good. It is time for those who are really responsible, for those who really know, not only to speak but to act. But there seems no one strong enough to deal with this abominable curse of betting, which is gradually throttling the lives of those who can least afford to lose their money. It is for those who know racing best to suggest a remedy. Theirs is the authority, and theirs is the knowledge. It is idle to shirk any longer a responsibility that must be faced. The greater the names of those whose fame is highest in the racing-world, the deeper is the scandal that they should leave untouched the plague-spot which contaminates the whole.

# MR. CHAMBERLAIN'S CASE AND THE ANSWER

WHAT MR. CHAMBERLAIN PROPOSES—OUR "DISEASE" EXAMINED—HE OMITS OUR TWO GREATEST MEANS OF ENRICHMENT: BRITISH SHIPS AND BRITISH INVESTMENTS—TRUE TESTS OF OUR MATERIAL PROGRESS—THE DELUSION OF A COLONIAL DUMPING-GROUND—EXAMINATION SHOWS MR. CHAMBERLAIN'S PROPOSALS TO BE POLITICALLY INEXPEDIENT AND STATISTICALLY UNSOUND

MR. CHAMBERLAIN'S proposals, and the arguments with which he supports them, may be summarised as follows:

### I. A Disease which Calls for Remedy

He alleges that signs are discernible that all is not well with British trade. While not anticipating a sudden catastrophe, he sees "cracks and fissures in the walls of the great structure." The exports of Germany and America have grown at a much greater rate than our own.

### II. Foreign and Colonial Trade

Our exports to British possessions have increased at a much greater rate than those to foreign countries, which leads to the conclusion that it is the imperial portion of our trade which has the first claim on our attention.

### III. Where the Remedy may be Found

These things being so, we cannot afford to let the Colonies go adrift. We must endeavour to retain our colonial markets. We must go to them and point out that, while we see "that they have no right to neglect what Providence has given them in the shape of mineral and other resources," we think they should leave to us the manufacturing of many goods which they do not now make. This, of course, in exchange for a *quid pro quo*.

### IV. A Self-sustaining Empire

The importance of the endeavour to retain Colonial markets is accentuated by the consideration that the 11,000,000 white colonists of to-day will grow to 40,000,000 in the time to come, and that already our self-governing colonists import £49,000,000 of goods from the foreigner per annum. By seizing the opportunity before us, we can build up a self-sustaining empire.

### V. We must Tax Food to Provide a Preference

Cheap raw materials being a prime necessity of our manufacturing trade, we cannot include them in a preferential tariff. Therefore, we must tax food, but this can be done "without adding one farthing to the cost of living of any family in the country."

### VI. We must Negotiate for the Reduction of Foreign Tariffs

To provide a means of negotiation for the reduction of foreign duties, and to defend ourselves from unfair competition, it is also necessary to levy duties on imports of foreign manufactured articles.

### VII. The Scheme Outlined

To achieve the objects thus summarised, he makes the following proposals:

*New Taxes on Food*

(To be levied on Foreign imports only, to give a "Preference" to Colonial supplies)

(1) Corn, except maize, a duty of 2*s*. per quarter.
(2) Flour, a duty at a somewhat higher rate than on corn to protect the miller.
(3) Meat, except bacon, a duty of 5 per cent.
(4) Dairy produce, a duty of 5 per cent.

*Reductions in Present Taxes on Food*

(1) Tea duty, three-fourths to be remitted.
(2) Sugar duty, one-half to be remitted.
(3) Cocoa and coffee duties to be reduced.

*A Wine Preference*

Colonial wine-growers to be assisted by preferential duties.

*A Duty on Manufactures*

A duty not exceeding an average of 10 per cent. *ad valorem* to be levied on foreign manufactures. (Presumably Colonial manufactures are to come in free.)

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It will be agreed that the above summary does fair justice to Mr. Chamberlain's case in its broad outlines. We will now proceed to examine it in detail, inquiring into the symptoms of the alleged disease and the probable effect of the suggested remedies on the body of the afflicted.

## I. A Disease which Calls for Remedy

Mr. Chamberlain appears to believe that, in considering the position and prospects of British trade, it is sufficient to turn to the record of the declared values of the goods which we ship to places oversea. That is to say, he does not consider our trade, but our exports, and not the whole of our exports, but a part of them only. Again, he does not consider that part fully, but confines his observations to the movement in values. Further, he does not consider even the values as a whole, but selects those of certain years, 1872, 1882, and 1902. Finally, he passes to a comparison of the progress of British exports, as measured in this incomplete and unsatisfactory manner, with those of certain foreign countries, without reference to the fact that the United Kingdom, the United States, and Germany, differ so widely in area, population, geographical position, and natural advantages, that fiscal policy is one of the least of the factors which have to be considered in connection with their comparative progress. The fact is that a wise fiscal policy can at best enable a nation to make the most of its natural advantages. This may be a truism, but its full recognition may save us from losing the solid substance of British prosperity in the vain imagination that a weak imitation of the Dingley Tariff will arm us at all points even as America is armed.

So far as Mr. Chamberlain's selection of the figures of certain years goes, the best reply is to set out the values of our exports of goods since 1850 :

*British Exports of British Products since* 1850
(*excluding ships*)

In Millions of Pounds

| | | | | | |
|---|---|---|---|---|---|
| 1850 | 71 | 1868 | 180 | 1886 | 212 |
| 1851 | 74 | 1869 | 190 | 1887 | 222 |
| 1852 | 78 | 1870 | 200 | 1888 | 234 |
| 1853 | 99 | 1871 | 223 | 1889 | 249 |
| 1854 | 97 | 1872 | 256 | 1890 | 264 |
| 1855 | 96 | 1873 | 255 | 1891 | 247 |
| 1856 | 116 | 1874 | 239 | 1892 | 227 |
| 1857 | 122 | 1875 | 223 | 1893 | 218 |
| 1858 | 117 | 1876 | 200 | 1894 | 216 |
| 1859 | 130 | 1877 | 199 | 1895 | 226 |
| 1860 | 136 | 1878 | 193 | 1896 | 240 |
| 1861 | 125 | 1879 | 191 | 1897 | 234 |
| 1862 | 124 | 1880 | 223 | 1898 | 233 |
| 1863 | 147 | 1881 | 234 | 1899 | 255 |
| 1864 | 160 | 1882 | 241 | 1900 | 283 |
| 1865 | 166 | 1883 | 239 | 1901 | 271 |
| 1866 | 189 | 1884 | 233 | 1902 | 277 |
| 1867 | 181 | 1885 | 213 | 1903 | |

higher than 1902

This table is given to enable the reader to judge for himself if Mr. Chamberlain was justified in the choice of 1872, or 1882, as a basis of comparison with the figures of to-day. The following three tables illustrate the point :

*Progress of British Exports in Thirty Years*

| | £ |
|---|---|
| 1902 . . . | 277,000,000 |
| 1872 . . . | 256,000,000 |
| Increase . | £21,000,000 |

*Progress of British Exports in Twenty Years*

| | |
|---|---|
| 1902 . . . | 277,000,000 |
| 1882 . . . | 241,000,000 |
| Increase . | £36,000,000 |

*Progress of British Exports in Ten Years*

| | |
|---|---|
| 1902 . . . | 277,000,000 |
| 1892 . . . | 227,000,000 |
| Increase . | £50,000,000 |

By the use of such tables plausible tales of the most widely divergent character can be dished up to a popular audience. British exports have grown by fifty millions in only ten years. Magnificent ! They have grown by £36,000,000 in twenty years. Slow ! They have grown by only £21,000,000 in a generation. A case for inquiry ! It is not well for a statesman who has the ear of the people to employ such dubious methods. Above all, the abuse of the statistics of 1872–1873 has been so often commented upon and exposed since the days of "*Made in Germany*" that it was with a gasp of astonishment that we found Mr. Chamberlain stooping to the device in his Glasgow speech. It is not merely that values have fallen so greatly since 1873 as to vitiate the comparison with later years for all practical purposes. Both the volume and value of our European trade in 1872–1873 were swollen by the special causes which arose through the Franco-German War. Moreover, as the boom was practically confined to our European trade, another loophole for misrepresentation is afforded by dividing our exports between foreign countries and British possessions and using 1872 as a starting-point to measure the respective growth of each. To this point we will return presently.

Neglecting specious comparisons, and taking the fifty years as a whole, it will be generally agreed that, when the boom period 1871–1874 is ruled out, the course of British exports, even when measured by values alone, is by no means unsatisfactory. Unfortunately, however, the

table takes no account of our exports of services, and their omission makes the test of British prosperity by official export records wholly misleading, and any comparison with foreign export records worse than useless. No other nation has shipping and banking interests which are to be mentioned in the same breath as our own. To talk of British exports without reference to British ships and British investments is to omit from the tale of our activities our two greatest means of enrichment. The £90,000,000 per annum which we earn in freights and the £90,000,000 per annum which is payable upon our oversea investments appear to have no interest for Mr. Chamberlain. Yet ships alone link up the sundered portions of our Empire, and the grave risk we run of destroying our shipping and shipbuilding supremacy through the adoption of a Protectionist tariff is one of the chief points which the nation should keep before it in connection with the present controversy.

Happily, there exists a means of measuring the growth of our total exports, as distinguished from our exports of goods alone, in the records of our imports. The following table, which contrasts our imports and exports in quinquennial periods, gives a clue to the real progress of our commerce.

*British Commerce*, 1851–1902

In Millions of Pounds

| Average of Quinquennial Periods. | Imports. (Values include cost of freight and insurance.) | Exports of British Produce. Ships excluded. (Values are exclusive of freight and insurance.) |
|---|---|---|
| 1851–1855 | 147.9* | 88.9 |
| 1856–1860 | 182.9 | 124.2 |
| 1861–1865 | 247.6 | 144.4 |
| 1866–1870 | 292.7 | 187.8 |
| 1871–1875 | 359.9 | 239.5 |
| 1876–1880 | 382.5 | 201.4 |
| 1881–1885 | 399.5 | 232.3 |
| 1886–1890 | 389.6 | 236.3 |
| 1891–1895 | 417.7 | 227.0 |
| 1896–1900 | 474.2 | 249.1 |
| 1901 | 521.9 | 270.8 |
| 1902 | 528.8 | 277.6 |

Such is the brilliant record of our commerce. Looking at these figures one can only wonder at and deplore the folly of men who would tamper with the fiscal system under which such results have been achieved. There is not even the excuse that alarm has been occasioned by a present falling-off in oversea trade. In the first nine months of this year, while our imports were, taking everything into consideration, as satisfactory as those of the past our exports of manufactured articles constituted a record. It comes to this then, that in the very period in which British commerce has beaten all records it is suggested that our trade is in dire danger and distress, and that only a tax on imports can save it. But, it may be said, Mr. Chamberlain was speaking of our trade in manufactured goods only. Upon this it may be remarked that the deduction of coal from our exports on the plea that they constitute loss, is unjustifiable. Our coal exports do not, as is often ignorantly assumed, feed foreign manufactures, but are chiefly for the use of steamships, and as to a great part, of British steamships. The growth of coal exportation is but a symptom of the triumph of the steamship over the sailing-vessel. Moreover, the exportation of coal, combined with free imports, has built up our shipping trade. Coal exports mean low freights for imports and low prices to the British consumer. Our coal shipments, therefore, so far from being loss, are a double gain, and it would be more appropriate to the facts to count them twice over than to subtract them.

As to the comparisons with America and Germany, for the reason already stated they are valueless and misleading, but even if it were not so, we have nothing to fear in the comparison. It goes without proof that both Germany and America, starting from much lower levels, have shown a greater increase in their rate of progress, but neither of them has gone ahead as we did when we were dealing in figures of their size. Time will show that, when Germany has reached an annual exportation of manufactured goods equal to our own, as she is, of course, bound to do, she will not find it easy to make more than a normal rate of progress. Between 1882 and 1898, a period of seventeen years, German exports only increased by £27,000,000. In the last few years, it is true, the figures have grown remarkably, but that increase has largely resulted from exporting from weakness, and not exporting from strength. America is a class to herself, but her exports of goods such as our own are still very small, and less than those of France. In the time to come they must, of course, surpass our own, and no tariff devices on our part can arrest her progress, or give us industries to rival in capacity those of the New World.

We have thus rapidly reviewed the chief features of our external trade, but that is to leave out of account every form of national activity

* Average of 1854–1855. The real value of imports was not stated before 1854.

which is not concerned with ships and shipping. So far as the profitableness of our commerce goes, our imports are a true measure. To gauge our material progress as a nation, we can use a variety of tests which are known to all men, and which must carry conviction to every observer not blinded by prejudice. We can measure the national consumption of food, or coal, or timber, the building of houses, the growth of incomes, and each of these in relation to the growth of the population. From each such test our prosperity emerges triumphant. Most of the results are known, if often deliberately ignored, but it may be of interest to give the little-known figures relating to our imports of timber and the growth of house property:

*Timber Imports in the Free Trade Era*

| | Loads. | | Loads. |
|---|---|---|---|
| 1850 | 1,744,000 | 1880 | 6,351,000 |
| 1860 | 3,070,000 | 1890 | 7,213,000 |
| 1870 | 4,429,000 | 1900 | 9,899,000 |

*Gross Income from House Property and Estimated Capital Value of Houses in United Kingdom*

In Millions of Pounds

| | Annual Income. | Capitalised Value at twenty years Purchase. |
|---|---|---|
| 1881 | 117 | 2340 |
| 1891 | 140 | 2800 |
| 1901 | 179 | 3580 |

That is to say, the new houses built between 1881 and 1891 were worth £460,000,000 or an average of £46,000,000 per annum, while the new houses built between 1891 and 1901 were worth £780,000,000 or an average of £78,000,000 per annum. We need not wonder, therefore, if the building industry, and the millions who depend upon it, dread Protection.

Reviewed in its broad outlines, then, we see no cracks or fissures in the stately edifice of British prosperity. Fifty years of the natural selection of industry finds us, in every material point, great and prosperous, owners of half the world's shipping, and with some £2,000,000,000 of capital (*i.e.*, exports for which we have elected to take no imports) invested in places oversea. In a word, not only have our exports sufficed to pay for our imports, but they have built up an ever-growing mortgage on foreign industry.

## II. Foreign and Colonial Trade

It has already been pointed out that, owing to the fact that the 1871–1874 boom was practically confined to our European trade, 1872 makes a doubly misleading starting-point if we measure the comparative growth of our foreign and colonial exports in a generation. The following table makes this point clear:

*British Exports*, 1869–1876

In Millions of Pounds

| | To Foreign Countries. | To British Possessions. |
|---|---|---|
| 1869 | 141.8 | 48.0 |
| 1870 | 147.7 | 51.8 |
| 1871 | 171.3 | 51.2 |
| 1872 | 195.7 | 60.5 |
| 1873 | 188.8 | 66.3 |
| 1874 | 167.2 | 77.2 |
| 1875 | 152.3 | 71.1 |
| 1876 | 135.8 | 64.8 |

It will be seen from this table that when Mr. Chamberlain selected 1872 for comparison with 1902 in speaking of the comparative progress of foreign and imperial trade he utterly misled his audience. It is a most extraordinary thing that the last available records of our trade should be of a year whose unit figure is 2. If this agitation had taken place in 1901, the selection of 1872 would have excited suspicion, even on the part of a popular audience, but as it is 1872–1902 looks quite honest, as an interval of thirty years.

The truth as to our foreign and colonial exports is shown by the following table:

*British Exports (Home Produce only) to Foreign Countries and British Possessions*

| Annual Averages. | To Foreign Countries. | | To British Possessions. | | Total. |
|---|---|---|---|---|---|
| | Million £ | Per Cent. of Total. | Million £ | Per Cent. of Total. | Million £ |
| 1855–59 | 80 | 68.5 | 36 | 31.5 | 116 |
| 1860–64 | 92 | 66.8 | 46 | 33.2 | 138 |
| 1865–69 | 131 | 72.4 | 50 | 27.6 | 181 |
| 1870–74 | 175 | 74.4 | 60 | 25.6 | 235 |
| 1875–79 | 135 | 67.0 | 67 | 33.0 | 202 |
| 1880–84 | 153 | 65.5 | 81 | 34.5 | 234 |
| 1885–89 | 147 | 65.0 | 79 | 35.0 | 226 |
| 1890–94 | 156 | 66.5 | 78 | 33.5 | 234 |
| 1895–99 | 158 | 66.1 | 81 | 33.9 | 239 |
| 1900 | 197 | 67.7 | 94 | 32.3 | 291 |
| 1901 | 176 | 62.9 | 104 | 37.1 | 280 |
| 1902 | 174 | 61.5 | 109 | 38.5 | 283 |

The persistency of the ratio of foreign to colonial trade is really remarkable, save in the last two years, and it will be found on examination that the greater part of the increase of colonial trade in 1901–1902 is due to the abnormal exports to South Africa to make good the ravages of the war. Even so, the percentage 38.5 in 1902 is but 3.5 higher than the

average of 1885–1889. The reader will not fail to see that the quinquennial period 1870–1874 which covers the great European boom shows 74.4 per cent. for foreign and only 25.6 per cent. for colonial exports. Now as to imports:

*British Imports from Foreign Countries and British Possessions*

| Annual Averages. | From Foreign Countries. | | From British Possessions. | | Total. |
|---|---|---|---|---|---|
| | Million £ | Per Cent. of Total. | Million £ | Per Cent. of Total. | Million £ |
| 1855–59 | 129 | 76.5 | 40 | 23.5 | 169 |
| 1860–64 | 167 | 71.2 | 68 | 28.8 | 235 |
| 1865–69 | 218 | 76.0 | 68 | 24.0 | 286 |
| 1870–74 | 270 | 78.0 | 76 | 22.0 | 346 |
| 1875–79 | 292 | 77.9 | 83 | 22.1 | 375 |
| 1880–84 | 312 | 76.5 | 96 | 23.5 | 408 |
| 1885–89 | 293 | 77.1 | 87 | 22.9 | 380 |
| 1890–94 | 323 | 77.1 | 96 | 22.9 | 419 |
| 1895–99 | 355 | 78.3 | 98 | 21.7 | 453 |
| 1900 | 414 | 79.1 | 109 | 20.9 | 523 |
| 1901 | 416 | 79.7 | 106 | 20.3 | 522 |
| 1902 | 421 | 79.7 | 107 | 20.2 | 528 |

Again a remarkably constant ratio between foreign and colonial trade.

Now it is important to observe that these figures take no account of the growth of the British Empire in the period they cover. In the fifty years the British *imperium* has been extended over a great deal of Indian and Burmese territory, the Malay States, Borneo, British Central and East Africa, Nigeria, Cyprus, besides large parts of South Africa and minor places. The same trade which in the above tables ranks in the earlier years as foreign, ranks in the later as imperial trade. Taking this transfer into account, it will be seen that the tables do less than justice to the growth of our foreign trade. Nor should our shipping trade be forgotten in this connection.

## III. Where the Remedy may be Found

We have thus seen that Mr. Chamberlain's diagnosis of the condition of John Bull, merchant and banker, shipbuilder and shipowner, engineer and manufacturer, is exceedingly unsatisfactory. He has unwisely excited the patient by alarming his fears and playing upon his lower emotions. For the rest, instead of feeling his pulse, he has contented himself with carelessly examining the value of the goods carted away from his house. It is not strange, therefore, that his remedy is to let blood, and recommend a low scale of diet.

Mr. Chamberlain's suggestion that our colonies may be persuaded to be tame dumping-grounds for the British trader is so extraordinary that it had best be given in his own words (Glasgow, October 6):

"But we will say (to British colonists, that is), after all, there are many things which you do not now make, many things for which we have a great capacity for production. Leave them to us, as you have left them hitherto; do not increase your tariff walls against us, pull them down where they are unnecessary to the success of this policy to which you are committed. Let us, in exchange with you, have your productions in all these numberless industries which have not yet been erected."

The origin of this remarkable utterance may be found by reference to *The Tariff Problem*, by Professor W. J. Ashley, of Birmingham University, page 157:

"The question is whether the Colonies—besides the preference of British to foreign goods—will consent, in return for adequate reciprocal concessions from Great Britain, to abstain for a time from entering upon such branches of manufacture as they have not yet undertaken. In other words, will they consent to a certain slackening in their manufacturing development?"

Professor Ashley was driven to this suggestion by the reflection that a Colonial Preferential tariff of the Canadian pattern is quite useless, as was so clearly demonstrated by Mr. Chamberlain himself at the 1902 Colonial Conference. It is difficult to speak with patience of the suggestion that this great nation is so hard put to it in trade that we must needs beg our colonists to study our requirements before starting new industries. Apparently Professor Ashley has in mind the artificial stimulation of industry by Protection, but since the Preference is recommended to us as a policy which regards the future, it is clear that in the long run the natural development of colonial industry will not merely render our colonists independent of our manufactures, but number them amongst our keenest competitors. Looking to the future, then, Mr. Chamberlain's reciprocity scheme, based upon the idea that we are to be the manufacturers of the Empire, and our colonists the hewers of wood and drawers of water, falls to the ground.

## IV. A Self-Sustaining Empire

Mr. Chamberlain's vision of a self-sustaining Empire is very narrow and parochial. We are asked to consider the magnificent "market" which will be afforded by the forty million white

colonists that are to be. Always this picture of a "market." And what is the colonial view? Does the colony picture itself a "market"? Is it burning with anxiety to save British trade by buying goods it does not want, or by buying goods it does want at the wrong price in the name of Empire? We have had the answer to such questions again and again. The Canadian Government itself, in an official memorandum prepared a few months ago, made the following statement:

"The Canadian Government has been attacked by Canadian manufacturers on the ground that the preference is seriously interfering with their trade. The woollen manufacturers have been foremost in the attack, and they have made very bitter complaints to the effect that the industry is threatened with ruin through the severe competition from Britain brought about by the operation of the preference."

It is also on record that the Canadian Finance Minister, in a statement made to the Dominion Parliament in April 1903, remarked that at the time of the 1902 Conference in London, Mr. Fielding frankly told the Colonial Secretary that, while his Government were prepared to re-arrange their tariff so as to give Great Britain a preference over the foreign competitor, they were not prepared, as between the British and the Canadian manufacturer, to make any further reduction in their tariffs which would operate to the advantage of the former.

A scheme of self-containment founded upon the Colonial dumping-ground idea is a delusion. It is something worse than that. It is calculated to make our colonists despise us as needy traders, driven out of foreign markets, and appealing for preferential treatment in our colonies as a last resource. Accompanied, as it is, by the confession on the part of Mr. Chamberlain that Free Trade is a failure, the colonist sees the Mother Country raising barriers against imports of manufactures, while asking her colonies to lower their tariffs against herself.

As to a self-contained empire, in the true sense, and not as a collection of units existing for the aggrandisement of one of them, that also is an impossibility. The "self-containment" of the United States is sometimes referred to, but it is a fiction. In the fiscal year ended 1902, the United States imported for the use of her manufacturers £83,000,000 of materials (American imports are valued f.o.b., not c.i.f. like ours), in addition to £41,000,000 of food. Is this self-containment? It may be urged that the British Empire, being more widely flung, with a greater range of latitude, has even more diversified resources than the United States, but it must not be forgotten that it is not merely *some* of an article that is required in modern industry, but the best and most plentiful supplies at the cheapest possible price. Quantities are everything. It is common to see writers misled by the extensive area of the Empire into the belief that it could soon be made self-supporting, in an industrial sense. Canada, it is said, produces wheat; that settles the bread question. New Zealand can supply us with mutton. Timber? there is plenty in Canada. Hides? India and Australia have them in abundance. Metals? there is copper at the Cape and lead in Australia, iron in Canada and pyrites in Newfoundland; and so on, through the long list of our needs. All is well until quantities are examined, and then the whole case collapses. A simple examination of our present supplies of food and raw materials shows that three-fourths of the former and two-thirds of the latter are derived from foreign sources. Such fractions are not easily altered, and to suggest that we should attempt to do so by taxing our food, if not our materials, would hardly be regarded as a serious proposal if it were not made by a man who can command attention for any policy, however ridiculous.

As for the £49,000,000 of goods which our colonists now buy from foreigners, the following table gives the figures:

*Imports of the Self-governing Colonies*

| Colony. | Total Imports. | Goods imported from foreign countries. |
|---|---|---|
| | £ | £ |
| Australia . . . | 41,502,000 | 12,436,000 |
| New Zealand . . | 11,353,000 | 2,018,000 |
| Natal . . . | 9,556,000 | 1,554,000 |
| Cape of Good Hope . | 21,416,000 | 4,367,000 |
| Canada . . . | 38,414,000 | 28,821,000 |
| Newfoundland . . | 1,513,000 | 473,000 |
| | £123,754,000 | £49,669,000 |

The fact is, of course, that by far the greater part of Colonial imports from foreign countries consists of goods we do not sell. Of the rest, the experience of the Canadian preference shows that no tariff could give us more than a fraction of the present trade. Of the £49,000,000 which Mr. Chamberlain referred to, only some £23,000,000 is in our way of business, and of that £10,000,000 is the share of Canada, so that only £13,000,000 of trade is left which may be considered open to the operation of a preference. In view of geographical considerations, we

must reduce this by one-third, leaving £8,000,000. Then, with a really effective differential tariff, we might possibly win one-half of this, or £4,000,000 worth of trade, an amount hardly worth serious consideration in relation to the extent of our commerce.

The fact that our self-governing colonies find it necessary to import so much food and material from foreign countries, is evidence that they are unable to supply our needs, or make substitution for foreign supplies. A self-sustaining empire is a chimera.

### V. We must Tax Food to Provide a Preference

Mr. Chamberlain admits that we cannot afford to tax raw materials, and that, of course, is an admission that the consumer pays the import duty. Therefore, he says, we must tax food, for a preference must be created (1) to save our trade, and (2) to save our Empire. But, we are told, the taxation of food will cost us nothing, a plea which we will presently examine in detail. At this point, we are only concerned with the question of political expediency. It is a cardinal fact that a food preference is of little value save to Canada:

*Food Imports from Self-governing Colonies in* 1902

| | £ |
|---|---|
| From Canada . . . | 13,381,000 |
| From Australia . . . | 3,011,000 |
| From New Zealand . . | 4,839,000 |
| From South Africa . . | *nil* |

Canada, it will be seen, would benefit more by the preference than all our other colonies put together, and if we refused to tax materials to redress the balance for Australia, we should be denying in practice what we affirm in principle, viz., that a preferential tariff is the only means by which the Empire can be kept together. It is not a little remarkable that Mr. Chamberlain makes no attempt to explain by what means he thinks of providing a "tie of interest" for South Africa, the part of the Empire in which he is, or should be, most interested. To set up a tariff to benefit Canada alone is not politically expedient. Moreover, even in Canada, by taxing food, we should favour only one section of the population, while irritating the manufacturers, who see, or think they see, an enemy in every British manufactured article.

### VI. Retaliation

Here we reach the most popular part of the Chamberlain programme. The popular belief is that foreign countries have put tremendously heavy duties on British goods, and that we are foolish not to retaliate. On this belief, Mr. Chamberlain plays with great effect. "If I am hit, I hit back." There is no need to look at the report to know that "loud cheers" follow. There is a widespread impression that foreign tariffs are aimed at British goods alone. Many British manufacturers believe that the new German tariff is specially aimed at this country, when, as a matter of fact, it was chiefly shaped by the Agrarians and aimed at food-exporting countries. In the same way, the new Russian tariff is believed to be anti-British, when it is really anti-German, and provides lighter duties for goods by sea than goods by land. Nor is it known, or if known, appreciated, that with a few insignificant exceptions, which go to prove the rule, British goods enjoy the lowest duties of every nation in the world. It may not be out of place to set out the most-favoured-nation clause in our treaty with Germany of 1865, which we denounced in connection with the Canadian preference:

> "The produce of manufactures (of the respective parties) shall be subject to no higher or other duties than the produce and manufactures of any third country the most favoured in those respects. . . . Any favour, privilege, or reduction in the tariff which either of the contracting parties may concede to any third Power shall be extended immediately, and unconditionally, to the other."

In virtue of such a clause in our treaties with all the great Powers, we automatically enter into the enjoyment of every reduction in every tariff. Without tariff wars, without negotiation, without a "big revolver," our goods are assured the best treatment everywhere. Mr. Chamberlain must know that unless this is explained to the British people, it is little better than a deception to say to them, "If I am hit, I hit back."

Above all, we must clearly bear in mind the fact that our exports consist as to the greater part of manufactured goods. Indeed, we export as many manufactures as Germany and America put together. Our imports of manufactures, on the other hand, are but one-half as great as our exports. If it comes to retaliation, then, we are most vulnerable. While we can but aim at the heel of the foreigner, nearly the whole of our exports, whether of goods or shipping services, lies open to attack.

### VII. The Scheme

We now come to the scheme which Mr. Chamberlain has at length divulged. Its

arithmetical results are summarised in the following table :

*Effect of the Suggested Food Duties*

| | | Duty received by Treasury. Thousand pounds. | Loss to Consumer. Thousand pounds. | Gain to Colonists. Thousand pounds. |
|---|---|---|---|---|
| *Corn (except Maize)* 6*d.* per cwt. | Million cwts. | | | |
| Foreign | 132 | 3300 | 3300 | — |
| Colonial | 35 | — | 875 | 875 |
| Home-grown | 160 | — | 4000 | — |
| *Meat (except Bacon)* 5 per cent. *ad valorem* | £ | | | |
| Foreign | 27,000,000 | 1350 | 1350 | — |
| Colonial | 7,500,000 | — | 375 | 375 |
| Home-raised (say) | 45,000,000 | — | 2250 | — |
| *Dairy Produce* 5 per cent. *ad valorem* | £ | | | |
| Foreign | 26,000,000 | 1300 | 1300 | — |
| Colonial | 7,000,000 | — | 350 | 350 |
| Home-grown (say) | 50,000,000 | — | 2500 | — |
| | | 5950 | 16,300 | 1600 |

(1) The Consumer loses £16,300,000.
(2) The Treasury gains £5,950,000.
(3) The Colonist gains £1,600,000.

The most striking thing is the paltry nature of the benefit given by the scheme to British colonists. Think of it ! The suggestion is that £1,600,000 is sufficient to purchase the loyalty of 11,000,000 British colonists. It works out at less than 3*s.* per head per annum. If loyalty must be bought, it would appear to be more sensible to vote our colonists the 3*s.* per head as a free gift from the imperial exchequer, than make the British consumer pay £16,000,000 to provide it. However, we prefer to think of British loyalty as without a price.

It is suggested that the British consumer's loss of £16,000,000 can be made up to him by a reduction of the tea and sugar duties, but a little simple arithmetic also disposes of this plea. On the figures of the fiscal year 1902–1903, the following result is arrived at :

*Taxes Reduced*

| | £ |
|---|---|
| Three-fourths of tea duty | 4,500,000 |
| One-half of sugar duty | 2,500,000 |
| Part of cocoa and coffee duties (say) | 100,000 |
| | 7,100,000 |

But, as we have seen, the consumer's loss on bread, meat, butter, eggs, and cheese would be £16,300,000. So that we get :

*Consumer's Loss on Transfer*

| | £ |
|---|---|
| Loss on corn, meat, and dairy produce | 16,300,000 |
| Gain on tea, &c. | 7,100,000 |
| | 9,200,000 |

The effect on the national purse would be as follows :

*Treasury's Loss and Gain*

| | £ |
|---|---|
| Loss on remissions of tea, &c., taxes | 7,100,000 |
| Gain through corn, &c., taxes | 5,950,000 |
| Balance Loss | 1,150,000 |

In the above calculations " dairy produce " has been interpreted to mean eggs, butter, and bacon. It is asserted by Mr. Chamberlain's supporters. however, that lard, and even margarine and condensed milk (the margarine that comes out of a dairy must surely be a near relative of the milk that comes out of a pump !) are to be taxed under the scheme. In that case, of course, the consumer's loss will be much more than £16,000,000.

It is important to observe that the sugar duty was re-imposed, after an interval of many years, as a war tax. It should therefore be removed in the next Budget in any case, especially in view of the Brussels Convention.

It but remains to consider the 10 per cent. duty on manufactured goods. As to this it may be remarked that while a duty of 10 per cent. is insufficient to diminish our imports of manufactures to any appreciable extent, it is ample to raise the prices of goods all round, and to reduce considerably the purchasing power of the consumer. As a measure of Protection it is ludicrous. As the thin end of the wedge, it is welcomed by those who hope for 25 per cent. later on. As a means of negotiating with the foreigner, it would be absolutely useless. If Germany with duties averaging 25 per cent. *ad valorem* on manufactures has been unable to make any impression on the Dingley Tariff, how can it be seriously suggested that a mere 10 per cent. would help us. It is conceivable that the United States might be inclined to bargain on a 10 per cent. corn or meat duty, in view of the fact that we buy so much food from her, but if by negotiation we reduced the food duty, the Canadian Preference would disappear, and the Empire, *ex hypothesi*, would fall to pieces, lacking the only system which can keep it together.

To sum up, Mr. Chamberlain's proposals are politically dangerous and statistically unsound.

# ALASKA AND ITS PROSPECTS

THE RICHES OF THE LAND WHOSE BOUNDARIES HAVE JUST BEEN SETTLED IN LONDON—RAILROADS FOLLOWING THE MINERS, AND SETTLERS THE RAILROADS, INTO THE NEW NORTH—CITIES SPRINGING UP IN ALASKA WITH PAVED STREETS, ELECTRIC LIGHTS, BANKS, CHURCHES, AND SCHOOLS —GRAIN AND VEGETABLES GROWN NORTH OF THE ARCTIC CIRCLE

BY

WILLIAM R. STEWART

NO longer is Alaska, even in popular conception, the lone land of ice and snows which fiction and tradition long presented it. Northward within the last five years, swift on the heels of the gold-seeking pioneers, have gone railroad builders and telegraph linemen, engineers, capitalists, bankers, teachers, and settlers, until not only Alaska, but the whole vast stretch of the Far Northwest is repeating California's marvellous story of development. Steamers, many of them palatial in their fittings, now navigate the Alaskan rivers; towns with organised systems of government are growing fast, with schools and banks and churches, and streets lighted by electricity and paved. The telegraph and the telephone connect the principal settlements, and railways are being built which in a year or two will traverse the peninsula almost from end to end.

Prevailing fallacies regarding the climate have disappeared. In south-eastern Alaska, which is tempered by the warming airs from the Japan Current, the thermometer rarely falls to zero, and the changes from midwinter to midsummer do not exceed twenty-five degrees. Even at St. Michael's, north of the mouth of the Yukon River, the mean summer temperature is 50° Fahrenheit. In the interior the climate is more severe, but not so bitter as is commonly believed. Daily observations during five summers in the Klondike region show that on the average the temperature there rises to 70° or higher on forty-six days, and to 80° on fourteen days; 90° was recorded in Dawson in June 1900, and 95° in July of the same year. From end to end of the Yukon, mightiest of the rivers of the world, the traveller may wander during four months of the year, and never see snow. Instead, there will be a tangle of rich vegetation, of great forests of grass that grows as high as a man's shoulder, and endless fields of beautiful plant-life.

The object of the Alaskan Boundary Commission (consisting of the Hon. E. Root, Senator Lodge, and Senator G. Turner, representing the United States; and Sir Louis Jetté, the Hon. A. Aylesbury, and the Lord Chief Justice of England, representing Canada)—which has just given its award in favour of the American contention in the dispute—was to interpret the treaty of 1825, which fixed the boundary between Alaska, on the one hand, and British Columbia and the Yukon on the other. When Alaska was purchased by the United States in 1867, its value was lightly regarded. The price paid—£1,430,000—was thought to be excessive, and there was much popular opposition to the terms. Yet in thirty-six years the Government has received back in revenues not only the sum expended, but £400,000 more. During the same period Alaska, and the adjoining Canadian Yukon territory, have supplied fish, furs, and mine products, amounting in value, at a conservative estimate, to £75,000,000. Goods worth about £8,000,000 a year are now sent back in return, and the amount of American, British, and Canadian capital invested there is probably not less than £25,000,000. Not only Alaska, but the entire north-western portion of the continent—for many hundred miles beyond the international boundary—is undergoing a marvellous development. Ten thousand miles of railroad are already under construction, or definitely projected, in territory farther north than is now touched by any existing completed line.

Nome is now a city of 25,000 population, and the building of two new railroads, which

are under way, and the improvement of the harbours at Port Clarence and at Solomon, will remove the last of the transportation difficulties of its inhabitants. It is the western terminus of the railroad development of north-western Alaska, whose roads are the farthest north of any in the world, extending almost within the Arctic Circle. Nome is reached by steamers from the western coast of the United States by passing through the Aleutian chain, past Unalaska, as well as by rail from Skagway and steamboat down the Yukon River. The city boasts good hotels, large stores, daily newspapers, banks, electric lights, telegraph and telephone systems, and the other usual adjuncts of civilisation in more southern climes. It is connected with St. Michael's by cable and by telegraph with Dawson and Skagway. Handsome private residences are being built by men who have made their money there, and who have settled down to make the city their home. Well-kept lawns and flower-gardens add to the wonderful metamorphosis which has overtaken the sandy beach.

Seward Peninsula, on which Nome is situated, is being rapidly "gridironed" by the various railways built to communicate with the principal gold-mines, and with the other towns in that part of Alaska. The Alaska Central Railroad, the latest transportation enterprise, will run from Valdez, the most northerly port in Alaska, which is open all the year round, to Tanana, a distance of four hundred and thirty miles, and will open up the mineral and agricultural districts of the Copper, Tanana, and Yukon valleys. Construction has already begun on this line, the route lying through a country which is heavily timbered, with tributary territory rich in gold, copper, and coal. With a railroad projected as a part of the Grand Trunk Pacific System, from Port Simpson to Dawson, with a hundred-mile line soon to be built from Dawson north, and with the Alaska Central coming east to Eagle City and west to connect with the Nome and Solomon City Railroad, it remains but a question of time when there will be all-rail communication from New York to Norton Sound, a few miles across Bering Strait from the continent of Asia. A northern spur from the Trans-Siberian Railway would then realise the dream of "New York to Paris by rail."

The first railway undertaking in the Far North was begun in southern Alaska and the British Yukon in 1898. In June of that year work was begun by a syndicate of English capitalists on what is now the White Pass and Yukon Railway, extending from Skagway, in Alaska, to White Horse, Yukon territory, a distance of one hundred and twelve miles. It was constructed primarily to afford access to the gold-fields of the Canadian Yukon, but has since been made a link in the continuous rail and river route to north-western Alaska and Seward Peninsula. The railway was completed to White Horse in June 1900, at places the cost of construction exceeding £50,000 a mile. The route had been used for pack horses in the fall of 1897, but the trail was almost impassable, and immense numbers of the animals had died in their tracks. Two thousand had to be collected and burned with kerosene before the work could be undertaken. In attempting to lower Lake St. Louis about three feet, the entire lake washed away, causing widespread damage. The total cost of the White Pass Railroad was about £1,000,000; but it paid nearly £400,000 profits during its first two years' operations.

From White Horse to Dawson, a distance of three hundred and thirty miles, connection is now made by modern steamers in summer and by four-horse sleighs in winter. The stages used in winter cover the distance, under ordinary conditions of weather, in three and a half days, or at a rate of about ninety miles a day. A railway was built last summer from West Dawson to Stewart River, a distance of eighty-two miles, tapping the rich mining districts in that direction. A number of other railways leading to different gold centres are now being constructed, and in a few years Dawson will be connected with its outlying districts in every direction, and even, it is projected, with the trans-continental lines to the south.

Dawson enjoys almost as many municipal advantages as any place of its size in the world. It has a splendid system of water-works, a local telephone system and long-distance connections with the principal mines, telegraphic communication with the world, churches of every denomination, large Federal and municipal buildings, and good schools. There are a number of clubs and lodges, as well as theatres and other places of amusement, and three banks. The personal and realty assessments of the city exceeded £2,200,000 last year, and post-office orders to the value of £360,100 were sold. The streets are all thoroughly lighted by electricity. Lines of steamboats along the wharves, loading and unloading, and steam dredges at work in the river, give an animated aspect to the water-front. Three years ago the inhabitants of Dawson lived principally on dried and canned meats and German sliced evaporated potatoes. To-day

fresh meat is brought in, frozen in winter, and in refrigerator cars to White Horse in summer, and all vegetables are grown in market gardens near by. Nothing pleases the Dawson citizen more than to entertain a sceptical visitor from the south at table with lettuce, asparagus, green peas, or celery, cauliflower, cabbage, and carrots according to the season, grown in his own rear yard; and the same civic pride has led the Dawson Chamber of Commerce to display some very fine specimens of barley and oats grown in that section. Moreover, throughout the Klondike country live stock can find sufficient feed to sustain life outdoors even in winter.

From Dawson to St. Michael's, by the Yukon River, is sixteen hundred miles, and during the open season of navigation—from the middle of May till the middle of October—about forty stern-wheel steamboats run between the two points in from nine to twelve days. The Yukon is easy to navigate—without snags, and with shores alongside of which boats can run and tie up at almost any desired spot. Between its mouth and the Tanana it flows with an easy current of about three miles an hour, the stream varying in width from a mile to a mile and a half. The rest of the river, below Dawson, flows variously through mountainous regions and wide flats, attaining at places a width of ten miles, with many channels and numerous small islands.

The winter trade begins as soon as the ice has formed in sufficient thickness to sustain teams of dogs and loaded sleighs, and continues until the break-up in the spring. The trail having once been marked by some venturesome first traveller, running as nearly as possible over the smooth ice near the shore, is generally followed thereafter. Although the temperature sometimes falls to fifty degrees below zero, such occasions are rare, and even then the air is dry and uniform, and accompanied by little wind. At no part of the route is the traveller out of telegraphic communication with the world.

At Eagle, the first American town beyond Dawson, four large trading companies maintain well-stocked stores, and Fort Egbert, located there, has a garrison of two hundred soldiers, with barracks, stables, hospital, and officers' houses. There are two sawmills, and the town is the headquarters of the United States Weather Service for the interior of Alaska. Several large gardens supply an abundance of vegetables, while barley and oats are raised in steadily increasing quantities.

The railways of Alaska and of the Canadian Yukon are being built primarily because of the enormous mineral wealth to be tapped. Those projected for the Hudson Bay, North Saskatchewan, and Peace River districts, have another reason for their inception. Agriculture and lumber are the great natural resources of that vast stretch of little-known territory, and minerals and furs play but subordinate parts. About a thousand miles north of the boundary between the United States and the Canadian North-west territories, in the valley of the Peace River, wheat, barley, and oats are grown in quantities limited only by the number of the agriculturists, and a hundred-barrel roller-process flour-mill, the most northerly mill on the Continent, has just been completed at Vermilion. Two other water-power stone mills, owned respectively by a private firm and by the Roman Catholic Mission, have been running for the past two years and have been offered more grain than they have been able to handle. Two steam sawmills are also in continuous operation, while cattle and hogs are raised by the settlers and find a ready market among the traders. The town is lighted by electricity, derived from the water-power of Vermilion Falls.

The wheat which was awarded the first prize at the Centennial Exhibition at Philadelphia, in 1876, came from the Peace River country. Further east, on the south side of Lesser Slave Lake a wild meadow, thirty to forty miles in extent, from which three tons of grass to the acre are obtained, gives evidence of the richness of the soil there, while the land on the opposite side is excellently adapted to mixed farming, consisting of open prairie interspersed with tracts of cottonwood timber. Dr. Dawson, of the Canadian Geological Survey, estimates the Peace River country to contain 15,140,000 acres of good arable soil.

