

INSTITUTE OF MARINE ENGINEERS

INCORPORATED

SESSION



1912-1913

President: SUMMERS HUNTER, Esq.

VOL. XXIV.

Institute of Marine Engineers

TWENTY-SECOND ANNUAL DINNER

IN THE CONNAUGHT ROOMS, GREAT QUEEN STREET, KINGSWAY, W.C.,

On Friday, November 8, 1912.

CHAIRMAN: MR. SUMMERS HUNTER (PRESIDENT).

THE Twenty-second Annual Dinner of the Institute was held in the Connaught Rooms, Kingsway, London, W.C., on Friday, November 8, when about 442 members and friends were present.

Before proceeding to the large hall, a Reception was held by the President, Mr. Summers Hunter. The guests included the Right Hon. Sir George H. Reid, P.C., G.C.M.G. (High Commissioner for Australia); Sir Thomas Jackson, Bart.; Admiral the Hon. Sir E. R. Fremantle, G.C.B.; Sir William H. White, K.C.B., F.R.S., D.Sc. (Past President); Sir Walter J. Howell, K.C.B.; Charles Booth, Junr., Esq.; James Denny, Esq. (Past President); Thomas L. Devitt, Esq. (Chairman, Lloyd's Register of Shipping); Captain H. Acton Blake (Deputy Master, Trinity House); Dr. Wm. C. Unwin (President, Institution of Civil Engineers); E. B. Ellington, Esq. (President, Institution of Mechanical Engineers); W. Duddell, Esq., F.R.S. (President, Insti-

tution of Electrical Engineers); J. Bell-White, Esq. (Master of the Worshipful Company of Shipwrights); Admiral Lindor Perez (Chief of the Chilian Naval Commission); Captain Kenji Ide (Chief of the Japanese Naval Commission); Colonel R. Saxton White, V.D.; James H. Rosenthal, Esq.; Dr. G. B. Hunter; J. Muysken, Esq.; D'Arcy Dawes, Esq.; Alexr. Boyle, Esq. (Board of Trade); Dr. S. J. P. Thearle (Lloyd's Register of Shipping); J. Foster King, Esq. (British Corporation Registry); John Gravell, Esq. (Bureau Veritas); Charles W. Gordon, Esq.; H. Hunter, Esq.; Leslie Skinner, Esq.; A. E. Doxford, Esq.; Harald R. Dixon, Esq.; James Adamson, Esq. (Hon. Secretary); Professor R. L. Weighton, M.A., D.Sc.; A. Scott, Esq. (Lloyd's Register); F. W. Sanderson, Esq., M.A.; Geo. T. Henderson, Esq.; J. M. Allan, Esq.; George J. Carter, Esq.; A. B. Gowan, Esq.

The Croupiers were W. G. Gibbons, Esq. (Vice-President); J. E. Wimshurst, Esq. (Vice-President); T. Putnam, Esq., J.P. (Vice-President); Alex. H. Mather, Esq. (Hon. Treasurer); H. J. P. Béliard, Esq. (Vice-President); Asplan Beldam, Esq. (Past President); J. T. Milton, Esq. (Chairman of Council); H. Walker, Esq. (Vice-President); R. Leslie, Esq., R.N.R. (Vice-President); W. J. Willett Bruce, Esq., R.N.R. (Vice-President); George Adams, Esq. (Member); J. Howden Hume, Esq. (Vice-President); and E. J. Dove, Esq., J.P. (Vice-President).

After dinner, during which a programme of music was given by the Salerno Orchestra, under the direction of Mr. Clive Parsons, the following speeches were made:—

The PRESIDENT: Before proceeding with the toast list, I wish to put before you the names of several who accepted the invitation to be with us this evening, but who have been detained for business and other reasons. Admiral H.S.H. Prince Louis of Battenberg courteously accepted, and only a few days ago wrote that, owing to pressing business at the Admiralty, which detained him there late at night, he was unable to keep his promise. He expressed his sympathy with the work of the Institute, and wished us continued success. The Right Hon. Sir Samuel T. Evans, P.C., Sir Walter Runciman, Sir Theodore Doxford, and several others also accepted, but express their regret at being unable to be with us.

I now give you the first toast on our list this evening, and ask you to drink to the health of the "Sailor King."

“ GOD SAVE THE KING.”

The PRESIDENT: It is now my pleasure to give you the toast “ The Queen, Queen Alexandra, the Prince of Wales, and other Members of the Royal Family,” and I am sure you will drink it with all loyalty and enthusiasm, well knowing that various members of our Royal Family, from His Majesty downwards, take the greatest interest in the first line of defence, the Royal Navy.

“ THE IMPERIAL FORCES.”

Mr. J. BELL WHITE: It is said that some men are born to greatness and that others have greatness thrust upon them. When I received from your Secretary the request of the Council that I should propose this important toast, I was sorely puzzled to account for having this greatness thrust upon me. On reflection I have come to the conclusion that it must be owing to the fact—and to no other reason—that in the earlier part of the year the Worshipful Company of Shipwrights gained some notoriety by the great speech on the Navy delivered at its Livery Banquet by Mr. Winston Churchill—a speech that I think has been fairly described as “ *epoch-making*,” and one that I venture to think did much to enhance the reputation of the Right Honourable gentleman both as First Lord and as a statesman. The toast of “ The Imperial Forces ” is a time-honoured one. It is almost impossible to conceive a gathering of British subjects in any part of the globe who have done themselves well, as we have all done to-night, thanks to your bounteous hospitality, forgetting to pay this tribute to the gallant defenders of their country. The toast is usually proposed in more or less felicitous terms, and responded to at greater or less length—mostly greater—by distinguished naval and military officers. I have had the honour of proposing this toast on other occasions, and also of responding, at any rate to the naval portion of it; but whether as a speaker or a listener the thought frequently occurs to me—What amount of good does it really do? Does this observance of the time-honoured custom serve any useful purpose, or is it merely an empty compliment? Are we not too prone to take it as a matter of course? Does listening to all these speeches remind us of our duty to those who have sacrificed much in the service of their country, and make us resolve to support

and patronize all those splendid Institutions such as the Corps of Commissionaires and the other Employment Agencies that exist for the benefit of sailors and soldiers who have served their country well, afloat or with the colours; and does it make us register a vow that never by any chance must we let an old soldier or sailor end his days in the workhouse? If the observance of this toast does any one of these things, even in the slightest degree, then I think neither the speakers nor the listeners can have suffered in vain. Now just one word as to the Navy. Both as regards *materiel* and *personnel*, no matter how much some of us may differ on the question of quantity, there can be no two opinions, I think, as regards quality. To such an audience as this it would be rash on my part to say anything on the subject of *materiel*, as there might be some keen critic present anxious to throw a little "torch-light" on my remarks; but on the subject of the *personnel* of the Navy I feel on safer ground. I venture to assert that at the present moment—and there always have been and I trust always will be—hundreds of officers—quite unknown to the public, and who will remain unknown unless the great opportunity comes to them, whether it be in the Engineering, Torpedo, Gunnery, or Navigating branches—who are steadily and perseveringly qualifying themselves in the duties of their great and noble profession, and leading the abstemious life that we know Lord Roberts led for twenty years before our troubles in South Africa, so as to be ready when their country requires their services in times of national danger, which God grant we may never see. Our naval seminary is full to overflowing with sucking Nelsons of the most promising type, and on the lower deck the heart of the British blue-jacket is as sound as ever it was in the days of Trafalgar. I wish I could say with as much sincerity that the hearts of both our blue-jackets and "Tommies" were as sound physically as morally, for I am sure we all view with apprehension the great increase of the cigarette habit. To my mind there is nothing more becoming to the uniform than the old-fashioned well-coloured clay "nose-warmer" or a good briar pipe. It is surely time for the officers to set a good example to their men in discouraging a habit that is fast becoming a vice. As to the Army, I have neither the time under the ten-minutes' rule, Mr. President, nor have I the knowledge to enable me to say anything that would be either useful or interesting; but as I