The Hudson Bay and Western Railway, the bill incorporating which was passed at the last session of the Canadian Parliament, will connect Fort Simpson, on the Pacific, with Fort Churchill on Hudson Bay, a distance of fifteen hundred miles, passing through Vermilion and running south of Lake Athabasca and north of Reindeer Lake. Athabasca Lake is connected with Great Slave Lake by the Slave River, and, with the exception of a break about twenty miles long, steamboat navigation between the two is uninterrupted. From Great Slave Lake the Mackenzie River affords a clear course to the Arctic Ocean. For years past steamboats have been plying on the Athabasca and the Mackenzie, and with the Hudson Bay and Western Railway completed, it will be possible for a passenger to buy his ticket in New York—or in any other

city for that matter—for the Arctic Ocean, and proceed there with almost as great comfort as if he were booked for the Adirondacks. Still another railway—running from North Dakota—will have Fort Churchill as its north-eastern terminus. The bill incorporating the construction company was passed by the Canadian Parliament at its last session. Apart from agriculture the south-eastern Hudson Bay district is said to be rich in minerals of all kinds. The fisheries of the Bay are also valuable, and whalers from New Bedford even now find it profitable to go there, notwithstanding that it takes them two years to make a catch. Cod, trout, and white fish in large numbers are found in both Hudson and James Bay.

The timber wealth of all this section is naturally great, the forests of spruce, pine, and poplar having as yet been scarcely touched by the axe of the woodsman. Unrivalled water-power is furnished by the innumerable streams and rivers, and the transportation of sawn lumber is counted upon to furnish no inconsiderable source of revenue to the railways. A species of large poplar called "liard" or balm of Gilead, which is much sought for by cabinet-makers, is said to grow very extensively in some parts, and tamarack for railway construction is found in the entire region. The greater part of the territory, also, is the natural home of pulp-wood, where, it is declared, is a perennial crop to be harvested unsurpassed in the world. The average annual snowfall at Moose Factory, taken for a period of five years, is eighty inches, as compared with one hundred and seventy-seven inches during the same period at Montreal.

But railways are only one phase of the increasing activity in the North. The telegraph has far outdistanced the iron horse, and remote corners, as yet long distances removed from any line of railway, can flash their intelligence around the world. Well-equipped telephone services have also been established between the towns, and scarcely a place of five hundred inhabitants in the mining country has not its local and long-distance telephone system. On the Pacific coast daily mails leave by all the principal steamship lines and are forwarded from Sitka, Skagway, Nome, and other distributing points by steamer, rail, waggon, and carrier. Where ordinary means of distribution fail, the Russian reindeer, domesticated in Alaska, carry the sacks over the frozen lakes and snow-mantled uplands, traversing a vast distance in an incredibly short time. The highest salaried postal official in the world is in Alaska. He receives £5000 a year for carrying the mail, twice a month the year round, to Fort Yukon, providing his own dogs and sleds for the purpose. There are now upward of one hundred post offices in Alaska, and mails are delivered regularly beyond the Acrtic Circle.

The development of Alaskan oil-fields promises to establish an industry the extent of which cannot be yet foretold. Last autumn an immense oil gusher—Alaska's first—was struck at Cotella, near Kayak, thirty miles south from Copper City. Oil was thrown one hundred and fifty feet into the air, carrying away everything in its course and being capped with great difficulty. Experts were at once sent to the scene by the officials of the Standard Oil Company, but a Canadian and British syndicate had acted more quickly, and the announcement was recently made that they had secured control of the larger part of the Kayak fields, comprising 40,000 acres of land which had been leased to the Alaska Development Company. The British capitalists have chartered two steamships to convey north from Tacoma, Washington, a great quantity of pipes and machinery obtained from Pittsburg, Pennsylvania, together with other supplies. A hundred men are at present employed in sinking an additional well, and £100,000 will be spent in development work, which will include the erection of an experimental refinery.

The fisheries of Alaska are among the richest in the world. More than half the entire salmon product of the United States comes from Alaskan waters, and it is the opinion of competent authorities, that the cod banks exceed in wealth those of Newfoundland. The cod industry, however, is as yet only in its infancy—if, indeed, it can be said to have attained even that primitive stage of development. There are about 15,000 persons engaged in the salmon fisheries, and the market value of last season's output was a little more than £1,400,000. The packing industry is conducted at sixty canneries and fifteen salteries, and the total number of salmon of all varieties taken last year was about 33,000,000. The companies engaged in this industry have a capitalisation of about £5,000,000, and their plants, including vessels, are valued at £3,000,000. The amount which they pay in wages exceeds £500,000 annually, and the yearly expenditure for tin plate is about £220,000. According to estimates of the United States Fish Commission there are not less than 125,000 miles of codfishing along the Alaskan coast.

The special features of Alaska—its furs, fisheries, and gold-mines—have been so fre-

quently exploited by writers that an entirely erroneous idea has been conveyed as to the country's other diversified sources of wealth. That a grain-growing soil could be found so far north, with summers sufficiently long to bring wheat to maturity, has not been supposed possible. Yet, as I have already said, not only has wheat been grown and successfully harvested wherever the experiment has been made, but even so far north as Fort Yukon, within the Arctic Circle, oats, rye, and barley are now grown regularly. The winters of Alaska are more hospitable than those of the great plains of Wyoming, Montana, and some parts of Nevada, and in the dead of winter horses and cattle can be worked without fear of being frozen. The temperature frequently is very cold, but there are no storms. Except on the coast of Bering Sea all the hardy vegetables are grown with marked success throughout Alaska and the Canadian Yukon south of the Arctic Circle. No finer potatoes, cauliflower, cabbage, kale, peas, lettuce, and radishes could be found anywhere than samples which I have seen grown at the government experiment stations at Sitka and Kenai, and I have been told by a friend that at Holy Cross Mission he had eaten new potatoes, cauliflower, and other late vegetables, in the month of July. At Rampart, in latitude 65°, winter rye, seeded there in August, lived through the winter perfectly and matured grain by August of the following year. Barley seeded in May was ripe by the middle of August. An interesting experiment in wheat culture is being made during the present summer by Mr. Charles A. Perry, of Tacoma, Washington, in conjunction with the Illinois State Agricultural College. It is proposed by the experimenters to raise wheat on the Copper River bottoms in Alaska more cheaply and better than any wheat grown elsewhere, and to accomplish this one hundred bushels of a brand peculiarly adapted to that climate has been sown. The seed was obtained by the Illinois College from Russian wheat grown in the neighbourhood of Archangel, almost within the Arctic Circle, and efforts will be made to grow an intermediate style of grain which may not only be best suited to Alaska but also, it is expected, to northern parts of the Western States.

Stock-raising is becoming an important Alaskan industry—within a very few years it is probable that regular shipments of cattle for export will be made. The extensive areas of rich growths of grass and the absence of storms in the winter make many sections of the country ideal places for ranching. The present summer is seeing an important step being taken in this connection. Several large stock-growers of Washington State are planning to convert the Aleutian Islands into vast cattle and sheep ranges, which will surpass in extent the rapidly diminishing ranges of Montana and Texas. One company has already begun the shipment of 25,000 sheep and 5000 head of cattle to the Aleutians, a first consignment of 8000 head of sheep having recently been sent from San Francisco. The company had previously, by landing 1000 head about a year and a half ago, demonstrated that sheep will thrive there, living throughout the winter solely on the grass of the islands.

There are five places in Alaska having a present population exceeding 1000 and eleven with populations of over 500. Thirty public schools were maintained in Alaska in 1902, with thirty-six teachers and an enrolment of more than 2000 pupils. In addition to these public school other schools have been established by the various religious organisations, the Presbyterian Church supporting fifteen missions and a hospital and training school; the Protestant Episcopal Church ten missions, and other denominational bodies a smaller number.

The rapidly increasing importance of the North has just been strikingly recognised by the United States Government in its decision to establish immediately a coaling-station at Dutch Harbour, with a coal depôt having an initial capacity of 5000 tons. The estimated cost of the work is £10,200, the money for which is now available. Dutch Harbour is on one of the Aleutian Islands, on the direct commercial route between the ports of Bering Sea and southern Alaska and the Pacific coast of the United States. It will form the fifth in the chain of coal depôts along the Pacific coast, which will be begun at San Diego, and include San Francisco, Puget Sound, and Sitka.

In 1892 the total foreign trade of Alaska—by which is meant imports and exports of merchandise—amounted to but £5680, of which the larger part were imports. For the fiscal year ending June 30, 1903, Alaska's foreign trade reached a total of more than £4,400,000, of which the exports were about £2,600,000. With the gold and silver added the exports would have exceeded £5,200,000, making the total foreign trade £7,000,000. The importation of iron and steel products into the territory during the year, exceeded in value £400,000.

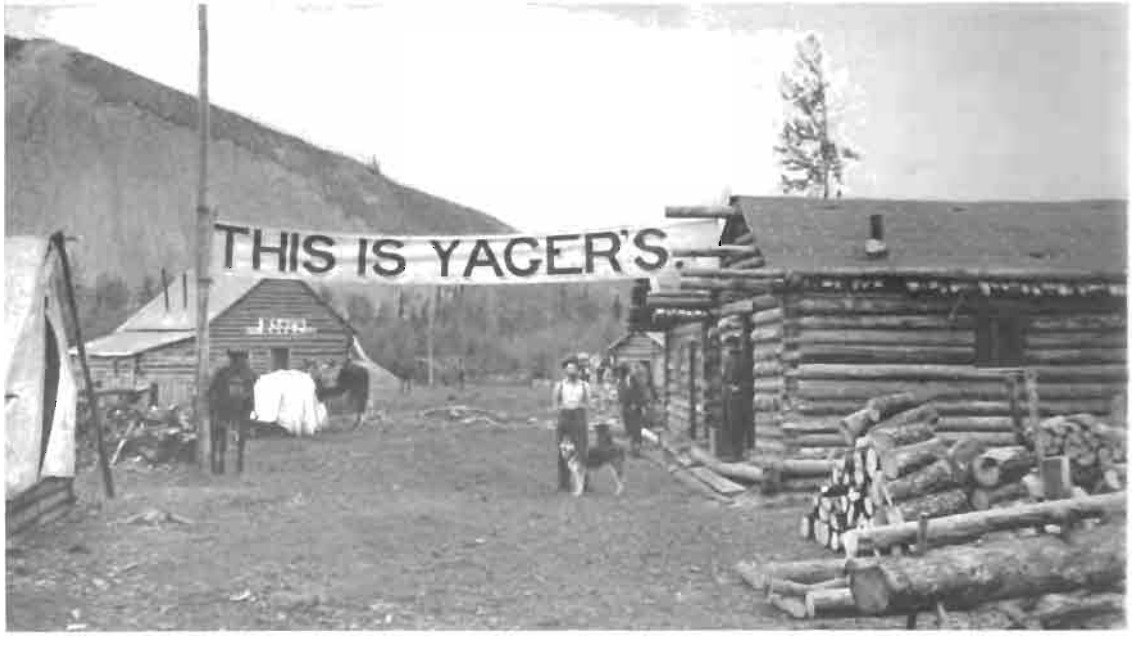
And yet the development of the North has only begun. Its immense wealth of fisheries and of timber has been but little exploited; its possibilities for agriculture have not even been

THE CITY OF NOME


A PART OF THE WHITE CITY WHICH ROSE IN FIVE WEEKS TO SHELTER 30,000 PEOPLE AT NOME

A KENTUCKY BLUE-JOINT HAY-FIELD IN ALASKA

attempted. Only the industry in furs and its gold-mines have received general recognition. When the cod banks of the coast have been exploited; the salmon industry—already the greatest in the world—placed on a more systematic basis; the deposits of gold, iron, nickel, copper, and coal worked by adequate modern machinery; the vast tracts of fertile land brought under cultivation, and the railroads briefly indicated in the foregoing sketch have been




YAGER'S CELEBRATED ROADHOUSE AT TONSINA CITY, SEVENTY-EIGHT MILES FROM VALDEZ

completed, the great North will be no longer the lone *terra incognita* of the past, but will throb with the pulse of an active and productive civilisation.

In the steady stream of population northward there is nothing known of the limits of nationality. In Dawson City, for example, there are more of American birth than there are

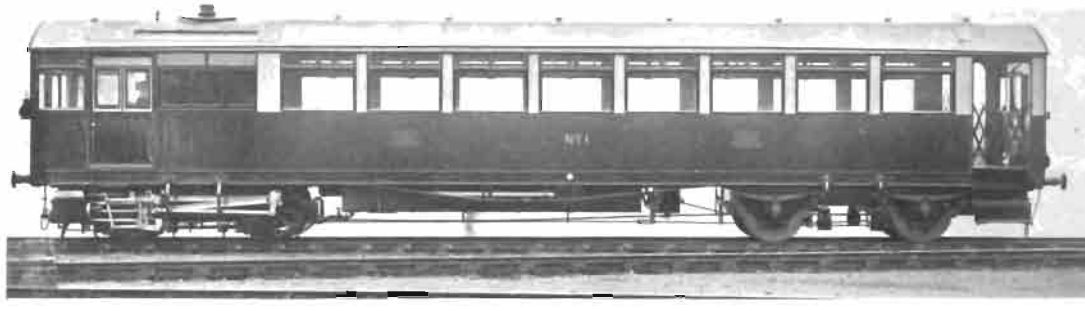

THE FIRE DEPARTMENT AT CIRCLE CITY

A ship's triangle serves as an alarm

Canadians. Shut off, industrially, from the east of Canada by the uninhabited and not very cultivable strip of north Lake Superior and Georgian Bay, north-western Canada must make its commerce with the north-western States and with Alaska. A few years ago it was the custom to laugh at the purchase of Alaska as having been somewhat politely forced upon the United States by Russia as a return for her supposed friendship during the Civil War. The laugh is no longer appropriate. Larger in area than the combined States of Alabama, Connecticut, Delaware, Indiana, Indian Territory, Kentucky, Louisiana, Maine, Maryland, Mississippi, Rhode Island, New Jersey, New York, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, and West Virginia, or than the British Isles, France, Germany, Portugal, and Belgium together, Alaska, already an important part of the United States, will contribute largely to the social and commercial union of two nations.

THE MOTOR-COACH ON THE GREAT WESTERN RAILWAY

The service was inaugurated last month on the line from Chalford to Stonehouse, Glos.



# RAILWAY MOTOR-CARS

HOW TO OBVIATE THE USE OF HEAVY ENGINES AND TRAINS FOR LIGHT PASSENGER TRAFFIC—EARLY AND RECENT ATTEMPTS TO SOLVE THE PROBLEM —WHAT OUR RAILWAY COMPANIES ARE DOING—THE SOUTH-WESTERN, GREAT WESTERN AND NORTH-EASTERN, CARS

BY

H. G. ARCHER

THE question of the employment of motor-cars for railway-line traffic is at present attracting considerable attention, and several railway companies in both the United Kingdom and Continental countries are conducting experiments in this direction. The idea is that a supply of such cars may better accommodate and give more economical results in the working of passenger traffic during certain specified hours of the day, or in particular districts. For example, where suburban traffic is concerned, it is thought that they will provide cheap and rapid transit during those periods of the day when the number of passengers does not warrant the running of heavy engines and long trains—these latter being reserved to meet the stress of the morning and evening traffic. Identically the same reason applies to the employment of motor-cars on rural branch lines, with this difference, that there are not a few such lines where it would appear to be almost feasible, except on market-days and other special occasions, to substitute for the numerically light service of ordinary passenger trains a stronger one, composed entirely of self-propelled rolling-stock.

Railway motor-cars, however, are not the novelty generally supposed, for, in the early days of railroads, one or two long-forgotten attempts to solve the problem of how to obviate the use of heavy engines and trains for light passenger traffic, were made by means of combination engines and carriages. This system was instituted by the late Mr. W. Bridges Adams, while filling the post of chief locomotive engineer to the Eastern Counties Railway. In 1848, Mr. Adams designed, and had built at Fairfield Works, Bow, a small combination engine and carriage, to run on branch lines. The engine had a vertical boiler, which gave it something like the appearance of a tea-urn, and a single pair of driving-wheels, 4 ft. 6 in. in diameter, which were driven by a pair of cylinders, 7 in. in diameter by 12 in. stroke, working a dummy crank-shaft in rear of the boiler. On the same frame as the engine was a carriage, mounted on four wheels, and containing, next to the engine, three open passenger compartments, and behind these

three completely shut-in ones. As his own company would not employ his motor-car, Mr. Adams sold it to the Great Western Company. The latter christened it "Fairfield," and put it into service on the Bristol and Exeter railway, which they worked. When in use on the Bristol and Exeter line, only the trailing-wheels were used to support the carriage—thus, the motor-car was carried on four wheels altogether. The "Fairfield" did good service for a number of years, but what was its ultimate fate the writer has been unable to discover. In 1850, Mr. Adams constructed another combination engine and carriage, the "Eagle," in which to travel on business over the Eastern Counties system. The engine was of the ordinary type, with a single pair of driving-wheels, of spiderlike appearance, and a pair of leading-wheels, while the coach in rear was carried on one pair of wheels.

Sometime in the "sixties" a khedive of Egypt conceived the idea of travelling by rail, but without the necessity of employing a train composed of royal saloon cars. To humour his whim, a gorgeously decorated combination locomotive and "landaulette" was constructed. At that period, the Egyptian State railways were controlled by the French, but the locomotive department was composed mainly of Englishmen, which accounts for the engine being a replica of the pretty "single drivers," formerly much favoured by the Great Western Company. The landaulette-like vehicle attached would appear to be an ideal railway coach for travelling in the hot and dusty land of the Pharaohs. The decorative work lavished on the khedivial railway motor-car is of a most ornate description—fluted smoke-stack; arabesque designs on the boiler-frames, driving-wheel, and tender-splashers; while the lamp ventilators of the khedivial compartment are in the form of crowns.

So poor and sparsely populated a country as Ireland seems specially suited for the employment of railway motor-cars. As a matter of fact, this was realised by the Great Southern and Western Railway of Ireland many years ago. In 1872 this company built one or two combination engines and carriages for use on their more remote branch lines, and one is still running on the Fermoy and Mitchelstown branch. The engine is of small dimensions throughout, having cylinders 10 in. in diameter by 18 in. stroke, a total heating surface of 362 sq. ft., and a weight in running order of 23 tons 7 cwt.; but it is very powerful, and the fact of its being given six coupled driving-wheels shows that it was intended to haul other vehicles in addition to that built on the same frame. Indeed, while in service in Kerry, the carriage on the engine-frame was not used for carrying passengers, who were accommodated in ordinary carriages, coupled on behind. In 1899, the London and South-Western Company acquired the pretty little composite tank-engine and directors' saloon of which we give an illustration. It was built at Nine Elms from the designs of Mr. D. Drummond, the locomotive engineer.


Locomotive Publishing Company

A STEAM MOTOR-CAR FOR RAILWAY DIRECTORS

Built in 1899. London and South-Western

The locomotive is an express engine in miniature, and can attain a rate of speed of sixty miles per hour.

What must be described as the pioneer of the modern railway motor-car is an *automobile postale*, belonging to the Northern Railway of France. The complete vehicle is carried on four wheels, 3.1 ft. in diameter, and comprises a saloon and a motor-compartment, the end of which somewhat resembles the "cab" of an ordinary locomotive. The propelling power is a Gardiner-Serpollet vertical steam-engine, which is practically an adaptation of the internal combustion engine to fit it for super-heated steam. Thus, the boiler gives very high-pressure steam, considerably super-heated, while the water-space is only about one-quarter of the whole. The power generated for propelling this particular vehicle amounts to 70 horse-power, and allows it to attain a speed of forty-five miles per hour, very shortly after starting. The cylinders are 7 in. in diameter by 9.8 in. stroke, and drive the leading axle. In working order the total weight of the automobile is 15½ tons. Since 1900 it has been employed exclusively in the postal service between Creil and Beauvais, a distance of twenty-three miles, but provided that the duties of the post office officials are not impeded thereby, a limited number of passengers are also permitted to travel in it, on payment of second-class fares. The great success of the Northern Company's experiment has led to other French lines placing orders for similar rail-automobiles, and suggested an ambitious scheme for a long-distance express automobile service on the Paris-Lyons and Mediterranean Company's system between Paris and Dijon.

In this country, the North-Eastern Railway was the first to announce its intention to institute an autocar train service, in order to compete with the electric trams in several populous centres, especially on the short section between East and West Hartlepool; and at the end of last year the Company placed an order with the Motor Power Company of Coventry, for a number of four-cylinder petrol automobiles of tramcar design. But the London and South-Western Company have been the first to produce a modern railway motor-car. This new steam-driven coach has been built with a view to effecting economy in the working expenses of the South-Western and Brighton Companies' Joint Fratton and Southsea line, where, during the slacker hours of the day, it performs a shuttle service as frequently as passengers come forward to fill it. The vehicle is carried on a channel-iron frame, which is 56 ft. long over all, and runs on two four-wheeled bogies, each having a wheel-base of 8 ft. and solid wheels 2 ft. 9 in. in diameter. As a locomotive, it is a single driver, the leading pair of wheels being driven direct by a pair of 7 in. by 10 in. cylinders. The boiler is of vertical type, and is filled with vertical and cross tubes. There are no flexible steam couplings, the boiler and cylinders being on the same frame. As regards passenger accommodation, the car is divided into two compartments, first and third, these being divided by a sliding door. The first-class compartment, where the seats are placed longitudinally, seats ten persons, while the third-class compartment, where the seats are arranged in pairs, transversely, on either side of a central gangway, holds thirty-two persons. Access may be had to the coach from both ends from wide platforms, which have openings on either side, these being closed when running by collapsible gates. Next to the engine is a luggage-van, capable of holding one ton of luggage. The coach, however, can be driven from either end, there being connecting rods and levers to work the steam-valve and brake-handles; hence, it can run as a shuttle, that is, without having to be turned round on arrival, in order to get the engine foremost again. Electric communication is provided between the engine and the car. The car is calculated to attain to a speed of thirty miles per hour within thirty seconds of starting. It was built at Nine Elms in the spring of the present year from the designs of Mr. D. Drummond.

On October 7 the Great Western Railway inaugurated a service of rail motor coaches on their line in the Stroud Valley, between Chalford and Stonehouse, which picturesque district is thickly populated, being a centre of tweed manufactures and kindred industries.

The cars were constructed at the Company's works at Swindon, from the design of the chief mechanical engineer, Mr. G. J. Churchward. In general construction the arrangement of the cars is similar to that running on the London and South-Western line, but their motive-power is much more powerful. The cars are driven by a steam motor—fuel, coal. The cylinders measure 12 ins. in diameter by 16 ins. stroke, and are fixed horizontally on frame of bogie, where they drive on to the trailing pair of wheels, which are coupled to the leading pair. The diameter of wheels is 3 ft. 8 ins. The cylinders have balanced slide-valves on top, and the valve motion is of the Walschdert type, which is a precedent for the Great Western Railway. Steam

is supplied by a vertical boiler, fitted with 477 tubes. The height of boiler is 9 ft. 6 ins., and the chimney projects through the roof, and is finished with a polished copper cap. The working steam pressure is 180 lbs. per square inch. The heating surface is : tubes, 625.58 sq. ft. ; fire-box, 44.34 sq. ft. ; total, 669.92 sq. ft., while the grate area is 11.48 sq. ft.

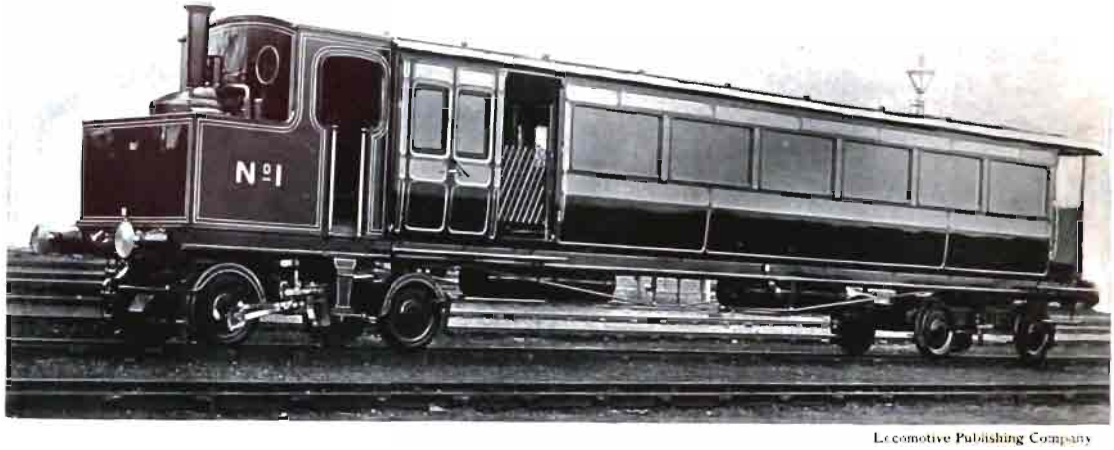
PASSENGER COMPARTMENT OF A MOTOR-CAR ON THE GREAT WESTERN RAILWAY

The compartment accommodates fifty-two passengers—sixteen in cross seats in the centre, and thirty-six in longitudinal seats at the ends

The water-tank (450 gallons capacity) is carried under the coach.

These cars are 57 ft. ⅜ in. long, 8 ft. 6¾ ins. wide, and the height inside is 8 ft. 2 ins. The under frames, which are of steel, are carried on suspension-hung bogies. Each car is divided into the following compartments : passenger 39 ft. long ; motor, 12 ft. 9 ins. long, and vestibule 4 ft. long. The passenger compartment will accommodate fifty-two passengers, sixteen in cross seats in the centre, and thirty-six in longitudinal seats towards each end. The cars can be driven from either end ; hand and vacuum brakes, which can be operated from either end of the vehicles, are fitted to each bogie ; and electrical communication is provided for the convenience of the conductor and driver. As the cars call at certain level-crossing places *en route*, the vestibule is provided with steps by means of which passengers can enter and alight from the ground. At station platforms hinged flaps cover the steps. Collapsible swing gates are fitted to prevent passengers leaving or entering the cars while in motion. The cars are very handsomely finished inside in polished oak, and lit by gas lamps, the gas being stored in cylinders attached to the under frame. The distance between Chalford and Stonehouse is seven miles, and the cars perform the journey in twenty-five minutes. Tickets are issued and collected by the conductor on board. In the event of this service proving successful, the management contemplate the extension of the system on a big scale.

At the time of writing the North-Eastern Company's petrol-electric rail motor coaches are still unfinished, which is due to the fact that the Napier motor at first tried gave unsatisfactory results, and a petrol-motor of the Wolseley type is being substituted. The engine drives a dynamo direct, which generates current for four motors, one on each axle of the vehicle. The style of car adopted is similar to that employed by the South-Western and Great Western Companies, save that it is provided with a clerestory roof, and is, on the whole, more plainly finished. The car measures 53 ft. 6 ins. in length, by 8 ft. 6 ins. There is a central gangway running the whole length of the passenger compartment, on either side of which are thirteen cross seats with reversible backs, to accommodate two passengers apiece. The conductor's compartment is completely shut in. Among other railways contemplating the construction of rail motor coaches are the Taff Vale and the Great Northern.




Locomotive Publishing Company

THE NEW MOTOR-CARRIAGE ON THE LONDON AND SOUTH-WESTERN

This steam-driven coach was built a few months ago and is now at work on the Fratton and Southsea line. It is divided into two compartments—the first class seated for ten passengers and the third class for thirty-two

Some little time must elapse before data are available for comparing the cost of working rail motor coaches per passenger unit with that of the steam locomotive and train they are designed to supersede on local and suburban services.

# HOW MILK SAVES LIFE

MILK THAT GIVES LIFE AND MILK THAT KILLS—THE MUNICIPAL MILK PLAN AT BATTERSEA—SIX HUNDRED CHILDREN ARE FED EVERY DAY AT A COST TO THE PARENTS OF THREEPENCE EACH PER DAY, AND THE DEATH-RATE OF INFANTS HAS FALLEN FROM 170 TO 96 PER THOUSAND

BY

C. W. SALEEBY, M.B., CH.B.

*Illustrated from photographs specially taken for* THE WORLD'S WORK

WITH the exception of the blood itself milk is the most remarkable of all known fluids. It contains every essential for the nourishment of the young mammal—nicely adapted to his wants in each case, whether he be a calf or a lamb or a baby. It contains a proteid called caseinogen, which is of the very highest nutritive value, and which is now prepared and sold separately under the name of Plasmon. Besides this tissue-forming substance, it contains such sources of energy and heat as fat, which it presents in the digestible form of an emulsion, and milk-sugar or lactose, which is favourably distinguished from other sugars by the difficulty with which it undergoes fermentation. Add that milk contains all the necessary salts, including those of iron and of lime—which latter it contains in more abundance than does lime-water itself, though many a poor mother adds lime-water to milk under the impression that she is thereby giving food to her baby's bones—and that it contains a good deal of water, and it will be seen that this is a perfect food. It has proteids, fats, carbohydrates, salts, and water: nothing can be added to these categories. This wonderful fluid, then, which embodies the whole physiology of dietetics, and which illustrates a whole philosophy of ethics, kills probably about one child in ten that see the light in these islands.

Our infantile death-rate is about one in seven. It is similar in all civilised countries and shows no diminution during the past half-century—rather the reverse. The main factor in this death-rate is diarrhœa, and the cause of diarrhœa is to be found in the child's food. Observe the difference between the milk that gives life and the milk that kills. The one is a warm, aseptic fluid having the properties above described. The other, especially in the summer months, is a cold or tepid semi-putrescent mass of bacteria, including, notably, the bacillus of summer diarrhœa. In Berlin thirty artificially fed children die for one breast-fed. In Battersea the establishment of a municipal milk depôt has reduced the infantile mortality from 170

THE STORE OF MILK AT THE MUNICIPAL DEPÔT, BATTERSEA

to 96 per thousand, and the figure is still falling.

Now before going any further into this question of municipal milk, and without raising the larger issue as to the effect of our modern methods upon the sense of parental responsibility, let it be laid down at once that no other method of feeding a child in the first year of its life is to be compared with the method of Nature. It is satisfactory to find that on the pamphlet issued by the Battersea Borough Council to all its customers there is printed in large type the following admonition: "N.B.—The milk should never be used in preference to mother's milk, which is the best of all foods for young infants." Once this fact, which is indisputable, is admitted, it follows that the ideal method of reducing our appalling infantile mortality is to educate the mother to feed her child. "Education," as at present counterfeited in this country, is effectually teaching the mother *not* to nurse her child. Hence we are promised Royal Commissions on the degeneration of the national physique and such like pleasing phenomena. But, granting that "municipal milk" is the second best method, let us see how it is accomplished.

THE STEAM STERILISER

At the instigation of Dr. McCleary, their Medical Officer of Health, the Battersea Borough Council have hired a small shop with two back-rooms in York Road, and since they manage these things better in France, as Sterne would say—in France where babies are scarce and prized—the method instituted by Dr. Léon Dufour at Fécamp has been adopted here. It consists in supplying humanised sterilised milk in stoppered bottles, *each bottle containing sufficient food for one meal and no more*. The sterilisation is accomplished by a large machine in one of the back rooms. The milk is put into the hermetically stoppered bottles which are packed in wire baskets and kept at boiling-point for twenty minutes in the steriliser. The milk is sold to the customer in convenient baskets with a handle, each basket containing as many bottles as the child has meals in a day. Infants under two months receive nine bottles per day, older children fewer bottles as they should be fed less frequently. The bottles contain different quantities, according to the age of the child. The "humanising" of the milk is, of course, just the usual addition of lactose, cream, and so forth. The parent is supplied with a teat, which is attached to the bottle, and the use of any other bottle is forbidden, as is the re-warming of the milk if it is not all consumed after the bottle is once opened. The mothers

FILLING THE BOTTLES WITH MILK FOR STERILISING

are warned not to open the bottle until the infant is ready to be fed, and not to give bread with the milk. They are also asked to bring the children once a fortnight to be weighed. Some six hundred children are fed every day,

BOTTLE-WASHING BY ELECTRICITY

at a cost to the parents of threepence per day.

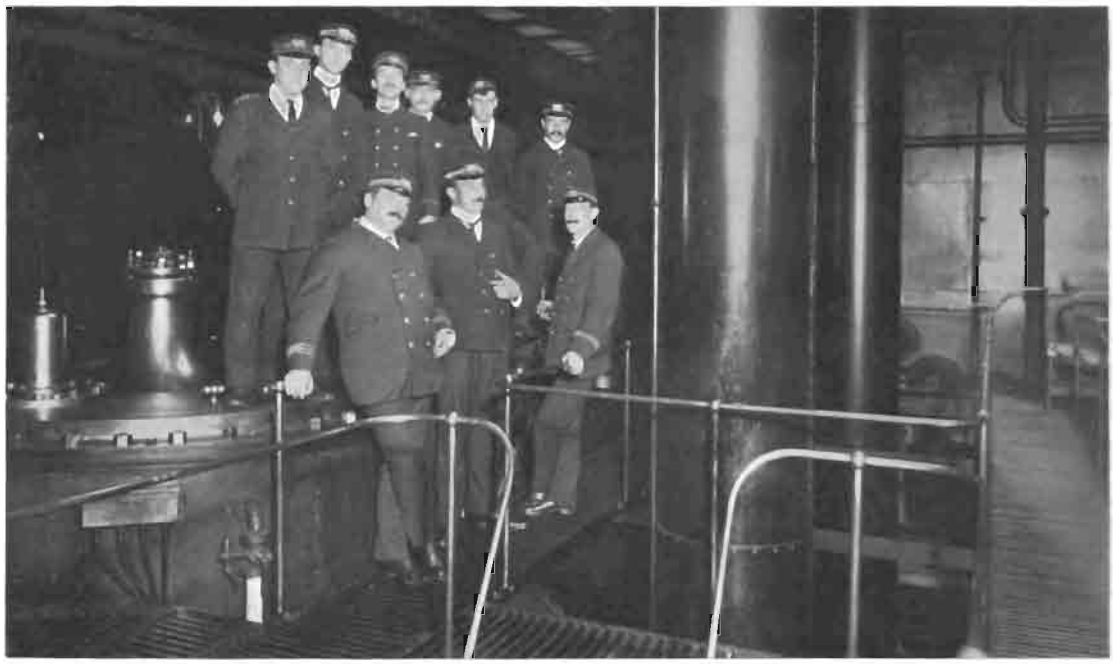
This matter of infantile mortality has lately received much attention on the Continent, and systematic international effort is going to be made in France, Belgium, and Germany to put an end to one of the great evils of our civilisation. As the marriage age of both sexes steadily rises and the birth-rate steadily falls amongst all white peoples, whilst brown and yellow multiply as fast as ever, it is clear that the whole future history of mankind is bound up with this question of infant lives. The municipal milk plan will soon save the lives of about

FOR ONE BABY FOR ONE DAY

one hundred in every thousand children born in Battersea. If mothers could be persuaded to look upon the milk as something other than a medicine, merely to be taken when the child is ill, the death-rate would fall lower still.

But it is to be hoped that the municipal milk method is only a phase. We must remember that what such a depôt can offer is at best only an inferior substitute for mother's milk, and that, in the case of older children, the necessary sterilisation and modification of cow's milk can and should be performed at home. Meantime by this method mothers may be taught to reject that abomination, the feeding bottle with a long tube, which takes far more lives every year than were lost on both sides in the Boer War.

THE STAFF OF ENGINEERS ON A TRANS-ATLANTIC LINER



# THE DAY'S WORK

## VIII.—A SHIP'S CAPTAIN

HIS GLORY AND AUTHORITY—ST. PETERSBURG TO LONDON—SWEDISH MAIDS REPLACE ENGLISH STEWARDS—THE FIREMAN AND HIS FOOD—FOG—THE CAPTAIN AS DOCTOR—SMUGGLERS CAUGHT—PREPARING A LINER FOR SEA—LONDON TO NEW YORK—SAILORS' WAGES—DROPS OF OIL ON TROUBLED WATERS—LIVE STOCK AND CARGO—A FLOATING HOTEL

*Illustrated from photographs taken for* THE WORLD'S WORK

ONE ship's captain differs from another ship's captain in glory, though every ship's captain is in one respect alike in the supreme, unquestionable authority he holds in voice and hand so long as his ship is at sea. (In port or ashore he is sadly worried by officials of various kinds, to whom he shows contempt flavoured with hospitality; and by "owners," towards whom his attitude is one of grudging respect.) Setting aside the two extremes marked by the captain of one of his Majesty's battleships and the captain of a barge, one may narrow the issue to something between the captain of a P. and O. liner—a gorgeous personage—and the captain of a tramp steamer, who may be a mahogany-faced user of oaths or a quiet man with a taste for literature. I have met both types. But after a search for the mean between the extremes I have selected the *Una* for the purpose of illustrating the work of a ship's captain, and the *Minneapolis* for the purpose of showing what is involved in the preparation of a great liner for sea. Let us take the smaller vessel first.

### I.—A NORTH SEA PASSAGE

The *Una*, during her four years of life, has been engaged in conveying cargo and passengers between London and St. Petersburg, under the commandership of Captain John Grant, and is perhaps the most popular of the Bailey and Leetham line of steamers, which has recently been

amalgamated with the Wilson line. Its popularity, not only with tourists but also with the Russians and English who travel on business between the two countries, is very largely due to the domestic arrangements on board. For Captain Grant's position is much like that of the master at a public school who has obtained a house. He is not only a seaman but a hotel-keeper; and after certain experiments he has decided that in all domestic matters a woman is cleaner, sweeter, more trustworthy, and more capable than a man. Wherefore on the *Una*, alone of all the steamers that have conveyed me across the sea, the whole service is directed by a woman—Miss Petersson—and carried out by women.

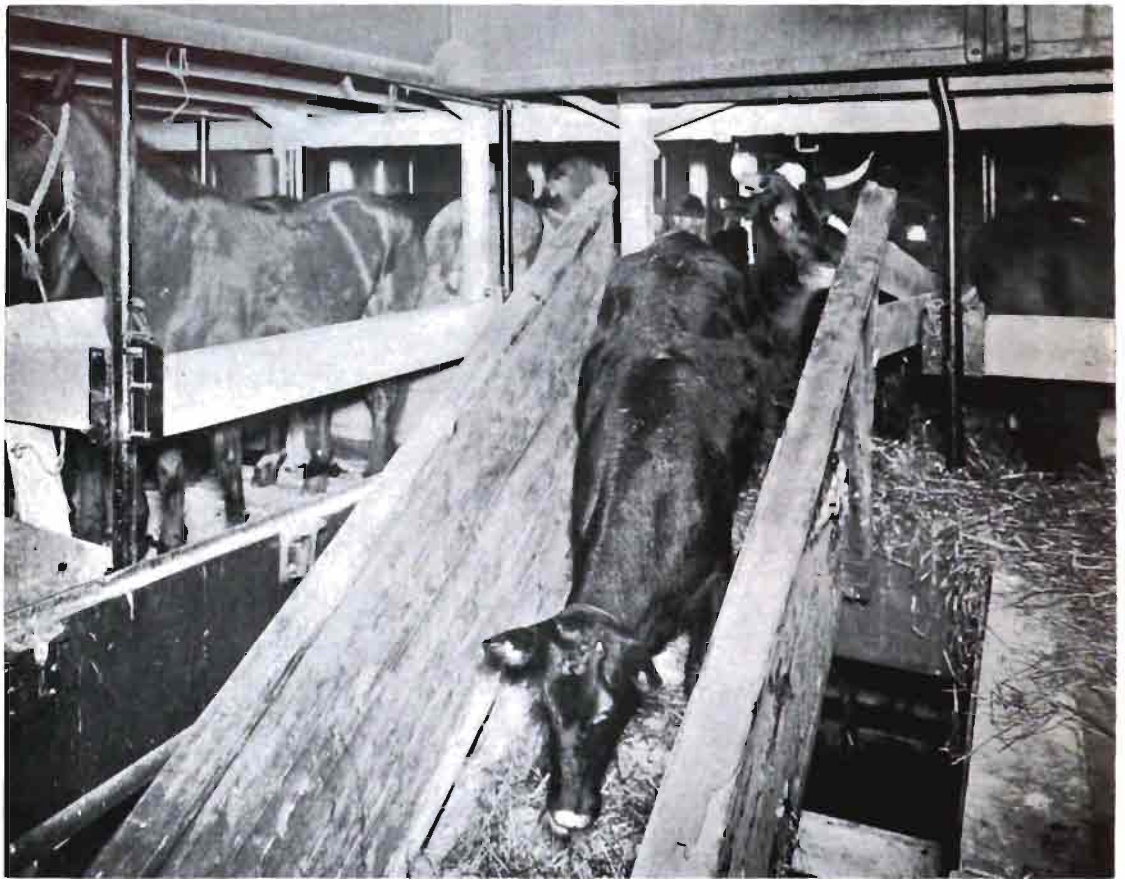
THE CAPTAIN'S ROOM ON THE "UNA"
London to St. Petersburg

The system is common on Swedish steamers, and its transference to a British ship works out in most satisfactory fashion. I am not prepared to advocate the adoption of the ordinary English housemaid into the service of a ship—even if she could be spared from her native shore. But the success of Swedish feminine service on the *Una* has already

IN THE ENGINE-ROOM OF THE "UNA"

taken a load off the broad shoulders of its commander.

Imagine, then, the last moments of the steamship at the quay below St. Petersburg. On deck is the captain; round about is the swirl of activity which at first sight seems confusion. Passengers arrive, cargo is being swung on board; from the bowels of the ship comes the throb of rising energy from the engine-room. This is the task before the captain. He stands on a ship which cost £40,000 to build; he knows that to get that ship from London to St. Petersburg and back again costs about £800 in coal, wages, port charges, and other necessary outlay; he knows that with luck and in spite of low freights, he can carry a cargo that will put several hundreds of pounds into the pockets of his owners; he knows that between forty and fifty passengers will criticise his manners. But the captain stands calmly confident in the efficiency of the watertight compartment. He has nothing to do with the cargo, for the moment, nothing to do with the engines. On the fore deck stands the second mate, quietly watching the cargo as it comes on board—and the notes he makes will subsequently be gathered in by the captain. Nor is the engine-room his province. There is a chief engineer, with assistants. Their function is to watch the signal-plate in the engine-room that indicates the wishes of the officer on the bridge. And the etiquette of the sea forbids the captain to descend to the engine-room and talk at large—as captains are prone to talk. That is the business of the chief engineer, who is held responsible by the captain for getting the required work out of the men and machinery below.



UNSHIPPING CATTLE FROM AMERICA

About 800 prime cattle are shipped to London in the *Minneapolis* every month

At the moment, then, the captain is not a seaman, not an engineer, not even a head steward—for Miss Petersson and her Swedish sisters are looking after that part of the business

—he is a hotel manager, dealing with the contending interests of passengers who invariably think that the berth they have not obtained is better than the berth assigned. Our passengers include a Siamese prince and his wife, a circus troupe, two or three governesses in Russian families, several merchants on travel, a diplomatist on his way back from Teheran, an American globe-trotter, Anglo-Russian school-boys, and a smattering of tourists. To soothe the sudden antipathies of these the captain must exercise all the diplomacy at his command. And this with the smiling Russian officials who are coming on board to see that everybody has his passport in order, the anxiety to get away in time to pass Cronstadt before sunset—after which no undiplomatic man may pass to sea—and the sudden desertion of a fireman. However, we caught a nigger ashore at the last moment, and shipped him with the ceremony of "signing on" in the captain's cabin. He afterwards turned out to be the only resister—not a passive resister—to swearing in the stokehole, and when I went down to see the refrigerating chambers, where poultry and dairy produce are stored, I found bitter complaints among the men, who usually come on board with as much rations for a week as they can remember to stuff into a handkerchief. They had to lean over the bulwarks to swear. The firemen on these short trips, I should explain, do not draw their rations from the ship's cooks; they provide their own food for the voyage; and as the average fireman has very little foresight or self-control on shore, he frequently leaves himself little money wherewith to provision himself, and comes on board with about enough food to make a golfer's lunch. On that he will have to perform five days—of eight hours each—of the most exhausting work. You will draw the world in vain for an aged ship's fireman, and as the

A GRAIN ELEVATOR AT NEW YORK

By which 242 tons of grain can be poured into the ship's hold in an hour

AN ELEPHANT THAT REFUSED TO WALK ON

"Mandarin," the famous Barnum elephant, was hoisted on board, cage and all. He went mad on the voyage, and had to be strangled before the ship reached New York

job offers no career in the way of promotion the inference is that ship's firemen die young.