see that my friend Colonel Saxton White, a Volunteer officer who has rendered good service to his country, is to respond to the Toast, I should like to say this, and I speak with some knowledge of the subject, having served, and I am still serving, on the Consultative Committee of the Territorial Association in my county, that here again, as in the case of the Navy, we have perhaps sacrificed quantity to quality. Under the new scheme, for instance, the distinguished Corps of which I have the privilege of being an Honorary Member, formerly the Inns of Court Rifle Volunteers, more familiarly known as the "Devil's Own," is now an officers' training corps. I frequently lunch in its mess in the Temple, and I must say you will meet there as smart a lot of young men as keen about soldiering as you would find in the mess-room of any regiment in the Regular Army. It has always been a matter of surprise to me how the Volunteer movement survived the carping criticism and the ridicule that was heaped upon it—notably by our old friend *Punch*—even up to recent times. Undoubtedly it was in some cases needed, and it had a chastening effect, but that the movement outlived it shows how strong the fighting instinct and love of soldiering is in our race. I remember Anthony Trollope telling a delightful story about the early days of the Post Office Rifles that is worth repeating. They had their headquarters up Fetter Lane, and he humorously described their first march-out one evening in the direction of the City, escorted by a jeering and irreverent mob. On the march back up Fleet Street when they got to Fetter Lane the Colonel gave the word of command "Left Wheel," which was obviously wrong, then "Right Wheel," with the result that the men got clubbed up in the middle of the street, when, losing both his head and his temper, he roared out "Damn it, turn up Fetter Lane." *Punch* had an illustration the other day, which most of us have seen and laughed over, that is worth referring to, as I think it very accurately portrays the proper spirit actuating our present-day Territorials. *Officer* (visiting outpost) to *Sentry*: "If you saw one of the enemy what would you do?" *Sentry*: "I calls 'im to 'alt.'" *Officer*: "Suppose he won't halt?" *Sentry* (with evident relish): "I takes an 'unts 'im wiv me bayonnit." Should any foreign foe unfortunately ever get a chance of landing on these shores and is so misguided as to take advantage of it, I venture to think that the amount of "'unting with the bayon-

nit " that will be done by our Territorials will be pretty considerable. I have to couple with the toast of "The Imperial Forces" the name of a distinguished sailor—Admiral the Hon. Sir Edmund Fremantle. The Fremantles have distinguished themselves in various walks in life, but none more so than the gallant Admiral, whose bright and cheery face I am sure we are all delighted to see at this hospitable board to-night. I have also to call upon Colonel Saxton White to respond to the military portion of the toast. As I have said before he has rendered good service to his country as a Volunteer officer, but his chief recommendation, to me at any rate, is that he is a livery-man of the Shipwrights' Company.

Admiral the Hon. Sir E. R. FREMANTLE, G.C.B. : Mr. President and Gentlemen. I feel it a great honour to be asked to speak to you this evening, and to be present on this occasion when so many of you are assembled together. There is no body of men which is doing more, or which has done more, for the maintenance of our naval supremacy than the marine engineers. I should feel very jealous of them. My time is past, but I might feel jealous for my colleagues, only, fortunately, they are wise enough to believe they can be marine engineers themselves, and in doing so they are paying you the greatest compliment they can. As for the engineers of the Navy at present, I doubt not they are amongst the most efficient of the officers of the noble service to which I have the honour to belong. Of course, the *personnel* in the Navy is of the highest importance. What is commonly called "the man behind the gun" is the important matter, after all. It is said sometimes in the papers, and I think they are more or less idle words, that this or that ship is in a bad state of discipline, and even, sometimes, in a state of mutiny. I have made inquiries about almost every case mentioned in that way, and I can assure you the remarks are absolutely without foundation. It is true that, if the First Lord did promise, or give people to understand, that there would be a rise in wages—which is always comfortable and satisfactory to everybody, and I admit that in the Navy, as in other professions, there is a fair demand for an increase, considering that the seamen's pay has not been increased since two or three years after I joined the Navy—if such a statement is made

and nothing is done it is likely to cause a misunderstanding, but that it will come to anything more than mere dissatisfaction I firmly assure you is not the case. I firmly believe that the loyalty of the men, as well as of the officers, is as satisfactory as in the days of that great victory we celebrated a week or two ago. I have spoken of the *personnel* as being of the greatest importance. We want more of the *personnel*—of course we do! We are obliged to if we are to maintain that supremacy on the seas necessary for the security of the Empire. But the *matériel* is of almost equal importance. The shipwrights and marine engineers are doing all they can in giving us the best material possible, but we want quantity as well as quality. We are depending upon the pre-Dreadnoughts, but we are not keeping up with the times. I wish to give all credit to Mr. Churchill for the exertions he is making and his endeavours to ascertain for himself everything that is absolutely necessary for the Navy over which he has charge, but in answer to Mr. Middlemore in the House of Commons on Wednesday night, he was obliged to say that since 1910 we had been able to commission eleven ships of the Dreadnought class—nine battleships and two battle-cruisers—and the Germans were equally able to commission eleven ships—eight battleships and three cruisers. Obviously that is not maintaining a two-power standard or a $1\frac{1}{2}$ power standard. It is a fact that we were willing to trust to good words and fine speeches. It was a case of the wolf and the lamb. It does not seem that our administrators of that date, Campbell-Bannerman and others, understood the position aright, but imagined that if we reduced our out-put, Germany would do the same. Unfortunately the effect was absolutely opposite. In 1908 we reduced our shipbuilding to a minimum and Germany increased theirs. As regards relative strength, our position is strong at the present moment. I am pleased to think we have sent a powerful squadron to the Mediterranean and are able to send it without being too weak at home; but if that is the case, what can we say for the extraordinary argument that we were absolutely obliged to withdraw from the Mediterranean because we were not strong enough. Surely our interests are in the Mediterranean, the interests of the country and of the Empire require that we should have a strong fleet there. Sixty per cent. of our food stuffs come through the Mediterranean, and as we know, it is the channel of communication with India,

China and the East. There are some who would trust to arbitration. I can only say with regard to that, that we should consider things as they stand, that in the past year and the present year we have had two wars. Many people think arbitration would be a panacea for all difficulties. May I point out that neither in the war between Turkey and Italy, nor in the war now raging, has any one proposed arbitration, and if they had it would have been of no use. Lately, in several quarters there has been a proposal for what is called the immunity of private property at sea from capture. The matter was brought before the London Chamber of Commerce by Lord Avebury, and I had the honour of taking part in a sub-Committee which had to consider the subject. I strongly opposed the proposal, and I am glad to say that the sub-Committee were unanimous in considering it impracticable. Let me remark, in conclusion, that we must be prepared, as Lord Roberts tells us. We must trust to our own strength.

“Let us be backed with God and with the seas,
Which He has given us for shield impregnable,
And with these helps mainly defend ourselves.
In them and in ourselves our safety lies.”

Colonel R. SAXTON WHITE, V.D., J.P. : Mr. Bell White, in proposing this toast, admitted to you that he had been serving under the colours of “The Devil’s Own.” I am quite sure that every man present will hope that when the order for assembly is given in the latter days, for the last parade of the “Devil’s Own,” Mr. Bell White will be declared “absent on leave.”

I esteem it a very great honour to have my name coupled with that of the gallant Admiral in responding to this toast. This is not in any degree a formal toast, to be got through with the fewest possible words and to be listened to with a corresponding amount of interest, however forcible those remarks may be.

This toast is the very soul of the history of this country, which, after all, in spite of the “little Englander” opinions, has been won for us by the heroic service of the men who have carried the flag of our country to every sea and to every part of the inhabited globe.

That grand old soldier, Lord Roberts, has recently once again urged upon his countrymen the necessity for preparation and the efficient training of our young manhood for the

defence of our country. He said, quite rightly, that our only guerdon of peace was to make ourselves so strong both by sea and land that no power, or probable combination of powers, shall dare to attack us without the certainty of disaster.

This speech of Lord Roberts has been attacked, not only by the smaller fry of the political world, but by those in high places, advising our own people and our possible enemies to pay no heed to the advice given to us by the most experienced soldier in Europe to-day. Gentlemen, what is the destiny of the German fleet? The statesmen and press of that country leave us in no doubt whatever. It is that, alone or in combination with others, it shall put an end to the maritime supremacy of this country. It may suit the purpose of some of our statesmen to assume, as they do, that Germany is building her great fleet for commercial purposes alone. Gentlemen, that is not the purpose, and any man who, for the sake of so-called social reform, leaves his country without a sufficient and properly trained Navy, backed up by a sufficient and properly trained Army, both Regular and Territorial, to protect her shores should be judged anathema by his fellow-countrymen.