But the bell is going; visitors are hurrying ashore; in the saloon the Russian officials are examining passports while the Swedish maids keep them supplied with refreshments and cigars ("always keep the officials on *your* side," is the captain's motto), and the first throb of the engines is heard. By this time the captain is on the bridge, the pilot at his side. We have

HOW HORSES ARE CARRIED ACROSS THE ATLANTIC

to take a pilot by the regulations of the Tsar's Government. But we need not follow his directions. The captain will swing the boat on her axis instead of taking her up the Neva to a wider stretch of water, for we want to clear Cronstadt at sunset. It is a popular belief that the pilot is responsible for the ship so long as he is on board. But if any disaster occurred—how much could the pilot pay? That was the question Captain Grant put to me afterwards, when he had swung his ship and pointed her down stream. It is really the captain who is responsible to the owners, and the captain knows better than any one else what his ship can do, where you must humour her with a twist of the wheel, where she will turn sulky. So we swung in triumph and reached Cronstadt, where the smiling and happy officials gave place to others—just too late. We must wait till sunrise is the smiling announcement. The captain figures out the situation in his head as he dispenses the hospitality of the ship. We are to call at Reval. Twelve hours delay here will mean a whole day late in clearing from Reval. Wages, the fury of consignees, the expectations of owners, the disappointment of passengers in a hurry—you can see the calculation working in the captain's head as he hands another cigar to the right man. "If ten roubles would do it," he begins. "Of course, it would give a bit of trouble to your subordinates——" The apodosis was immediately added to this protasis, and the conclusion was reached by the passage of ten roubles, the only phrase that the official really understood. So we cleared in time, with papers, passports,

everything in order. Diplomacy is not on the list of subjects required of the young man who will pass from third mate to the possession of a captain's certificate. It ought to be there. For the man who takes a ship hither and thither encounters different manners at every port; and at every point the successful mariner must know the men, the cigar, and the direct way to the heart.

Diplomacy, however, is but one of the surface qualities demanded of the captain who will bring a ship without delay, without mutiny among the crew, and without discontent among the passengers, from port to port. The ordinary passenger will see the captain only as the genial head of the captain's table—though his chair is often vacant—will know him as the teller of tall stories in the smoking-room just before bedtime, where he may look in for ten minutes to hint—finally—that the Swedish maids must not be kept longer at work; will see him on a fine morning playing with the children on deck. But in reality the captain's day's work has no beginning and no end. For mates and crew there is—except in cases of emergency—the four hours' watch on deck and the four hours off duty alternately, with the split watch (the dog watch) to prevent monotony. The captain is always on duty. He is, as it were, always on active service. The commander in the field never sleeps with assurance of the solid seven hours; but he is in the field for a small proportion of his service. A ship's captain is "in the field" for about five-sixths of his life as a captain, and it may happen that for a whole trip he never gets more than an hour or two at a time. And so it chanced upon this voyage across the Baltic, through the Kiel Canal, and over the North Sea.

"Call me if you see anything," said the captain as he came down to lunch and placed himself at the table, which he had carefully decorated with the prettiest women on board. The fish was on his fork when the call came. Fog! And wind and rain as well. But the only thing the captain treats with respect is fog. Lunch goes on, while the captain takes the bridge and sends for his steward and his clothes. For rheumatism is even more lasting than fog or drowning. On the bridge the captain makes his toilet, foreseeing that this is going to be a long job; and even as the steward shoves boots upon his feet and hands overcoat and cap, the controlling eye is cocked at the surrounding gloom. We are going dead slow, and from—somewhere, you cannot locate sounds in a fog—there comes the hoot of a steamer. That means the steamer is moving; a stationary vessel rings a bell. So hour after hour, and the hours mounted into days, stood the captain on the bridge. It was night that brought the incident that justified the continual watchfulness of the skipper. I was on the bridge, listening to the vague hoots around us. We had cast the lead again and again—"I can feel my way across the Baltic," says the captain — we had steamed round and round to pick up a lighthouse, and suddenly from the gloom appeared a ship. It was the moment when watchfulness told. Instantly the hand was on the engine-room signal—full speed ahead; a word to the man at the wheel, the word repeated as the wheel swung, and we cleared the ship that we could just see for a few moments about a hundred yards away. The manœuvre was simple enough, requiring only knowledge, courage, and swiftness. But in a sea-fog the emergency may occur at any moment, and if you wish to obtain some idea of the strain on a sea-captain's nerves you have but to stand by his side on the bridge, while from the surrounding world of possibilities come hoots—plaintive, threatening, inquiring, protesting, for the language of steamers' hoots is encyclopædic—while your vessel is setting to unknown partners and wondering where they are.

Once and again the respite comes—in the Kiel Canal, for instance, where, as it is a simple matter, the German regulations insist on a pilot and a steersman of the Fatherland. The captain gets a few hours' rest in his room. And the captain's room is a spot that should be visited by every voyager. No one but a seaman could stow so much, invisibly too, in a small space. There is the broad bunk for the broad back. But every possible square inch is utilised for storage. Six inches from the ceiling over the bunk contain the charts, and with these the captain will sail anywhere north of the Equator. A postage stamp—Russian, German, English? Put your finger under the cabinet which contains invisibly all that a landsman would pack in a couple of kit-bags—including the silk hat which the captain wears on occasion—and a swivel will turn the required stamp. An extra seat is wanted? Over your head is slung the stool to seat the guest who comes to smoke the cigar that is taken from the box that reposes in its own inches in its own corner. Another angle contains the medicines. For the captain is also a doctor. He was called upon within my own experience to cure a lady passenger of quinsy as he came from the bridge in an interval

of fog. To a ship's captain the curing of diseases comes well within the day's work, and a finger opens the cabinet that contains the remedies. The ship's papers, the particulars of cargo, writing materials, the captain's spare clothes, everything that a man may want during a trip which lasts the best part of three weeks, can be reached by a reasonably developed arm stretched from the centre of the room. Nor, on a casual glance at the room, do you detect anything but a bunk and one or two cabinets and sets of drawers. Even the tables drop from the wall at the invitation of a finger.

With rare intervals of sleep, then, with much casting of the lead as the fog falls and the information denied by the heavens above is dragged from the bed of waters below, with fine mornings—following foggy nights—that bring the captain to the deck to play with the children and tell stories to the adults before sneaking the two hours before lunch for rest in his cabin, the captain brings his ship to the Thames, somewhere in the small hours. He is a somewhat weary and puffy-eyed captain as the Customs officer boards the ship and remarks that now there is a bit of leisure he will go over the ship's stores. That means that the Government wishes to be assured that the food, drink, cigars, and other commodities on board, marked as ship's stores, are not designed to evade the duties, but for the benefit of those in the ship. The captain has his list ready. But his duties are not yet over. As we squirm into our berth within sight of London Bridge the boast of a boatswain and a carpenter that no revenue officer can catch them finds its Nemesis. Underneath the more important matters the human contest had raged around tobacco in the forecastle. Some one had given the tobacconists away. A quiet official plunges into the forecastle, digs behind a bunk, and drags up, by means of a string, the parcel of cigars. The captain is impartial as the two delinquents appear in the saloon. Meanwhile, the quiet revenue officer has counted the cigars and made his calculation. £5 17*s.* 3*d.* each are the figures at the end of his sum. "You can pay now, or you can go before the magistrate—he sits at ten o'clock—or you can appeal to the Board of Trade. Please yourselves and you will please me," remarks the official; and there is no sigh of pleasure as the money is handed over to the Treasury. The men earn about 30*s.* a week. "When you go home," remarked the captain to the one who had a wife and several children, "mind you go in backwards." The man fumbled for his cap. "You'll want to come out quick," added the captain.

Even now, as the passengers make for cabs after handshakes and graceful speeches, the captain's work is not done. Not yet comes the solid sleep on a stable bed. A change of clothes, a visit to the shipping office in order to lay before the employers the record of the trip, while the stevedore is plunging his dockers into the hold for unloading, and the mate, with a note-book in his hand and a wife and children waiting for him in Dorsetshire, stands on watch—this lies before the captain still.

Three days' rest before the next trip begins—that is the captain's outlook. What, then, is the reward of the tired men who have brought the ship safely home? At best it is a small one. The sea, I think, attracts by its glamour of romance, and the boy who runs after the romance gets little gold. In the merchant service the boy who has taken to the sea and passed all his examinations to qualify him as master of a steamship may find himself as mate at £3 a week if he is lucky. There are captains who carry valuable cargoes and sacrifice sleep and comfort and life, now and again, for such a weekly sum. Only here and there is the prize handed to the man who understands business ashore as well as navigation at sea. The ordinary skipper will end his career on a maximum of £250 a year. For days and sometimes weeks together he will, if he be skipper of a cargo-boat carrying no passengers, have no one to talk with except in the tone of command; for the etiquette of the sea compels the captain to eat alone; he shares the sad glory of solitude with the Pope. And when one considers the qualities which make up the man who can be trusted to bring a ship and its cargo safely over sea, through storm and fog, and all the dangers that beset those that do business in great waters, it seems a little surprising that those qualities can be bought at so few pounds a week.

As the captain goes down the gangway in his shore clothes I find a rather grimy man lighting a pipe on the after deck. He is one of the engineers, a young Scotsman, who surprises me for a moment by the incongruity between exterior oil stains and interior intellectuality. His work, he says, is by no means over; indeed, it is just about to begin; for the engines have to be overhauled and reports of their conduct made up and handed in to the office before the next sailing. The captain's duties are mere pleasure, thinks the engineer, looking at the bridge and the saloon from the standpoint of

the engine-room. And the engineer, on whom depends the progress of the steamer, gets none of the fun and none of the credit of a good passage. But the passengers had all of them left by this time—and no one had thought of saying "Thank you" to the chief engineer, who, with his two assistants, had obscurely kept the life-blood throbbing through the ship.

## II.—A GREAT ATLANTIC LINER

The steamer *Minneapolis* of the Atlantic Transport Line from London direct to New York may be taken as representative of that class of modern Trans-atlantic liner which combines first-class passenger accommodation with ample cargo and live-stock space. Her dimensions are as follows: length, over all, 625 ft.; depth 44 ft.; breadth 64 ft.; gross tonnage 13,401 tons; cargo-carrying capacity 15,000 tons; live-stock capacity 1003 head of cattle; first-class passengers (only) 227; indicated horse-power of engines 11,000; daily consumption of coal 170 tons; speed 16 knots.

The steadiness and absence of rolling in this class of vessel are accounted for partly by the great depth and breadth of the ship, but chiefly by the presence of "bilge-keels," *i.e.*, fins or plates of steel 1 in. thick and 18 ins. broad, fixed on to the hull on either side 25 ft. below the water-mark, and running for 350 ft. of the length of the vessel, chiefly amidships. These very materially break the force of waves passing below the ship's hull.

During the passenger season from March till November the ships of the line have only five days in port on either side of the water, so that the preparation of the ship for the ensuing voyage requires prompt and energetic co-operation between the shore-staff and those on board. On arrival at Tilbury, quarantine being passed, the Customs examination completed and passengers landed, the first important business is the official "entering" of the vessel at the Custom House by the captain. The ship's manifest, which contains full particulars of the cargo, the names of the shippers and consignees, the list of ship's stores and names of crew and passengers, is delivered up, and, the documents being found to be in order, a permit is granted to discharge the cargo. At the same time, as a protection to himself and the shipowners, the captain files with a notary public what is known as a "note of protest," which signifies that, owing to stress of wind and weather, he expects that some damage may have been done to the ship and cargo. Thereafter, if it transpires that any such has actually taken place, the protest is further "extended." Without these formalities, no subsequent claim for damages would be entertained. The next business is the "paying-off" of the whole crew before a Board of Trade Shipping Master. On Trans-atlantic liners when a member of the crew "signs the articles" and joins his ship, he agrees to remain on that ship for one year if called on, even although the usual voyage to New York and back lasts from three to four weeks. This means that, on arrival in New York, in the event of the ship being required in an emergency, as in time of war, to sail to other ports, he would be compelled to fulfil his agreement for the year but for no longer. At the end of that time, he could, if he desired, claim his discharge, and also to be sent back free of cost to a port of the United Kingdom. The fact, however, of the return of the ship to any port of the United Kingdom, cancels the original agreement, a discharge being granted to each member of the crew with a report as to his conduct and ability, while fresh "articles" or agreements are required for each succeeding voyage. On liners to the Far East, to Australia and other long voyages, the original agreement may, as in the Navy, extend to three years.

For practical purposes and division of labour, the staff on board ship is divided into (1) the deck department, (2) the engine department, and (3) the stewards' department, the head of each being concerned in the details of his own department. In the deck department, the chief officer, as senior executive officer, has numerous and responsible duties. First comes the engaging of his crew, which includes quartermasters, boatswain, carpenters, lamp-trimmer, able-bodied and ordinary seamen and boys. Of these the good petty officers may remain on the same ship for years, the most frequent changes being amongst the seamen. In British ships the sailors are drawn mainly from the natives—but not exclusively, for among them are Norwegians, Swedes, and Danes, all of whom are born sailors and prefer British ships, where the pay is better than on their own. The average wages of a sailor are £4 10*s.* per month, while the cost of his maintenance is, on first-class ships, 1*s.* 6*d.* per day. On many ships trading to India and the Far East, the sailors are Lascars or East Indians, and on some are Chinese crews. The average pay of these men is 25*s.* per month, the cost of their keep not more than 7*d.* per day; hence it is that ships

can afford to carry at least double the number of coloured that they can of white men. Under the leadership of British officers Lascars have developed into good sailors; Chinese sailors are inexpensive, docile, proverbially steady and hard workers, but not very reliable in an emergency.

The unloading and loading of cargo is conducted by the stevedore department on shore, the officers of the ship sharing in the supervision of the work. Ordinarily, on a large ship like the *Minneapolis*, 240 labourers are employed, divided into twelve gangs of twenty men in each gang, and distributed between the wharf, the nineteen steam winches and derricks on deck, and the seven holds of the ship. According to the nature of the cargo being handled so will the rapidity of the work vary: on an average each gang will work forty tons of mixed general cargo per hour, the work of loading being slower than that of unloading by about 20 per cent., as more time has to be taken in the stowing away of cargo evenly in the holds. Under pressure of time and with increased gangs as much as 6000 tons of cargo were recently unloaded and 3000 tons loaded in thirty hours. The loading of grain in bulk from the enormous grain elevators is an interesting sight. By means of powerful suction the grain is led from the hold of the elevator up into a long iron pipe from which it can be poured into the ship's hold at the rate of 9000 bushels or 242 tons per hour, the dust being blown away by fans through air holes before the grain enters the conducting pipe. There is no end to the variety of cargo carried, anything in fact from the proverbial "anchor to a needle." Recently two large furniture vans full of household goods, and a steel barge weighing ninety tons with engines and boilers complete and ready for use, were lifted *en masse* by means of powerful cranes and placed on opposite sides of the deck to adjust the balance. Every voyage from New York a consignment of 5000 quarters of prime frozen beef is carefully packed in specially constructed refrigerating meat chambers, which are kept during the voyage at an even temperature of 29° Fahrenheit.

Deck stores to be used by the boatswain, carpenter, and lamp-trimmer require to be replenished each voyage, and of the various items which add pretty considerably to the ship's general expenditure, the chief are paint, rope, and oil. The whole of the ship above the water-line both inside and out is painted every voyage, and for this purpose one and a half ton weight of raw paint material is consumed; while to replace the wear and tear of hawsers in port, one new 7-in. rope 900 ft. in length and other coils of less thickness are necessary. It is perhaps not generally known that the oil which is occasionally poured on the troubled waters and which helps very materially to break the force of the waves during a heavy gale escapes in drops only, from a canvas bag containing oakum soaked in the oil and suspended near the bow of the ship; it is commonly supposed that large quantities of oil have to be used for this purpose. Many general repairs throughout the ship have also to be effected in the way of fixing bent rails and stanchions, adjusting cocks and joints in the fresh and salt-water service pipes and making tight any loose rivets in the hull and sides of the ship. A very important item is the cleaning and cementing of the fresh-water and ballast tanks of which there are altogether twelve situated in various sections of the ship fore and aft. These tanks, which have a total capacity of 4303 tons of ballast water, can either be filled up with water or emptied to hold cargo according to requirements; when at sea they can also be emptied or filled according as the ship may, from a list over to one side or the other, require to be straightened up. Fresh water for bathing, cooking, and general ship's use is contained in four tanks with a capacity of 600 tons placed in the centre of the ship below the engines, where there is least vibration. These are filled up at either end of the voyage and are connected with two "domestic" tanks containing sixty tons of fresh drinking water, which after passing through filters is used on board. On all of these tanks small scales, deposits, and other impurities are liable to form, hence the necessity of their being regularly cleansed and cemented. As a matter of routine the ship's chronometers are sent ashore every voyage to the optician's, where the average daily rate is noted and they are carefully adjusted. It being against the dock regulations to bring any gunpowder into port, all the night-lights, rockets, and other signals of an explosive nature are removed from the ship in the river and taken to floating magazines where they are refilled; they are replaced on board on leaving the dock. A thorough examination of the ship's boats, rafts, life-buoys, and life-belts is also a matter of routine, while a thorough cleaning of the cattle decks and crew's quarters complete the work of the deck department. In all passenger ships a yearly survey is held by the Board of Trade to ascertain that the passengers' accommodation and life-saving apparatus are complete and in order, and every fourth year a more comprehensive survey is

conducted by Lloyd's insurance surveyors, during which a thorough overhaul of the entire ship is made with a view to see that she is in every respect seaworthy and that she fulfils all the requirements of the class of vessel under which she is registered.

In the engine department, the real hard work does not begin till the ship gets into port, and from the moment the welcome sound of the final "ring-off" from the navigating bridge declares that the voyage is completed, all hands are busy. Any local defect in the machinery receives first attention, and if by good fortune there be none, some hours are allowed for a general cooling-off of the plant. Next day there is a general overhaul of the engines and boilers; boiler-tubes, furnaces, stokeholes, and forced draught fan-engines are thoroughly cleaned out. The number of the staff will of necessity depend upon the size and chiefly on the speed required of the ship. The greater the speed and the more boilers and furnaces necessary to provide this, the more men will be required, so that, whereas the *Minneapolis*, with a speed of sixteen knots per hour, a coal consumption of 170 tons per day and using eight boilers and thirty-six furnaces, has an engine staff of seventy men, an "ocean-flyer" like the *Deutschland*, which can steam 23½ knots per hour, will carry down below no fewer than 300 men, comprising stokers, trimmers, greasers, donkey-men, and store-keepers.

Recruited as he is from a lower social order, the fireman is somewhat of a rough diamond and requires to be led by a firm will and a strong hand. With a monthly wage of £5, comfortable quarters, plenty of good food, and eight hours' rest for every four of work, which is made more tolerable nowadays by the superior ventilation below, his lot is not so bad, after all, and the provident and steady ones are able to keep themselves and others respectably. Passengers frequently inquire what the coal-bill for a ship averages each voyage, and it is a comfort to them when they are told that a ship always carries enough coal to allow, in the event of an accident, for several days' full steaming beyond her usual voyage. In addition to the engines other important plant on board has to be kept in order, viz., dynamos for generating electric light; the apparatus for warming the ship by means of steam-heat from radiators; the refrigerating apparatus for keeping meat and ship's stores at a proper temperature, and also for manufacturing ice; the steam winches on deck, the windlass, and the steam-steering gear in the wheelhouse.

The amount of work to be done in port by the stewards' department is enormous, especially in ships which carry some hundreds of mixed first- and second-saloon and steerage passengers. As soon as the ship arrives in quarantine, the Custom House officers receive an official declaration of all the wines, spirits, and tobacco in stock on board, and these are forthwith placed in bond under seal until the ship leaves port again. Thereafter the first item is the output of soiled linen, of which, for every 100 saloon passengers during a seven days' voyage, an average of 4000 "pieces" will be sent to the laundry, a "piece" including anything from a bed-cover to a serviette. Next there is a general turning out of the contents of each cabin—any article left behind by a passenger is handed over to the Lost Property Department—and the cabins, after being washed and scrubbed out are allowed to air and dry well before being refitted. The ship's hospitals, of which there may be two, or more, for the isolation of infectious cases, are also thoroughly fumigated and disinfected. Stock is then taken of the linen, glass, crockery, cutlery, dry goods, and other stores, an average sum of one shilling and sixpence per head of the passengers being allowed to cover the losses resulting from breakages and general wear and tear of property. As in other departments there is also a "paying-off" of the staff, which is generally a large one, and includes the chief steward and his assistant, saloon and bedroom stewards, stewardesses, cooks, bakers, butchers, pantry-men, scullery men, and boys. In the first saloon one waiter to every seven passengers; in the second, one to every twenty, and in the steerage, one to every fifty is generally allowed, with separate servants for the officers, of whom the captain, purser, and surgeon only dine as a rule with passengers.

The day before sailing is the grand field-day for the department, for then the commissariat and other stores are taken on board. Whenever steerage passengers are carried, the Board of Trade regulations are as strict in regard to their food stores as they are in other matters connected with their health and comfort. In the presence of a Government inspector and health doctor of the port, all the foodstuffs to be used on the voyage are closely inspected, every single article being separately tested, and if any one sample be found faulty, the whole may be rejected. For the crew of a ship a regulation diet is prescribed on the ship's articles by the Board of Trade; on first-class liners, however, each member receives more than his daily allowance, fresh vegetables and

fruit especially being liberally supplied, thus obviating the old-time routine dealing out of lime-juice to prevent scurvy. To those who are interested in figures, the following will give a fair idea of the average consumption of ordinary articles of diet, the table representing the amount consumed by one hundred first-saloon passengers during a seven days' voyage: Butcher-meat 2450 lbs. (this includes all the "stock" necessary for preparing soups, broths, and beef tea); game and poultry 100 head; eggs 1750; fish 225 lbs.; bread 700 lbs.; milk 112 gallons; tea 15 lbs; coffee 35 lbs.; butter 100 lbs.; ice cream 80 quarts; fresh fruit and vegetables *ad libitum* and in season.

It may relieve the anxiety of many intending travellers to know that when a liner leaves port for an ordinary voyage of one month, as from London to New York and back, the Board of Trade regulations require that she be provisioned for six months (if for a three months' voyage then provisions for one year are necessary), not of course with delicacies but with the actual necessities of life; biscuits and fresh water, too, being always kept stocked in the ship's boats, ready for emergency. Many questions are asked about the milk-supply on board. Some ships going long voyages carry one cow or more, but on the Atlantic it would hardly be worth while to do so. Some inquire if the milk is taken on board fresh at each end, some if it is "frozen," others if it is condensed milk. As a matter of fact most of it is known as "evaporated" milk, *i.e.*, fresh milk which is thick, specially prepared in large quantities in England and America, sent on board in special cans and kept at a temperature of 36° to 38°, whereby its good qualities can be preserved indefinitely. The drinking water is fresh water contained in special tanks, then filtered and used as required, and not, as many imagine, condensed water, although any quantity of this, of excellent quality, could, if necessary, be made from the salt water during a voyage. Modern liners are often spoken of as first-class floating hotels. One realises this indeed when he sees on some of them the elegant dining-saloons, grill-room, luxurious suites and cabins, handsome reading-room and library, ladies' drawing-room, smoking-rooms, bath-rooms fitted with the most recent sanitary conveniences, gymnasium, children's play-room, typewriting-room, telephone system—every luxury, in fact, for those who are willing and able to pay for it.

In the live-stock department, an average monthly consignment of 800 prime cattle is shipped from the States, and, in addition to some hundreds of valuable stud, racing, and draught horses, animals of all kinds, chiefly with pedigrees and for breeding purposes, cross the ocean to and fro. The mortality during the voyage amongst any of these classes is exceedingly low. In October 1902, the *Minneapolis* was converted into a veritable modern Noah's Ark when she conveyed from Dunkirk to New York the whole of Barnum and Bailey's vast menagerie, and the only losses on the voyage were a Hungarian-born monkey, which pined away from home-sickness, a baby zebu, born on board, which lived but four hours, and "Mandarin," a monster elephant, who went mad during the voyage and was put to death by strangulation as he stood in his cage.

On sailing day, the last, perhaps, but not the least important item is the adjustment of the Marconi apparatus. The special passenger train having arrived, the consular declarations and bill of health are signed, the bell rings for "All visitors ashore," good-byes are exchanged, gangways are cleared, and the liner is off on her voyage punctually to the minute.

# THE NEW DISEASE AMONG MINERS

## THE WORM DISEASE: WHAT IT IS AND HOW TO PREVENT IT

THE CORNWALL OUTBREAK—A TERRIBLE AND INSIDIOUS DISEASE COMMON IN ITALY, GERMANY, AND BELGIUM—SYMPTOMS AND EFFECTS UPON THE SUFFERER—HOW TO PREVENT ITS APPEARANCE IN THIS COUNTRY

BY

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ANKYLOSTOMIASIS, Miner's Anæmia, or Worm Disease—as it is scientifically and commonly known—was first discovered in England by Professor Haldane, M.D., F.R.S., in November of last year. Dr. Haldane was sent by the Home Office, at the request of Mr. Martin, the Government Mines Inspector, and Mr. Thomas, the manager of the Dolcoath tin-mine, to investigate a number of cases of anæmia which were thought to be due to poisoning by carbonic oxide, or some other kind of bad air. The symptoms of monoxide of carbon poisoning, however, usually pass off in a few hours, whereas these Cornish miners were afflicted for weeks and months with bloodlessness and shortness of breath. It was then, after careful examination, discovered that this terrible, loathsome, and insidious disease, commonly called Miner's Anæmia, had infected one of the famous old mines of Cornwall.

Dr. Haldane's report in a Blue Book on the Cornish outbreak, and a further report upon his visit to the German collieries, where the disease is rampant, issued by the Home Office last July, have aroused the attention of mine-owners and miners throughout the kingdom to the great peril of an extension from the Cornish mines to the collieries, and immediate steps will be taken by the Miners' Federation of Great Britain to bring the question before Parliament, and to obtain joint action of the coal-owners and miners with a view to stamping out the disease wherever it may begin, and preventing the infection being carried to any other mines in the kingdom.

The Ankylostoma worm was first discovered by Dubini in 1838, and it may be said to occur in all tropical and sub-tropical countries. In some parts of India 75 per cent. of the inhabitants are affected. In Egypt it is found in nearly every dead body. It exists also in the tropical regions of Asia and America, and in Australia. There was a fatal epidemic among the miners of the St. Gothard Tunnel in 1880, where the disease was termed "tunnel anæmia," and in Italy at the present day it is very common. The affection has in recent years spread to the German and Belgian collieries, where its ravages are dreadful. In Germany it was found that in four of the collieries 90 per cent. of the men examined were affected, and the numbers of cases in the Ruhr district of Westphalia increased from 107 in 1896 to 1355 in 1902. It was stated at the Miners' Congress this year that the vitality of the men had been reduced from forty-five to forty years. In Belgium the same sad story was told: the Pathological Institute in Liège had examined 10,000 men, and found 55 per cent. infected with the eggs and larvæ of the worm. The drain upon the mutual insurance societies of the miners was so great that appeals were made to the Government for assistance.

The parasites are about half an inch in length. There are males and females sexually distinct; the males exist generally in proportion of one male to three females. They are both white in colour when alive, and round in shape, and if full of blood they have a reddish-brown tint. Both sexes have a head and a mouth with strong hooks and teeth by which they attach themselves to the lining of the small intestines, and, like tiny leeches, they are constantly sucking the blood. The blood is passed in never-ending quantities through the worm's stomach, the red corpuscles being passed out into the bowel

and the serum retained. It is easy to understand, when there are hundreds of the parasites present, how pale and bloodless the sufferer becomes. The female worm produces a constant stream of eggs, and millions of them are contained in the excreta of the man and passed out of the body. After leaving its human host, if the egg is deposited in warm, damp mud, such as is found in deep mines, in one or two days it develops into an embryo. Now, if the contaminated mud gets on the boots and the clothing, the hands become infected, and at meal-times in the mine the larva finds its way into the mouth, and, being swallowed, it again becomes an adult worm and starts its new life by sticking to the lining of the bowels, drawing the blood of its victim in reproducing its species.

Thus the disease is propagated entirely by contact with infected material from the excreta of a human being. Until quite recently it was believed that the infection of a human being was produced entirely by swallowing the eggs, but Professor Looss, in making experiments by cultivating the worm, allowed some of the culture to come into contact with his hands. This was followed by redness and irritation of the skin. Professor Haldane found the miners in Cornwall to be suffering from a peculiar disease of the skin which the men called " bunches." Large spots filled with matter broke out, and he thinks it possible that the ova of the worm, by contact of the hands with infected mud in the mine, have passed through the hair follicles into the skin.

Besides the outbreak in Cornwall an ominous sign is the discovery of a case of ankylostomiasis in Scotland during the month of May this year. The man had been a soldier and had returned from India invalided through anæmia. He actually worked in one of the Lanarkshire collieries and was admitted into the Glasgow Infirmary, where the anæmia was found to be caused by the miner's worm. He was sent out of the hospital cured. This case, which I believe to be the first one occurring north of the Tweed, was under the care of Dr. Stockman, and reported by him in the *British Medical Journal* of last July. It is a well-known fact that there are thousands of Poles and foreigners working in the Scottish coal-mines, and therefore it is extremely important, now that one infected person has been discovered in that part of the country, that drastic measures should be taken to prevent a further spread of the plague.

In framing measures for prevention of the disease and the cure of the individual, it must be remembered that *the adult worm is met with only in the intestine of man*, after having been swallowed or absorbed in the shape of a larva. The eggs are transferred into larva outside the body only because it is necessary for them to have air. The worms themselves are not multiplied in the human body, and in time die out, and only fresh infection can increase their numbers.

The eggs will not hatch in the sun, and a dry atmosphere is bad for them. They must have damp, dark, and muddy surroundings with a warm temperature of about 70° Fahrenheit.

Experience has shown that where this blood-sucking parasite exists in large numbers it causes profound anæmia, but especially where the individual is weakly, poorly fed and nourished, the drain upon his blood is very dangerous, and extreme exhaustion and sometimes death takes place.

It must not be thought, however, that because the worm is present serious evils will arise in every case. Hundreds of natives in the tropics and miners in Germany and Belgium are infected without much apparent ill-health. But if a serious disease, like typhoid or pneumonia or affection of the kidney, should be set up, then a fatal result may follow owing to the extra burden put upon the patient. The importance of the disease is immense, owing to chronic exhaustion and the consequent inability of the miner to do his proper amount of work. The chief symptoms of the disease are increasing pallor of the skin, the lips become white and the inside of the eyelids lose their red colour, the finger-nails also look pale.

The pale appearance often noticed in miners must not be confounded with the anæmia of Ankylostomiasis. The skin of the face commonly loses its pink colour simply from the absence of sunshine, in the same way that a plant, if placed in the dark, will part with the green colour of its leaves. When it is borne in mind that many miners during the winter months hardly ever see more than a few hours of daylight in the week, except on Sunday, the pale faces are easily accounted for, but these men are in vigorous health for all that. One of the first symptoms of miner's anæmia is indigestion; there is also pain and discomfort in the pit of the stomach. This pain is increased by pressing the fingers on the tender place, and sometimes it is relieved by food. The appetite is occasionally bad, but often ravenous. Constipation occurs in some cases and diarrhœa in others, and the half-digested blood which the worm has swallowed also passes away with blood-

stained mucus. Sometimes the patient is feverish, at other times his temperature is below normal. By-and-by the signs of anæmia are well marked: the lining of the mouth, lips and eyelids become very pale, the face looks puffy and the feet and ankles swell. There is great lassitude, shortness of breath on exertion, and palpitations of the heart. One of the first symptoms noticed by a Cornish miner is the want of breath and difficulty in going up a ladder in the mine. There is mental depression and inability to think and exert the mental powers. The circulation of the blood is so much interfered with that faintness is a prominent symptom. The appearance of the patient gives one the impression that he might be suffering from consumption or cancer, but there is no loss of weight in these cases, and in making a post-mortem examination there is plenty of fat, and this with the dropsy gives the body a plump appearance.

The worst effects of the miner's worm disease are permanent degeneration of the heart, liver, and kidneys, and the destruction of all the blood-forming organs through deterioration of the blood-supply, the chronic ill-health making the patient an easy victim to any epidemic of pneumonia or typhoid or influenza. The progress of the disease differs very much in cases. Some men may carry the worm and its ova about with them for years and no bad symptoms are caused by them. Other men are more liable to a rapid anæmia, and in a few weeks or months they die. More often the disease is a chronic one, advancing and receding through some years.

Now comes the most important question of all. What is to be done for the prevention of an outbreak of the disease, and the cure of infected persons? With regard to the treatment of infected persons, the worms may be expelled by administration of thymol or male fern. It is necessary to bring the bad cases out of the mine and find some employment for them on the surface if able to work. As the worm itself is not renewed in the body a perfect cure is effected, provided that no new larvæ are swallowed. The diet of convalescents should be very carefully arranged for some time. The powers of digestion are so feeble that any heavy food might cause diarrhœa and enteritis, and recovery would be very slow or altogether prevented.

With regard to the prevention of an outbreak of the disease, it must be remembered that no mine can contain the eggs and larvæ of the worm unless deposited there in human refuse; and further, after such deposit the surroundings must be favourable or the larvæ will die out.

The utmost care must be taken to prevent the soil in the mines from contamination with human excrement. The water-supply must be carefully guarded and all drinking water boiled or filtered. Unfortunately the very means adopted in collieries for the health and safety of the men encourage the breeding and development of the ankylostomum. Thus the larvæ must have fresh air; therefore the better the air-supply the more it thrives. Again, the larvæ can only grow in damp mud, and not in dry dust; therefore the watering of the dust in mines, so necessary to prevent explosions, is just what is required as a muddy home for the parasite. The deeper the mine, too, the higher the temperature, and therefore more necessity for sanitary precautions, as there is less likelihood of infection in shallow and cold collieries. In preventing the spread of the disease from one mine to another, every miner from Belgium, Germany, Italy, Hungary, Poland, and from any tropical mine should be pitilessly refused admission into the collieries of Great Britain unless he can prove by microscopical examination of the dejections that he is free from the ankylostomum. As the worm exists in the mud and brickyards of Egypt, any one who has worked in that country should also be kept out of the pits. In Germany it is found that a percentage of robust men have the parasite in the intestines but continue their work; they are called "worm carriers," and these men are a source of great danger because of their moving about to the different mines seeking employment. In a report made last June by Doctor Iberer upon the coal district of Anina-Steierdorf in Hungary, a most important conclusion was arrived at, namely, that the parasite existed in the country people who came from the agricultural districts near the Alps and who had never worked in the mines.

It is, therefore, absolutely necessary, in my opinion, that the alien immigration into this country should be stopped altogether or be rigidly supervised, and no foreigner should be allowed to go into a colliery until he has been certified to be free from the Ankylostoma parasite.

# MAKING A PROTECTIVE TARIFF

THE ADVERSE INFLUENCE OF TARIFF LAW-MAKING UPON PUBLIC LIFE AND PRIVATE INTERESTS—TARIFF-LAWS AND POLITICS—THE STRUGGLE OF RIVAL INTERESTS—THE POISON IN THE LEGISLATURE

BY

CHALMERS ROBERTS

JUST how far a man may decry certain of his countrymen for the benefit of foreigners will always present a difficult question in patriotism. Certainly no one, not even the most ardent advocates of slavery, ever blamed Mrs. Harriet Beecher Stowe for allowing the publication of *Uncle Tom's Cabin* in England. And then the unity of the two peoples was nothing like it is to-day. Whatever is published in America is liable to publication in England. And whatever interests England is now sure to attract attention in the United States. Therefore, it seems but a small difference that one who has often and unceasingly advocated Free Trade in his own country should also add some small quota of opposition to the adoption of Protection in England. The question is almost a single one. When England departs from Free Trade, it may well sound the death-knell, at least for many years, to the hopes of Free Traders in the United States. It is true that we Americans have always believed, regardless of what might happen elsewhere, that the time will come when we shall be rich enough, and powerful enough industrially, to throw down all barriers and defy the outside world either to enter our markets or compete with us in its own. This is, in fact, almost the only hope left to American believers in the doctrines of Cobden. But there has been another gleam of hope, namely, that the constant drawing together of the two peoples might ultimately lead to Free Trade between them at least. That the consummation of Mr. Chamberlain's proposals will deal a heavy blow to the Anglo-American *rapprochement* is a truth beyond question. But I have here only space to point out the undoubted hostility existing in the American mind against Germany, and to state that this is in large measure due to the constant tariff wars and retaliative measures adopted by the German Empire against the products of American farmers and working men.

The way of the Free Trader in the United States has not been an easy one. The insidious poison of Protection had so slowly, but so surely, made its way in the veins of national life as to escape detection and prevention until the patient was thoroughly inoculated, and any sort of radical treatment was impossible, even dangerous. It was firmly established before any sort of movement was organised against it. In fact, not until the Civil War and all of its long succeeding difficulties, occupying the whole of the seventies, had passed did men begin to see what a serpent of corruption they had nourished under the beneficent guise of "aid to infant industries." English Free Traders are at least fortunate in that they have not this specious delusion to combat. The industries of Great Britain cannot be called infant, and it will take much hardihood for the Protectionist to dub them senile and fit to be fed upon infant nourishment. So twenty years of maladministration had passed, full of scandals of misgovernment of the disfranchised South, of finance in the North with the Government a prominent factor in Black Fridays, of corruption over the building of the trans-continental railways in the far West, before the air was clear enough to bring into view the perverted state of national taxation. The dominant Party (Republican) during all these years was not wholly responsible for the terrible evils which any heavy war brings in its train. Many of these evils are too obvious to England to-day to need amplification here, and the best of good intentions on the part of any Government could not overcome them all. But it was not until the long excluded Opposition (Democrats) obtained office in 1885 that tariff reform came within the realms of possibility.

This had been a plank in Democratic platforms for some years, but always cautiously worded and only as a protest against High Protection. In fact, in the Presidential campaign of 1880 the Democratic candidate had shirked the issue as a question concerning separate localities only, and not the nation at large. In the campaign of 1884 it had not occupied the most important place, but it was quite expected that the success secured by the Democrats would result in a revision of the tariff laws. When this was begun, and what was known as the Mills Bill was in the making, President Cleveland issued a message as unexpected as Mr. Chamberlain's famous *pronunciamento* of last spring, declaring for a tariff for revenue only, and denouncing the whole theory of indirect taxation for the encouragement of industry. He tried to bring home to the people that a protective tariff is a tax upon the whole nation for the benefit of a few sections, that it brought a revenue to the Government far exceeding all possible needs and resulting in all manner of scandalous public expenditures on pensions, public works, and the like. But it was too late. The pap of public bounty had raised up monsters of such strength and power, with tentacles interlacing such diversified ranks of life, as to make them practically unassailable. The evil was not even scotched, but arose in infuriated might at the next election and hurled the President and his Party from power so overwhelmingly as to dismay the stoutest hearts. In the return to office of the Republicans at the hands of the protected mighty the true orgy of Protection began. Fear made these great interests greedy for gain while it was yet night.

As I will explain hereafter, all taxation originates in the House of Representatives, and is devised by a committee known as the Committee on Ways and Means. When the Bill is finished it is introduced by the Chairman of this committee, who is *ex officio* the leader of the Party in power on the floor of the House, and, introduced by him, it bears his name. Mr. Mills had been this leader under the Democrats in 1885, and Mr. McKinley held the post under the Republicans in 1889. The McKinley Bill was a step towards High Protection never dreamed of by advocates of the theory before it had been assailed. It practically advanced import duties all along the line to an average of about 40 per cent., and was] attended with so many scandals as to disgust the great majority which had made it possible. At the end of four years, and wholly upon this issue, the Republicans were turned out even more unanimously than the Democrats had been four years before, and the latter Party was reinstated in office with full control of all branches of the Government. In his first administration President Cleveland had a hostile Senate to deal with. He now returned to power with his way clear before him, and Tariff Reformers and Free Traders alike happy and hopeful to have won what seemed a fair fight before the people with the issue uncomplicated. To have secured a majority of senators, indirectly elected as they are, seemed to show that the hearts of the people had been turned to the true way. It was little foreseen that the sacred cause would be murdered in this house of its newly acquired friends.

The tariff Bill framed by the Democratic House, bearing the name of the leader and known as the Wilson Bill, while a disappointment to out-and-out Free Traders, was nevertheless an honest effort at providing a tariff for revenue only, with whatever unavoidable and incidental protection it afforded justly apportioned. For many reasons the industrial interests so riotously prominent in the making of the McKinley Bill had not been able to affect the Democratic majority in the House. The members of this body, elected every two years, are much nearer to the people than the sextennially elected senators, and are therefore much more chary of disregarding popular wishes. Then, too, the Democrats as a Party represent the agricultural and raw material producing sections of the country, and are difficult of approach on the part of the great manufacturing interests, so long the complete masters of their own Representatives.

The Wilson Bill was so mutilated and perverted from its intent in the Senate that President Cleveland refused to sign it, and it became a law without his approval. This failure on the part of a Party with quite free hands disgusted the people, and had much to do with the overthrow which it met at the polls at the end of its four years, but the " free silver" issue was also a leading cause. Although Mr. Kinley's election was primarily a victory for sound money, and although the emasculated Wilson Bill gave Protection in only a lesser degree than its predecessor, the Republicans could not ignore the appeals of their best friends, and a new and even higher protective tariff was put under way—that which is now in operation as the Dingley Law.

That the industrial affairs of the Republic

have withstood this battle-dore and shuttle-cock game of rise and fall in tariff duties, that every succeeding election has not been followed by financial crashes, is but a tribute to inherent strength. It is true that there has been actually no departure from Protection, and that the threat of 1893 did seriously upset industry throughout the country. Certainly it is one of the most criminal features of Protection that it puts commercial interests into the political cauldron. And it is true that in withstanding all of this adverse agitation, American manufactories but gave evidence of their youth and growing strength. It is hardly likely that the factories of England, at least fully matured, would come so safely through the deep seas of tariff campaigns and tariff law construction. For it is this last ordeal which seems to me not to have been brought home to the English voter. And he should not ordain that Mr. Chamberlain's proposals be put into effect without realising the powers of corruption and trickery which they will introduce into English public life, hitherto so comparatively pure.

The writer witnessed the making of two tariff laws in Washington, and believes that the record of a typical case would be both interesting and instructive to the British reader. Although in preliminary details the British system of law-making differs from the American, at the general and more important stages the procedure is practically the same. Let us suppose, therefore, that the American Protectionist Party has been returned with a majority large enough to constitute a mandate from the people to "pile the tax on the foreigner" still higher. Strange to say the foreigner does not take much interest in this attack upon his peace and happiness. And the home manufacturer seems to have a suspiciously unquenchable desire to get as much tax from the "foreigner" as possible. There is, from the nature of the case, no danger of any reduction in the protection he now enjoys against outside rivals. What possible difference can it make to him if the foreigner is made to pay an advance of 30 per cent. or 40 per cent. over existing rates? But no sooner does the new Congress meet than Washington begins to fill up with representatives of the various interests which hope to put a further impost upon the factories of what they call "effete Europe." The constitution requires that all taxation shall originate with the House of Representatives. Therefore, the preliminary draft of the Bill is prepared by the committee which is called Ways and Means, because it provides the wherewithal to run the Government. There is nothing like the American committee system at Westminster. Membership on the various committees of the House of Representatives is allotted by the Speaker immediately after his election, and the Protection-seeking interests lose no time in beginning efforts to secure places on this most important committee for men known to be favourable to their desires or approachable in any direct or indirect fashion.

As soon as the Committee on Ways and Means is constituted, it takes the existing tariff law, and, going through it schedule by schedule, decides what advances shall be made in the duties, and gives daily hearing to representatives of the industries concerned in each schedule as reached. Members of the House appear for the various protected interests of their constituents, either singly or bound together in a band, representing the sugar-refiners, or the steel-makers, or any industry sufficiently large to cover several states. Then to Washington come bodies of manufacturers or Chambers of Commerce from some district which holds its leading factories to be in need of a little more Government aid in the shape of a tax upon the foreigner. So the battle is well begun before even the preliminary schedules are completed. Representatives of all the great protected trades have come to Washington, taken sumptuous suites of apartments at the hotels, and begun a season of lavish hospitality to inconspicuous Members of Congress whose votes may some day be of great service for what looks like an unimportant little line in a schedule, but which really means millions and millions to the sugar-refiners or the steel-kings. Of course, in England this preliminary draft of the Bill would come from the Treasury, and the "influence" could only be brought actively into use during the committee stages in the House of Commons. But no doubt the Treasury would give hearings to various deputations and if there was a possible way, political or pecuniary, to influence the Treasury, it would be found. For it saves a lot of money and pains in the making of a tariff law to get your schedule put down as you want it in the preliminary Bill.

After several months of such deliberations the Committee on Ways and Means brings its Bill into the House of Representatives, and here the real fight begins. Schedule by schedule the Protectionists and Free Traders fight over

the Bill, while those most interested look on from the galleries, or go down, and sending for members, give orders and suggestions as to how the fight shall be waged. The necessities of the situation bring about "deals" innumerable. The group asking for an increase in the duty on manufactured steel, for instance, will enter into an alliance with those hoping to prevent any reduction in the duty on sugar. One can understand why and how these groups vote together. But over a closely contested schedule, where many millions are involved to some great organisation, there will be all manner of scattered surprises. And it is one of the saddest things in public life to see some single man, hitherto without reproach and supposed to be against the increase in question, silently and without reason give his vote in its favour. No one says anything about it, but every one knows that another honest man has fallen. Not only men but whole communities are corrupted. States or districts which have for years returned tariff reformers when there had been no question of disturbing the status of their chief products, will promptly veer round and become the most ardent Protectionists if it is proposed to take off any portion of the tax which the foreigner pays for competing with them, or if there seems any chance of increasing the rate of duty. Neither economic theory nor patriotism endures long in the light of such self-interest.

But the House of Representatives is Radical in its methods, while the Senate is Conservative. And although the Senate is forbidden to initiate taxation, it can modify revenue Bills sent to it until their makers scarcely know them. But if it is more Conservative, it is also more independent of popular opinion and not so afraid of the clamour of the people. One-third of it has always six years of office before it, and another third has four, so that, knowing their people as they do, it is not surprising if senators disregard the opprobrium of to-day, trusting to the forgetfulness of to-morrow. As only one-third of the Senate is elected every two years, it is an absolutely continuous body, and nearly approaches the position of the House of Lords, both in conduct and in imperviousness to popular demands. It has always been held to be the peerage of American politics, and for this reason has of late years been the goal towards which rich men desirous of serving their country gravitate, just as successful Englishmen look to the upper house at Westminster. The fact that this is so in the end produces a body favourable to capital rather than to Democracy. Therefore, whether or not it is true that this senator or that is the representative of this corporate interest or that, it may be said that both by training and association their sympathies lie in its direction, if their financial interests do not. You cannot expect a man who has made his fortune as the attorney of a great railway combine to forget past favours when the interests of that combine come up on the floor of the Senate. But, more to the point here, neither can men whose whole outside interest lies in the Stock Exchange, who hold perhaps many securities affected by tariff upheavals, be expected to acquiesce in any tax likely to prove disastrous. A senator represents a State as a whole, and not any particular district, and in most States there are enough conflicting opinions to render any course agreeable to an approximate half. Their position more nearly resembles the representatives of the various colonies in that great Imperial British Parliament of the future of which much is sometimes heard. And whatever scandals, whatever bargaining and conspiracy of special localities, as against the welfare of the country at large, have been charged against the American Senate will undoubtedly find their parallels in the competition of the various colonies for special favours at the hands of the mother country. It will again be the crime of pitting special interests against the honesty and fair dealing of the Government towards the whole people.

In order to get a clearer view, we may now take a special instance in tariff law-making at Washington. Perhaps recent fights over the duty upon refined sugar have been most scandalous, as affecting the greatest mass of the people. In the beginning the sugar duty was purely a revenue tax, and while it kept the price of sugar high, it was not looked upon as any special encouragement to home sugar-refiners. By far the greater portion of the sugar consumed in the United States came from Cuba and Hawaii. But along with the magnificent growth of all industries there sprang up over the country sugar refineries not only for the consumption of the home-grown raw material but also for refining, even to a greater extent, imported brown sugar. So, in the great carnival of tariff corruption which went on over the making of the McKinley Bill, the sugar-refining interests, by this time combined into a great Trust, secured practically the abolition of the duty on raw sugar and the imposition of a prohibitive duty on the refined

article. And as a corollary of this unfair treatment of the people at large, and as a fitting example of where the poison of Protection leads, the sugar-growers of the Lower Mississippi States were given a bounty in compensation for loss through foreign competition. These States before this had been honestly and unanimously in favour of as low a tariff as was consistent with the needs of the Government. But they were to be bought from their principles with the favours of the Government, given at the bidding of the sugar magnates. The McKinley Bill had other and wider disastrous effects. It practically put an end to sugar-refining in Cuba and Hawaii, and was the direct cause of anarchy and war in one place, and of the insidious movement for annexation in the other. But for several years the sugar-refiners of the United States waxed fat and strong, even fostering an infant beet-sugar industry in the West; and when the second Cleveland administration set out to abolish this scandalous state of affairs it found its way blocked in the Senate by a band of senators openly defending the Sugar Trust, and able through combination with other protected interests to dictate the sugar schedule, and incidentally to so transform the Bill that the President refused to sign it, and the Party stood publicly convicted of treason and incapacity. And note this well, those honest sugar-growing Southern States, so long advocates of tariff reform, had by the bounty poison been completely bribed into advocacy of the highest Protection possible, and their senators voted with the clique representing the sugar-refiners of the North.

In the making of this Bill, because they were really on their defence, and not seeking favours in the House of their friends, the efforts of the protected interests were perhaps more open than ever. The Sugar Combine took a suite of rooms at the Arlington Hotel for the winter. There were banquets and card games (at which, of course, the Trust people always lost) every evening. The quartette of representatives was, of course, added to by the permanent and regular attorneys which every combination of protected interests keeps at the Capital. If some obscure member chanced to be in financial difficulties, or if he had a hard fight on for the biennial election, which always seems to come round before a representative has settled into his seat, or if gifts would be accepted by his wife and daughters, these and many similar opportunities were seized by the suave sugar men and made the best of. They won the day, and it was a bitter day for tariff reformers and for honest government in the United States. Even then, however, their troubles were not at an end. As a direct result of their machinations, although not foreseen and by no means desired, both Cuba and Hawaii became wards of the American Government. The latter, with all of its cargoes of sugar, came in as a territory of the United States. This was blow enough, then the Republic of Cuba came complaining that we had made her independent, had taken away the market for her sugar abroad, and yet closed our doors to her at home. In common justice the people demanded that she be allowed reciprocal tariff reductions, and a Republican President seconded the demand. How the Sugar Trust blocked the United States Government for a second time, how even the masterful Mr. Roosevelt denounced their methods to the world and bewailed his impotency at home, are matters of too recent record for repetition here.

But are these things not enough to make any American throw away what reserve he might be expected to have in arraigning the Protectionists of his own country before the world? Are they not enough to make England pause as she stands hesitating, credulous?

# LIFE IN THE ZOO

ATTRACTIVENESS OF THE GARDENS—A MISTAKEN DEMAND FOR NATURAL CONDITIONS—ANIMALS IN CAPTIVITY GAIN ABOUT AS MUCH AS THEY LOSE—APES ARE FIRST FAVOURITES WITH VISITORS—MONKEYS AND THE TEMPERATURE—ANIMALS THAT EAT THEIR OWN TAILS—DIETARY AND BREEDING

BY

R. I. POCOCK

*Illustrated chiefly from photographs taken for* THE WORLD'S WORK

OUT of the medley of information concerning the Zoological Gardens, recently diffused by the Press, perhaps the item that came as the greatest surprise to those unfamiliar with their history is the fact that they are the property of one of the largest and most influential scientific societies in the world which is known by the extent and value of its publications to the zoologists of every civilised country, to whom the Gardens themselves may be little more than a name. Nevertheless, it is quite recognised that the flourishing state of the society and the catholic prestige it has achieved are largely due to and are dependent upon the attractiveness and popularity of the Gardens. It is, therefore, of paramount importance to the society to consider the popular taste in the matter of exhibiting the animals.

If the demand that the animals be given natural conditions were carried into effect, those who make the demand would be the first to complain that the animals were never to be seen. All the nocturnal species would sleep during the day and many of the diurnal species would keep out of sight. Too many of them as it is lie hidden all day under their hay or in their sleeping-boxes and only occasionally exhibit themselves to habitual frequenters of the Zoo. For all practical purposes the Kiwi, the Cape jumping hare, and the giant shrews of Madagascar, rare and interesting animals every one, might have been left in the countries they came from so far as the occasional visitors are concerned. It is, no doubt, pleasant for the beavers to be given the privileges they enjoy; but the gratification we feel in their contentment is largely discounted by their disappointing fondness for stopping at home. Animals, like men, are largely creatures of habit; and those mentioned above and others similarly secretive would soon cease to feel the hardships of being excluded from their dormitories for a certain number of hours each day.

Underlying most of the criticisms, just or unjust, levelled at the managers of menageries on the score of neglect of the animals and want of consideration for their comforts is the spirit of anthropomorphism—the judgment of others from the human standpoint—which is the source of all kinds of erroneous conceptions in inexperienced hands. It is taken for granted that the likes and dislikes of animals are the same as our own, that they have the same capacity for suffering and enjoyment, and act in response to the same emotions. Birds naturally come in for a very large share of the sympathy extended to captives, because of the delight we derive from their beauty of form or plumage and their sweetness of song; and since flight appeals to the human imagination as the most enjoyable method of locomotion it is inferred that the exercise of this power is the greatest factor in the happiness of birds. Flight may be accompanied either by pleasure or by pain, according to the emotion that prompts it; but primarily, like running or climbing, it ministers to the first necessities of life—feeding and safety. To catch gnats and flies for themselves and their nestlings, swallows are compelled to beat up and down the live-long day; when they appear to be flying for pure pleasure, they are in reality hard at work. Eagles return to their eyries as soon as their prey is captured; and vultures soar out of sight to cover a large area in their watch for carrion. The pigeon-like ancestors of the Dodo, although free to act as they pleased, ceased to use their wings upon reaching Mauritius and lost the power of flight when the necessity for it was removed by the absence of enemies and abundance of ground food. These and many other instances testify that flight is subservient to the purposes mentioned

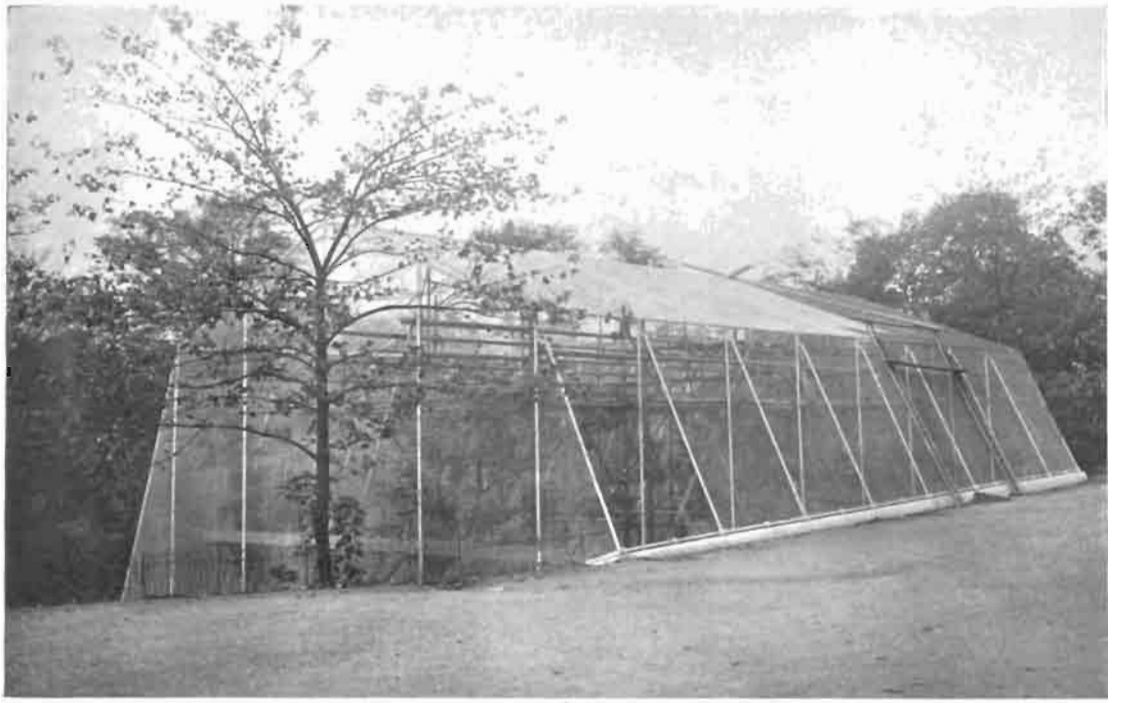
above ; and since even strong fliers like pigeons, with opportunities of feeding in security upon the ground, voluntarily and completely relinquish the habit, there is every reason to suppose that the deprivation of the free use of the wings necessarily entailed by the state of captivity, in which food is provided and safety assured, is not the excessive hardship it is commonly supposed to be. Birds like the cranes in their new enclosure and the ibises and flamingoes in the outdoor aviary are to all appearance perfectly contented with their lot.

So too with the beasts. Setting aside the activities involved in the propagation of the species, the natural life of herbivorous animals is made up of eating, sleeping, and avoiding enemies ; that of the carnivora of sleeping, hunting, and eating. The sacrifice of freedom exempts the herbivora from the haunting fear of enemies, from the pangs of hunger and thirst in time of drought and famine, and from the miseries old age must bring in its train. Although fear enters less into the lives of carnivora, the other ills mentioned above cannot be always avoided. Even lions and tigers suffer hunger and thirst when food and water are scarce ; and, if fearless of foes in their prime, they must be inevitably overtaken by old age, when mangy, toothless, and shorn of their strength, they are reduced to the condition of scavengers and die in the end from starvation, if they escape the horror of being torn to pieces, feebly fighting, by a pack of hyenas or jackals, which have perhaps dogged their traces for days past. In truth animals in captivity, though they know it not, gain almost as much as they lose. The maimed and aged either are mercifully killed or are fed and cared for to the last. At least they are saved from the miseries of untended sickness and senility.

The suffering brought upon man by the loss of liberty is largely dependent upon his imagination and powers of retrospection. There seems no good reason to suppose that even the most intelligent animals possess these gifts in any considerable degree. Those captured wild soon forget the life they have lived ; those born in captivity have no power to imagine any other form of existence. Their sufferings, if such they can be called, probably do not amount to more than vague and transient feelings of unrest due to the suppression of certain natural instincts. Carnivorous beasts and rapacious birds are more to be pitied in this connection than the species which feed upon grass or grain, because of the deprivation of the excitement of the chase and of the supreme satisfaction of slaughter. But, after all, may we not doubt if even the captive carnivora and eagles are worse off than ourselves, the visitors to the Zoo, who, as members of a civilised community, have many of our natural and primitive instincts curbed and thwarted every day of our lives ?

The lower grade of intelligence manifested by the animals beneath the rank of birds and mammals, like reptiles, fishes, and insects, is accompanied by an air of apathetic acquiescence in their surroundings suggestive of a contented and peaceful, if not a happy, existence. Also the lower we descend in the animal scale, the less attractive the creatures become in the eyes of the public at large. In fact, the extent of the interest they arouse in us bears a direct ratio to the closeness of their affinity to ourselves. The apes stand first in popular favour, the monkeys second, and the beasts third. The birds and reptiles perhaps tie for the fourth place ; but the fish and the insects are nowhere. In time and with improved finances much could be done to foster interest in the fishes and to develop the invertebrate section of the Zoo by building aquaria for cuttles, crustaceans, and star-fish ; but at the present juncture the higher animals, and especially the quadrumana, claim all the attention of the staff.

Some twelve months ago a little chimpanzee was exhibited at the Westminster Aquarium. He was firm on his legs, playful, cunning, muscular, and astonishingly active—in all respects a different animal from the listless and feeble individuals commonly seen at the Gardens. And apparently the secret of the difference was this : the only precautions taken against the cold of winter were those that we adopt for ourselves and children, namely, blankets at night, clothing, if necessary, for the day and the shelter of houses warmed in the ordinary manner. These, with fresh air and change of scene, sufficed to keep up the health and vigour. For all practical purposes apes are like children and should be treated as such. Their requirements are attention, amusement, companions—anything to relieve the monotony of captive life—and, above all, fresh air and exercise. A daily constitutional round the grounds in Regent's Park, weather permitting, would probably meet the purpose, at all events until an external enclosure into which the apes could be turned, to sport in the sun and wind, can be added to the new apes' house. Just outside this building in the unwarmed pig-sties there is a pair of red river-



THE NEW PARROT HOUSE NOW BEING ERECTED AT THE ZOO

hogs in the pink of condition; and over by the hippopotamus lives the beautiful Sitatunga marsh-buck, which may be seen in the open both winter and summer. Yet this buck and the hogs and the chimpanzees all come from the forests of tropical West Africa where the mean temperature both of summer and winter is 80°. Are there any reasons for thinking that a chimpanzee is more delicate than its compatriots, and requires to be kept from the fresh air in an artificially heated house? Delicate! Surely Sally, the bald-headed chimpanzee, now dead and gone, must have had a constitution of cast-iron to withstand for so many years the foul unchangeable atmosphere of the old apes' house to which so many of her relations succumbed, and no wonder, after a few months' captivity.

Anthropoid apes are valuable animals, difficult to procure and, as has proved hitherto, difficult to keep. They are worth special care and will repay it. So also will the monkeys; but their numbers make individual attention an impossibility. Like apes, they are commonly believed to be delicate; but the belief, which has its origin in their excessive mortality, appears to be without rational foundation. It is surprising, indeed, that they thrive as well as they do. Nearly always young when caught, cooped up on board ship for three or four weeks and none too well fed on the voyage, they are sent to the Gardens in poor condition and

A PORTRAIT

THE KING VULTURE

lodged in the stifling atmosphere* of the monkey-house, which is already stocked with other monkeys, lemurs, and bats, to say nothing of the circulating crowds of human beings, who, for hours at a stretch, busily exhaust the supply of oxygen already too small for the needs of the permanent occupants. The result is that the half-grown, seedy or stunted individuals exhibited are as little to be taken as types of the species they represent as the children and adolescents of a London slum are to be regarded as models of the human family. Even those that are brought home adult and healthy, and attest by their strength and activity the potential vitality of their kind, seldom do well for any length of time. And these things are true even of the commonest species. Young mandrils may be seen in almost every menagerie in the country; but the adults are almost unknown. Some years ago, however, a mature male, the most grotesque beast in creation, was the great attraction of Wombwell's travelling show, where no artificial heat is provided. A story is told of two South African baboons whose delight on a winter's day was to sport on a frozen pond. A Burmese macaque of my acquaintance has lived nearly ten years in South Kensington without more care than is accorded to the dog or cat; and I know of a spider-monkey, from the forests of Brazil, which is allowed the run of a house and garden at all seasons. The successful experiment in our own Gardens of keeping the Chinese rhesus or Tscheli monkey in an outside cage is not convincing because the winter cold of northern China is as intense as that of Central Europe; but at Clifton an Indian rhesus has responded equally well to similar treatment. Encouraged by this success and resolved to remedy matters, the authorities have built an outside enclosure to their monkey-house which, constructed upon the plan of the one in Regent's Park, has for a quarter of a century been a decided failure so far as preserving monkeys is concerned. Yet the house stands upon clayless sandstone soil, in a healthy district, where fogs are infrequent—a combination of circumstances which weakens the contention that the monkeys' mortality in the London Zoo is attributable to the clayey soil, the winter fogs, and the unfavourable climatic conditions of Regent's Park.

The instances cited above in proof of the

HEAD OF HIPPOPOTAMUS

* Visitors will have noticed the beginning of the betterment of this and other evils under the new management.

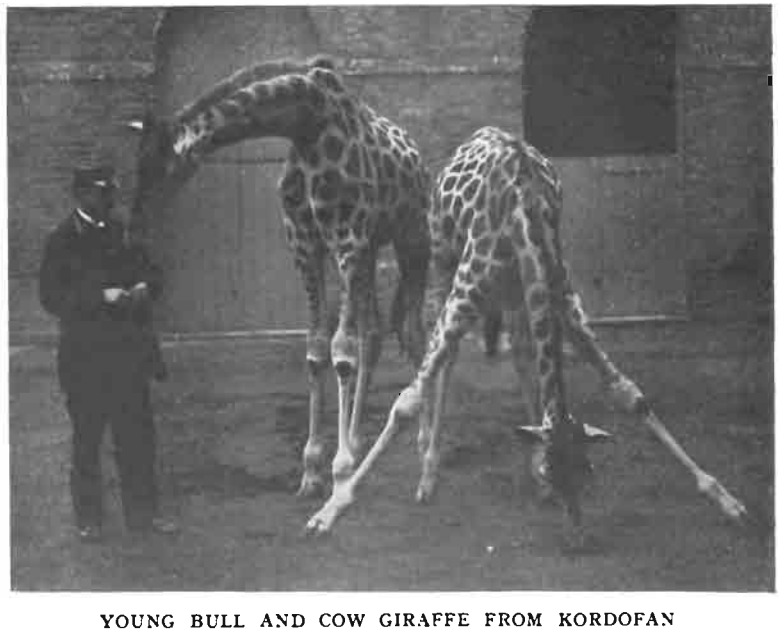
A BLACK-MANED LION

acclimatising capacity of monkeys of various kinds and different habits, organically fitted for physical conditions as dissimilar as those of the South African kopjes, the Brazilian forests and the Indian jungles, justify the inference that all monkeys have the same potential adaptability of constitution and merely require to be treated in captivity as nearly as possible as we treat our horses, dogs, or children. The hot-house method is an anachronism, dating from the time, not so very long past, when it was the custom to foster the delicacy of invalids by keeping our windows closed at night and open as little as possible during the day.

The dietary *régime* of the apes and monkeys may also have something to do with their ill-health. These animals are by no means such strict vegetarians as is commonly supposed. According to Hartmann, gorillas prey upon smaller mammals, upon birds and their eggs, and upon reptiles. Those kept in Berlin were quite omnivorous and displayed a special taste for animal food. A macaque turned loose in a garden starts hunting, not for leaves and roots but for spiders and insects, displaying an acquaintance with their whereabouts in rolled leaves and wall-cracks strongly suggestive of instinctive knowledge; and in South Africa an entomologist will waste his day if he collects over ground already traversed by baboons on an insect raid. This liking for animal food probably indicates a natural need for such diet. At all events it suggests a line for experiment with our captives, which, if it only succeed in stopping the bad habit, so prevalent with macaques and mangabeys, of eating their own tails, will achieve at least one desirable end.

The arguments in favour of the abolition of the hot-house system * and of the addition of open-air enclosures to every cage, based on the attested inherent adaptability of most mammals

* Except, of course, for the reptiles, which rapidly lose vitality with a fall of temperature.



YOUNG BULL AND COW GIRAFFE FROM KORDOFAN

INDIAN TIGER IN THE OUTER CAGE

and birds to a life of captivity in England, apply equally well to the carnivora. The Indian and Siberian wolves, the Bornean and Swedish bears live side by side in perfect health in the open air. The Polar bear withstands the heat of summer and the Indian Sloth bear the cold of winter without the shelter of a house. It is difficult to explain away the geological evidence that the hippopotamus and the reindeer formerly lived contemporaneously in the same districts in Europe. Central African negroes do well in northern climes; and the mortality of Europeans in the tropics is mostly due, not to adverse climatic conditions but to the blood parasites which abound there. Also it is often forgotten that many tropical species are met with as well in latitudes where the winter cold is great. Tigers range from Central Asia where the cold of winter is as intense as in northern Scandinavia, to Sumatra on the equator. The northern animals are both larger and better coated than the southern, despite the common belief that Bengal produces the finest specimens. The truth is that the original home of the tiger was northern Asia, his presence in the tropics being the result of a southward migration in recent geological times. Leopards and pumas have a still more extended distribution, ranging through the tropics from 40° N. lat. to 40° S. lat., roughly speaking. Lions too spread, at all events formerly, from South-western Asia, where the mean temperature of January is about the same as that of the south of England, to the Cape; and Mr. Selous tells me he believes the magnificent heavily maned specimens, the typical lions of tradition, now so rarely seen, came from the uplands of Cape Colony where the cold on winter nights is very keen. The far inferior maneless lion from Gujerat in India and the half-maned specimen from East Africa, generally exhibited at the Zoo, are, on the other hand, the product of tropical conditions. Hence it may be that the uniformity of temperature of the lions' house and the exclusion of the winter cold are not only unnecessary, but actually deleterious to the health of the beasts.

The objection that the large cats are to all appearance perfectly healthy must be met by the question: Why do they not breed? Unfortunately the conditions which determine fertility are but little understood. In the case of the carnivora

CHINESE RHESUS OR TSCHELI MONKEY
In its outer cage

A BACTRIAN CAMEL

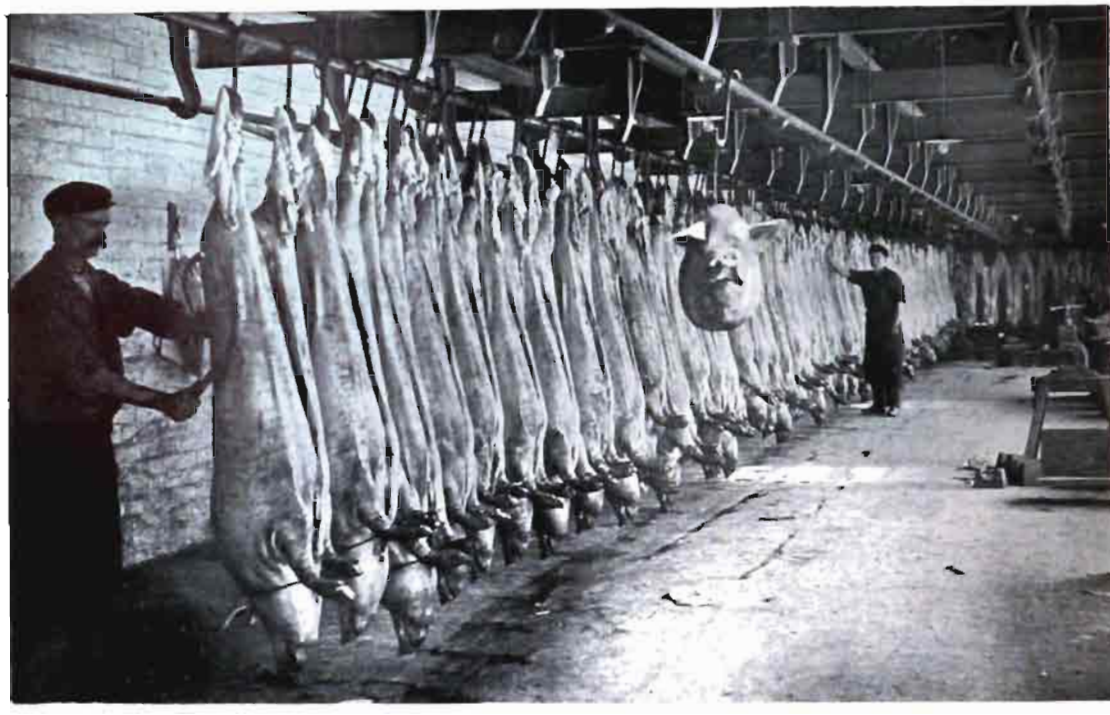
captivity seems to affect it adversely, especially in Regent's Park, where no great success in this direction has been achieved. Lions, however, breed in Dublin; and lions, pumas, black leopards, and lynxes have bred repeatedly at Clifton; tigers once or twice, and black bears and wolves at least once within my recollection. But except for the lions which did well for a few generations after the importation of a splendid black-maned specimen, the cubs seldom prospered and either died young or grew into feeble and crippled animals. Yet the fertility of dogs and cats and the healthiness of their puppies and kittens prove that there is nothing in the constitution of these carnivora inherently opposed to the successful rearing of offspring under artificial conditions. In fact, if it be true, as some believe, that two or more distinct species of dogs and cats have contributed to the formation of our domestic breeds, it is probable that domestication has tended to increase fertility in the sense of removing the physiological barrier Nature usually places in the way of the propagation of hybrids. The difference between domestication and captivity is not so wide as to discourage the hope that the obstacles the latter state opposes to the breeding of the larger carnivora may be overcome, at least in some cases, by modifying the conditions under which they live. It is significant that the hoofed quadrupeds, like elands, gnus, deer, wild sheep, camels, and zebras, whose mode of life is very similar to that of our domestic cattle and horses, often produce and rear young in Regent's Park. It would be a triumph for the Society if the giraffes would do likewise. Since they are animals of the same class and live in Africa under the same climatic conditions as elands and gnus it is difficult to see why they should fail unless the inability to procure natural food prove a serious obstacle to health. They are pre-eminently leaf-feeders, the long and flexible upper lip making grazing an impossibility. Leaves, however, of the right kind cannot be supplied in sufficient quantity even in summer. Hence arises the necessity for giving these animals hay and dry clover which in their natural haunts they probably never eat.

Breeding is important from every point of view. It is as much a natural instinct as eating or drinking, is a good test of the well-being of the animals and relieves the monotony of their lives. It keeps the Gardens supplied with the particular species, and provides a surplus for exchange or sale. Moreover the young of animals have a fascination all their own, which adds enormously to the attractiveness of the menagerie. No animals are readier to breed than the monkeys; and their newly born young would surpass those of all other animals in popularity. It is all a question of health; and the success of the Gardens in keeping, breeding, and attractively exhibiting the animals depends upon learning its secrets.

"ADJUTANT"

A scavenger stork from India

INTERIOR OF A BACON FACTORY



# COLD STORAGE AND ICE-MAKING

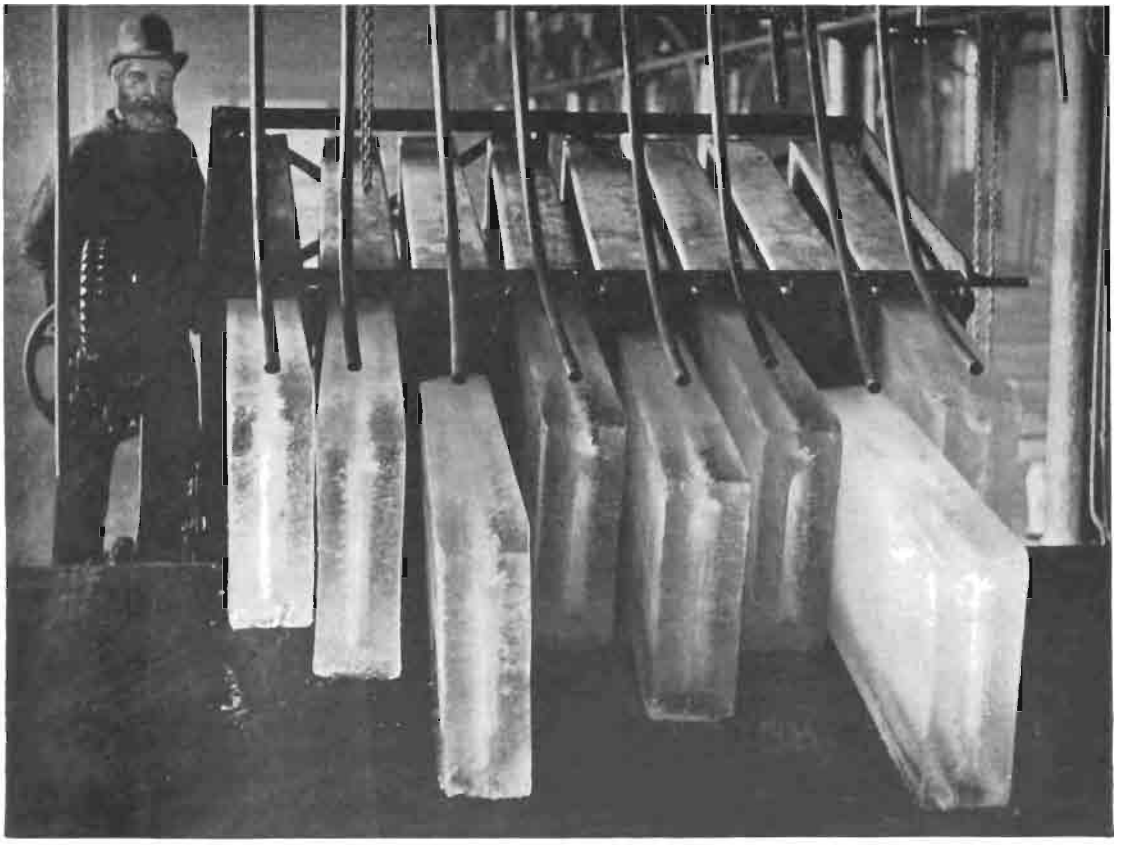
ADVANTAGES OF COLD STORAGE TO DEALERS IN ALL KINDS OF PERISHABLE PRODUCE—ITS BEARING ON FREE TRADE—HOW IT HAS DEVELOPED THE FROZEN MEAT AND RABBIT TRADES—THE REFRIGERATING INDUSTRY AND ITS GREAT FUTURE

BY

R. M. LEONARD

THE refrigerating and ice-making industry is one of the most interesting and important established in the United Kingdom within recent times, and it may be described as still in its infancy, although millions have been invested in it. It has a literature and several technical journals of its own, and a Cold Storage and Ice Association, founded on the lines of the great engineering institutions, to safeguard its interests. It is not without reason that the *Times* has declared that cold storage has become literally a matter of life or death in certain industries. There are, at present, some hundred odd, more or less public, cold-storage warehouses in the United Kingdom of varying capacity. These stores are scattered throughout the country, at all the chief ports and in the larger cities. Several municipalities have provided cold stores in connection with the markets, or, if not cold stores, chill rooms at the public *abattoirs*, into which the freshly killed meat can be placed for rapid cooling. In London alone the cold stores, public and private, are large enough to accommodate possibly three million carcasses of sheep. The capacity of any cold storage space on land or on board ship is often described in 56 lb. carcasses of sheep. Meat, of course, is only one commodity that is stored, although hitherto it has bulked most largely in British cold stores. But dealers in all kinds

of perishable produce are finding out the advantages of cold storage. In addition to meat, poultry, game, fish, dairy produce of all kinds, fruit and vegetables are commonly kept at a low temperature. Dr. Alfred Hill, of Birmingham, who has devoted much time to the subject, has placed his opinion on record that "cold storage has been proved the most effective as a preservative, surpassing in efficiency salting, boric compounds, or any other practical method. Cold storage adds nothing and subtracts nothing from the article preserved, not even the water, and in no material sense alters its quality. Cold storage causes no change of appearance or taste, but leaves the meat or other substance substantially in its original condition, while it renders it neither less nutritious nor less digestive." This is a glowing testimonial, but not ill-deserved. It goes without saying that there is a large number of firms that possess their own private cold stores. Where a firm such as Messrs. T. Borthwick and Sons, whose chief is President of the Association referred to, has to pay upwards of £30,000 a year for cold storage it is obviously more economical to build stores for its own use, even at considerable outlay. Many shopkeepers in a large way of business—butchers, fishmongers, poulterers, dairymen—have their own installations, to the envy of their weaker brethren who have to be content with refrigerators cooled not by mechanical means but by ice. Not a few hotels and restaurants and private mansions are provided with small refrigerating plants; to the hotel keeper a cold chamber means a considerable economy in preventing waste, and to the owner of shooting preserves a considerable convenience. Hospitals, too, are reaping the benefit in the larder, the laboratory, and the dissecting-room. Cold storage is also employed for the preservation of hops. It is held by good judges that the hops are actually improved by being kept for a time at a low temperature, and, if this is debatable, the brewers greatly appreciate the advantage of being able to buy hops in fat years for use in the lean. The plant that cools the hop-stores is invaluable



TIPPING GREAT SLABS OF ICE OUT OF THE CANS

DISCHARGING FROZEN MEAT FROM BARGES

for other cooling work in the brewery, and it is indispensable in connection with lager beer. Without refrigerating machinery the brewing business as carried on to-day would be out of the question. The nurseryman has awakened to the value of refrigeration, and many thousands of roots and bulbs are retarded in their growth by its means; and it is owing to this practice that nowadays it is possible at any time of the year to ensure a supply of, say, lilies of the valley on any desired date if ordered beforehand. Furs and woollen fabrics, such as tapestry and carpets, escape the corruption of moth or worm in cold storage, and there are in London several stores devoted entirely to the preservation of such articles. The drying of clothes in laundries may be expedited by hanging the lines in cold dry air, and indeed an extended catalogue of the diversified uses to which mechanical refrigeration may be put would be unduly long and probably incomplete at best. It may be added, however, that it is invaluable in a number of industries, among which I have noted chocolate cooling, milk condensing, sugar refining, the making of margarine and butter substitutes, bacon and ham curing, tea fermenting, spirit distilling, soap and candle making, oil refining, glue cooling, rubber cooling, decomposing salt-cake, concentrating sulphuric acid, the production of chloroform, the manufacture of cordite and dynamite, the preparation of photographic films, timber drying, and shaft sinking through quicksands or water-bearing strata. In the cooling of theatres and other public rooms and offices refrigeration is clearly destined to play an important part. Cold air or cold brine is laid on in pipes in several cities in the United States, just as gas or hot water or air might be, and possibly the practice will be more generally followed in this country. Already various tenants of the meat market in West Smithfield enjoy this convenience through the enterprise of the London Central Markets Cold Storage Company.

Professor J. W. Robertson, who has done so much for the cold storage industry in Canada, some time ago made a most valuable report on the subject to the Dominion Government, in the course of which he laid down the law that "cold storage has no creative power; it does not create wealth. It preserves wealth and prevents it from becoming loss. It has no regenerative magic; it cannot bring back to a good condition what is already spoiled. But it can keep what is put into it in a practically unchanged condition for a prolonged period of time. It has three chief uses in commerce: (1) to preserve commodities and thus avoid direct loss; (2) to prolong the marketing season, or the period of consumption; and (3) to enable the trader to choose his own time for buying and selling." The passage here quoted cannot be well improved upon. The benefit to the intelligent retailer, who regards cold storage as an essential part of his business, as well as to the wholesale dealer, must be obvious; and it is no less to the

advantage of the public in the long run that gluts should be a gain rather than a loss, and the all too brief season which ordinarily exists for many delicacies prolonged. In many of the cold stores traders are able to rent private cubicles so that their goods may be kept apart and at any special temperature that may be desired.

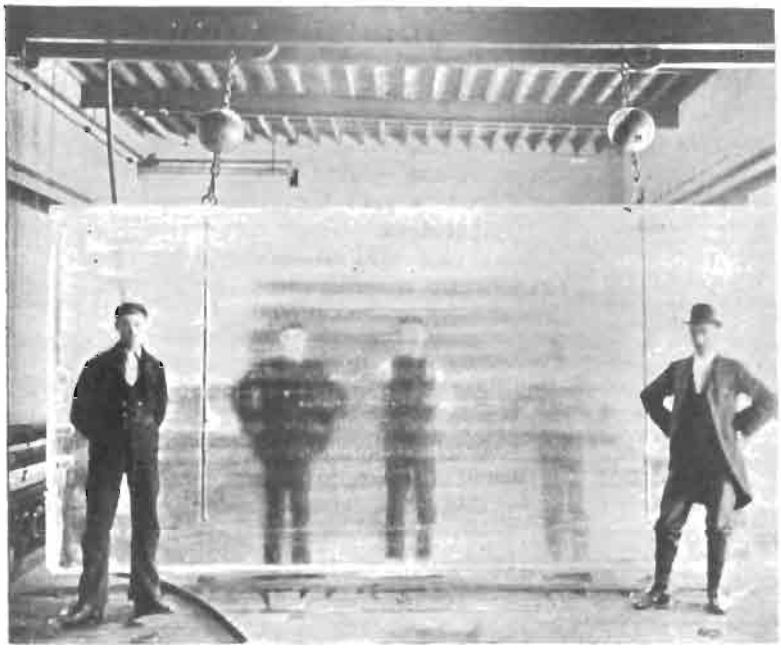
But cold storage has something more than a local habitation. As a writer in the *Engineer* noted, it is "a phenomenon, the international, political, and social importance of which is quite incalculably great. . . . As food is the most fundamental material interest of mankind, this modern identical fact of cold storage is an irresistible political factor in enforcing the ever-increasing dependence for its material welfare of the world on all other parts." Cold storage, indeed, would serve as a useful peg on which practised writers might hang disquisitions on the new fiscal proposals, but all I wish to point out is that the cold storage industry would be of merely local value were it not for the insulated fleet. The modern cargo boat is ill-equipped without refrigerating machinery and insulated holds. At the present moment there are upwards of 150 vessels afloat, with a carrying capacity of from nine to ten millions of carcasses of sheep, engaged in the Australasian and Argentine trade alone. There are several ships that can carry upwards of 100,000 carcasses; at least one with accommodation for 130,000 carcasses, with many miles of piping on board. All this vast business has sprung into being in the course of two decades.

The importation of frozen meat began on a commercial basis in 1880, 4000 carcasses of mutton being brought to London from Australia. Last year the total imports from all sources amounted to 77,373,657 carcasses, and to the end of last year we had received in all from Australia, New Zealand, and the River Plate upwards of 104 million carcasses. From the United States are drawn our chief supplies of chilled beef—being twice as much last year (which was a lean year) as from Australasia and Argentina. The distinction between frozen and chilled is simply a question of the temperature at which the goods are carried.

APPARATUS FOR COOLING CHOCOLATE

The frozen rabbit trade is entirely the child of cold storage. It began later than the meat business, but last year our imports from the Colonies amounted to upwards of 17,000 tons, and a pest has been turned into a considerable source of profit to Australasia.