Let us hope our old warrior is mistaken, but who shall say? Certainly not the man who reduced the army by 40,000 men, who abolished the Militia, that grand old buttress of Britain, and who created what is at best a force deficient in strength, not only in men but in officers, insufficiently trained to put up a fight against, possibly, the highest trained soldiers in the world. Should such an occasion occur, we shall not, as promised by that optimistic statesman, be given six months' notice, nor six weeks. Shall we be given six days? Things move quickly in these days of modern warfare. We have an instance to-day: Turkey within three weeks has been practically driven out of Europe, and this not by one of the great Powers, but by a nation whose national history may be reckoned almost in days.

Let our own country take heed and rightly interpret the signs of the times. "Arm and prepare to quit yourselves like men" is the dictum laid down by our old General.

To you as business men I leave this statement of fact, viz., that so long as the Territorial force is based on voluntary enlistment so long will it be impossible to give the men a sufficient period of training to stand the severe tests of modern warfare.

We are the inheritors of a glorious country, free and united ; we are the inheritors of a glorious army with its magnificent record of valour ; we are the inheritors of a glorious navy, with all its splendid heroism as our first and chief line of defence. Let us lay these great inheritances nearer to our hearts, and put aside, as of little or no importance, the paltry political questions on which there are expended such floods of talk and so many millions of our national funds.

Let us never forget to assert and reassert the first and greatest right of all Britons, the right to be taught how properly to defend our country, and the honour and liberties of this glorious Empire.

SIR WILLIAM H. WHITE, K.C.B. : The toast which I have the honour to propose is that of "The Overseas Dominions, Ships and Commerce." This is an old friend in a new dress. The old toast was "Ships, Colonies and Commerce," and I venture to think that, chronologically, that is the right order. If there were not any ships, there would be no Colonies, and if there were neither ships nor Colonies, there would not be anything like the commerce possessed to-day by England. In now existing conditions, however, we put, and ought to put, the overseas Dominions first. There was an Elizabethan sailor of some note who said more than 300 years ago that "whosoever commands the sea, commands the trade of the world, and whosoever commands the trade commands the riches of the world, and so the world itself." That is, in brief, the history of the British Empire, and the words were written by Sir Walter Raleigh, a fellow-countyman of mine. He belonged to a race who found their way about the world, although men would probably be treated as pirates who now attempted similar exploits. A book has been published recently in which it is said that Drake, even when he put one of his men to death during his famous expedition to the Pacific, acted in a gentlemanly and proper manner, and I believe he did. Such men as Drake and Raleigh did not wear kid gloves ; they were not given to the use of rose water, but they knew exactly what they wanted to do and did it. Such men, going out from these little islands in the North Sea, laid the foundations of the dominions beyond the seas. "They builded better than they knew" ; but they had a clear idea of what they were doing, and we who come after them have entered into a great

heritage. The race which produced these men is still producing them. There is now a disposition among us to decry what we have and are ; to make the worst of our present position. What earthly purpose can be served by so doing I have never understood and never shall understand. We are called upon to face the facts, and what are the facts about the dominions beyond the seas ? A number of nations are coming into existence, English-speaking, vowed to justice, to the maintenance of law and liberty, joined together in bonds that we believe can never be sundered. While in these little islands we are crowded, while many of our people are living under conditions that we ought to be ashamed of, and I hope we are ashamed of, the great waste spaces of the Empire which belongs to us are crying out for people. Our fellow citizens in the Empire beyond the seas are holding out arms of welcome. And yet there are those who tell us we are doing wrong in sending out our best and bravest to take advantage of this glorious heritage as yet so little utilized. If we could only stand in some of these great spaces in Australia or in the North-West country of Canada, these wonderful regions of whose possibilities we yet know little, we could not fail to realize that the first great need for their development is human beings ; and much less would be said about the decadence and the hopelessness for the future of the race. Besides the great self-governing dominions, account must be taken of the colonies that are still colonies, not self-governing, but controlled by the mother-country. As a nation we do not realize what we possess at present or what the future will bring to us : and we ought to be ashamed of ourselves that we know so little of the Empire to which we belong. It is a good thing to look on the greater aspects of this Imperial problem ; to think what may be if we, like men and citizens, set ourselves to justify our descent ; not to sit down helplessly or to dwell on troubles which may come, but to face both present and future in a reasonable and courageous mood. For goodness' sake, let us as a nation get rid of scares. Newspaper utterances in British journals are often exaggerated or sensational, yet these are reprinted in foreign newspapers and treated as indications of our real national temper. Do we honestly believe that the British Empire under proper direction can hold its own against the world ? When this question is directly asked, we answer, Yes. It has been done in the past and