By means of refrigerated waggons on trains and cold chambers on board ship we have been able for some years to import from distant lands large quantities of butter, our Colonies having sent to this country some 90,500 tons. Cheese is also shipped to advantage in artificially cooled vessels, though it is not shipped at so low a temperature as butter; and it has been recently discovered that cheese can be profitably ripened in cold storage. The cold storage of eggs by speculators has become a fine art in the United States, and cold-stored eggs are not infrequently sold as fresh in the towns of Great Britain. There is no doubt that larger quantities of dairy produce will be imported as cold-storage facilities are increased. Already the importation of foreign fruit has been made easy by refrigeration, and great developments in this direction may be confidently expected. It will be recalled that the Imperial Government has subsidised a line of steamships between Jamaica and this country specially equipped for the carriage of bananas. Clauses relating to refrigeration on board ship are common nowadays in mail contracts, and governments are vying, with one another in the encouragement which they offer to the industry ashore and afloat. Both in Canada and South Africa cold storage forms one of the planks in the political platform, and this idea may be commended to the Unionist Free Food League. And not only on our cargo vessels but also on men-of-war and passenger boats refrigeration has made its influence felt; on the former for the cooling of powder magazines, and on both for ice-making and for preserving the provisions of passengers and crews. The railway companies, too, have risen to the occasion as far as necessary, and refrigerator cars are not uncommon objects on the various lines, though Great Britain is not large enough nor its climate sufficiently hot to make the cars a *sine qua non* as on the Continent and in less favoured climates. Refrigerator cars are, at present, merely cooled by means of ice. Combined with the business of food-supplies from the Colonies and foreign countries cold storage has an unlimited field before it, and it is in this direction that the greatest amount of development must be expected.



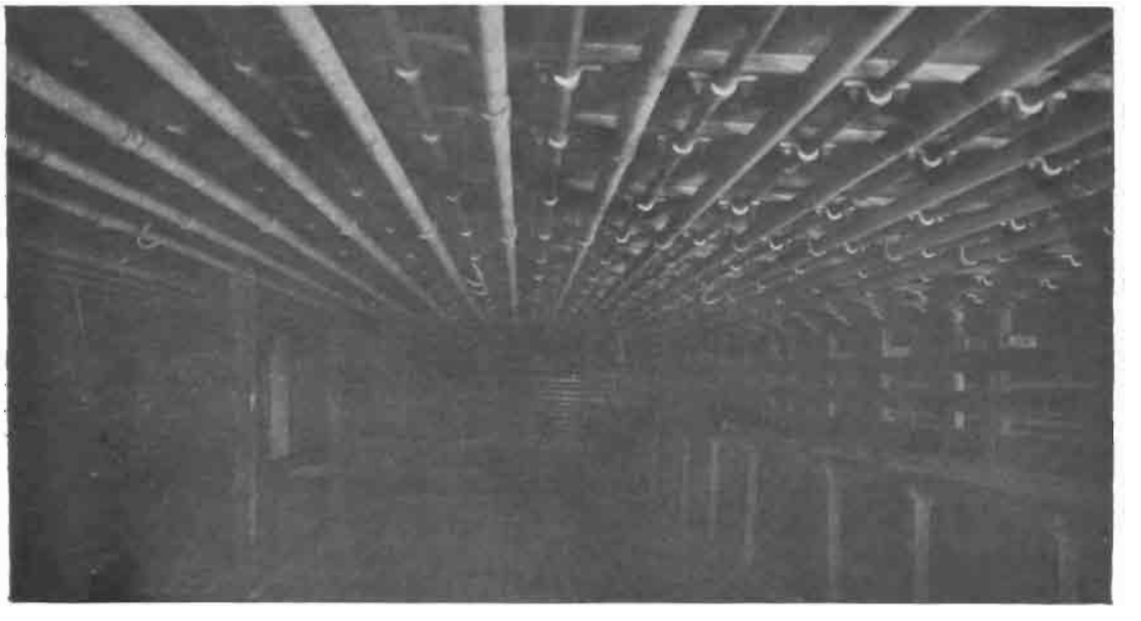
A HUGE PLATE OF CRYSTAL ICE

Before quitting this part of the subject reference may be made to the report of the Royal Commission on the War in South Africa. The Commissioners state "the invention of cold storage, which had not been previously applied in warfare, appears to have contributed much to the success of operations on a large scale in South Africa." Colonel Richardson, in his evidence, declared that frozen meat "saved South Africa," describing it as "one of the great successes of the war," and he handed in a memorandum for future guidance to the effect that "when railway communication with a coast port exists refrigerated meat is certain to be largely used in future campaigns to supplement the cattle and sheep available locally. In such cases it is very necessary that timely arrangements should be made at the commencement of a campaign to provide for a necessary supply of refrigerated meat, for the erection of cold storage, for the

manufacture of ice, and for the construction or purchase of suitable railway plant to convey the supplies from the coast to the army in front."

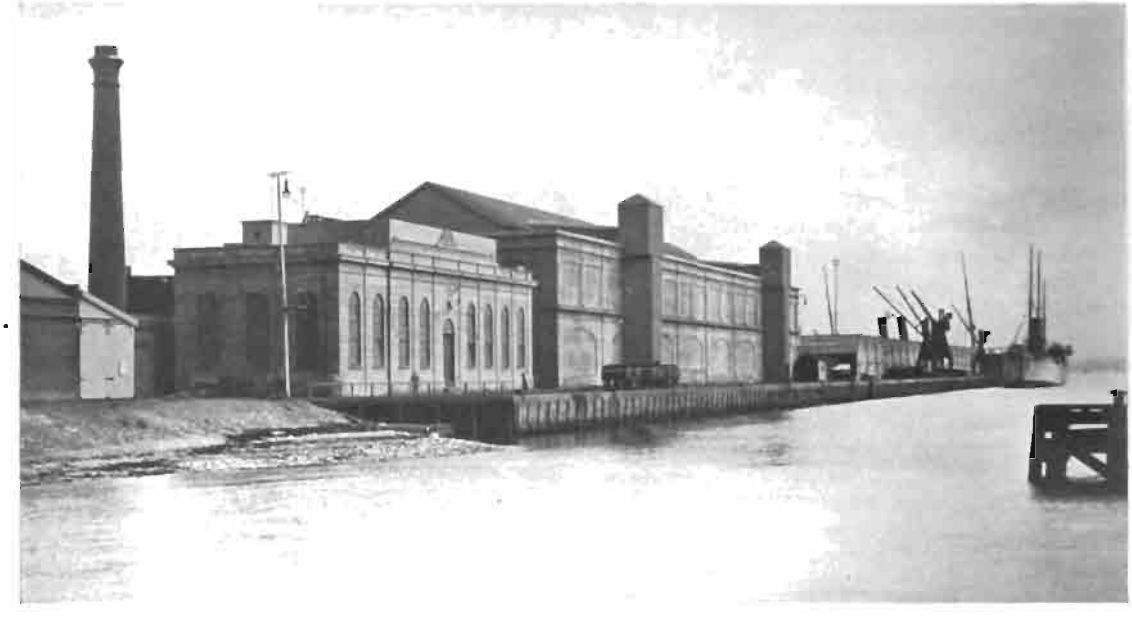
So far nothing has been said about the manufacture of ice. A large number of the cold-storage companies make ice, and there are not a few ice factories which do not provide cold-storage accommodation. The ice is made from pure water, which here and there is distilled, and is naturally preferred for table use or in cases of illness; but clear ice is not necessary for mere cooling purposes. Opaque ice is much less costly to produce (it can be made for 2*s*. a ton as compared with 6*s*.), and it meets all the requirements of the fish trade, which preserves its catches in crushed ice, or of those who make use of ice-cooled refrigerators or ice-chests. It is impossible to estimate the output of the ice factories in the United Kingdom, and compared with the output in, say, New York alone, it is small, but manufactured ice is slowly but surely crowding natural ice out of our markets. Although some of the natural ice sold in this country is still called Wenham ice, a survival of the early days of the trade, it is now all brought from Norway. Last year the imports of Norway ice amounted to 362,867 tons, value £206,400, the average price at the port of landing, including the cost of freight and insurance, being 11*s*. 3*d*. per ton; but in 1899 no less than 504,627 tons were imported; when, however, as at Grimsby, to take one case in point, a couple of factories alone can manufacture, if required, no less than 187,800 tons in a year, excluding Sundays, the demand for the natural product of the fiords must necessarily diminish. In London this year to the end of September 157,180 tons had been imported.

The questions may be asked: how is refrigeration accomplished, and how is ice made? Refrigerating machines, it may be premised, are worked by steam, electricity, or gas engines, according to the locality or size of the plant. The cold-air machine, invented by Gorrie, an American, fifty-nine years ago, has been largely superseded. Instead of air, anhydrous ammonia or carbonic anhydride is now generally used as the refrigerating agent; sulphur dioxide or ether is also employed but not to any great extent in this country. The machines are either on the compression or the absorption principle. The compression machine was invented by an Englishman, Jacob Perkins, sixty-nine years ago, and made practicable by a journalist in Geelong, one James Harrison, twenty-three years later. Windhausen, a German, invented the absorption machine twenty-five years ago. Dr. Carl von Linde, of Munich, a member of the Cold Storage Association, before which he recently read a paper, is the father of the ammonia machine, and the parentage of the $CO_2$ system has been traced to one Raydt. In the compression



INSULATED AND REFRIGERATED HOLD ON AN OCEAN LINER

machine ammonia or $CO_2$ in the form of gas is always compressed under pressure; it then becomes liquid and boils on the pressure being reduced; when, absorbing heat from the surrounding air, it again reverts to gas. In the absorption machine the ammonia is similarly expanded and brought into contact with water from which it is separated by heat, and then condensed and liquefied ready to renew the process. It will be seen that the refrigerating machine is the exact reverse of a heat engine.



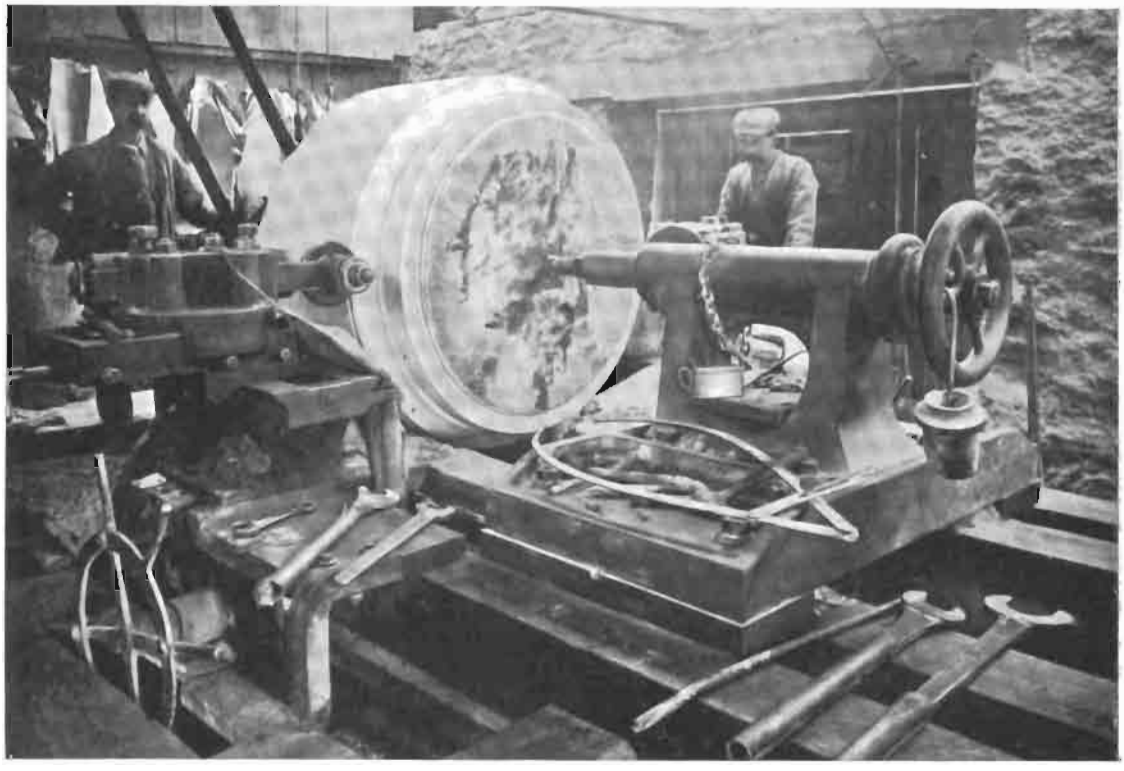
THE NEW COLD STORES AT SOUTHAMPTON

The best and one of the biggest storehouses in the world

Cold stores are cooled by the circulation of ammonia in pipes along the walls or ceilings of the chambers, or by the circulation of brine in pipes, or by the circulation in ducts of cold dry air. The economical working of cold storage depends largely on the insulation by which heat is kept out of the store. The walls are double lined with layers of waterproof air-tight paper, the space between being filled with some insulating material such as charcoal, cork, sawdust, and silicate cotton or slagwool. Finally, ice is made, as stores are cooled, in three ways. Can ice is made by pouring water into cans which are placed in a tank containing cold brine circulating round the cans. When the water has frozen solid the ice is sprinkled with warm water, and it then slides out of the cans. If clear or crystal ice, instead of opaque ice, is required the water while freezing has to be kept agitated; or distilled water must be used. Plate ice is made by circulating brine within plates between which is the water, and the ice slowly forms on either side. This method is not so commonly employed as that first described. In making cell ice, which is also less popular than can ice, the brine is circulated within hollow walls which contain the water to be frozen. As may easily be imagined, cold storage and ice-making have given birth to a large and prosperous industry engaged in the manufacture and supply of the necessary machines and materials and accessories of various kinds.

We are indebted for the illustrations in this article to: (*a*) the Liverpool Refrigeration Co., Ltd.; (*b*) Joseph Baker and Sons, Ltd.; (*c*) J. and E. Hall, Ltd.; (*d*) the Pulsometer Engineering Co., Ltd.; (*e*) the Colonial Consignment and Distributing Co. Ltd.

A TURNING LATHE, TURNING A LARGE MOULDED GRANITE CAPITAL



# THE SCOTTISH GRANITE INDUSTRY

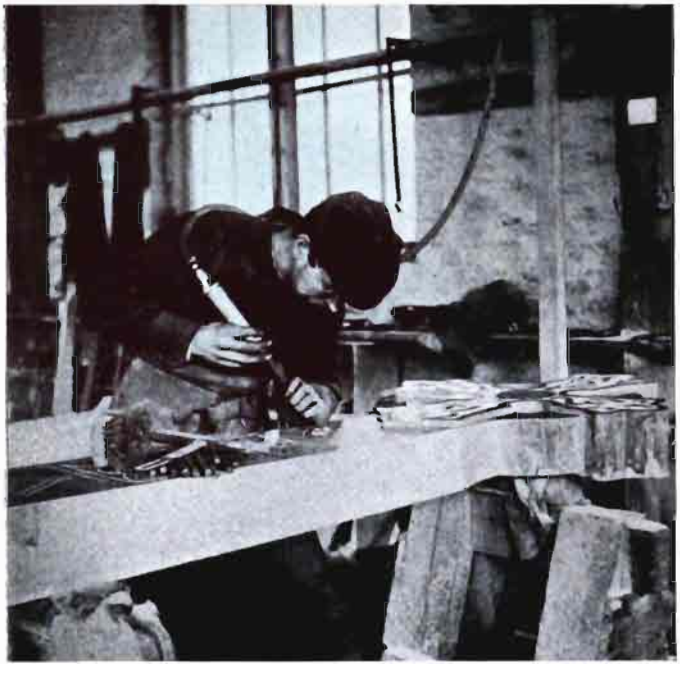
ABERDEENSHIRE IS THE CENTRE OF THE INDUSTRY, WHICH IN SCOTLAND ENGAGES 15,000 PEOPLE—BLASTING 70,000 TONS OF GRANITE AT ONE OPERATION—A MODERN QUARRY AND ITS PROCESSES—THE GRANITE SAW—THE USE OF COMPRESSED AIR—SOME NOTABLE MONUMENTS

BY

WILLIAM DIACK

FEW save those closely interested in the arts of masonry and sculpture know of the many uses to which granite is put to-day. In nearly every city in the kingdom it is regarded as the most reliable of paving stones. Churches and temples, towers and lighthouses, bridges, docks, and wharfs are built of this all but imperishable stone. From it are hewn the sarcophagi that contain the dust of kings, emperors, and statesmen. It forms those massive pedestals on which rest the statues of men and women whom the world delights to honour. It tells the place where, on the battlefields of India, and on the far South African veldts, our British soldiers fell. Trinkets innumerable are fashioned from it—brooches, scarf-pins, sleeve-links, inkstands, letter-weights; while such novelties as garden-chairs, shaped like sofas, have recently been manufactured. In Scotland alone 15,000 people are engaged in this industry, 9000 of that number finding employment in Aberdeenshire, which thus may be fairly regarded as the centre of Britain's granite trade.

In mediæval days nearly all the great ecclesiastical and military buildings of Aberdeenshire

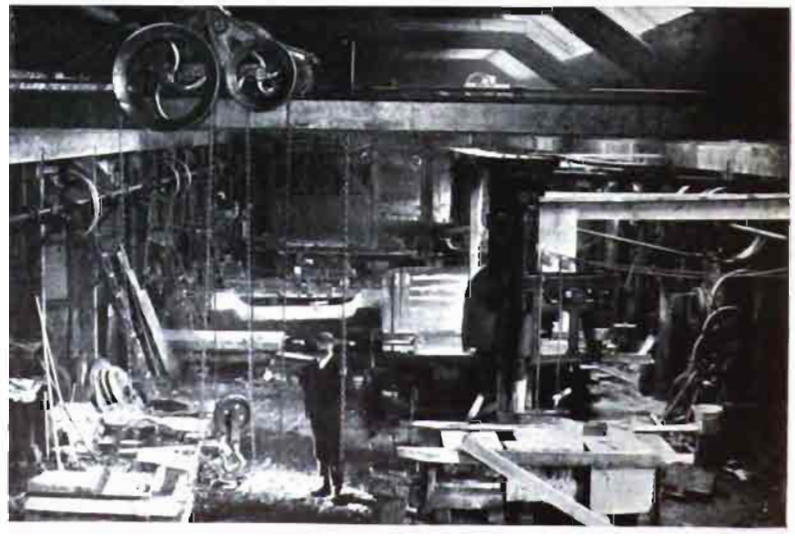


PNEUMATIC CARVING-TOOLS BEING APPLIED TO A CELTIC CROSS

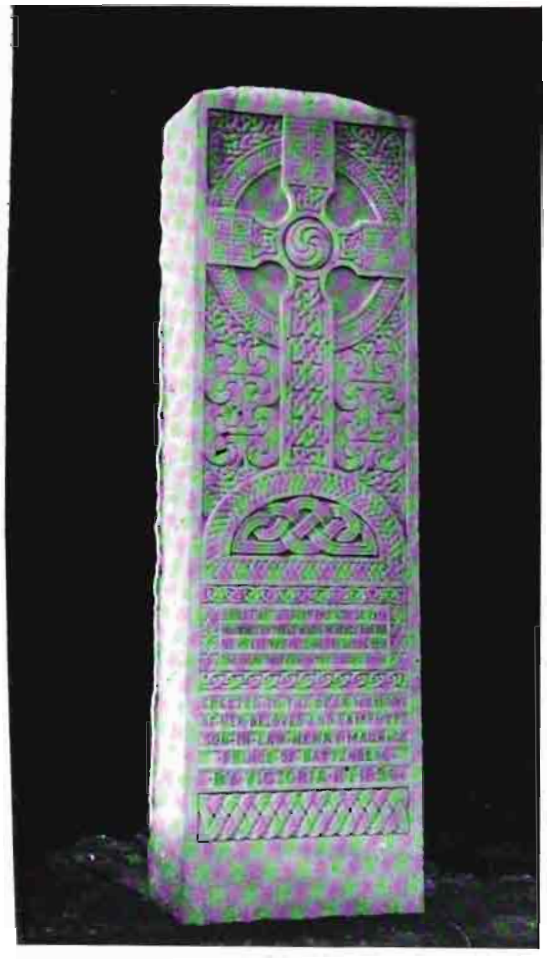
were executed in sandstone. Kildrummy Castle, oldest of Scottish strongholds, is built from turret to foundation of that more pliant material. So too is King's College, with its picturesque crown of stone, and the old Kirk of Greyfriars, where, in their intervals from prayer and fasting, the monks of other days were wont to wield the chisel and mallet. Yet both are situated in the heart of some of the finest granite quarries in the world. Evidently the skilful hands that carved the dainty wreaths adorning the tombs of Bishops Elphinstone and Dunbar, and fashioned the far-famed woodwork of King's College, deemed the stubborn igneous rock beyond their art and skill, for amongst mediæval Scottish churches St. Machar Cathedral alone is built of granite—largely built, we should rather say, for even there only the nave and west front are of native material.

"Granite was hard in the quarries of yore," as Goethe says, and lack of skill in granite-cutting doubtless prevented that lightness and wealth of decoration which characterise free-stone buildings of the same era. Yet in sombre dignity, in rugged strength and beauty, the architectural design is perfect. The grey old church, with its plain unmoulded arches, its massive Norman doorway, its seven lofty windows, and its background of ancient trees, is not only a fine example of mediæval granite-work, but one of the most delightful of Scottish scenes. But even with this noble example in their midst, the native rock was rarely used by Aberdeenshire sculptors or builders. Here a doorway and there a chapel was attempted in granite, but even in the early years of the nineteenth century, free-stone was in almost universal use for all monuments and buildings where elaborate decoration was required.

But that stone which long ages ago had been carved and polished in Pharaoh's Egypt, was not destined to lie useless in the great granite hills of the north. Pioneer craftsmen were already at work devising newer methods of conquering the obdurate rock. Amongst those energetic Scotsmen, two names stand prominently forth—those of Mr. John Fyfe, Scotland's quarry king, and Mr. Alexander MacDonald, founder of the modern granite industry.



GRANITE POLISHING MACHINERY

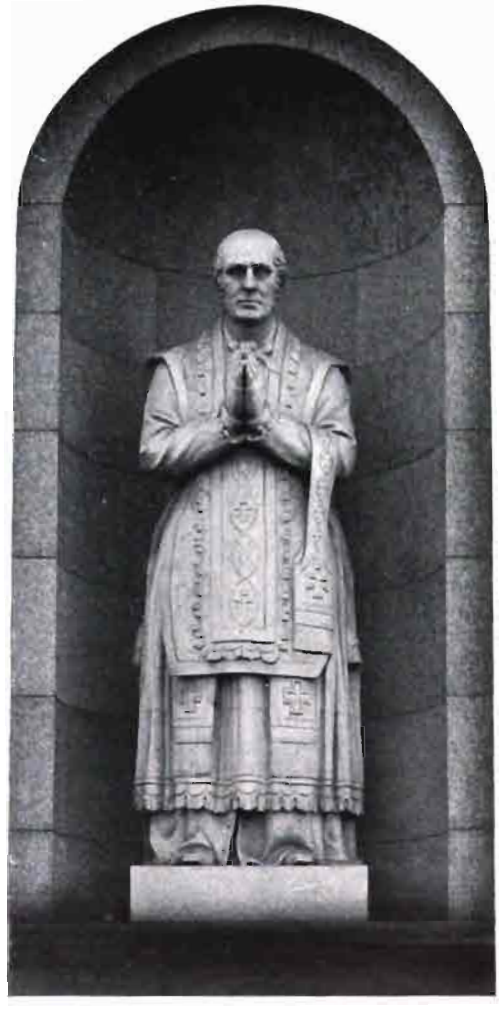


CARVED GRANITE MONOLITH ERECTED AT BALMORAL BY QUEEN VICTORIA IN MEMORY OF PRINCE HENRY OF BATTENBERG

Each in his separate department worked an industrial revolution. From being a purely local industry supplying local needs, it gradually advanced and developed, widening its circle of trade, until to-day specimens of polished Aberdeenshire granite may be seen in every part of the civilised world.

Having traced the rise of this Scottish industry, let us see how the work of granite-quarrying and granite-cutting is performed in modern quarries and stoneyards. Of Scotland's granite quarries, perhaps the most important are Kemnay, Rubislaw, Persley, Dunecht, Hill o' Fare, Corennie, and Peterhead, all in Aberdeenshire ; and Oban, the Isle of Mull, the Isle of Arran, and Craignair and Creeton in Kirkcudbrightshire. The beautiful, rich red granite of Stirling Hill, Peterhead, is largely used for polished columns and pedestals. Fine specimens of it may be seen in the columns of St. George's Hall, Liverpool, and in the pillars of the Carlton Club in London. The products of the Kirkcudbrightshire quarries are largely used for docks and wharfs, as at the Liverpool, Birkenhead, and Swansea Docks. Kemnay granite is admirably adapted either for finely axed monumental work or for bridges, wharfs, and lighthouses.

But to our work of quarrying. First come the preliminary blasting operations. In some of the smaller workings, the boring of holes for this purpose is still done by hand-drillers, but in all the larger quarries it is performed by steam and compressed air rock-drills. These drills are capable of delivering 400 strokes per



GRANITE STATUE OF "PRIEST GORDON" OF ABERDEEN

minute, and will bore a hole three inches in diameter through the solid rock at the rate of eight feet per hour, piercing downwards if necessary to a depth of twenty-five feet. The number of holes required varies, of course, according to the size of the block about to be dislodged. Three or four will usually suffice, although as many as a dozen may sometimes be necessary. These holes are then charged with blasting powder, the quantity being so accurately gauged to be removed was first pierced. Jutting out from this, smaller side-tunnels were also cut along the intended line of rupture. Into these were placed two and a-half tons of blasting powder, the different charges being fired simultaneously by means of electricity. By this means 70,000 tons of granite were effectively displaced. Some idea of the size of this block may be gathered from the fact that when cut up into convenient sizes, 9000 railway waggons

RUBISLAW GRANITE QUARRIES, ABERDEEN

that the rock is not at first dislodged, but rather riven asunder, a deep fissure one or two inches in width being formed at the back of the boulder about to be "quarried." Into this aperture a second charge of powder is placed, and this, when exploded, slowly dislodges the piece of rock so that the least possible injury is done to the finely grained granite.

Sometimes, however, when a larger block than usual is required, firing by mine is resorted to. A year or two ago, a gigantic blast of this kind took place at Kemnay. A horizontal tunnel extending all the length of the mass about were required for its transport, or a single train over thirty miles in length.

Immediately the rock is dislodged, the quarrymen set to work, and with hammers and drills bore a number of small holes, two or three inches in depth, along the intended line of cleavage. Into these holes are inserted small steel "feathers" and wedges, which, on being driven firmly with a hammer, split with remarkable facility vast boulders of rock into the required shape. The blocks, reduced thus to suitable sizes, are next raised to the loading bank by means either of a powerful steam crane, or by

a Blondin transporter. This Blondin tackle is an ingenious appliance invented by Mr. Fyfe of Kemnay, during his earlier years as a quarry master. It is constructed on the principle of the suspension bridge. A massive wire cable stretches from the farther edge of the quarry, right across the pit, and over a lofty tower beyond the loading-bank. Both ends of the rope are of course securely anchored. On this suspended cable runs a travelling carriage driven to and fro by a winding-engine. To this travelling carriage are attached chains and wire ropes, which may be lowered at any point as required, and attached to the huge blocks of granite. These are then raised, sometimes from a depth of three hundred feet, drawn along the suspension rope, and deposited on the loading-bank. In Mr. Fyfe's quarries, these Blondin transporters are capable of raising burdens of from three to ten tons in weight. There is also at Kemnay quarries a powerful steam crane capable of raising boulders fifteen tons in weight from a depth of three hundred feet.

On reaching the loading-bank the material is assorted and promptly despatched to its destination, by rail or lorry. Nothing is wasted in a modern granite quarry. The larger stones are reserved for monuments, pedestals, and columns, the smaller blocks for hewn ashlar work, and similar purposes, while yet lesser stones are manufactured into granite setts, or used by builders for rubble walling. In some of the quarries this Scotch-like economy of materials is carried yet one step further, even the stones which the builders reject being cast into a powerful crushing-machine, ground into minute fragments and utilised in the manufacture of artificial paving-stone.

But our concern is, meanwhile, with the larger blocks destined to be fashioned into elaborately carved Celtic crosses, pedestals, polished obelisks, sculptured monoliths, or those handsome glittering columns that now adorn the fronts of so many modern buildings. An entire revolution has been effected in this branch of the industry since 1832, when the first polished granite monument was despatched by Mr. Alexander MacDonald from Aberdeen to London and erected in Kensal Green Cemetery, where it still stands as fresh and glossy as ever.

Although the principle on which the granite saw is worked was understood by the ancient Egyptians, it is but in comparatively recent years that it has been applied to British stone-cutting. The great block about to be sawn is placed on a strong bogey and wheeled on rails underneath the saw. This saw is a steel blade, perhaps a quarter of an inch thick, six or eight inches in height, and a few feet larger than the stone about to be cut. But a granite saw has no teeth like an ordinary saw, its cutting edge being perfectly smooth and level. The actual sawing is done by a powerful abrasive in the form of what is technically known as iron sand or grit—small rough grains of chilled metal, not unlike small shot. The heavy saw swings backwards and forwards, driven by steam, with a steady pendulum-like motion, pressing heavily on the iron grit, and thus slowly forming a tiny groove in the rock. Water, of course, is freely applied to prevent heating, and the water, dust, and grit rapidly form a kind of sludge, which is steadily ladled into the narrow saw-cut by the workman in charge. The process of granite sawing, however, is by no means a rapid one, the cutting of a slab two feet in depth being accounted a fair day's work. But slow though it may be, it saves both labour and material. By this process, slabs as thin as five and six inches may be split in two (a feat beyond the power of the most skilful granite cutter), thus securing two stones where hand labour could only with difficulty secure one. Apart from this, the two sawn surfaces require practically no hand finishing. When they leave the saw they are ready for the polishing-mill or the carving-shed.

Machinery, of course, is now almost universally used for polishing. If the surface to be polished is a plane, the stone is placed on a frame with the face uppermost. The polishing is effected by three separate processes. Iron grit, smaller and finer than that used for sawing, is first rubbed over the surface by a number of circular metal discs, all connected with one another, and revolving rapidly in the same plane. When the surface becomes comparatively smooth, emery-powder is next applied, and, by this means, a dull polish is obtained. All the sludge and powder is then washed carefully off, and, by wet felt attached to the revolving metal rings, the surface is rapidly polished with putty-powder—generally with oxide of tin or tripoli—and the rich and beautiful gloss so much admired is at last obtained.

Obviously this machine can only be utilised for flat surfaces. For polishing mouldings a different process is necessary. First of all, a cast of the mould is made in plaster of Paris, and from this pattern a metal casting is made. The granite is placed in position, and the metal casting firmly attached to a long wrought-iron arm, which, when the machinery is set in motion, moves to and fro with a pendulum-like motion,

from which it derives its name. When, however, it is necessary to polish elaborately carved work, the primitive method of hand-rubbing is still necessary. The process is slow and laborious, but nevertheless, a vast amount of beautifully polished carved work is exported to the Continent annually.

The use of compressed air in stone-cutting has considerably lessened the cost of intricate carving, and opened up a wide field for high-class granite work. With a pneumatically driven chisel, one mason can accomplish as much as from four to six men working by hand —much, of course, depending upon the nature of the work. These pneumatic hammers can make from 2000 to 15,000 strokes per minute, and with them, deft and skilful workmen are fashioning with marvellous facility the hardest of granite—wreaths of flowers, luxuriant foliage, tasteful designs in Runic work, figures of birds and beasts in bold relief, all being reproduced almost as effectively as from the far-famed marbles of Carrara. But although the application of steam and compressed air has thus revolutionised the granite industry, a large amount of stone-dressing is still done by hand. In this case, the stone is first worked to a rough surface by means of steel points and chisels, then finished off with axes and bush-hammers as may be required.

In the turning-sheds a powerful lathe fashions those handsome-polished pillars and capitals that form so interesting a feature of many famous buildings. There, by the doorway, rough, unhewn, lies a massive square-cut block, sixteen or eighteen feet in length. The corners are just scabbled roughly off, after which the heavy stone is securely fastened into the lathe. On the opposite sides of the lathe are two circular cast-steel cutters, the pressure of one acting as a counterpoise to the other. The rotary motion is, of course, produced by steam-power, and when the column begins to revolve, the steel cutters come into operation, and, striking the stone obliquely, gradually reduce it to the required proportions. When a surface sufficiently smooth has been produced, the column is removed to an ordinary lathe, and polished with iron grit, emery-powder and oxide of tin. in the manner already described, the polishing materials being applied by cast-iron planes.

Many orders for memorials of Aberdeenshire granite were executed by command of the late Queen Victoria. Not the least interesting of these is the carved monolith erected at Balmoral in memory of the late Prince Henry of Battenberg. One of the last orders her Majesty gave was for a richly ornamented Celtic cross of Balmoral granite, which she caused to be erected in memory of her second son, the Duke of Coburg. The beautiful sarcophagus, too, that holds the dust of Queen Victoria herself and the Prince Consort was executed—many years ago now—of Aberdeenshire granite, and was accounted at the time the finest work of the kind ever produced in Britain.

Numerous military monuments have also been despatched to South Africa during the past two years. On the top of a kopje, overlooking the little cemetery at Majesfontein, where General Wauchope, the gallant commander of the Highland Brigade lies buried, stands a lofty obelisk of polished Peterhead granite. The graves of General Woodgate, the valiant Dick Cunyngham, and of Prince Christian Victor, are also marked by memorials of Scottish granite. The Prince Christian memorial, erected in Pretoria, is made from granite quarried on the Royal estate at Balmoral. It is a simple Celtic cross of early Irish type, whilst the railing enclosing it is made from the metal of old British guns. From an artistic point of view, however, perhaps the most interesting memorial is that erected in Cape Colony in memory of the men of the Cape Mounted Rifles, who fell in the recent war. It takes the form of the statue of a rifleman in full regimentals standing on a fluted Ionic column flanked on either side by African lions. This statue, carved by Mr. Arthur Taylor, Aberdeen, is an excellent example of Scottish granite statuary. More than a quarter of a century ago Messrs. Alexander MacDonald and Co. revived that long-lost art, the statue of Priest Gordon which stands in Constitution Street, Aberdeen, being one of the first statues cut in granite since the days of the Ptolemies.

# THE ART OF MEMORY

AIMS AND PRINCIPLES OF MEMORY-SYSTEMS — HOW TO ACQUIRE AND HOLD IDEAS, AND TO RECALL THEM AT WILL

BY

EUSTACE MILES, M.A.

"A MAN'S life does not consist of the superabundant things that he possesses" is true of worldly goods, of bodily foods, and of mental information also. A man's mental life or health consists of the useful things that he possesses ready for use. The best mind is his who has selected the largest number of useful things, that is, of things useful to him as an individual member of society; who has then acquired and now keeps these things; who has them accessible with the minimum of trouble. The analogy of food suggests another requisite: that useless or harmful things shall be refused and not acquired at all, or else, if acquired, shall be removed.

When we consider various ways and arts of memory with a view to this well-stocked mind, inevitably we are struck with some very significant thoughts. First, that our present education does not select many useful things for us to keep and acquire, and does not tell us how we may learn for ourselves, beforehand, what things are useful. For instance, the simplest paths to physical health are not selected for us, nor are we encouraged to find them out for ourselves. We are given no scientific and all-round criterion of usefulness, which should include the physical and hygienic, æsthetic, moral, social, economical, intellectual, and "prospective" aspects of life. Secondly—and perhaps it is rather a mercy, seeing how barren most of our selected materials are—our present education does not show us how to acquire and keep the selected materials. Thirdly, it does not show us how to have them accessible with the minimum of trouble. It refuses scornfully almost every aid except parrot-like repetition. Fourthly, it does not show us how to get rid of the useless, including the used materials, and the harmful.

Now taking these four divisions of mental work, we see that the first, selection, does not properly belong to the art of memory (more accurately to be called the arts of memories, since there are so many arts and so many memories); good selection should precede any process of acquisition. If a thought is not likely to be a desirable inhabitant of our mental and physical kingdom, we must not invite it and keep it by interest, realisation, repetition, and so on. We want to store our brains with records of pleasant and pure sensations, pictures, &c. This first mental work, then, is the choice of subject-matter for the memory, and not part of a system for remembering.

The second and third divisions—acquisition and preservation in an accessible place—not only belong to the art of memory, but are the boasted result of every much-advertised memory-system, as well as the ideal of educational methods.

The fourth division—elimination or forgetting—is dealt with by no system that I have seen, and is omitted from educational methods. It is one of the supreme arts of life, and is no less essential to the good digestion and assimilation and use of mental food than physical elimination is to the good digestion and assimilation and use of physical food. Physical eliminators we have in plenty—Turkish baths, sun- and light-baths, air-baths, sweating, and so on; but what mental eliminator have we? The mere attempt to eliminate an idea seems generally to fix it more firmly in the mind, so that the best of educationists now avoid mention of the "Thou shalt not," and insist on the "Thou shalt." Closely akin to the art of not remembering is the art of not emphasising—the art of saying a thing that shall escape notice. Some writers strike us as brilliant users of words, until we find out that they cannot speak without brilliancy and emphasis, so that their painting is a perpetual day of almost equally bright colouring, or—as is the case with Tacitus—lurid colouring, without any background. Not a sentence of theirs but is as clear as a headline in a daily paper!

But if none of the well-known systems tell us our heart's desire—how to forget—they all profess to tell us how to remember, and we shall see directly what are the principles and practices of these systems. First, however, to clear the ground of a few fallacies and mistakes.

(1) It is somewhat inaccurate to speak of

*the* memory: there are many memories. The eye alone has several kinds; so has the ear. Some people remember words as printed words or else as written words; others remember words as sounds; others remember not words but pictures; others, again, apparently see no pictures but remember ideas; and so on. Each type of memory may exist strongly without the others; each, nearly by itself, may give excellent results in daily life.

(2) It is no less inaccurate to speak of memory-systems *en masse*. It is almost as if we generalised about religions or dietaries. I know of more than a dozen memory-systems, some valuable to me, some valueless to me. Extremists have erred in imposing on all alike this or that system, which happens to have suited certain people well enough, but is not needed by every one. Here is a man who finds it hard to remember numbers (dates, houses in streets, &c.): but substitute consonants for figures (as, for 23, the word *name*) and he is helped; but, to his wife, 23 is sufficient; why burden her memory with a heap of words like *name*? No, it is in aiding the specially weak memories of the individual that memory-systems are justifiable. The test of all things is their usefulness.

(3) But their usefulness may not be obvious in the beginning. I maintain that a memory-system is defensible if eventually it is used subconsciously; if, as it were, it comes to work itself automatically. This may involve practice and patience. To take three instances from my own experience, I have found the Initialising-system and the Card-system (which will be illustrated below) invaluable: at first, when it was important for me to remember a list of twenty things, I relied on these or other rather elaborate systems. Now I can usually remember the twenty things without being conscious of employing any system, though I know that sometimes I write down ideas on imaginary cards. But the plan of substituting *n* for 2 and *m* for 3, &c., though I have practised it, I do not find helpful. I still find it far more trouble to form and remember the words than to remember the figures themselves. To many, however, the two former systems, so good for me, are meaningless, and would probably weaken already-existing memories.

(4) Extremists have erred by forcing one system on all, and by expecting the public to give it a fair trial. They have also erred by claiming to have invented it. What they have done has generally been to systematise and apply more widely some principle that we have used unconsciously from early childhood. Loisette's system is to link together words that otherwise we should not connect, as "seven" and "Angel Road": the chain here might be "seven," "heaven," "angel," "Angel Road." He takes advantage of the fact that our minds are a world of word-groups, the word "heaven" belonging to the same group as "seven" (by similarity of sound, without which there would be no rhymes, no puns, few riddles, and not so many jokes), and also to the same group as "angel" (by association). He takes rubbish from our mental lumber-rooms, and uses it in the service of man—if it does indeed serve man. He finds good employment for the unemployed—which is just what they need to have, if they will not die. Again, no one ever invented Repetition: but some have systematised it. I could never learn history till I tried what I call the *Résumée*-plan of repetition, reading first chapter i., then chapters i. and ii., then chapters i. and ii. and iii., then reproducing the ideas of chapter i., and so on. To strengthen my eye-memory, I have observed an object, then have immediately tried to reproduce it in imagination, then have corrected my mistakes and tried again. This is not original invention, but systematisation. Similarly, who is there who does not remind himself to do this or that? To choose special times for reminding oneself—as, the few minutes just before sleep—is again not invention but systematisation.

Having cleared the ground, we may now consider some of the leading systems for acquiring mental materials safely and keeping them ready for use. We cannot separate these processes. Some say, indeed, that there is only one principle in all systems: namely, Association. But the word's meaning would have to be stretched too far. Repetition, for instance, as when we see the same advertisement over and over again, or when we see the same idea conveyed by paraphrases, fresh pictures, &c. (repetition with variety), is not Association proper, neither is all realisation, which of course should generally precede repetition.

We realise a thing most quickly and easily when we concentrate our mind on it, and therefore when we are interested in it. The interest may be inherent in the thing (as it is in games), or may be attached to the thing (as it is to much school-work by marks, prizes, punishments, &c.). Stokes' pictorial system forces an idea upon the mind through the sight and by repetition, often without voluntary concentration or interest. Similarly, we could not fail to remember a certain amount of music, foreign

languages, &c., if we allowed a person or a gramophone to "talk" to us during solitary meals. Leland's system is to suggest to oneself, especially just before sleep, that one will remember such and such ideas: this may be classed as a system for adding interest to ideas.

Some other systems associate the thing to be remembered not with what is interesting but with what is familiar to us or easily recalled. The Localising-system is one of the oldest examples. In the mind is a furnished room, or a house with rooms, or a street of houses, or any scene with many features. To each feature or part one attaches an idea, seeing, for example, a likeness or head of each American president in a separate room. By this means, some have remembered the presidents in their order. Others find it far easier to learn the presidents themselves. So, again, something may be recalled safely by a knot in the handkerchief—or it may not. Other things may be associated together by alliterations, rhymes, or rhythms: instances teem in advertisements. Or we may remember this or that better because we connect it with something not familiar, nor in any way similar, but striking. "I recall every incident of that day," we say when there has been some great event, perhaps a shock, though these incidents may have no bond except time and place. The sight or smell or name or touch of a flower may recall a face utterly unlike the flower itself—only we happened to see them together. The link need not be that of cause, effect, similarity, contrast.

Association, once more, is used in the Number-system by which *n* is associated with and stands for 2, *m* stands for 3, and *name* or *nemo* for 23. If we want to remember 23 Westbourne Grove, we may connect Westbourne Grove with "name" by such apparently silly links as "Westbourne—was born—was named —name." Here we have a principle besides Association, viz., Representation: *n* represents 2. Representation appears also in the Initialising-system, of which an early instance is CABAL, each letter standing for a name (Clifford, Arlington, &c.), and a prominent part representing the whole: as H.R.H., P. and O., M.P., &c., are sufficient to recall His Royal Highness, &c. Professor James quotes a word by which the colours may be remembered in their order in the prism, VIBGYOR. In lecturing on "Causes of Rome's Early Success" I have found useful the words GEM, CREATING, FOCUS, these letters being initials of the following ideas:

(1) Geography and its effects, especially the Etruscan kings (*e.g.*, Tarquins) who ruled Rome, and the Mixture of peoples.

(2) (The Romans in dealing with others). Colonies, Roads, gradual Extension of rights, Alliances, Treachery, Isolating-policy, eNemies' weakness, Gradual conquest.

(3) (The Romans in themselves). Family life, Organisation (in religion, arms, and law), Character, Unity, Senate (and Slaves).

This instance will enable me to justify the memory-systems which really help. The above ideas were carefully selected because they are useful (for general knowledge, as well as for examination purposes); I had practised this system till it became easy to form such words composed of the initials of ideas; I had realised all these ideas before I formed the three words. Then, having the three words in my mind, I found that each letter suggested its idea, surely and in due order, and I could lecture free from any fear of forgetting. On the other hand, when I had merely realised each idea, and had not strung the ideas together and associated them thus, thanks to Representation, it did not in the least follow that before my class I should recall all the ideas in their order.

Realisation there must be: by concrete examples, by pictures, by questions, by contrasts, by comparisons, by application to other countries (for example, by considering why England has succeeded), by working out causes and effects, and so on, abstract ideas like the above must be understood. By realisation and repetition I had acquired and held the ideas, by the Initialising-system I could now recall them all at will.

A study of this example will show also the value of arrangement and classification in groups, and, within these groups, arrangement of ideas so that one will naturally suggest its neighbour by some connecting link.

But we cannot always group in this way what we want to remember. A morning's work may include fifteen items which we may "realise" and "repeat," yet some of which we may forget. It is here that a system like Loisette's may be of value, or else a System of Memoranda. My own favourite is the Card-system. I have plain cards, 2 ins. by 4, on which I jot down briefly such notions as I want to remember, always putting only one notion on a card: this enables me to arrange the notions in and required order afterwards. Then, having usey the cards, I can either preserve them or destroy them, according to their permanent or ephemeral interest. I do not indent my memory deeply with the latter notions: I nearly forget them.

This is one help to the art of forgetting, namely, to remember as it were with the surface only. If we cannot, like the Hindu Yogî, altogether close our senses to undesirable external things, our next best course may be not to impress the attention much, and not to recall the memory later on. For my own part, when undesirable thoughts try to revive themselves, I find it a great help to relax the tension of my muscles and to substitute some other interesting thought. But there is no space here to say more about the ways of forgetting.

Having touched on some of the chief systems, I may conclude with a suggestion as to one of their uses to-day. Dr. Schofield and other specialists have proved the value of Suggestion as a curative process. the Americans, *more suo*, prefer Auto-suggestion (or Self-suggestion) to Suggestion from another. And certainly this practice, applicable to all things at all times, without expense and without ostentation, is inestimable. But most of its teachers have hitherto failed to allow for individuality. They still give a verbal formula to be repeated regularly, as if it were a pill; whereas the first requisite is to help the individual to realise the good ideas of health, &c., to remember them, to recall them at will; and this realisation may be best made through the sight of (written or printed) words, or of (real or imaginary) pictures, or through the sound of words (or of music, when it is better understood), or through "acting," or through ideas and reasons, while the memory may be aided by some system: if any system would recall and enable us to realise the best ideas in the time of (or just before) the worst temptations, they would be abundantly worth using. Even the repetition of words themselves, of the mere formula or *mantram*, may have a saving power. As an example, let us take the Alliteration-system: we want to realise perfection, but the idea is too vast and vague. Such thoughts, however, as purity, peacefulness, patience, poise, promptitude, power, plenty, pleasantness, may be within our grasp, and far easier to recall than cleanliness, repose, waiting, balante, alertness, strength, abundance, happiness. If this or any other system, after you have tried it and practised it fairly, helps you to recall what you really want to recall, whereas without a system you find this hard if not impossible, then it is worth while. For systems, like everything else, must not be condemned because they are unusual and unorthodox, or even ridiculous; they must be judged by their fruits, and the fruits do not spring in a moment from the seeds.

# THE WORK OF A LADY HEALTH-LECTURER

HOW A KNOWLEDGE OF THE LAWS OF HEALTH IS PROMOTED IN THE VILLAGES —PLAIN SCIENCE TEACHING HAS TO FIGHT AGAINST GENERATIONS OF PREJUDICE — EXAMPLES OF SUPERSTITION — A TYPICAL DAY'S WORK OF THE NATIONAL HEALTH SOCIETY'S LECTURER

BY

CLARENCE ROOK

NOW that the cry of physical degeneration is filling the air, and we are exhorted to fight the evils of civilisation with its discoveries, it is well to remember that more than thirty years ago the National Health Society began to organise its forces for the conflict. During the intervening years it has spread its influence by means of lectures, pamphlets, and such useful offshoots as the Metropolitan Public Gardens Association, crying for years in the wilderness of bricks and mortar and general ignorance. It organised training for lecturers on the prevention of disease, and despatched the lecturers hither and thither to teach the ignorant how to combat the death that was wasting life. And the leaven of common sense seethed and worked until the new scheme of local government produced the county councils. It was not until the county councils

came into existence fifteen years ago that the mechanism of sanitary education in the country districts was organised. And the villagers are as much in need of instruction as the dwellers in cities. Villages contain greater possibilities of healthfulness than cities; but they waste their advantages, paying no thought to the benefit of pure air and pure water in the cottage-house. Superstition, too, lingers more persistently in the remote hamlet, while it is driven headlong from the city; and the remedies which killed the fathers are relied upon to cure the children. Now, the county councils were given power to devote a portion of their revenue to technical instruction; and a large number of these bodies concluded quite rightly that there are few matters more important than the diffusion of knowledge as to the laws of health, and few matters upon which the village mother is so ignorant and so bound to tradition. It was here that the fifteen years' work of the National Health Society showed its useful result. For it had trained in London a small army of ladies in the elements of hygiene, nursing, and kindred subjects. With the coming of the county councils the training course at the headquarters, 53 Berners Street, included elementary anatomy and physiology, first aid in accident or disease, elocution and the art and manner of imparting knowledge swiftly and convincingly. A special period of training in a hospital or infirmary is also arranged. By the time the woman lecturer—who must be an "educated gentlewoman"—has gained her teacher's certificate she knows considerably more about the laws of health, the prevention of disease, and the care of babies than the village mother; and, moreover, she has been taught the best means of convincing the village mother of this fact. That is really the most difficult part of the business.

The county councils choose subjects and lecturers as they please, keeping as much as possible in touch with the clergymen, the local councils, and the rural schoolmasters, who know the needs and wishes of their neighbours. I propose to confine myself for the moment to one point, one district, leaving aside the technical instruction in arts and crafts, and so forth, which finds its way now and again into the obscurest corners of England. But the National Health Society, being ready with its training, is drawn upon every winter for lecturers on sanitation and nursing. That is the point—and Oxfordshire is the district. For Oxfordshire holds the most curious contrasts of light and darkness that can be found in any county within an hour or so of London by railway. It contains the central seat of English learning; it contains, too, villages so remote from the current life of England that you may still talk with men who have never seen a railway. And it is these villages that chiefly concern Miss Christine Hall, the National Health Society lecturer who now for the third year is carrying on her course of instruction.

Locomotion is always a problem. Oxford is headquarters, and in July the various villages send in a list of the lectures they wish to hear. Then, having arranged her winter's work with some regard to space and time, the lecturer has to look about for temporary quarters from which she can reach her classes. Sometimes an invitation comes from the squire or the vicar—and there are vicars in Oxfordshire whose poverty is almost that of the cottager. Sometimes only the village cobbler has a room to spare. There is always a hearty welcome; but to the "educated gentlewoman" it is little more than camping out for a week, and in winter, too. For no villager wants knowledge when the land calls for tending, and the lectures, which extend from September to the end of June, are sparsely attended when potatoes are being planted or taken up. Some county councils provide both lodging and conveyance over the country roads. The Oxfordshire council gives a lump sum and leaves the rest to the lecturer. Miss Hall is an intrepid bicyclist, and trusts her bicycle implicitly. Here is a typical day. The start is from Oxford. The lecture is at Tetsworth, at four o'clock. Then, after riding across country for fourteen miles and answering all the mothers' questions, comes another ride across country to Thame. Another lecture. And then, after the hospitable supper with squire or cobbler, the fourteen-mile ride back to Oxford, through snow, or rain, or frost, or whatever heaven sends. Miss Hall rests secure between her bicycle and her nurse's garb. But she has found chivalry everywhere. There is never a dark or stormy night without the offer of an escort from the village bicyclists.

In these villages, set in the backwater of English life, there is always a vague desire to learn—but at the same time a shrinking from knowledge. Home nursing and first aid are the subjects most often asked for, and there are many villages in which practically the whole adult population attends the lectures, headed by the local squire or vicar. A broken limb or a fever appeals at once to the least imaginative; and when at the end of the session the oral

examination is held, and the labourers and village mothers are tested in the knowledge they have assimilated, the result is encouraging enough to stimulate further effort. But the questions must be simple, set in the form in which the problem would in an emergency present itself to the mind untilled by the classic plough. This, for example, was a question put by a lecturer:

"In the case of a dislocated shoulder, would you expect increased or decreased passive mobility?"

The answer was a lesson to the teacher: "If you'll put your question in plain English, Miss, I'll endeavour to answer it."

To a doctor the question appears in its simplest form. The village grocer does not know what it means. And one of the problems before the health-lecturer is that of expressing the latest scientific discoveries in the compass of the few thousand words at the command of the English peasant. I have said that the peasant shrinks from knowledge, even while desiring it. It is the realism which attracts the uneducated listener to the first-aid lecture—and repels him sometimes. Miss Hall was once describing the proper method of stopping a flow of blood, showing the points at which in each imaginary case the tourniquet should be applied. Suddenly a man fainted—a man usually faints during this lecture—never a woman. He was carried out. Recovering, he insisted on returning. In five minutes he had fainted again. Miss Hall inquired who the man was. He was the village pig-sticker.

"Surely," she said to him at the end of the lecture, "you are used to the sight of blood. I was only *talking* about it."

"Yes, Miss," he protested, "but it was *my* blood you was talking about."

Instruction filters very slowly through the village mind into practice. After two sessions of lectures there are certainly many women who know how to make poultices, and how to construct the most comfortable bed for the sick person, and many men who could grapple with the first difficulties of the suddenly wounded. But the feeding of babies is one of the matters in which the village mother is sternly conservative. It is a fixed conviction among the ignorant that the mere possession of a baby confers the knowledge of its proper treatment, nor will the village mother admit for a moment that the skilled instructor who has dealt only with other people's babies has the inspired authority of the prophet. To her the inspiration comes from the mother who has "buried" the most. And all the news of scientific research into food values in relation to the digestion of the lately-born has no weight in the scale against the dictum of the mother next door who has buried her entire progeny, with due regard to crape and tombstones. Hygiene, again, is somewhat too abstract a subject for village appreciation, though its principles are listened to with respect. Miss Hall confesses that in spite of dozens of lectures on the value of fresh air in the home, in spite of excellent theoretical answers from the audience at the end of the session, she has noticed no increase in the number of open cottage windows. In one village she lodged in a cottage as the guest of a woman who was an enthusiastic attendant, and noticed that the chimney of her bedroom was stuffed up with sacking. Two lectures were delivered on the subject of fresh air, with special reference to bedroom ventilation, and the woman, on her walk home with the lecturer, expressed her approval. But the sacking remained. Another lecture was aimed straight at the mistake of choking the bedroom chimney. Again the woman approved. Then the lecturer alluded to the concrete case. "Oh, but think of the draught if it was took away!" said the woman. And the sacking remained.

In spite of lectures, instruction, examination, and theoretical approval of the latest discoveries and inventions, the ancient methods and remedies linger in the belief of the country districts. The Salvation Army has a large following in many of the Oxford villages, and is not in close touch with the established church. But the leader of the local contingent lately called upon the rector and asked to be allowed to get a bit of the grease on which the church bell swung. A member of the Army was suffering from rheumatism, and asserted that church oil was the infallible cure.

These health-lecturers have to fight against the superstitions of ages, the prejudices fathered by unnumbered generations. And it is the prevention of disease which the instructor finds most difficult to explain to the ignorant listener, who regards disease as a special visitation from heaven, and in no way a consequence of his own foolishness. Most important is the due instruction of the mother who persists in feeding her babies on "the same as we have ourselves," as she proudly proclaims to the coroner, including her excuse and her condemnation in one sentence. Possibly the village mother, though she may never have heard of Lewis Carroll, may think that what is said three times is true, and may respond to reiteration.

# GLADSTONE THE WORKER

GLIMPSES OF A TRIUMPHANT CAREER AS REVEALED IN MR. MORLEY'S GREAT BOOK—SHOWING GLADSTONE'S STRENGTH OF WILL, ORDERLINESS, AND CAPACITY FOR WORK—THE VARIETY OF HIS PURSUITS—THE CHARITY AND RELIGION OF A MASTER ENGINEER OF GOVERNMENT

IN whatever light the life of Gladstone is regarded, it was a life of incessant industry. Mr. Morley's monumental work* has been reviewed during the past month in every paper in the country, and its interest as the greatest political biography of the period has been fully dealt with. In this magazine, therefore, we need only refer to those phases of Gladstone's life—less generally treated by the daily papers—which exhibit him as a tremendous worker. As a young man, he constantly reproached himself for natural indolence, and for a year and a half he took his college course pretty easily. But when he changed—and he was only twenty when he changed—there was no halt in the march forward. "The time for half-measures and trifling and pottering, in which I have so long indulged myself," he wrote in his diary, "is now gone by, and I must do or die." This was no frothy resolve. Half his genius, says Mr. Morley, was labour.

Reading the life of anybody else one might be tempted to condemn as unhealthy the almost morbid minutes Gladstone kept of the daily condition of his mind in his youth. But morbid is an impossible term to apply to Gladstone at any stage. The combination of self-consciousness and lofty ideals must always be supported by strong ambitious force, or the sufferer will fall beneath its rigorous regimen; but Gladstone had in him precisely that conquering force. He was himself, indeed, what he described his friend Hallam as having been—"that rare and blessed creature, *anima naturaliter Christiana*."

A reader of the work may detect here and there a note as if Gladstone sometimes regretted the dedication of his life to politics, and wistfully longed for a serener atmosphere of toil. The boy would have liked to live in a church; the old man, to die in church. Destiny seemed to guide his footsteps to parliamentary life from the beginning. At sixteen he made his first speech in the debating society at Eton, on the education of the poor. At twenty-two—already an orator of note at the Oxford Union—he took some trouble to hear a great debate in the House of Lords, and here is a hint of laborious days:

"*October* 3 *to* 8, 1831.—Journey to London. From Henley in Blackstone's chaise. Present at five nights' debate of infinite interest in the House of Lords. The first I went forwards and underwent a somewhat high pressure. At the four others sat on a round transverse rail, very fortunate in being so well placed. Had a full view of the peeresses. There nine or ten hours every evening. Read Peel's speech and sundry papers relating to King's College, which I went to see; also London Bridge. Read introduction to Butler. Wrote to Saunders. Much occupied in order-hunting during the morning."

At twenty-three he is at Newark fighting his first election:

"We started on the canvass [says one who was with Mr. Gladstone] at eight in the morning, and worked at it for about nine hours, with a great crowd, band, and flags, and innumerable glasses of beer and wine all jumbled together; then a dinner of thirty or forty, with speeches and songs until, say, ten o'clock; then he always played a rubber of whist, and about twelve or one I got to bed and not to sleep."

Success at Newark led to parliamentary life, and soon we see the development of his social side in London. This too was strenuous:

"He would not go to dinner-parties on Sundays, not even with Sir Robert Peel. He was closely attentive to the minor duties of social life, if duties they be; he was a strict observer of the etiquette of calls, and on some afternoons he notes that he made a dozen or fourteen of them. He frequented musical parties where his fine voice, now reasonably well trained, made him a welcome guest, and he goes to public concerts, where he finds Pasta and Schröder splendid. . . . Besides listening to as many sermons as possible, he was also for a long time fond of reading them aloud, especially Dr. Arnold's, in rather a peculiar way.

* *The Life of William Ewart Gladstone.* By John Morley. Three volumes. (Macmillan.)

'My plan is,' he says, 'to strengthen or qualify or omit expressions as I go along.'"

How varied his pursuits were, is seen by the following passage, which belongs to the year in which Queen Victoria ascended the throne:

"Back at Fasque, only a day too late for the Twelfth, he found the sport bad and he shot badly, but he enjoyed the healthful walks on the hill. His employments were curiously mixed. '*Sept.* 8.—In the bog for snipe with Sir J. Mackenzie. Read *Timæus*. Began Byron's Life. My eyes refused progress. Verses. *15th.*—Snipe-shooting with F. in the bog. Began *Critias*. *22nd.—Haddo.* Otter-hunting, *senz' esito*. Finished Plato's *Laws*. Hunting, too, in the library.'

"The mental dispersion of country-house visiting never affects either multifarious reading or multifarious writing. Spanish grammar, *Don Quixote* in the original, Crabbe, *Don Juan*, alternate with Augustine *de peccatorum remissione* or *de utilitate Credendi* ('beautiful and useful'). He works at an essay of his own upon Justification, at *adversaria* on Aristotle's *Ethics*, at another essay upon Rationalism, and to save his eyes, spins verse enough to fill a decent volume of a hundred and fifty pages. He makes a circuit of calls upon the tenants, taking a farming lecture from one, praying by the sick-bed of another."

Once at least the very variousness of his interests—which ranged from Greek ethnology to old china and the prices of things in shop windows—gave offence. Jealous for the party's share of their leader's time, some of his followers were riled at seeing him placarded to write upon *Ecce Homo*. Gladstone was a great disciplinarian regarding the performance of parliamentary duties as well as in other things, but this is the gist of his reply to the grumblers:

"I have been for near thirty-six years at public business, and I must myself be the judge how best to husband what little energy of brain, and time for using it, may remain to me. If I am told I should go to Sheffield instead of writing on *Ecce Homo*, I answer that it was my Sunday's work, and change of work is the chief refreshment to my mind."

He was a marvel of physical endurance. He had a frame of steel, says Mr. Morley. Dietetic peculiarities, if he had any, do not seem to be touched upon in the book. He drank wine and beer. "How can I," he wrote in 1864, "who drink good wine and bitter beer every day of my life, in a comfortable room and among friends, coolly stand up and advise hardworking fellow creatures to take 'the pledge'?"

One day, in 1842, while out shooting, the second barrel of a gun went off while he was reloading, shattering the forefinger of his left hand. The remains of the finger the surgeons removed. "I have hardly ever in my life," he says, "had to endure serious bodily pain, and this was short." During his illness in 1894, he realised for the first time the value of having a trained nurse to attend him. In that brief time he said he had taken more physic than in all his previous life. Not second to vigour of physical organisation, says Mr. Morley, was strength and steadfastness of will:

"He was never very ready to talk about himself, but when asked what he regarded as his master secret he always said, '*Concentration*.' Slackness of mind, vacuity of mind, the wheels of the mind revolving without biting the rails of the subject, were insupportable. . . . By instinct, by nature, by constitution, he was a man of action in all the highest senses of a phrase too narrowly applied and too narrowly construed. The currents of daimonic energy seemed never to stop, the vivid susceptibility to impressions never to grow dull. . . . Sir James Graham said of him in these years that Gladstone could do in four hours what it took any other man sixteen to do, and he worked sixteen hours a day. When I came to know him long years after, he told me that he thought when in office in the times that our story is now approaching (1841) fourteen hours were a common tale. Nor was it mere mechanic industry; it was hard labour, exact, strenuous, engrossing, rigorous. No Hohenzollern soldier held with sterner regularity to the duties of his post. . . .

"Mrs. Gladstone once said to me (1891) that whoever writes his life must remember that he had two sides—one impetuous, impatient, irrestrainable, the other all self-control, able to dismiss all but the great central aim, able to put aside what is weakening or disturbing; that he achieved this self-mastery, and had succeeded in the struggle ever since he was three or four and twenty, first by the natural power of his character, and second by incessant wrestling in prayer—prayer that had been abundantly answered."

His Budget speech of 1860 was made during an illness, and he says in his diary:

"Spoke 5–9 without great exhaustion; aided by great stock of egg and wine. Thank God! Home at 11. This is the most arduous operation I have ever had in Parliament."

He was always a great walker; at sixty-four he did thirty-three miles one day. "A little woodcraft for helping sleep," he notes on his seventy-sixth birthday. This had been his occupation when the Queen sent for him upon the resignation of Disraeli in 1868:

"On the afternoon of the first of December, he received the communication from Windsor. 'I was standing by him,' says Mr. Evelyn Ashley, 'holding his coat on my arm while he, in his shirt-sleeves, was wielding an axe to cut down a tree. Up came a telegraph messenger. He took the telegram, opened it and read it, then handed it to me, speaking only two words, "Very significant," and at once resumed his work. The message merely stated that General Grey would arrive that evening from Windsor. This, of course, implied that a mandate was coming from the Queen charging Mr. Gladstone with the formation of his first Government. . . . After a few minutes the blows ceased, and Mr. Gladstone resting on the handle of his axe, looked up and with great earnestness in his voice and with great intensity in his face, exclaimed, "My mission is to pacify Ireland." He then resumed his task, and never said another word till the tree was down.'"

The middle of December 1882 marked his political jubilee:

"His fifty years of public life had wrought his early habits of severe toil, method, exactness concentration, into cast-iron. Whether they had sharpened what is called knowledge of the world, or taught him insight into men and skill in discrimination among men, it is hard to say. He always talked as if he found the world pretty much what he had expected. Man, he used often to say, is the least comprehensible of creatures, and of men the most incomprehensible are the politicians. Yet nobody was less of the cynic. As for Weltschmerz, world-weariness, *ennui*, tedium vitæ—that enervating family were no acquaintance of his, now nor at any time."

To realise how he "lasted," look at the old man of eighty-three at work with a committee of the Cabinet preparing the Home Rule Bill:

"Here he was acute, adroit, patient, full of device, expedient, and the art of construction; now and then vehement and bearing down like a three-decker upon craft of more modest tonnage. But the vehemence was rare, and here, as everywhere else, he was eager to do justice to all the points and arguments of other people. He sought opportunities of deliberation in order to deliberate, and not under that excellent name to cultivate the art of the harangue, or to overwork secondary points, least of all to treat the many as made for one. That is to say, he went into counsel for the sake of counsel, and not to cajole, or bully, or insist on his own way because it was his own way. In the high article of finance, he would wrestle like a tiger. It was an intricate and difficult business by the necessity of the case, and among the aggravations of it was the discovery at one point that a wrong figure had been furnished to him by some department. He declared this truly heinous crime to be without a precedent in his huge experience."

How very significant that last sentence! Of the veteran worker's lighter moods, *per contra*, we must take one gem from Mr. Morley's table-talk:

"Wordsworth once gave Mr. Gladstone with much complacency, as an example of his own readiness and resource, this story. A man came up to him at Rydal and said, 'Do you happen to have seen my wife?' 'Why,' replied the Sage, 'I did not know you had a wife!'

"This peculiarly modest attempt at pointed repartee much tickled Mr. Gladstone, as well it might."

Another field in which Gladstone's untiring tenacity and force were exerted at one period was the management of his estate. Embarrassments in working the minerals of the family property at Oak Farm, due to the over-confidence of an agent, had led to a burden of £250,000 being placed on Hawarden. Writing long after to his son on the subject he said:

"The full history of the Hawarden estate from 1847 would run to a volume. For some years after 1847, it and the Oak Farm supplied my principal employment; but I was amply repaid by the value of it a little later on as a home, and by the unbroken domestic happiness there enjoyed."

In clearing up the entanglement, says his biographer:

"He plunged into masses of accounts, mastered the coil of interests and parties, studied legal intricacies, did daily battle with human unreason, and year after year carried on a voluminous correspondence. . . . He manfully and deliberately took up the burden as if the errors had been his own, and as if the financial sacrifice that he was called to make both now and later were matter of direct and inexorable obligation."

Between two and three hundred thousand written papers of one sort or another passed under Mr. Morley's view in writing the biography, and these consisted chiefly of the papers collected at Hawarden. This vast accumulation is only understood if we see what Gladstone's literary repository looked like:

"Near the end of the eighties, Mr. Gladstone built for himself a fire-proof room at the north-western corner of his temple of peace. In this Octagon—'a necessity of my profession and history'—he stored the letters and papers of his crowded lifetime. He estimated the 'selected letters' addressed to himself at sixty thousand, and the mass of other letters that found their way into the Octagon without selection, along with

more than a score of large folios containing copies of his own to other people, run to several tens of thousands more. There are between five and six hundred holographs from the Queen, afterwards designated by him in his will to be an heirloom. 'It may amuse you,' he told Lord Granville, who always wrote the shortest letters that ever were known, 'to learn that your letters to me weigh fifteen pounds and a half.' Probably no single human being ever received sixty thousand letters worth keeping. . . . Half of the contents of this crowded little chamber are papers of business, nightly letters to the Queen, telling her what had gone on in the House and what sort of figure had been cut by its debaters, reports of meetings of the Cabinet, memoranda for such meetings, notes for speeches, endless correspondence with colleagues, and all the other operations incident to the laborious machinery of Government in the charge of a master engineer. In this region of his true calling, all is order, precision, persistency, and the firmness and ease of the strong."

Another light upon the temperament of the worker is seen in this letter of Gladstone to his wife a couple of years after their marriage:

"It is always relief and always delight to see and to be with you; and you would, I am sure, be glad to know how near Mary [Lady Lyttelton] comes as compared with others to you, as respects what I can hardly describe in few words, my mental rest, when she is present. But there is no *man* however near to me with whom I am fit to be habitually when hardworked."

Charity was a life-long habit. He never at any time devoted less than a tenth of his annual incomings to charitable and religious objects:

"He kept detailed accounts under these heads from 1831 to 1897, and from these it appears that from 1831 to the end of 1890 he had devoted to objects of charity and religion upwards of £70,000, and in the remaining years of his life the figure in this account stands at £13,500—this besides £30,000 for his cherished object of founding the hostel and library at Saint Deiniol's."

To see what he could accomplish in one day, take the record of December 5, 1879—during the Midlothian campaign. After a breakfast party he puts his notes in order for the afternoon speech. At twelve he delivers the inaugural address as Lord Rector of the University of Glasgow:

"This discourse lasted an hour and a half. . . Then followed luncheon in the University Hall. . . . By this time it was four o'clock. Before six he was at St. Andrew's Hall, confronting an audience of some six thousand persons, as eager to hear as he was eager to speak. . . . For an hour and a half thus he held them. . . . This high-wrought achievement over, he was carried off to dine, and that same night he wound up what a man of seventy hard-spent years might well call 'an overpowering day' by one more address to an immense audience assembled by the Glasgow Corporation in the City Hall. . . ."

From the "romance of politics which befell my old age in Scotland," he comes straight back to his books. In his library he was method itself. "My method of reading," he said, "has usually been (1) to read over regularly; (2) to glance over all I have read, and analyse."

"Again and again he gives himself the delightful refreshment of arranging his books. He finds that he has seven hundred volumes of English poetry. 'After thirty hours my library is now in a passable state, and I enjoy, in Ruskin's words, "the complacency of possession and the pleasantness of order."'"

Politics could never submerge him. His teachers (over and above the four Gospels) were Aristotle, Augustine, Dante, Butler. In the midst of the stormy events of 1855 he writes from Wales to Lord Aberdeen: "I am busy reading Homer about the Sebastopol of old time, and all manner of other fine fellows." Thirty years later, when the curtain is nearly rung down upon Gladstone's political life, Mr. Morley calls at Downing Street, and, as he enters, the old man says cheerily, "I suppose 'tis the long habit of a life, but even in the midst of these passages, if ever I have half or quarter of an hour to spare, I find myself turning to my Horace translation." Other nine months, and, the political drama over, he is at work with all his old zest on his edition of Bishop Butler.

We have purposely in this notice of a great book confined our attention more particularly to aspects of Gladstone's life which show him as a worker. No notice of any kind could be justified, however, which failed to express also the guiding principle of this myriad-minded man. It was his religion. "You do not know," wrote Spurgeon, "how those of us regard you, who feel it a joy to live when a Premier believes in righteousness." We go back to the diary of his twentieth year to find what Mr. Morley calls "the biographic clue":

"In practice the great end is that the love of God may become the *habit* of my soul, and particularly these things are to be sought: (1) The spirit of love; (2) of self-sacrifice; (3) of purity; (4) of energy."

For many a day to come this dazzling example of "virtuous energy" must remain an inextinguishable light for striving men and peoples.

# THE NEW POULTRY MOVEMENT

## EGGS *VERSUS* FEATHERS

THE DIFFERENCE BETWEEN POULTRY FOR EGGS AND THE TABLE, AND SHOW POULTRY—LAYING COMPETITIONS IN ENGLAND AND AUSTRALIA—TRAP-NEST RECORDS OF THE LAYING SCORE OF EACH BIRD—THE LESSON OF THE COMPETITIONS FOR PRESENT AND PROSPECTIVE KEEPERS OF POULTRY

BY

"HOME COUNTIES"

*Illustrated from photographs specially taken for* THE WORLD'S WORK

AFTER all that has been written about poultry, there are still folk who do not know—and have sometimes to pay for not knowing!—that domestic fowls are of two sorts: Utility Poultry and Show Poultry.

The first class consists of birds bred to fulfil the destiny of domestic poultry, to lay eggs or to provide roast chicken. The birds of the second class are bred as *matériel* for the hobby of "the fancy," to win prizes at Shows.

The enlightened poultry-keeper is a man or woman who realises that it is not feasible to eat your cake and have it, who obeys the Emersonian injunction, "Make thy option which of two."

Most beginners in poultry-keeping, and that class of breeder of stock birds which asserts and believes that its birds are at the same time "likely winners" and "the very best layers," may be regarded as still sitting in darkness.

### I

Whatever was the original intention, prizes are now given at the six hundred Shows held in this country every year not for the best layers, or for the birds which when dead will make the finest table poultry, but for—feathers! The birds—there were two thousand or more at last month's Dairy Show—are ranked good or bad according as they approximate to or fall short of an artificial "standard" for each variety. It is absolutely immaterial whether the "perfect bird" has ever laid, or ever will lay, an egg. "Want of condition" may, indeed, count as much as ten marks in the scale of defects, but such considerations as the character of the comb and ear-lobe and the "colour," "size," and "symmetry" of the bird have control over eighty-two, or an average of more than sixteen!

And there is no fixity of "standard" or "points." An "agitation" among the "supporters" of a particular breed may at any time succeed in securing a change in the "markings" or "points" of the ideal "true to type" bird.

While "fine feathers do not make fine birds" is the motto of the utility poultry-keeper, the contrary is the belief of the "fancier." And to do him justice he has acted up to his faith.

He has taken old-fashioned breeds (like Spanish and certain Hamburghs) which were once good layers, and has bred and inbred them for some particular feathering or other he fancied, till they have become such bad layers that no instructed poultryman would dream of keeping them for egg-production. To Minorcas and Langshans—two of the most useful breeds of poultry every introduced into this country—the fancier has given, in the one case, such a big comb as to be a deformity and a danger, and in the other such long legs that their unfortunate owners "cannot stand upright in the Exhibition pen, and are perfectly useless as table poultry."

Not content with lowering the value of the breeds we had, the fancier has invented new ones at such a rate that many a fairly well-informed poultry-keeper could hardly trust himself to recite offhand a complete list of the breeds now shown in this country. There are four

sorts of Orpington, half a dozen varieties of Leghorn, and eight kinds of Wyandotte; and a year hardly passes in which something fresh is not championed.

The latest achievement of the fancier is to descend on the famous nondescript "Sussex fowl," which has supplied for ages, and still supplies, the London market with the table poultry for which poulterers and their customers are ready to pay the highest prices, and try to exploit it as a Show bird. It is to have a Club of its own; it is to be bred in three varieties, the "red," the "speckled," and the "white"; and each variety is to have a "standard" drawn up for the way it is to wear its feathers, its toes, and its comb. That there will be nothing in the "standard" as to those qualities of breast meat and early maturing for which the Sussex fowl is now so well known, by which its existence is justified, goes without saying. "Markings" and "standard" are almost all "the fancy" cares for, and to obtain, to fix, and to perpetuate the particular artificial "points" decided on, birds will be selected for the breeding-pen regardless of practical considerations, and will be inbred, father with daughter, son with mother, brother with sister, until the desired Show creature is evolved.

## II

Now all this is very interesting, and, it may be, even excusable, as a hobby. No one complains of fanciers working their will on pigeons—at least, all sorts but carrier pigeons—or perhaps on bantam poultry. But at a time when

> We are consuming 4,500,000,000 eggs a year,* and
> Producing ourselves only half of them, and
> Importing no end of dead poultry for the table,

and it is generally recognised that a considerable proportion of the foreign import could be produced at home, to the great advantage of our agricultural population—which, though it not so long represented two-thirds of the nation, has now shrunk to a third—it is not easy to regard with equanimity the proceedings of the poultry fancier—and the Agricultural Shows which work hand in hand with him, although they ought to know better.

* Many of these low-grade eggs in "trades and manufactures."

The utility poultry-keeper at any rate makes no attempt to speak smooth words on the subject. He thinks hens too valuable a rural asset to play chuck-farthing with. He believes, as I have said already, that hens are for laying eggs and cockerels for turning into roast chicken, and that not some particular breed in feathers or ear-lobes or wattles or toe-nails, but the number of eggs a hen will lay and the kind of roast chicken a cockerel will make, and the healthiness and hardiness of them both, and their general adaptability to that station of life to which it has pleased him to call them, are the things to bear in mind in breeding them, and that in-breeding is of the devil.

So he started the Utility Poultry Club.

The watchword of the new movement was Strain, instead of Feathers. The Utility Poultry Club, parleying quietly with the enemy, as became a stripling in the presence of the giant, said, in effect: We do not come into existence to say which are the best breeds of fowls. (The reason being, David discreetly muttered to himself, because nowadays the trail of the fancier is over them all!) Our wish is merely to seek until we have found those good laying strains which were lost. Most breeds have their good points—(*sotto voce:* You have not been able to get rid of them all!)—and we desire to discover and proclaim the best existing utility strains of those breeds, and to do our best to perpetuate and to better them.

The Utility Poultry Club first drew up a common-sense standard for dead table poultry, which was much wanted. Then it decided to start a Laying Competition, and as the countryman can get a shilling for only seven eggs in the winter, while he has difficulty in getting as much for thrice as many in the summer, it was, of course, a Winter Laying Competition. The half-crowns collected from the members permitted of the imposing sum of six guineas being offered as prizes—such are the modest beginnings of epoch-making movements!—and seven pens of birds competed. The time was the winter of 1897–1898, and the scene the well-known poultry yards of the veteran Mr. Simon Hunter at Northallerton. Four birds were allowed to each pen, and the pen which laid the most eggs in the sixteen weeks the Competition lasted was to be the winner.

The following little table gives the more interesting particulars of that contest and of all the contests held since:

| Winter. | Prize Money. | Pens Competing. | Breeds. | Eggs Laid. |
|---|---|---|---|---|
| | £ s. | | | |
| *1897-98* | 6 6 | 7 | 1. *Black Minorcas* | *161* |
| | | | 2. " " | 149 |
| | | | 3. Langshans | 146 |
| *1898-99* | 12 0 | 12 | 1. *Buff Leghorns* | *154* |
| | | | 2. Barred Rocks | 149 |
| | | | 3. Golden Wyandottes | 133 |
| *1899-00* | 17 0 | 16 | 1. *Silver Wyandottes* | *223* |
| | | | 2. Brown Leghorns | 161 |
| | | | 3. Buff Orpingtons | 151 |
| *1900-01* | 17 0 | 20 | 1. *Plymouth Rocks* | *127* |
| | | | 2. Buff Leghorns | 81 |
| | | | 3. Lincolnshire Buffs | 73 |
| *1901-02* | 20 0 | 20 | 1. *Golden Wyandottes* | *200* |
| | | | 2. White Leghorns | 185 |
| | | | 3. Buff Orpingtons | 164 |
| *1902-03* | 34 0 | 24 | 1. *White Wyandottes* | *276* |
| | | | 2. Buff Orpingtons | 225 |
| | | | 3. " " | 200 |
| *1903-04* | 36 0 | 30 | | |

The winning pens and their egg records are italicised.

It will be seen that there has been an immense improvement in the number of eggs produced in the five years. Whereas the four winning pullets in 1897–1898 produced only 161 eggs, the pen which took first prize in 1902–1903 had 276 eggs to its credit, and broke all records. Even the second prizetaker of last year beat all previous first prizetakers' figures.

A Lancashire Utility Poultry Club, an off-shoot from the parent organisation, has also begun to hold Competitions at Burnley. Last year's, which was under practically the same conditions as the senior society's, showed that the two pens taking first and second prizes had produced 256 and 238 eggs respectively.

A Utility Poultry Club has also got started in Holland, and utility poultry-keeping has made such strides in Australia that the New South Wales Government is going to hold an International Laying Competition, lasting not sixteen weeks but a year (April 1, 1904, to March 23, 1905, inclusive). £125 is offered in prizes, and pens—accommodation is provided for one hundred, not a mere thirty-two, as in the case of our home Competition *—are expected not only from the various States of the Commonwealth but from New Zealand, Canada, the Mother Country, and the United States.

Last year's home Competition was remarkable for the fact that for the first time the report showed not only the number of eggs laid per pen but the number to the credit of each particular bird. As it would be far too much trouble, exceedingly expensive, and unfair to the birds, which no doubt like company, to pen each bird by itself, the record of eggs laid by each pullet is obtained by means of the trap or recording nest. Several plans for this kind of nest have been published, but the principle is alike in all. As the hen enters the nest-box, she pushes back a contrivance of varying pattern, which, when her weight is taken off it—on her sitting down, that is—falls back and prevents her leaving without the assistance of the poultryman, who is attracted by the cackling with which the hen announces the accomplishment of the task for which she entered the nest. As all the birds have a number on a strip of metal or a metal ring on their legs the poultryman on releasing the layers is able to credit each bird in his book with every egg she lays.

* Why our Board of Agriculture does not step in and give £50 or so to enable the scope of the home Competition—one of the most practical pieces of work now being done in the interests of rural industry—to be reasonably extended passes comprehension. In New South Wales Government patronage is promptly forthcoming; in France such a Competition would at least procure for the founders the *Mérite Agricole*.

## III

On this system of recording the number of eggs laid by each hen likely to be used for breeding, and setting eggs laid by the best layers only, obviously depend the improvement of the different breeds of poultry as egg-producers. In most flocks of birds there are probably some very bad, some moderate, and some good layers, and possibly one very good layer.

Of 236 April and May-hatched pullets tested at the Maine Experimental Station for twelve months, by means of trap-nests, five laid from 200 to 208 eggs and three only 36, 37, and 38. Twenty-two laid fewer than 100. Note as important that "the poorest layers looked as promising as the others."

At the Utility Poultry Club Laying Competition the trap-nest showed that one of the birds in a pen had alone laid 62 eggs, and its three comrades together only 35. In another pen one pullet produced 67 eggs, and a sister no more than 9. There were birds which never laid an egg from the beginning to the end of the Competition, and several which placed only 3 or 10 to their credit.

The bird in the winning pen of White Wyandottes—which made the highest individual score—produced 78 eggs in the sixteen weeks. But the highest individual score in another pen of White Wyandottes which competed was only 47.

The owner of the 78-eggs bird—a lady

poultry-keeper, by the way—will, of course, raise her stock-birds from eggs laid by this prolific creature, mating her for the purpose to a cockerel the son of a mother who has also a high-laying record.

## IV

A few words, in conclusion, to the young poultry-keeper on what seems to be the lesson to be derived from the Laying Competitions which have been held, the experience which has been gained by the recording nest, and the results which have been derived from keeping poultry under various conditions.

In the first place, though some breeds seem naturally better adapted for laying than others, and non-sitters have an advantage in some respects over sitters, it is strain rather than breed which counts. Because certain pens of White, Golden, and Silver Wyandottes, Buff Leghorns, and Minorcas came out first at the different Laying Competitions, this is not to say that all strains of these breeds are good for egg production. The facts that no breed has won twice, and that last year there were Golden Wyandottes in the twenty-first, Silver Wyandottes in the twentieth, Buff Leghorns in the seventeenth, and Minorcas in the twenty-second places only, speak for themselves. Sittings and stock-birds must therefore be bought with discernment.

Secondly, when it seems plain that the hens in a flock vary enormously in the number of eggs they produce, it is well worth making some effort to breed only from the most prolific.

Thirdly, as the winter egg is so much more profitable than the summer egg—which can, indeed, only be made profitable by preservation till the dear time comes round again, as is now done in the case of millions of eggs—birds must be so hatched—March for heavy breeds, April for light—as to do their best in the cold weather.

Fourthly, in addition to prolificacy, other matters, such as robustness, size of egg laid, and the quantity of food needed to keep the bird in working condition, must also be borne in mind in breeding utility birds.

Fifthly, whether poultry-farming pure and simple—that is, the production of market eggs and table poultry—can be made to pay by itself or not—experts are still wrangling—poultry-farming which includes selling stock-birds and eggs for sittings, and is managed in conjunction with the ordinary work of a farm or along with minor rural industries, is undoubtedly profitable when carried on under the right conditions and with experience and capital. Nevertheless, the margin of profit per bird is so small that the question in regard to the number of stock kept should be rather how few than how many. Quality should always go before quantity, and the kind and cost of food given, and such matters as the housing of the stock and the labour of attendance thereon, demand the most careful attention.

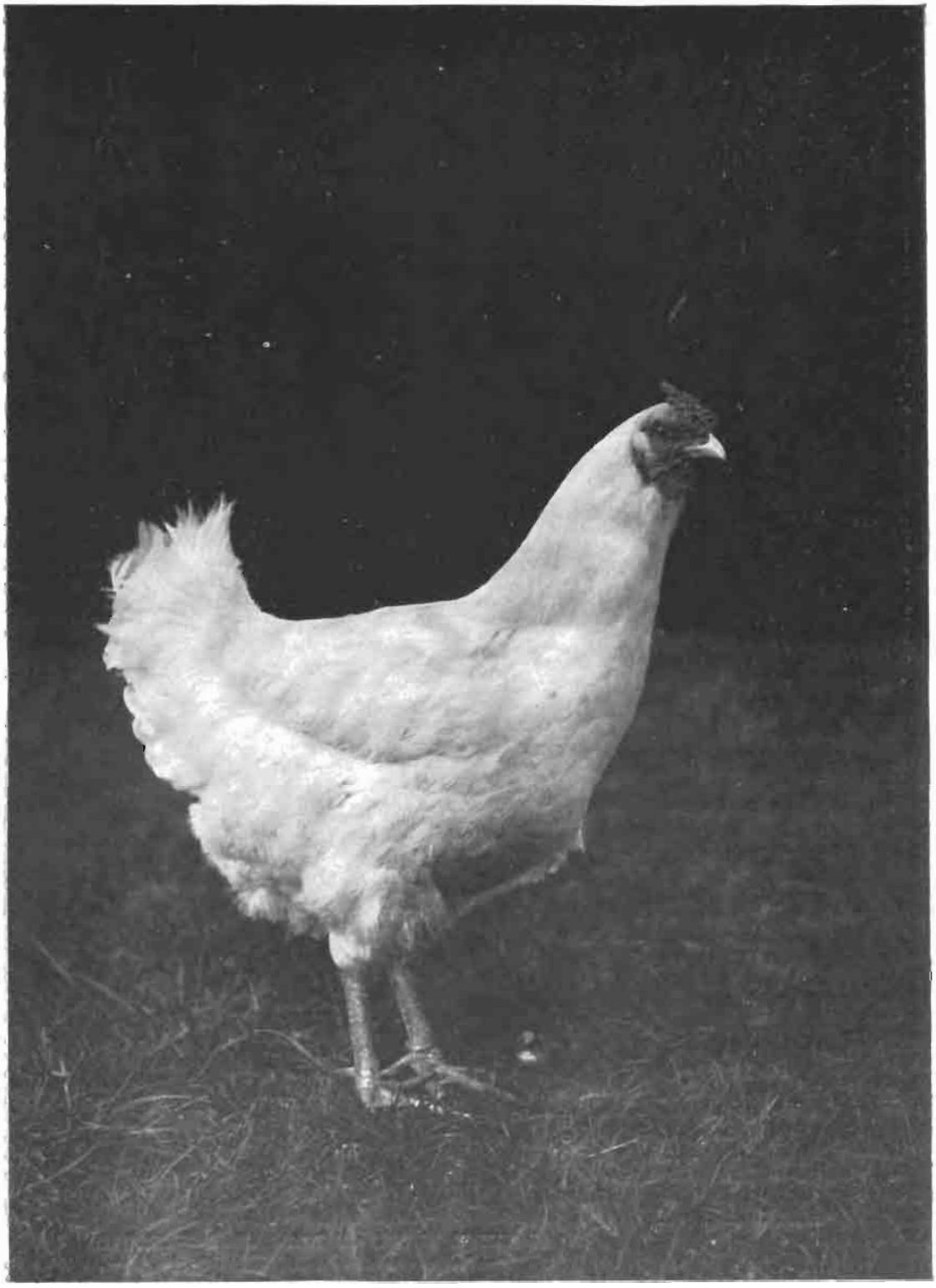
## V

In the future the instructed farmer seems likely to be the great utility poultry-keeper, for poultry can go hand in hand so well with the other things under his management, and room, labour, food, litter, housing, and carriage can all be provided by him at the lowest cost. Whatever the rigorous winter climate of the United States and Canada may make profitable in the way of elaborate, permanent stone and brick poultry houses, with glass tops and canvas screens and what not, it is doubtful whether the English agriculturist will do better than by keeping his birds in small flocks in movable, properly designed houses, each little company having a large field or fields to itself.