will be done again in the future if the need arises ; all the more certainly because of help given by the Dominions beyond the seas. Can Britishers forget what happened in South Africa : the swift and ready response from all parts of the Empire when a real need arose ? Ought we to forget the glory of the past and simply sit down in despair ? Surely nothing of the kind can happen. I have talked about the defence of the Empire to farmers in Manitoba. One might not think that Manitoba farmers would take much interest in this toast, Colonies, Ships and Commerce, but they do. They desire to maintain British naval supremacy as much as the people at home. What is more, they are prepared to help to pay their contribution to Imperial Defence, which is an important thing. Australia is now showing a noble example in its contribution towards the naval defence of the Empire ; within a few weeks we shall hear from Canada a message which I believe we shall heartily welcome. Do not let us forget New Zealand also, with its million of people and its gift of a splendid battle-cruiser to the Royal Navy. These are the things which bind the Empire together. Loyal to one idea, let us always think how we can become more closely united throughout the Empire. A statesman has not yet appeared to frame a scheme that would fulfil this end completely. Probably not one statesman will accomplish this result, but it will be rather the gradual outcome of public opinion in all parts of the British Empire. May it ever be our great aim and object to continue loyal subjects of the monarch whose official title is " King of the United Kingdom of Great Britain and Ireland and of the Dominions beyond the Seas."

With the toast I couple the name of the High Commissioner of the Australian Commonwealth, Sir George Reid.

The Right Hon. SIR GEORGE H. REID, P.C., G.C.M.G. : I came here to enjoy myself, and in order to enjoy myself, I did not worry about what I was going to say. What man can feel happy if he has a long tape inside his mind and has to roll it out to the last inch ? I came to make myself feel happy, and then to amuse you, and after I have amused you a little, I hope to talk a bit of sense. First of all I would like to say a word about the band. If you knew what I have suffered from bands nearer to me than that one, you would sympathize with me. It is like a man driving a car ; he goes slowly at first,

but unconsciously he goes faster and faster until he is going for all he is worth. That is the way with a band of music. But that band in the gallery is one of the best I ever heard. I will tell you why. Instead of making our conversation a background for its music, its music was a delightful background for our conversation. Now with regard to this Institute. You are a very young company. About a hundred years ago there was no marine engineer on the face of the globe. There were plenty of political engineers on the face of the earth then as now. I have been one of them. In this country we have had an aristocracy on the land since the beginning of time, and now, in these better times, we have got the aristocracy of the sea, the marine engineer. Tablets have been dug up which show that 8,000 or 10,000 years ago, amongst the Babylonians, the men held in the highest social esteem were the men of culture. When shall we come to that test of merit? I am getting quite anxious about this old country. I get cold shivers down my back when I hear these gloomy forecasts of the ruin that is coming upon us. But there is one consolation, England is never really well off unless she is on the brink of ruin. Everything that is being done is going to be the death and destruction of your navy and commerce and everything else. Yet you are still going strong. I suppose it is like the time of travail which preludes the joy of a new birth. England is always coming again. I see a brighter, younger, stronger, more skilled, more industrious England rising year by year. I am an outsider here and I do not go into politics, but there is one thing I cannot understand. If we are going to the dogs because we have not got enough soldiers, why don't some of these men who think we are going to the dogs crowd into the ranks of the Territorials? There is no time to lose. You might have to wait fifty years for conscription, and then it might be too late. If things are as bad as they are painted, why cannot thousands of our men of leisure, not those who are working at a pound a week and keeping a family on it—I don't know how they do it—why don't those who are better off fill up that blank of 40,000 in the Territorial forces of the Crown? And when they are there, why not insist upon doing twice the drills the others are doing? But I suppose that sort of thing is too sensible altogether. You have two big parties fighting about national compulsory service. They are both strong parties, and I do not think