Finally, when all is said, it must be remembered that hens are only hens, and that though much may be done by right feeding and warm housing—and the number of eggs laid by birds bred for generations for laying is wonderful compared with the egg production of a jungle fowl—there must be a limit to the quantity of eggs which can be obtained; and that beyond a certain point the expense of maintaining a high rate of winter egg production may make the eggs obtained too costly to be much more profitable than the more easily got eggs of milder periods of the year.

"Had the winter been mild throughout [I am quoting from the report of the Utility Poultry Club's Laying Competition of last year, managed according to the much-advertised American system], only one canvas curtain would have been used; as it was a second canvas was used every night the thermometer fell to freezing-point, but only for the lighter breeds. The canvas was entirely removed during the daytime, except when stormy weather prevailed. The birds were allowed to range on the grass runs during all favourable weather, but never during rain or snow.

"The breakfast of mash was composed of one part clover and meal, one part bran or pollard, and one part either maize meal, barley meal, or oat meal, varied to counteract the climatic changes,



THE IDEAL HEN: CHAMPION EGG-LAYER

A white Wyandotte pullet, the property of Miss Tammadge, of Newbury, Berks, which laid seventy-eight eggs at the 1902–3 Utility Poultry Club Winter Laying Competition, beating all other birds there. The pen to which this pullet belonged broke all laying records at previous competitions. She was photographed when a little more than a year old.

MR. BIRKS, WHO IS MANAGING THE COMPETITION FOR THE UTILITY POULTRY CLUB

scalded over night, with about 10 per cent. of pure cooked meat added, and the whole fed warm.

"This was promptly followed by grain buried in the litter of the scratching-sheds. If the weather prevented the birds using the grass runs, a second change of grain was buried in the litter about two o'clock. If ranging in the runs, grain was scattered over the grass from three to four o'clock, and in either case less than the birds would eat; but just before roosting-time pans of grain were placed so that every bird retired fully satisfied. On cold nights whole maize was fed.

"Mica crystal grit and crushed oyster shells were always with the birds; charcoal was supplied occasionally. Water, replenished twice a day, was always before them."

And so on. Two things are obvious. First, this is not the plan on which the British farmer is likely to be got to manage his winter flocks of poultry. Second, he must not be surprised if his birds fail to lay quite as many eggs as the Utility Poultry Club parlour-fowls. If he be disappointed thereat, he must simply balance up the value of possible eggs under more costly methods against actual expenses, and figure out for himself whether the light is really worth the candle. If he is still unsettled in his mind because he has read in a London poultry journal over the signatures of the proprietors of an English "poultry farm" that "in America the hen which lays 200 eggs in the twelve months has been an accomplished fact for years," let him also read the following extract from the leading American poultry journal, *Farm Poultry*:

"Perhaps it isn't really worth while to contradict such statements as long as a considerable number of American writers of some repute are willing to vouch for 200-egg hens as more common than in fact they are. But the fact of the matter is that the testimony for the records approaching or exceeding 200 eggs per hen is not of a kind that will survive close examination, and the 200-egg hen occurs only—frequently as an individual in many flocks—occasionally in small flocks doing exceptionally well for a single season.

"So far as the 120-egg hen being unable to earn

A HOUSE IN ONE OF THE LAYING COMPETITION PENS

The bottom floor is a scratching- and dusting-place. Upstairs is the roosting-chamber whence the nests (on the left) are reached. The box of grit and the water-bowl are also shown. The birds are white Wyandotte pullets, taking part in the competition. The two others in the pen do not appear in the photograph

her keep is concerned: In America the most successful producers of market eggs are never heard of in connection with extremely high records, and of large flocks kept continuously at a profit for market eggs only there are probably many more that produce an average of less than 120 eggs per hen per year than there are that go above that figure.

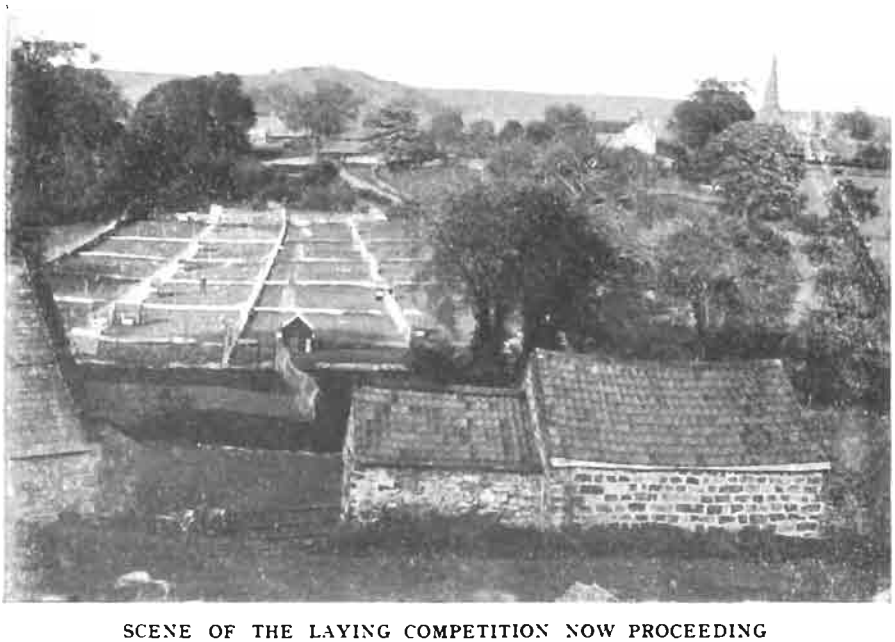
"It is becoming more and more apparent to students of American methods of egg farming that it is easier to make money by reducing cost of keeping hens than by increasing production of eggs.

"From what we have read and heard of the labour requirements of poultry farms of various kinds in England, we judge that English poultry keepers could profit more by a study of American methods of doing a day's work than by endeavouring to emulate our high marks in egg production."

A CLOSE VIEW OF PAYNE'S TRAP-NEST

These contrivances are fitted to all the houses. The photograph shows one of the pair of nests open and the other closed. The hen steps on the trap, which rises up and shuts her in until released by the poultry-man

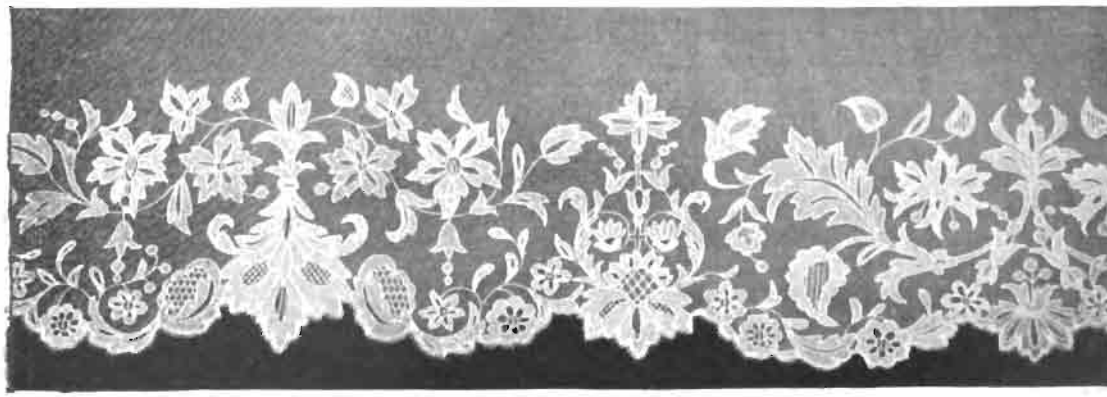
Whatever course of action the instructed farmer may decide upon, we may be sure that it will be the Utility, and not the Show, hen (which may make a pretence of earning its living by laying eggs, but seldom does more, and if left out all night or in a downpour of rain would as like as not die of roup) which he will keep, swear by—and find profitable.



SCENE OF THE LAYING COMPETITION NOW PROCEEDING

Mr. Birks' poultry farm at Ashover, to which the Utility Poultry Club has sent the thirty rival pens

LIMERICK LACE TRIMMING WORKED BY DEAF MUTES AT ST. MARY'S, CABRA



# THE STORY OF IRISH LACE

A NATIONAL ART WHICH HAD ITS RISE EIGHTY-THREE YEARS AGO AND WAS GREATLY DEVELOPED IN THE FAMINE YEAR—HOW THE POPULARITY OF THE LOVELY LACE IS BENEFITING THE WOMEN OF IRELAND

BY

E. LEAHY

OF all the beautiful and varied products of art in its different forms, few are more highly prized by their fortunate possessors than the lovely creations of the needle which we call lace. Queens pride themselves on their matchless collections, and the present-day woman of fashion sets almost as much store on her lace as on her diamonds.

Although undoubtedly the art of lace-making was introduced into Ireland in the first instance from abroad, yet it has been developed to such an extent and brought to such distinctive perfection that it may now be regarded as a national art. Irish lace at the present day is famous all over the world and ranks equally with the finest creations of foreign schools, ancient and modern. The most beautiful of all Irish laces, as well as the most difficult to make, is the exquisite needle-point known as Youghal lace and made at the Presentation Convent, Youghal.

The Youghal lace industry owes it inception to the charity of a tender-hearted woman seeking to relieve the sufferings in the dark days of the Irish famine in 1847. When hunger and pestilence stalked hand in hand through the country claiming their victims in thousands, a nun in the Presentation Convent, Youghal, set her woman's wits to work to devise some means of relieving the awful distress around her. It so chanced that rummaging one day in out-of-the-way nooks and corners, Mother Margaret Smythe came upon a piece of rare old Italian lace. Quick as light, it flashed upon her that it might be possible to reproduce the delicate and intricate pattern of the cobweb-like scrap. Patiently she unravelled the threads one by one, anxiously pondering over the stitches, until at last she succeeded in grasping the secret of construction. After many attempts and repeated disappointments, Mother M. Smythe succeeded in establishing the now famous Youghal School of Lace. Although modelled in the beginning on the piece of old Italian point lace, Youghal needle-point has now been brought to such perfection, and so many new stitches have been invented that it may justly be regarded as a purely Irish production. The chief characteristic of this lace is that it is produced altogether by the needle. Some of the fairy-like work contains hundreds of different stitches and

rivals the spider's web in the fineness of the meshes.

In making needle point lace the pattern is first drawn, preferably on glazed calico, but parchment or paper is sometimes used. This is laid on a piece of calico, and the pattern is traced by the worker with a thread, this thread forms the foundation on which the lace is made. When finished the lace is removed from the calico by cutting between the two pieces. In large pieces of work, requiring a number of workers, great skill is required in dividing the pattern into different pieces so that they can be joined in such a manner as to render the joining invisible. Owing to the stitches being so complicated that it is almost impossible to unravel them, Youghal lace is more durable than most other laces. It also exacts a higher degree of skill and training. For this reason the girls chosen for this industry are selected with the utmost regard to their taste and aptitude, and their circumstances in life. Such exactitude is necessary to secure the permanent maintenance of the present perfection.

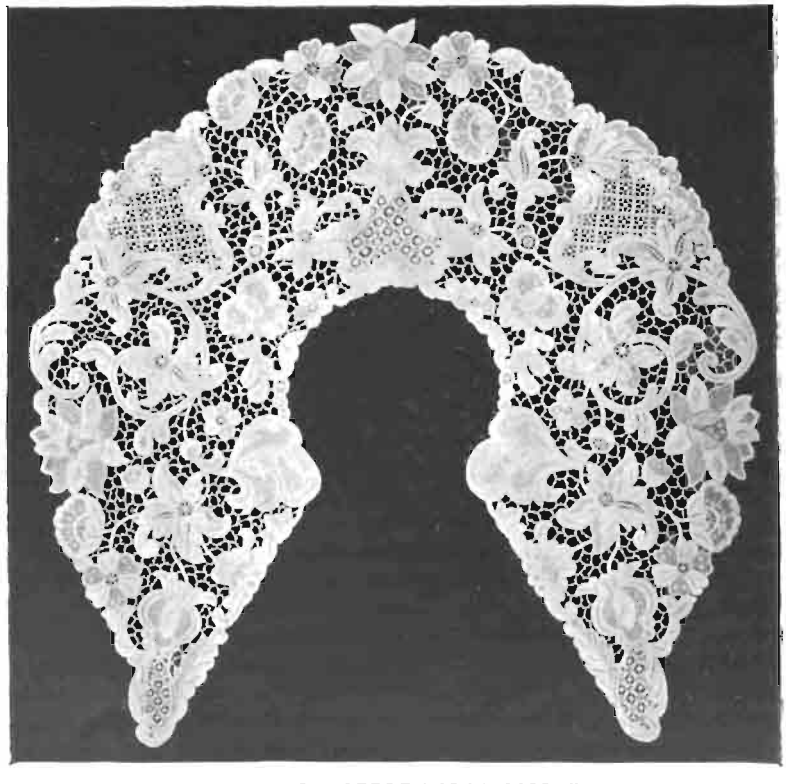
The greater part of the lace is made by the girls of the lace class under the personal supervision of the nuns, but some is also the work of the women who live in the surrounding district. Their earnings are so profitable as to enable them, not only to support themselves, but in the case of the married women, to clothe their children as well.

The oldest existing lace industry in Ireland is that of the Carrickmacross *appliqué*, which dates from 1820. The origin of this lovely lace is doubtful, some declaring that it came in the first instance from Persia, and others that it was invented by Botticelli. It is certain that quantities of it were made in Italy from the thirteenth to the seventeenth centuries.

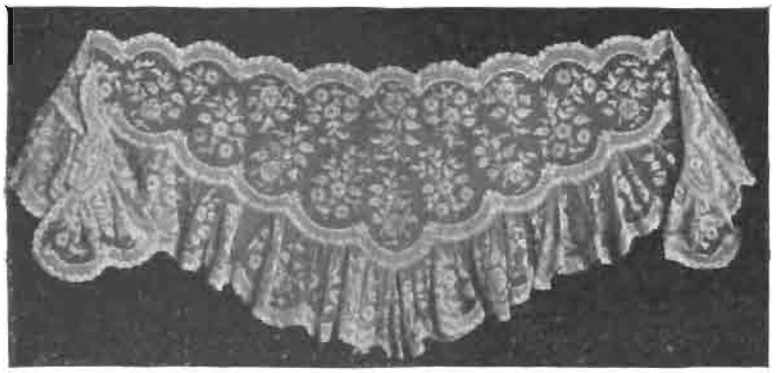
More than eighty years ago, Mrs. Grey Porter, the wife of the then Rector of Dunnamoyne, in the north of Ireland, was fortunate enough to possess some of this rare lace and still more fortunate in being able to teach her maid how to copy the work. Miss Reid, a lady living near the rectory, learned the art from Mary Steadman, at first merely from a desire to amuse an invalid sister with this interesting occupation. But so well did they succeed that the two sisters conceived the idea of teaching the new art to the women and girls of the neighbourhood and so enabling them to gain a livelihood.

A barn on their brother's farm was utilised as a workroom, and here the two ladies gathered round them a class of girls to whom they taught the making of the lovely lace brought from sunny Italy. The work prospered, numerous orders were received, and from this small beginning sprang the famous Bath and Shirley School of Lace which was founded at Carrickmacross in the famine year 1846.

Carrickmacross is equally famous for guipure lace, a later addition to the existing industry. The *appliqué* lace is made by tracing the pattern on fine cambric, which is then applied to a net foundation with point stitches. Formerly, this net foundation was made by hand, but at present, none of the net used is hand made. In guipure lace the pattern is traced with thread on a cambric foundation,



YOUGHAL NEEDLE-POINT COLLAR
Made at the Presentation Convent, Youghal



FICHU IN TAMBOUR LIMERICK LACE
Worked at Mrs. Vere O'Brien's Limerick Lace School

the pattern is then connected with point stitches and the foundation is cut away. The pattern is joined with lace stitches called " brides " or *picots*, or as in the finest pieces of work by small " pearls " or " loops " springing from the design.

The School of Lace at the Convent of S. Louis, Carrickmacross, produces some of the finest specimens both of *appliqué* and guipure lace. In 1897, the workers at this school were formed into a co-operative society, which step has had the best results. The lace is largely purchased by the Irish Lace Depôt, Grafton Street, Dublin, which offers special advantages to the lace-workers. The work is constant, the payment is prompt, being made immediately on execution of orders, the prices are very good, and in addition, the workers are supplied with materials and designs. Further, the Directors of the depôt each year distribute a portion of the profits among the co-operative workers.

Limerick lace, which much resembles Brussels lace, is an embroidery on net of which there are two kinds, " run " and tambour. On the fineness of the net foundation depends much of the value of this lace. Tambour lace is made by working the pattern with a tambour needle on the net with white or tinted thread. " Run " lace is worked with an ordinary needle and the stitch is more open. " Run " lace is exquisitely light and filmy in appearance.

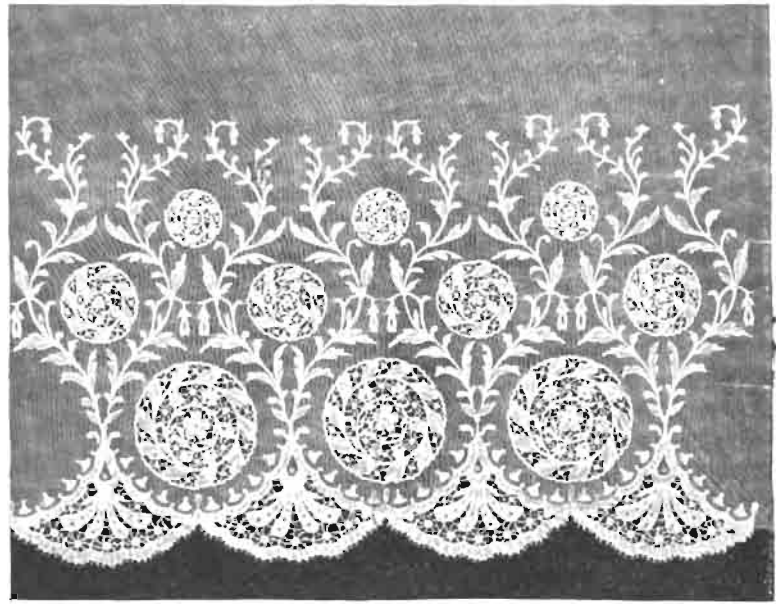
The making of Limerick lace was introduced into Ireland more than sixty years ago by Mr. Walker, an Englishman, who brought over teachers and started a class for girls in an old store in Limerick. The Irish girls proved apt pupils, the industry grew apace, and in a short time a factory was started with three hundred workers, the number increasing afterwards to four hundred. During the first years of Queen Victoria's reign Limerick lace was extremely fashionable, and the industry attained great prosperity, then came a change, and owing to various causes the demand for the lace steadily declined. The workers grew careless, wretched work and bad designs brought the lace into great disfavour and the industry sank to a very low ebb. For some years, however, it has been steadily improving, and just now has more than regained its former flourishing condition. The Limerick lace of the present day is a veritable dream of beauty. This is owing to the exertions of Mrs. Vere O'Brien, of New Hall, co. Clare, who ever since her marriage in 1883 has worked unceasingly to revivify the decaying industry, and whose school of lace turns out exquisite work. Mrs. O'Brien bears eloquent testimony to the capabilities of the Limerick girls in her class for producing work of the very highest order. Her only regret is that a larger number cannot be induced to join, emigration being one of the great rival attractions.

Most beautiful specimens of Limerick lace, both run and tambour, fairy-like in their gossamer lightness, are made by the inmates of S. Mary's Institution for deaf mutes at Cabra, near Dublin.

Amidst the gloom and sorrow of the awful famine year, another lovely Irish lace had its birth, the child as it were of Famine and Death. Strange, grim parents for the dainty " Irish crotchet," Fashion's favourite. While Mother Smythe in the Youghal Convent was studying the construction of her treasure trove, that bit of rare old Italian lace, the Ursuline Sisters in their Convent at Blackrock, co. Cork, were discovering that the humble little crotchet needle was capable of wondrous things when manipulated by skilful fingers. They were successful beyond all expectation. The crotchet industry spread far and wide and was the means of saving thousands from starvation

In the North of Ireland, an English lady but lately gone from amongst the people, Mrs. Hands, wife of the then Rector of Clones, eager to bear her part in helping the stricken people, took up the cause of Irish crotchet and started a little class at Clones. Scraps of old Venetian point, a lace which most readily lends itself to reproduction by the crotchet needle, were

begged from friends who had wandered much in old Italian cities. These were set before the girls in the class, and their bright intellect and artistic fingers under good instruction, soon grasped the lovely intricacies of the cobwebby morsel. Success was rapid and complete. In every cottage for miles around the crotchet needle was plied assiduously. Orders flowed in and many a house was saved from ruin. And so north and south, the "Irish crotchet" industry flourished. The fashionable world of London, Paris, and Vienna hailed the new creation with delight. But this great success had a bad effect. The workers, eager only to turn out quantities of work, grew careless, and paid no heed to design or execution, with the inevitable result of lessening the demand. However of late great and successful efforts are being made to restore the industry to its former prosperity, by inducing the workers to use new and improved designs, and to pay due attention to fineness of execution. We must here remark that Irish crotchet bears no resemblance to crotchet as it is ordinarily understood. It is a distinctly unique and lovely production of Irish skill and artistic taste. It is divided into two kinds, raised and flat, and is made in both silk and cotton thread. Irish crotchet has always been greatly esteemed in France, being known in Paris as "Point d'Irlande."



FLOUNCE IN CARRICKMACROSS LACE
Worked at the famous Bath and Shirley School

The great popularity of Irish crotchet has flooded the market with quantities of machine-made imitation crotchet which, although sold at a low price, is a sorry substitute for the genuine article, which will wash and wear for years, and still remain a thing of beauty.

The home of the "Inishmacsaint" lace industry is on the shores of Lough Erne in the County Fermanagh, but its birthplace was in Tynan, co. Armagh, where Mrs. Maclean, the Rector's wife, established it in 1847. Like so many women at that time, Mrs. Maclean could not remain a passive spectator of the suffering around her. She possessed a piece of Venetian Rose Point, which was made to give up the secret of its marvellous construction, and then a few of the poor girls around were initiated into the art. By degrees the work was brought to such perfection that experts declare "Inishmacsaint Rose Point Lace" equals the rare and costly old Venetian Point, while it may be purchased for considerably less money. The stitches are so fine and complicated that it takes a long time to complete a tiny square of this lovely lace.

During the last few years a vast improvement has been effected in the making of all kinds of Irish lace. The great defects of the old method were poor designs and want of knowledge of drawing, which nullified the exquisite work of the needle. To remedy these faults art classes have been formed in all the convent lace-making centres where instruction is given in drawing and designing.

The Irish lace industry owes much of its present prosperity to the Countess of Aberdeen. She purchased the house at 76 Grafton Street, known as the Irish Lace Depôt, thus providing the lace-making centres with a profitable market for the disposal of their work. The opening of the depôt has proved of incalculable service to the lace-workers.

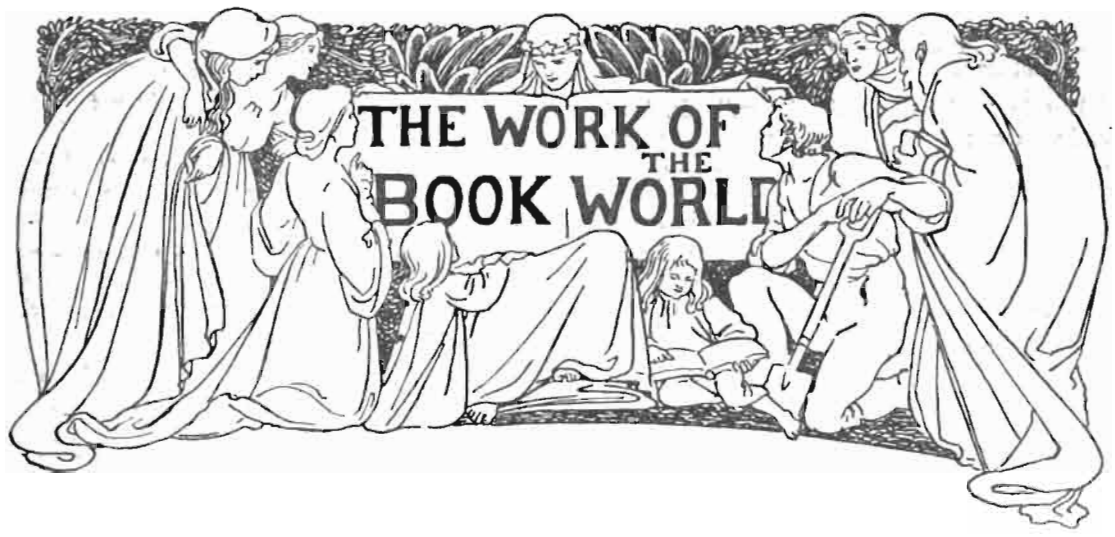
If ever extravagance can be excused, it is in this fashion of wearing Irish lace, for it has been the means of bringing a little sunshine into hundreds of lives and of keeping the grim wolf hunger from many a door.

MR. RICHARD WHITEING
("The Yellow Van")

MRS. FULLER MAITLAND
("Priors Roothing")

MR. CUTCLIFFE HYNE
("McTodd")

MR. H. G. WELLS
("Mankind in the Making")




LONDON, *October* 16.

MR. WILLIAM WATSON gives us his poems in tantalisingly small volumes. It is because their quality, however, is so high that we wish their quantity was greater. His latest volume—*For England* (John Lane)—contains but forty-seven pages of poetry, and almost exclusively the short poems and sonnets which he was moved to write by the war, of which he consistently disapproved. Hence, judgment of them will inevitably be affected by the point of view of the reader upon events in South Africa. In some cases, as where he apostrophises freedom, for instance, some readers will greatly appreciate his poems, but will apply their sentiments to other actors in that tragedy than those the poet had in view. But the beauty and dignity of his verse will delight every lover of poetry, who, indeed, needs no further recommendation to read him. The following sonnet, entitled "The Slain," is perhaps the most noteworthy of the present volume, and may without exaggeration be called Shakespearean in its music and stateliness:

Partners in silence, mates in noteless doom,
Peers in oblivion's commonalty merged;
Unto like deeds by differing mandates urged,
And equalled in the unrespective tomb;
Leal or perfidious, cruel or tender, whom
Precipitate fate hath of your frailties purged;
Whom duly the impartial winds have dirged,
In autumn or the glorying vernal bloom:
Already is your strife become as nought;
Idle the bullet's flight, the bayonet's thrust,
The senseless cannon's dull, unmeaning word;
Idle your feud; and all for which ye fought
To this arbitrament of loam referred,
And cold adjudication of the dust.

Mr. Kipling's new volume, *The Five Nations* (Methuen), stands out in strong contrast—full as it is of the vigour of strenuous life, of the echo of the streets and the barrack-room, of the swing and the slang of the fighting man, and the delight in things doing and done. Most of these poems also are already familiar from previous publication—some of them, like the "Recessional," having become household words. The verses about the fleet are here, the war-poems, "The Broken Men," "Our Lady of the Snows" (which made Canada so unreasonably angry), "The White Man's Burden," and "The Truce of the Bear." Of those less known, the most beautiful, and the one least like the style by which its author is known of all men, is "Sussex," with these among a dozen exquisite stanzas:

So to the land our hearts we give
Till the sure magic strike,
And Memory, Use, and Love make live
Us and our fields alike—
That deeper than our speech and thought,
Beyond our reason's sway,
Clay of the pit whence we were wrought
Yearns to its fellow clay.

God gives all men all earth to love,
But since man's heart is small,
Ordains for each one spot shall prove
Beloved over all.
Each to his choice, and I rejoice
The lot has fallen to me
In a fair ground—in a fair ground—
Yea, Sussex by the sea!

And, since we are writing of Mr. Watson and Mr. Kipling side by side, we may point out two curious echoes of the former in the latter's verse. In "The Islander," Mr. Kipling says:

So, at the haggard trumpets, instant your soul shall leap.

But in "Wordsworth's Grave," Mr. Watson had written :

The soul leapt instant to the soul.

Mr. Kipling says, in the next line :

Forthright, accoutred, accepting—alert from the wells of sleep.

But in "The Father of the Forest," Mr. Watson had written :

A changeless pace His coursers keep,
And halt not at the wells of sleep.

Nobody would be so senseless as to suggest plagiarism. These are but examples of how a striking word or thought of one poet may take root in the mind of another poet, to be reproduced some day by him in complete unconsciousness of its origin.

### The Paramount Issue

The Cobden Club has replied to Mr. Balfour, and has flattered him so far as to imitate his binding and his price. The Cobden Champion is the secretary to the Club, Mr. Harold Cox, and his pamphlet is entitled, *Mr. Balfour's Pamphlet : A Reply* (Unwin). Mr. Balfour's warmest admirers, provided they know anything about industrial facts and economic arguments, must have regretted a thousand times during the last few weeks that he ever published the notes he supplied to the Cabinet. He is wrong when he refers to the date and the finding of commissions; he is wrong in his statements regarding the export of Bradford goods to America and of bleach to Russia; he is wrong in his references to the history of tariffs. The superior equipment of Mr. Cox to conduct an economic argument is apparent on every page, and fully justifies the rather sweeping sentence in the opening paragraph :

"The pamphlet which he [Mr. Balfour] has issued to the world as a professed explanation of his opinions is founded entirely upon conjectures and suppositions, which have so little relation to the facts of British life and British commerce that it is hard to believe that the author is really an inhabitant of this planet and actually the Prime Minister of this country."

The following sentences contain the essence of Mr. Cox's argument :

"All we can practically do if we wish to retaliate is to select some article which we import in large quantities, and which we export in small quantities or not at all. Our importation of the penalised article must be large, or else the foreign country would not feel the penalty; our exportation must be small or else we should lay ourselves open to a dangerous counter attack."

Only raw material satisfies these conditions; but Mr. Balfour says he will not penalise raw material.

"Thus the very minister who advocates retaliation proves by his speeches, or by his silence, that he has not grasped the conditions under which retaliation would alone be possible."

But a more directly valuable book is the *Handbook for Speakers on the Tariff Question* (London, Free Trade Union, 8 Victoria Street, S.W., 6*d*.). This contains everything that the political student needs to have ready to his hand, in the most conveniently arranged form. It is admirable and invaluable.

### Mr. Wells, Pedagogue

Mr. Wells' latest book is one of the most suggestive he has written. It illustrates the adage that every man should stick to his own last, for *Mankind in the Making* (Chapman) is the fruit of the author's experiences and thoughts when he was a teacher. It is the reflections of the "New Republican" upon present-day society and the "New Republican" having been a schoolmaster, he not only writes about schooling, the organisation of the Higher Education, and so on, but he defines successful reforming effort as that which makes provision for the full development of the births occurring in Society.

"We 'save the State' for the sake of our children; that at least is the new Republican view of the matter."

Mr. Galton and other materialist and mechanical anthropologists dealing with the same subject of race virility as Mr. Wells, advocate selection of parents. Upon such proposals Mr. Wells turns the searching light of common sense in his opening chapters, and comes to the eminently sane conclusion that until we know a great deal more about the mystery of heredity than we now do, we had better leave Jack and Jill alone to fall in love with each other, or mate with somebody else as the "heart" moves them. But the State can do much for Jack and Jill's children. It can, for instance, insist that the parents shall be paid a living wage and see that they do their duty to their offspring. So long as adults are childless they can do what they like and live where they like.

"But directly children come in, we touch the future. . . . More than one child should mean

another room, and it seems only reasonable if we go so far as this, to go further and require a minimum of furniture and equipment, a fire-guard for instance, and a separate bed or cot for the child."

The "New Republican" has very peculiar ideas about political affairs. He does not believe in elections, but would choose a jury by lot and allow that jury to select public representatives. In this way he thinks he would "secure the management of affairs in the hands of the very best men, not the noisiest, not the richest or most skilfully advertised, but the best." A few other novel proposals are, a professor whose sole duty will be to revise text-books, a periodical revision of the professorships provided by universities, a State subsidy to authors so as to remove from them the temptation to write too much. Generally the mind of the "New Republican" may be judged from this:

"If our present civilisation collapse, it will collapse as all previous civilisations have collapsed, not from want of will, but from the want of organisation for its will, for the want of that knowledge, that conviction, and that general understanding that would have kept pace with the continually more complicated problems that arose about it."

### The Canadian Premier

*Sir Wilfred Laurier and the Liberal Party* (Murray), by Mr. J. S. Willison, is what may be described as a timely book. It sketches the career of the Canadian Premier and at the same time narrates the political life of the Dominion since Confederation. Sir Wilfrid is a Frenchman and a Catholic, yet his public life opens with the heroic stand made by the members of the *Institut Canadien*, to which he belonged, against the claims of the Canadian priests to determine what books should stand on the shelves of the Institute. Later on, Sir Wilfrid had to undergo the same fight when Bishop Bourget of Montreal intimated that no candidate should be returned to Parliament who questioned the right of the priests to employ spiritual censures in elections. To vote for a Liberal, it was openly declared from ultramontane pulpits in those days, was a sin. If the clerical party in Canada has been taught the wisdom of allowing Catholics freedom of political action, it is largely owing to the magnificent courage of the young, eloquent Catholic who has at last found his reward in the leadership of the Liberal Party of Canada. The man himself is a Frenchman, self-nurtured on English Whiggism. Constitutionally he is cautious, and even in his youth the old *Rouge* programme failed to fuse him into ardour. If he had not been a Frenchman, he says, he would have preferred to be a Scotsman, and it is rather curious to find Burns amongst the favourite authors of one to whom English is only an acquired language. The chapters upon Canada's fiscal policy will be enlightening reading to those inclined to follow Mr. Chamberlain.

### Lord Beaconsfield

Mr. Wilfrid Meynell is frankly a "Dizzyite," and the second volume of his *Benjamin Disraeli: An Unconventional Biography* (Hutchinson) is the ablest defence of our Oriental statesman that we know. But we candidly confess that we would not exchange the first volume, with its Dizzy gossip, its Dizzy *obiter dicta*, its Dizzy morality, for two score and ten second volumes full of Dizzy politics. "Disraeli the Man—Disraeli as son, brother, husband, friend—is the theme of this book," writes Mr. Meynell in his preface, and in the first two hundred pages, the Disraeli personality is unfolded by an illuminating combination of Disraeli talk and Meynell literary charm. The predominant note is cynicism. "I ascribe my popularity in the House to the smoking-room," said Disraeli. Or again:

"My friends send me many books. I don't know which profit me most—those that keep me awake at night or those that send me to sleep."

Or this on the occasion when Lord Bury, having become a Roman Catholic, informed his leader that something had happened which might embarrass the party and resigned. Lord Beaconsfield asked if the occurrence had anything to do with a lady:

"Well, if you like—the Scarlet Lady. I have become a Catholic."

"Lord Beaconsfield: 'But how *very* convenient. A relative of mine has just taken the same step; and now you can tell me, what was terribly puzzling me, the appropriate thing to say in congratulation.'"

He had not the proper dress to attend the coronation, and so he spoke of the folly of getting up at eight in the morning and sitting "dressed like a flunkey in the Abbey for seven or eight hours." But that morning (Mr. Meynell can tell the tale):

"At half-past two he got a Court suit, and at once proceeded to try it on. His sudden change of plans was due to the friendly persuasions (another friendly purse) of his brother Ralph. Once he had his Court dress, Dizzy did not recur to its likeness to the livery of a flunkey. On the contrary, it not only got him into the Abbey, but

it gave him otherwise a specially personal gratification: 'It turned out that I have a very fine leg, which I never knew before.' "

This is the Disraeli note of cynicism and vanity throughout. How pathetic this regret is for instance:

"I grieve to say my hair grows very badly, and, I think, more grey, which I can unfeignedly declare, occasions me more anguish than even the prospect of death."

The only fault one can find with Mr. Meynell is that as he set out to gossip so delightfully in these earlier pages he has been so sparing with Lady Beaconsfield's stories. But one, at any rate, is worth quoting:

"Once in her effort to amuse Disraeli, she made Sir William Harcourt blush. He was dining with the Disraelis and sat beside the hostess, who observed that he was looking at the picture of a lightly robed lady on the wall opposite and said: 'It oughtn't to be allowed in here; but it is nothing to the Venus that Dizzy has up in his bedroom.' 'That I can well believe,' replied he with a gallant bow. Of course the story had to be told to Dizzy, who always delighted in Harcourt's wit; and, all the company hearing it, Harcourt perhaps had a bad half-minute. This was one of the rare occasions on which Disraeli smiled."

### A Famous Correspondent

Every one who knew Monsieur de Blowitz—and who did not?—or who regularly read his marvellous correspondence in the *Times*, will turn to his *Memoirs* (London, Edward Arnold) with the greatest eagerness. He was so quaint a personality both physically and intellectually, such an indefatigable news-gatherer in high quarters, he had such a faculty for casting the glamour of romance around the dullest topics, that he was assuredly the most remarkable member of a profession which has always contained many remarkable men. But this volume is a series of detached sketches rather than anything approaching a succinct story of his life and work, and the most interesting of them all—those relating to the relations of France and Germany in 1875, and the story of how he got the copy of the Treaty of Berlin—have already appeared in an American magazine. The volume, therefore, is one for a few hours' easy reading, rather than for a careful perusal with a view to information upon modern European history. It is as entrancing, however, in parts as a fairy tale, and indeed most readers will come to the conclusion that some of it is fairy tale. And the pleasantest thing in it is the unconscious and innocent vanity of the author, and the unfailing certainty with which each story finds him in the *beau rôle*. There is space for only one of these. The reader must remember that M. de Blowitz was very squat in figure, very short, with a very big head with long Drundreary whiskers falling on each side of a very low turned-down collar and an enormous flowing tie—in appearance a figure so grotesque as to suggest the gnome of a German folk-tale. One day there called to see him a lady—there are many beautiful and romantic ladies in these pages—whom he describes as follows:

"Very tall, dressed in a dark grey robe of very thin material, with her mantle folded under her left arm, her figure seemed to be extremely elegant. She had the supple and slender grace and the refined vigour of a huntress of the forest or the mountain. . . . I was deeply impressed by her rare beauty, by the majesty of her bearing, and by an aristocratic refinement which gave her a sort of royal air. . . ."

This lady wished him to secure her an audience with the Pope, which he was enabled to do

"On the following day, Mme. Elou came to see me. This time she offered me her delicate, aristocratic hand, which was hot and feverish. *She then threw herself at my feet.*"

The book is full of things as good as this.

### Queen Mary's Love Affairs

*The Love Affairs of Mary, Queen of Scots* (Nash), is serious history written under a title which suggests personal gossip. Although one might as well try to walk with Turveydrop deportment on ice, as attempt to be impartial regarding Mary, Queen of Scots, Mr. Martin Hume may well claim to have approached this woman, whose history is as blinding and fascinating as her person, in a judicial frame of mind. Occasionally, one who is prepared to defend this weak woman as he does the apple of his eye, may resent Mr. Hume's liberties, as for instance, when he assures us that Mary's heart trouble was caused by over-eating! The point of the book is that Mary's love affairs were moves inspired by politicians.

"The chicane of political courtship and marriage proceeded without interruption for many years as a main branch of European diplomacy. If a rival was becoming too strong, his neighbours did not attempt to beat him in the field, but developed a languishing desire to marry another rival, who was dropped as soon as the object of the wooing was served."

Mary wooed and dropped many—if her poli-

tical selections can be called wooings. Her policy was to secure the throne of both England and Scotland for Catholicism, and to advance the interest of the Guises in Europe. In a few brief sentences Mr. Hume describes the pomp of her first marriage :

" Heralded by music, preceded by hundreds of courtiers in gay apparel, there came the princes of the blood and the great churchmen of the royal house, Cardinal de Bourbon (himself long afterwards a puppet King of France) and the two Cardinals Lorraine—the wicked old John already tottering to an execrated grave, and Charles of Guise, the real hero of the day. With soaring gold cross in front of him marched the Pope's nuncio, bearer of the special blessing of the Pontiff on the wedded pair ; and then, glittering and handsome, the titular King-Consort of Navarre leading by the hand the shrinking little bridegroom abashed by the thunderous cheers that greeted him. Henry II. himself conducted the beautiful young bride, tall and slender, with a perfect grace prematurely adorning her sixteen springs. She was clad in a blue velvet robe covered with silver lilies and piled with flashing gems, and bore upon her fair young brow a diamond coronet worth half a million crowns."

Widowhood met her almost as she left Notre Dame. Then came a period of political wooing ended precipitately by Mary falling head over ears into real love. Widowhood followed, and once more policy was ended by love—this time, the disgraceful fascination for Bothwell. Then came ruin to Mary and Mary's purposes. Poor Mary could not play the game of political wooing. She sooner or later took heart affairs too seriously.

" Elizabeth had strength to remain single, whilst Mary had not. The contest was an unequal one, and the weaker competitor lost because she was the more human of the two and the less fortunate."

Mary loved—and therefore lost.

### Literary

Two notable literary estimates the month has produced are Canon Ainger's *Crabbe* in the English Men of Letters Series (Macmillan), and Mr. Charles Whibley's *Thackeray* in the Modern English Writers Series (Blackwood). Canon Ainger's study is marked by all the graces and good criticism that we expect from his ripe literary judgment. He has had access to new letters and sources of information, and his own placing of the poet whom Byron described as " Nature's sternest painter yet the best," modifies this estimate to " the truest painter of Nature in her less lovely phases." The most startling revelation to readers of " Sir Eustace Grey " will be Canon Ainger's conclusion that the author was an opium-eater.—Mr. Whibley's work is perhaps not more critical than should be expected from a disciple of that very impeccant critic, the late Mr. Henley. " He complained that Byron never wrote from his heart, and he forgot that the head, not the heart, is the safer place wherefrom to write." Thus Mr. Whibley on William Makepeace Thackeray.

### South Africa

*The Engineer in South Africa* (Constable) is a book with which we must confess to have been disappointed. Mr. Stafford Ransome is well equipped to give us valuable information about South Africa as a market for machines, and when he confines himself to his subject, he is most interesting. But the fatal disease of partisan politics is upon him. The great value of the book lies in the admirable clearness with which it points out that Cape Town cannot long continue to be the chief port of entry for South Africa. Its harbour is bad, and badly equipped (Mr. Ransome ought to have considered the evil effect of cheap native labour on mechanical appliances), and now that the great consuming markets have gone northwards towards Johannesburg, the centre of industrial gravity has shifted, and Durban (when its sandbar is got to behave itself) will compete with Lorenzo Marques for the bulk of the South African import trade. Mr. Ransome's advice to the English manufacturer is to study local conditions and wants, to pack his goods better, and to take the trouble of putting prices in his price-lists ; he shows, however, that England is more than holding her own on South African markets. He takes what might be called a brutally frank business view of South African problems. For instance, he is against white labour because it is dear, and its politics might become Australian in character.

### An Excellent Novel

*The Relentless City* (Heinemann) is much the best novel that Mr. E. F. Benson has written, and one of the most accurately observed and wittily told stories of contemporary life we have read for a long time. It is an Anglo-American tale, and the scenes on both sides of the Atlantic are those which would naturally surround an impecunious but charming young English earl going to America with the deliberate object of finding and marrying

the daughter of a multi-millionaire. The weak points of both societies are pitilessly described, but without malice and with a fine understanding of the causes which produce them and the elements of social good of which they are the development. The following comments by the heiress's father when he came to England to carry out certain great railway and financial schemes, form the most appropriate quotation for these pages :

"'From the business point of view, England is the most enervating place I ever came to. These directors and business men here are about as much use as nursery-maids. They go down to their offices round about eleven, and sit there till one. Then they eat a heavy lunch, and stroll back about two to see if anything has happened. Of course it hasn't; things don't happen unless you make them happen. So they light a big cigar, and go down to Woking for an evening round of golf after the fatigues of the day. Saturdays they don't put in an appearance at all. That's their idea of business. And it tells on me rather; it's difficult to keep up ordinary high pressure when you're surrounded by so many flabby bits of chewed string. I guess I'll go back to America in the fall, and get braced up. . . . It reminds me of a poultry-yard,' he added. 'An Englishman, on the rare occasions when he lays an egg, has to flap his wings and crow over it, instead of sitting down to hatch it. Why, I suppose they've given fifty lunches to boards of the directors over this twopenny-halfpenny line of mine already. There was a luncheon on the formation of the board; there was a luncheon to celebrate their doing so. There was a dinner on the occasion of the cutting of the first sod of earth; they brought down some fool-sort of Highness to do it. They had a week at the seaside when the Bill passed through the House, and when the first train runs next month they'll all go and have a rest-cure on the completion of their labours. What they want is something to cure them of their habit of always resting.'"

*The Relentless City* is, amongst other things, a charming love-story, and its interest will not be decreased by the fact that many people see in it a *roman à clef*.

### Fiction

It is easy to predict for *The Yellow Van*, by Richard Whiteing (Hutchinson), a success which this author has not secured since *No. 5 John Street*. As he says himself, this is one of the oldest stories in existence, the marriage of the king to the beggar maid. But it takes the other side of the case. We have often had disquisitions upon how the king liked his bargain. Here we have the various changes and influences which came into the life of Augusta Gooding, formerly American schoolmarm, and now her Grace the Duchess of Allonby. The story takes its name from the travelling car of an itinerant socialist, who went about the country denouncing landlordism and urging a general division of the land of the country among the people. This character has as little to do with the story as has the Duke, who made Augusta's many adventures possible. But the yellow van influences the lives of many of the characters, most of whom are admirably drawn, even if the luxury and carelessness of the upper classes seem rather like a fairy tale. This is the kind of novel that the reader puts down with a sigh of content, lost in deep thought over the problems presented or suggested. And what more can a good novel expect ?

Inevitably the mind of the reader of *Priors Roothing*, by Ella Fuller Maitland (Smith Elder), turns to "Cranford" although the new book is as distinctly of its period as the old. Motor-cars and new millionaires and mourning caused by the South African War all play their part in these chronicles of a small village in "Eastshire." Readers of her former books know the unusual distinction of Mrs. Maitland's work. There is no lack of this here, and much of the artlessness concealing art. Technically it is quite interesting to find an autobiographical novel in which the narrator plays no part at all, and is curiously detached from the unfolding of the simple action, never really a plot. But there is colour, characterisation, atmosphere, thought, and all the charm which makes a good book, and is really indefinable.

Mr. Henry James has always been a cult among a small but select circle of readers. Others, like the Meredith cult, seem to grow into such widespread acceptance as to lose this designation. But there must be thousands who read *Daisy Miller*, or even *What Maisie Knew*, to the hundreds who will succeed in disentangling the intricacies of character and style of *The Ambassadors* just published (Methuen). Of course if you are a disciple every word is honey and every phrase original. Mr. James is surely a delight to every student of style, but to the ordinary novel reader he must be, and seems to wish to be, caviare indeed.

The lady who writes charmingly as E. Nesbit has brought together an attractive collection of short stories under a general title *The Literary Sense* (Methuen). Although the stories are quite separate affairs, many of the best treat of that well-known but little discussed trait

which causes us to act from a sense of effect, literary or dramatic, rather than from impulse, and of the evil consequences which usually result.

The small surburbanite is said to be the god of certain enormously successful novelists. If so, surely Mr. Barry Pain is his prophet. Some time ago he delighted us all with the whimsical seriousness of a certain semi-detached-villa lady, named Eliza. His latest booklet is devoted to *Eliza's Husband* (Chatto and Windus) and is as amusing as its predecessor, which is saying a great deal. Mr. Pain seems to enter into the mind of the man with a thoroughness which is incomprehensible. If he is not careful he will soon suffer the penalty which an actor pays for playing a great and successful part, and the public will insist upon further records of Eliza's family, even to the third and fourth generation.

Many and various are the devices resorted to by the creators of popular personages, like Sherlock Holmes and Captain Kettle, to save themselves from the incessant chronicling of the adventures of their heroes. Sir A. Conan Doyle killed his great detective, published his memoirs, and has now resurrected him from the dead. Mr. Cutcliffe Hyne, having retired Captain Kettle with a K.C.B. and a conversion to Particular Methodism, endeavours to assuage the demand for further adventures of the doughty captain by putting forth a volume concerning the adventures of his late able lieutenant, *McTodd* (Macmillan). We doubt if the plan will prove wholly successful; the Odyssey of McTodd is too sane, too respectable, too literary. The book is divided into chapters like a novel, but except in the continuous appearance of the leading character, they are not by any means dependent one upon the other. Those who gloated over the fiery adventures of the little red-bearded captain must make the best face they can over his willing and energetic substitute.

Last month we spoke of Mr. James Lane Allen as the foremost of Kentucky writers. At that time we had not read *The Little Shepherd of Kingdom Come*, by John Fox, junr. (Constable). Mr. Fox has been for some years spoken of as a coming man in the forefront of American novelists. He arrives with the *Little Shepherd*. It seems, as far as plausibility of plot and realisation of character go, more successful even than Mr. Allen's *Mettle of the Pasture*, although without an approach to the beautiful style of the latter book. Mr. Fox writes of the same mountains, the same blue-grass country, and happy is the land which has two such prophets. This is the story of a mountain boy, born in the roughest kind of mountain life, who comes down to civilisation, and to the courtly aristocracy of the old South, with all manner of difficulties and prejudices to overcome in the winning of his way. Like most great books, the boy part of the story seems to us better than the man part, but that may be because we are tired of stories of the Civil War, and the latter half of the book is occupied with this period. But, in the end, the little shepherd wins a blue-grass bride, and a long line of distinguished ancestry, of which he had been wholly in ignorance; in short, he wins both his own fortunes and our sympathy.

The opening chapters of *Golden Fleece*, by David Graham Phillips (Richards), show really a wonderful intuition into the point of view of upper English classes, especially in regard to fortune-hunting American marriages; but later the author's desire for satire runs away with him, and we are sure that many of the chapters about Washington and Chicago are hopelessly overdrawn. This is a story of a fortune-hunting earl in the States, and at any rate his adventures are vastly amusing, even if he fails to find an American millionairess in the end.

The thousands of readers who will rush to buy a new book by the author of *The Visits of Elizabeth* will be surprised if not indignant when they secure Mrs. Glyn's *The Damsel and the Sage* (Duckworth). There is nothing to inform any one that it is not a novel, and surely there will be disappointment in many quarters. On the other hand, and from a literary point of view, Mrs. Glyn distinctly merits congratulation on the clever accomplishment of a clever bit of work. The book consists of a series of dialogues, upon men and women, and things in general, between a hermit sage and a pilgrim damsel, who daily visits him. The allegories are certainly very much of a type, but the language is bright and fresh, and the distorted axioms often startling. There is a pleasant hour or so before the reader, and no one else will grieve that the novel-hungry crowd must wait before another sister of Elizabeth and Ambrosine appears.

Miss Evelyn Sharp has added one more to the Christmas list of pretty story-books for young girls. The story of *The Children who Ran Away* (Macmillan) is as attractive as the title would lead one to expect, and the frank charm of the book will appeal to uncritical youth.

In *Where Love Is* (Lane) Mr. W. J. Locke has

given us what may fairly be described in the literary sense of the term as "a good story." Mr. Locke presumably knows the manners of the aristocratic set to which he introduces us, and presumably there are Norma Hardacres and avaricious parents in that world, though it is with an effort that we can believe in any woman acting so disloyally to herself and the man she loves. There are three or four honest souls in the book—the artist Jimmy Padgate, an incurable optimist ("the man he had most loved, the woman he had most worshipped, had each brought upon him bitter and abiding sorrow"), his ward Aline, and his friend Connie. The cold-blooded American who is in England for the purpose of securing "a decorative wife" is cleverly—if just a little maliciously—drawn; and the story of the fall of Morland King, the fall which stops short of the last depth, is most carefully done. The book is written with all the skill of an accomplished novelist; the interest never flags, and the ending, to the majority of readers, will come as a surprise.

### Miscellaneous

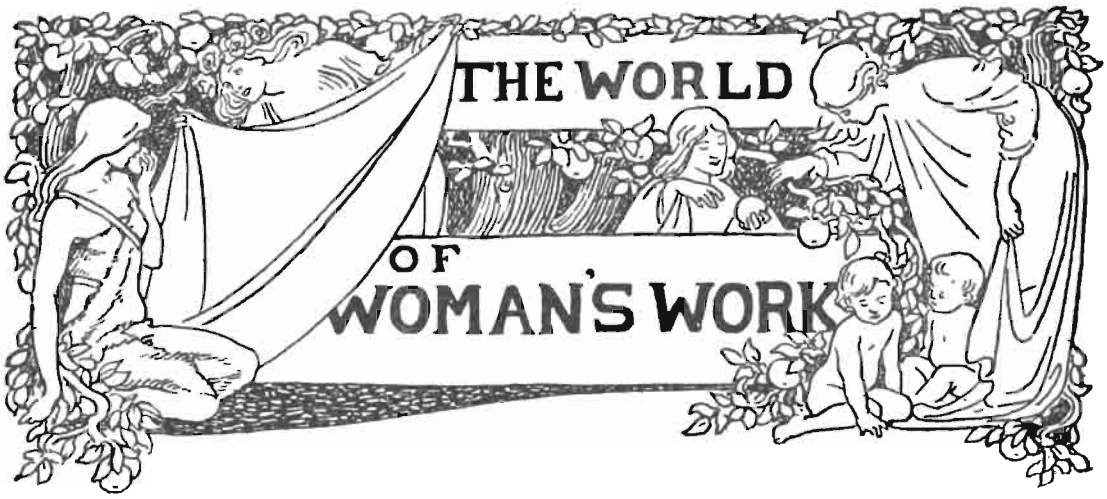
The comic relief to the dead earnestness of the fiscal discussion is provided by H. B. and G. K. C. in *The Great Inquiry* (Duckworth), Mr. Belloc acting as reporter and Mr. Chesterton as artist of the proceedings of the inquiry. With such a pen and such a pencil the result could not fail to be an amusing shilling's-worth. Those who regard the present Administration with the feeling of wonder it has been inviting so assiduously of late will relish the fun more than others. But for sheer fun, give us *England Day by Day* by E. V. L. and C. L. G. (Methuen), the latest—we would not for worlds say last—shilling's-worth of the two brilliant authors of *Wisdom While You Wait*. It is excessively funny and delightfully malicious, and the comic advertisements are side-splitting. Anybody who economises a shilling by not buying it, is losing a sovereign's-worth of laughter.

*The Motor Book*, by Mr. R. J. Mecredy, the well-known editor of *The Motor News* (London, John Lane), may be cordially recommended to the study of motor-car owners who do not yet understand the mechanism and management of their cars, and desire to acquire at least an elementary knowledge of the subject. It begins at the beginning by explaining accurately but popularly the construction of the petrol motor, with a series of admirably clear illustrations and diagrams. Then it explains in sufficient detail the system of ignition which is the point at which most cars, owners, and mechanicians break down, and in turn describes the carburetter and governor, and the different kinds of water circulation. The chief change gear and transmission systems are briefly explained, and the novice is taught how to drive his car, how to take care of it, and how to locate and cure temporary derangements. The book is not, of course, exhaustive, as it does not describe that excellent little car the Oldsmobile, nor has it anything to say of steam-cars, which are undoubtedly destined to a larger popularity in the future. But it will serve its purpose admirably.

It is difficult for competitors when what is already best is made better. But this has happened in the new and enlarged 1903 edition of the *Standard Dictionary* (Funk and Wagnalls). Such constant improvements have their disadvantages to others than rival dictionary-makers. When one sees how much admirable material can be added in one year, it is hard to be content with an edition of last year, and one is tempted to buy each new edition, as attractive in make-up as in matter. It is impossible to relate briefly the many claims its publishers make for this latest edition but it seems easily "the greatest on earth." In spite of the exclusion of obvious compounds, this dictionary in its two large handsome volumes is said to define 92,000 words more than any dictionary of the English language yet completed. And best of all the price asked for this storehouse of information seems about half that placed upon its nearest followers.

Very pleasant company is Mr. G. M. A. Hewett, *The Pedagogue at Play* (George Allen). "I hope every one's chains have as many golden links as mine," he remarks. "And I am a better preceptor of youth for my days 'off duty.' And we did take the shoot because we were weary of 'boy.' And I don't care whether these statements harmonise or not." Amiable and gay, this volume of sporting and holiday papers about Mr. Hewett and his friends will be welcomed by other schoolmasters, for the author has humour and point of view.

*Cassel's Popular Science* is one of the many "worthy" publications issued from La Belle Sauvage Yard. It consists of about sixty articles upon such subjects as "How the Camera Works," "The Sleep of Plants," "Why a Stone Falls," "The Man in the Moon," and is written and illustrated in such a way as to lead the inquiring mind deeper and deeper into the enchanted mazes of science. It is excellent food for the inquiring spirit.




## A DAILY NEWSPAPER FOR MADAME. By Alfred Harmsworth

[The issue of a daily newspaper for women is so novel and interesting an enterprise that we have asked Mr. Alfred Harmsworth, its founder, to tell us of his aims and methods, in the new departure. He has been good enough to write the following account of the paper, its staff and its plans.—Ed.]

MADAME has not been quite fairly treated by the Press in the past. She has not been ignored, it is true, but she has been regarded as a merely subsidiary factor in that great constituency commonly referred to as "The General Public." Thus it has been the fashion for newspapers to include a woman's column or a woman's page more or less frequently, and also to insert a certain proportion of paragraphs appealing more especially to the fair sex. Woman has, in a word, been simply viewed as an occasional reader of her husband's newspaper.

The sex has learnt to think and act for its charming self, and in ever-increasing numbers is now a purchaser and reader of the daily newspaper. It is evident that the time has arrived when Madame should possess a high-class morning journal of her own.

The only attempt in this direction hitherto was made in connection with that moribund propaganda known as the Women's Rights movement, and it cannot be said that the attempt displayed any of the elements of successs. What, in my humble judgment, is needed, is not a Party organ appealing only to the "advanced" section of the community, but a *bona fide* newspaper which shall be indispensable to every woman who wishes to be well informed. It was with this object in view that I long ago decided to establish the *Daily Mirror*.

The scheme will cost £250,000, and on all hands the opinion has been expressed that the venture is not only a daring but an exceedingly risky and even foolish one. But I venture to assert that these fears are altogether grounded on false premises, and my confidence is based upon the character of the new journal. The *Daily Mirror* is not to be a paper written by women for women, but a thoroughly equipped and complete daily newspaper, managed by a staff of the most brilliant journalists of the day. It is a woman's newspaper which makes its appeal strongly to men. Many of its pages will be devoted to the news of the day —not treated and watered down with a view to a special audience, but presented with the fulness of detail which characterises the best morning papers. While strictly non-political in tone, it will make a feature of its leading articles, written by experts of both sexes. It is thus introducing to morning journalism that hitherto unappreciated quantity, the woman leader-writer.

The *Daily Mirror*, which in size and general form will resemble that admirable paper, the *Ladies' Field*, is to be illustrated on a scale hitherto unattempted by any journal of its kind. Printed on paper specially prepared for the purpose, it will reproduce the delicate and detailed work of first-rate artists in a manner previously considered impossible in a newspaper printed on rotary machines. Subjects which appeal more particularly to women will be dealt with in an entirely new fashion by a large staff of ladies,

which includes all the recognised authorities and experts in their several departments. The latest fashions will be presented in a way hitherto unattempted. A special letter from Paris, written by a lady who is in closest touch with all the leading *modistes*, will appear each morning, recording in detail the fashion news of the preceding day. Similar arrangements have been made at New York, Vienna, Brussels, Cairo, Simla, and elsewhere, while correspondents will be sent in the season to such resorts as the Riviera, and the like, to record day by day everything interesting to women. The subject of dress is to be treated with due reference to the destination of the wearer. The woman proposing to winter in Egypt, or to spend her summer holiday in Norway, will find exactly the information that she needs for the occasion. The *Daily Mirror*, while profusely illustrating the subject of dress, will rigorously eschew the conventional and hideous fashion plate. Dress is to be treated with an eye to pictorial effect, and the illustrations will be pictures showing the costumes as actually worn, and not mere diagrams representing the garments on a dressmaker's dummy. Dress at the theatre is to be treated by an accomplished lady critic, and on the morning following each first night a fully illustrated description of all novelties will appear. The subject of children's dress is also to receive adequate attention.

The Editress of the journal is Mrs. Howarth. A staff of lady reporters has been engaged to attend the leading shops in London and other centres of fashion, and everything worth recording in connection with novelties in dress, jewellery, and the like, will duly find its place in each morning's issue. The whole department of dress is under the capable management of Mrs. Jack May, who is the greatest authority on the subject in Great Britain, and she will be assisted by a corps of clever designers. An entirely novel guide to shopping has been designed, which shows the reader at a glance where to go each day for particular articles, keeping well in view the demands of the bargain hunter.

The subject of cookery also forms a feature in the *Daily Mirror*, and every recipe will have been practically tested by actual cooking before publication. Particular care is taken with the translation of French recipes, to ensure correctness in quantity. The needs of the bachelor —whether man or woman—are kept in view. The subject of cookery above stairs—or the use of the chafing dish—which is now becoming increasingly popular, will be fully dealt with, and great attention is paid to table decoration, a daily scheme of floral adornment for both dining-table and drawing-room being given. The *Daily Mirror* each day will present the housekeeper with a unique time-saving device, enabling her, with the minimum of trouble, to arrange the entire programme of the day's meals and engagements both at home, at the shops, and in society. By means of a specially organised news service, the social notes aim at a degree of accuracy and completeness hitherto unknown. Yesterday in society will be recorded in such a way as to satisfy the demands of the most exacting lady reader. The news of the Court is to be treated from within, special facilities for this purpose having been secured, while all social functions of importance will form the subject of crisp and interesting paragraphs, written by ladies of prominence in society.

The subject of women's recreations will be dealt with day by day by lady champions and others prominent in the world of sport. For example, noted horsewomen will contribute hunting notes from all the chief centres. Bridge will receive attention, notes and problems being regularly given, and in connection with the theatre a feature is to be made of personal paragraphs by leading actresses. The *Daily Mirror* will publish a literary column every day, noticing new books promptly on their appearance, and suggesting what to order at the libraries. The up-to-date character of its book-reviewing is to be one of its notable features. Works of import ance will receive column reviews, and special attention is to be paid to illustrated and children's books.

But to describe all the features of this new journal for women would occupy far more space than is at my disposal, and I can only briefly touch upon a few of them. Articles by famous women on their own subjects will appear regularly, the great aim of the journal being that everything shall be dealt with by an expert. Such subjects as the furnishing and decoration of the home, the management of the nursery, the education of the children, physical culture, the development and preservation of beauty by hygienic and natural means, all have a prominent place. Music both for the home and the concert room is in the hands of a recognised authority, while gardening and other out-door pursuits will be discussed with due regard to season and locality. A powerful serial story also forms a feature.

The *Daily Mirror* will aim high and make its appeal to intellectual and cultured women, while at the same time no reader, of however humble a social position, need find it dull or uninterest-

ing. It is designed to supply what I have long felt to be a missing link in modern journalism, and I anticipate that in the near future the woman's daily paper will be as indispensable in the boudoir as the man's morning journal now is at the breakfast table.

## TRAINING GIRLS FOR OCCUPATIONS

THERE are many institutions, some of which have been noted in this department, for training girls in domestic service. But in New York last November, some philanthropic people started a school of a different kind. They took about a hundred girls, fourteen or fifteen years old, who, when they left the free school, had to help to support their families as cash girls or bundle-tiers in department stores with no chance of ever learning a profitable trade, and are now training them to become competent dressmakers or milliners, skilled sewing-machine workers or makers of books. The course in most cases will last for one year, but girls who show ability for a higher grade of work will be given an extra year, while the exceptionally dull will study another year in order to become expert enough to take up their trade. Each girl is given a £20 scholarship, paid in small weekly instalments.

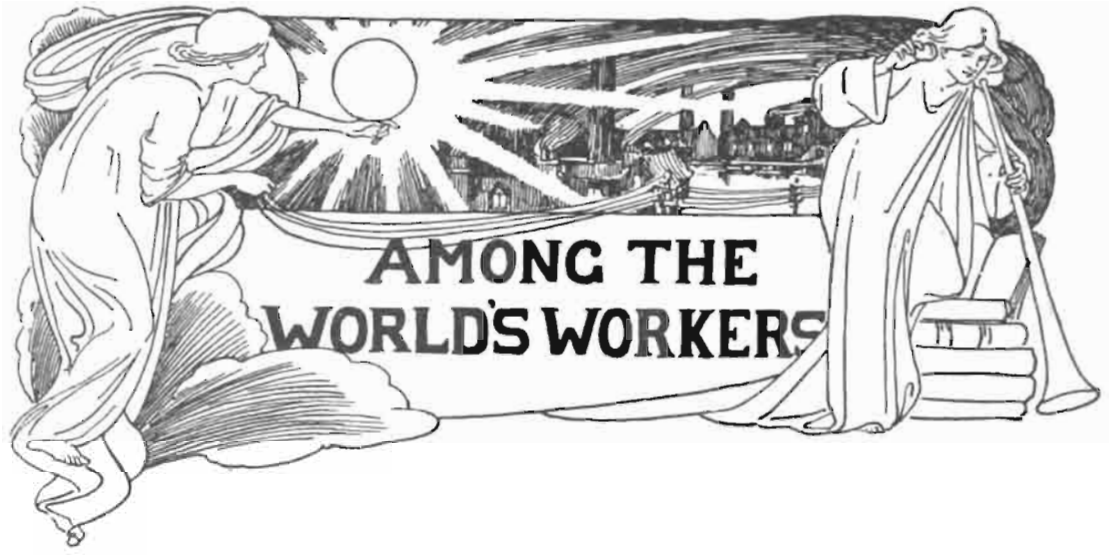
The spirit of the whole school is business; five minutes late in the morning means a fine, and so on, just as in a store. The hours are from nine to five six days in the week, winter and summer, each girl working at her trade four full hours a day. The girls also study drawing, business methods, industrial history, English, and physical culture.

At the head of each department is a college-trained supervisor, who visits stores and factories every week to keep thoroughly informed. In direct charge of the work under each of the supervisors s a trained trade worker taken from actual business life. Under the watchful guidance of these are teachers—who are often given aid by the heads of business establishments.

Each student has to serve a month's apprenticeship during her course at some good shop, the forewoman of which report the deficiencies of the girls to the supervisors. Then the girls, when they return to the school at the end of the month, try to overcome these faults. Since November the work turned out by the school has brought £80.

The girls study the industrial history of their trade by means of charts and lectures. They also learn the fundamental facts about the city and national governments. The English work centres about the correct use of trade terms and the idealisation of labour in literature. The students work simple problems in arithmetic, write cheques, and receipts, and so on. Every girl learns to draw straight lines, to gauge distances, and to copy flowers from nature. She also paints the flowers in water-colours, and then learns, by conventionalising them, how to make designs that apply to her trade. When she has made a design in the drawing-room, she next gives it a practical test in the workshop. Every minute during the day is turned to practical advantage. At the lunch hour these embryo wage-earners dip into the mysteries of house-keeping, as every week five different girls wait at table, wash and put away the dishes. In the summer odd moments are spent in the flower beds in the back yard where the girls learn how to make a window garden.

While the school has had but a brief existence already it seems to have achieved definite results. One girl, who entered in November, was apprenticed in April to one of the best millinery firms in New York. She has now been engaged permanently at £2 a week, while if she had been trained at a milliner's shop she would have worked for two seasons without pay. Another girl, who had been a bundle-tier in a department store, after spending three months at the school, was offered a position at 28*s*. a week by an embroidery firm. Nearly all of the hundred or more girls at the school are likely to have good positions by Christmas time.




## A PRIVATE CAR CLUB

AN account which reaches here from America by way of the *New York Herald* describes the very latest association of men of millions and gives a hint which might be followed by well-to-do suburbanites who have to come up to London daily. The American organisation is exclusive, as its name implies, and there is no other club like it in the world. Included in its membership are men of wealth whose business is in New York, and who have summer homes along the line of the New York, New Haven and Hartford Railroad.

Each morning attached to the Greenwich express when it rolls into the Grand Central Station are two handsomely appointed private cars, which do not discharge a passenger until the crowd in the dozen or more ordinary coaches is out of the way. Then nimble porters spring out, and following them come three score men who are prominent figures in commercial, professional or financial affairs in New York, who alight and hurry away to begin the business of the day.

There are always two of these club cars attached to the train arriving at nine o'clock, and one on an earlier train, as there are perhaps thirty of these men of millions who believe in getting to work early in the day and getting through. For the convenience of these a car leaves a half-hour earlier in the afternoon.

These men are proud of the only private car club, and have adopted regulations which make it difficult to become a member. The membership, which is limited, is already filled, and there is a long waiting list. The genesis of the club was due to the fact that at all seasons of the year, and particularly in summer time, the traffic on suburban railways is very heavy, and it is not always possible to obtain seats coming to New York in the mornings after trains reach Greenwich. Similar conditions prevail in the afternoon.

There had been many expressions of dissatisfaction at this state of affairs, when one day, in the presence of several wealthy men, Mr. James McCutcheon suggested the idea of forming a club and obtaining the exclusive use of a car. The idea was received with enthusiasm, and every man to whom the subject was broached favoured it. An informal meeting was held, at which a committee was appointed to confer with officials of the railroad, and the necessary arrangements were made.

At first it was intended that there should be but one car, which would accommodate about forty men, but two more cars were necessary for those demanding membership in the unique organisation.

## THE WAR FOR TRADE: GERMAN METHODS

THE United States Commercial Agent at Eibenstock (Mr. Ernest L. Harris) has sent to his Government the following account of the German chambers of commerce:

The German Empire is divided into 145 chamber of commerce districts. Each chamber of commerce has control of its own finances, and is compelled by law to appoint an able and experienced man as secretary. The members of the chamber appointed on committees, &c., must serve without salary.

Any outlay made by them, however, in the interests of the chamber is refunded. At the beginning of the year every chamber publishes a plan of the work and policies which it proposes to carry out during that year.

German chambers of commerce exert a powerful influence on legislation in the Empire. During

the long preparation of the Tariff Bill, which was recently passed by the Reichstag, these bodies made their influence felt in every part of the country.

When a German manufacturer desires to have his interests considered in tariff legislation or commercial treaties he does not have recourse to the member of the Reichstag from his district, but to his chamber of commerce. The Government, in its treatment of commercial questions, always obtains the opinions of merchants and manufacturers through the medium of the chambers of commerce.

The duties of a German chamber of commerce are, in the first instance, to further, by every means at its command, the commercial and industrial interests of the district in which it is situated.

It takes the initiative in examining any new enterprise which may materially benefit the district; it actively interests itself in the building of new railways, canals, and steamship lines, for the reason that cheap and rapid transportation is one of the pillars upon which a commercial State must stand.

The chamber also interests itself in the establishment of commercial museums, or samplerooms, and studies ways and means of getting the same as advantageously as possible before the commercial world. The furtherance of technical education is one of the prime features of German chamber of commerce activity.

A deep interest is taken in the welfare of apprentices, and much is done to elevate their morals and habits.

These organised chambers of commerce have probably done more toward building up German commerce than any other one factor. The immense growth in population and the ever-increasing need for additional markets have forced the merchants, manufacturers, and trading classes of the Empire to seek new fields of activity.

The German chamber of commerce has been a powerful medium in assisting these classes to entrench themselves in different sections of the world where Germany's great over-production may be introduced. I venture to say that there is not a chamber of commerce in the Empire which is not thoroughly posted in regard to the markets in South America, China, and all the British colonies.

## OLYMPIC GAMES AT ST. LOUIS

OUR American cousins notoriously make work of their play, what with training like professionals and straining for life or death like gladiators. It is not surprising that this spirit should result in frequent congresses of sportsmen, or that the great expositions common in their country should furnish opportunities for such gatherings. According to the *New York Herald* the seating accommodation for the athletic field on which will be held the Olympic games at the St. Louis Exposition will be on an extensive scale. Seats will be provided for nearly 10,000 spectators on the slope which skirts the athletic field on its southern side. A method of installation different from that usually employed for outdoor stands has been devised. The entire slope will be covered with armoured concrete stairs, each step having a tread, or horizontal surface 2 ft. 8 in. wide. Each of the steps will have a total length of 724 ft., and as there are fifteen steps, a total seating length of 10,860 linear feet will be provided.

It has been decided to present a comprehensive view of the practical sides of physical training by a series of exhibits:

(1) Of school gymnastics by classes from the various grades of public schools, showing the German, Swedish and other methods.

(2) An exhibit of school games as conducted in the schoolroom by grades, the school games that are practised in the school yards, and the various gymnastic games as practised in the many gymnasiums in this and other countries for persons of all ages.

(3) Gymnastics as applied to the training of soldiers.

(4) The methods pursued by the great gymnastic organisations of the country, the North American Gymnastic Union, Young Men's Christian Associations and similar organisations, also an exhibit of popular Swedish gymnastics.

## MORE "SCIENTIFIC HOOLIGANISM"

THE claim to perfect secrecy of wireless messages received another shock during the America Cap Yacht races, when the Marconi and De Forest wireless messages were interfered with by some "scientific Hooligan," as Professor Fleming would call him. It was a great joke in the scientific world when Mr. Nevile Maskelyne upset Professor Fleming's claim that tuned messages could not be intercepted or interfered with, and the trick was justified on account of Mr. Maskelyne's motive and the fact that he did not maliciously interfere with Professor Fleming's lecture. But, according to the *Scientific American*, Mr. Maskelyne's unknown imitator in America went to a spiteful extreme in entirely and even vulgarly interrupting the news for which the public was eagerly waiting. The perpetrator of so cowardly a deed should be vigorously prosecuted, the act being similar to that of severing telegraph or telephone wires. The difficulty of apprehending such vandals will always be great, and for this reason the question of safeguarding wireless messages should receive renewed attention. The fact that tuning of systems has failed to accomplish all that was required of it is con-

firmed by the statement of the De Forest Company that prior to the races an understanding was entered into with the Marconi Company whereby their respective systems should not be worked simultaneously to interfere with each other. The character of the telegraphic signals received on these two systems is very different. In one system the dots and dashes are short and sharp; in the other they are of much longer duration, and we are informed that it is possible for two operators to receive on one receiver messages sent simultaneously from a Marconi and a De Forest transmitter, provided one operator devotes his entire attention to the Marconigram while the other pays strict attention to the De Forest message. Now, if, with systems so different in character, it was thought best to make arrangements for non-interference, how much more necessary would it have been to prevent interference in systems using approximately the same length of telegraphic signal.

Wireless telegraphy is essentially similar to heliographic signalling. As the Hertzian waves are invisible, there is used in wireless telegraphy an electric receiver which Lord Kelvin has aptly called the "electric eye." To carry out our comparison, all efforts so far have been made to cause the light flashed out to have such a wave length or colour as the "electric eye" is best adapted to receive. The failure of this attempt is due to the fact that the "electric eye" does with varying efficiency receive Hertzian waves of greatly varying lengths, the difference in efficiency being too slight for practical detection. One thing seems to have been forgotten—the "eye" as now arranged is capable of receiving waves from every point of the compass, and similarly, the transmitting station spreads out its waves to all parts of the horizon. Why would not a practical solution of the difficulty be the use of a lens for focusing the rays directly on the "electric eye," and furthermore of providing "electric spectacles," as some one has called them, for the "electric eyes" themselves? It is well known that Hertzian waves can be readily focused by the use of a lens made of pitch, and such an arrangement would cause the "electric eye" to see most plainly those rays sent from one particular direction, while all outside sources of Hertzian waves would affect it to a comparatively small degree. If necessary, these rays might be screened off by a screen of wire or plate-metal.

## GLOBE-CIRCLING TIME-TABLES

IF a movement recently started succeeds and direct communication is established between trans-oceanic and trans-continental lines it will be possible to travel around the world at express speed, or in forty-five days. At the present time although there are one hundred routes for any one who wishes to tour the world, there is no direct service, as the railroads and steamship lines make no pretence to a connected time-table.

To-day, if one should desire to emulate Jules Verne's picturesque hero in *Around the World in Eighty Days*, he would find it possible to lessen that period only by seventeen days, although the actual time required to travel by the different sections of the overland route is less than forty-five days. The difference is caused by the lack of direct communication. It is this difference that the various transportation companies are endeavouring to eliminate.

Up to the present the shortest time recorded for a round-the-world journey is sixty-three days, and that by the long sea route *viâ* Cape of Good Hope and Cape Horn. This journey covered 25,412 miles, or at the rate of sixteen and eight-tenth miles an hour, a very fair speed for a continuous sea voyage.

The competition for the shortest world route is virtually restricted to two main routes. One, controlled by the Canadian Pacific railroad and an English steamship line, offers a service of fifty-two and one-half days. This schedule includes twenty four days to or from Hong Kong eastward, seventeen and one-half days from Hong Kong to Vancouver and eleven days from Vancouver to London. The company feels confident that it will be possible to set an outside limit of sixty days, allowing an ample margin for contingencies and waits.

The other route is of recent origin. It is being extensively advertised as the "cheapest, shortest, and quickest" journey around the world, and includes the Trans-Siberian Railway and the new steamship line of one of the great western railways. The journey, commencing at New York, can be taken either to the eastward or to the westward. The former, for instance, goes by way of the Atlantic route to London, then across Europe *viâ* Berlin or Vienna to St. Petersburg or Warsaw to Moscow. From Moscow, a journey covering 5307 miles over the picturesque Trans-Siberian Railway takes the traveller to Vladivostok, where a steamer of the Japanese line connects with Yokohama, Japan. From the latter port the enormous new American steamers convey the tourist to Tacoma, and the remainder of the trip is made overland to the starting-point.

It is hardly possible that encircling the globe will be a common pastime, at least not for many years to come, but the movement to establish direct connections between the various transportation lines will result in the improvement of mail and express facilities. Even at the sixty-day service it will be possible to send mail to any point east or west within one month, which is a long step forward.

## JAPAN AND THE YANGTZE TRADE

ACCORDING to a report from the American Consul at Kobe, it is evident that the statesmen and capitalists of Japan intend to take a prominent part in the development of trade and commerce on the Yangtze. Many of Japan's leading lines of steamers are emulating each other and foreigners in their efforts to establish trade relations at all available points on the Yangtze—China's greatest river. The contest that is sure to come will be for a long time between England, Germany, and Japan.

The following table shows the percentage of shipping on the river.

| | Per cent. |
|---|---|
| British | 51.2 |
| German | 17.5 |
| Chinese | 17.1 |
| Japanese | 10 |
| American | 1.6 |
| Russian | .6 |
| All others | 2 |

## FOOD FRAUDS ABROAD

IN Paris snails are a popular delicacy, and, according to a recent article in the *Scientific American*, even they suffer adulteration, as dealers mix them with lungs of cattle and horses. Even entirely artificial snails are manufactured. The shells, recoated with fat and slime, are filled with lung and then sold as "Burgundy" snails. Lovers of fresh rooster combs are imposed upon by a substitute cut out of hog's intestines.

Chopped artificial truffles are made of black rubber, silk, or softened leather, and even whole truffles are made out of roasted potatoes, which are flavoured by adding ether. They are said to sell well.

Fish spoiled in spite of ice and borax is treated with salts of zinc, aluminium, and other metals. Rubbing the fish with vaseline to give it a fresh look, and colouring the gills with fresh blood or eosin—a coal tar colour—is resorted to. The latter is also used to intensify the red colour of inferior crabs.

Imparting a greenish colour to oysters is another adulteration. An oyster requires about one month in the beds to acquire the greenish colour. As this is too long a time the dealers help them along with an artificial colour. The chemists in the Paris municipal laboratories have shown that tomato jelly is adulterated with turnips, and powdered pepper contains a large admixture of powdered hardtack.

## HOW WE LOSE TRADE

AMONG the reasons Mr. Consul Richards assigns for British losses of trade in the Damascus district are the better terms of credit allowed by Continental manufacturers—at least six months' credit, the prices quoted being f.o.b. Beirut, and the charge for packing, which is extra with British merchants, is included in the price. Cash payment before the goods leave the warehouse is insisted on by British exporters. Then British cloth manufacturers refuse to sell pieces of a length suitable to small oriental tailors, and our Continental rivals have greedily taken up the trade by doing so.

## THE MONO-RAIL SYSTEM

MR. F. B. Behr writes in the *National Review* for October an interesting account of the practical results which he thinks would ensue from the introduction of the mono-rail system of locomotion, with which his name is so closely identified. "The main difficulties and dangers of the present railway system," he says, "result from the mixture of speeds on the same rails. By the construction of mono-rails alongside the existing railways, the complete separation of the express passenger traffic from the slow local passenger and goods traffic would be effectually carried out, and the cost of carrying the whole of the traffic would be greatly reduced, 99 per cent. of the accidents would be eliminated, and the principal problems at present before the management of every railway company would be solved, viz., the acquisition of higher speeds for express passenger traffic, the increased frequency of such trains, and the facility of improving their local passenger and goods traffic both in the number and speed of the trains, and reducing at the same time the working expenses. At present the railway companies spend enormous sums every year in providing additional accommodation to overtake the increase of traffic, and whenever they have accomplished the task set before them they have found that they are just as far behind the necessities of the moment as when they began, the traffic having increased so rapidly that they have to go through the same process all over again. If instead they would build mono-rails along their lines for the whole of their fast express passenger traffic, running light trains at very short intervals at a speed of not less than 100 miles an hour, their own lines would for many years to come be sufficient to meet their local passenger traffic, to accelerate their goods traffic, and to do both at much less cost, while the mono-rail would be always occupied by a continuous succession of light trains at very high speeds, so that it would be absolutely impossible to again mix the speeds on these rails. One of the most important results of this arrangement would be that a very large proportion of the enormous amount of shunting now required to clear the rails for the express passenger traffic would be done away with, and a much better, safer, quicker, and more punctual service all round would be secured at lower rates, including also the goods traffic, without diminishing dividends. On the contrary, it is expected

that the saving on the shunting alone would be so great that dividends would be increased both from that source and from the large accession of passenger traffic sure to be obtained through the additional accommodation, the greater speed, and the absolute safety and punctuality which would be ensured. To give an idea of the saving to be effected in the shunting alone, I may state that the Midland Railway Company gave in evidence before the Railway Commissioners some time ago, when some of their customers complained of high goods charges, that the shunting on the Midland Railway had increased to over 14,000,000 miles per annum, a great part of which was occasioned by the mixture of speeds. I think it is no exaggeration to state that had this separation of speeds been introduced, most of the accidents we have had to deplore within the last few months would have been avoided."

## A COMPETITION IN TURBINE SHIP BUILDING

IF Lord Inverclyde's Commission decides that it is feasible to fit out the new Cunard ships with turbine marine engines there will be a pretty contest for the contract between British and American inventors. It is stated that the members of the Commission will visit the United States before rendering their decision.

In order that the type of steam turbines sufficient in size to speed the great hull of such a ship as the new *Kaiser Wilhelm II.* may be tested, there is, according to the *New York Herald*, at present being built in that country a marine turbine engine of vast proportions. Within two months it will be completed and then subjected to all the stress of speed and endurance usual to the engines of the great liners. The inventor anticipates its complete success.

There are at present only two builders of marine turbine engines in the English-speaking world, Mr. C. A. Parsons, of England, and Mr. C. G. Curtis, of New York. While the former has a formidable number of successful vessels to his credit, the latter has but one, the yacht *Revolution*. German, English, and American steamship owners have already turned to these two men for figures on turbine engines for greater and faster ships, emphasising the remarks uttered by Mr. George Platt, president of the North-German Lloyd directorate, that the possibilities of the reciprocating engine have been reached in the *Kaiser Wilhelm II.*

Beginning with 2000 horse-power boats (the *Turbinia* was built in 1894), Mr. Parsons has had a line of successful fast vessels, the latest the twenty-three knot steamer the *Queen*, which made her initial trip in the English Channel service, from Dover to Calais, last June.

Mr. Curtis has but one marine turbine in service. The *Revolution*, a yacht 178 ft. long, which is equipped with a turbine corresponding to a compound marine engine, has been in continuous service since April 15, 1902.

"Not one cent has been spent for repairs on the turbine," said Mr. L. C. Ryce, treasurer of the company owning this yacht. "The *Revolution* is an eighteen-knot craft, fitted with two turbines, transmitting 2500 horse-power to two screws, one on each shaft."

Although no official connected with the Curtis Company would admit that negotiations were going on with Lord Inverclyde, an official of the Cunard Company stated that the Commission would thoroughly investigate the designs, both in America and in England.

## TRADE WITH SIBERIA

ACCORDING to a report made by the American Commercial Agent at Vladivostok, Russian goods are beginning to compete with English goods in the Asiatic markets with some success, especially in Korea and in the vicinity of the Chinese boundary. The pioneer in this line is a Moscow manufacturer, N. I. Konshin, who has already a number of representatives in China and Korea.

It is proposed to send to Manchuria during 1903 about 10,833,600 pounds of butter. As most of this (7,222,400 pounds) will be shipped during the summer months, the Trans-Baikal line is making preparations for the necessary refrigerating cars and boxes and cold storage.

But the decline of the Russian Far Eastern trade is shown by the statistics of the goods transported from European Russia to the ports of the Pacific. According to an official report the goods transported in 1900 amounted to 51,157,000 roubles, while in 1901 and 1902 they amounted to 49,827,000 roubles and 37,704,000 roubles respectively.

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