either of them is consciously desirous of preventing the progress of this nation. Until they settle this matter, why don't you let the millions of boys in the elementary schools have half an hour a day out of school to learn the rudiments of drill? Once we get in their young minds the germ of the thing, when they grow up they will not only talk about Britain being in danger, but join some force to help to get her out of it. As to the Navy, on that point one is quite clear. The whole safety of the country depends upon that. We have to maintain the traditions of the past and to guard the heritage our fathers left to us. You may be sure of this, if your fleet is once destroyed, the Power that destroys it will never let you build another. So I say if you want to go straight for anything, get a few more battleships. But we cannot all go to sea. I am warmly in favour of some sort of military progress, I would like to see a volunteer army of half a million; but why do not those who complain join the force there is? With regard to this toast, your toast list would not be complete without it. At some dinners I have attended this toast has had a very insignificant position on the list. I was at one the other day and at the end of the proceedings was asked to respond for the British dominions beyond the seas. I did. I told them that the Empire consists of $11\frac{1}{2}$ millions of square miles, and of these the British dominions comprise 11,380,000 square miles. The other 120,000 belong to you! With a population of 420 millions in the British Empire, 375 millions do not live in England. You have the other 45 millions! We will always want England and England will always want us. We Australians are having a fleet built. Every boy in Australia when he is fourteen years of age becomes a soldier of the King. While we are doing our duty, why cannot Canada look after the North Pacific and Atlantic, and why cannot the Empire of India look after that station? Let each important part of the Empire guard the seas nearest to it, and let us look to the Home country to look after the North Sea and the Mediterranean and help us to protect the commerce of the Empire on the high seas. We want all the young British nations to listen to the call of the sea. We want to keep alive that spirit which made our forefathers invincible on the high seas. We want to see the children of these rising young empires showing some claim to the old spirit which I hope will always leave us masters of the seas. Some talk about England as

if she were going to share the fate of ancient Empires—as if she, like Imperial Rome, were going to fall from a glorious zenith down to a humiliating catastrophe. There is a difference between the empire of Rome and the British Empire. Rome was an oppressor, Rome was childless. This grand nation is not an oppressor. There was a time when we used to glory at being at the head of the conquering races of mankind, but now our glory is of a juster type, we glory at being at the head of the civilizing races. Although Australia is far away from you, whispers of the past stir the electric current of our ancestral blood. When your day of trouble comes you will find the glories of your past renewed in the rising glories of the children you have protected, who have grown up under your generous care and who, when they reach the age and strength of manhood, will stand shoulder to shoulder with you when the King calls.

Mr. THOMAS L. DEVITT: I have the honour to propose the toast of “The Institute of Marine Engineers,” and I am sure you all sympathize with me in having to follow so eloquent a speaker as Sir George Reid. My toast to-night is a very important one. First of all, I want to assure you that the shipowners of England value very highly the services of the marine engineer. My difficulty to-night was in choosing what subject to speak upon. I had thought of touching upon marine engineering from the beginning onwards, but I remembered that the toast I had to propose was the prosperity of the Institute of Marine Engineers. I am assured that the Institute is a very young body, but, like all important societies based on proper principles, it has grown quickly. About twenty-four years ago there were about thirteen members, now there are over 1,300, and I venture to say that the work done by the Institute has been of the greatest importance to the country. The British shipowner ought to know more about the engineer. Of course no shipowner ought to be entirely without a knowledge of engines; he ought to know the different types of engines, and how best to take advantage of them, but much beyond that he has little opportunity of knowing; but with the assistance and advice of skilled engineers we shipowners can always be kept up to date in every development of Marine engineering, and we really cannot do without you. I am not going to trouble you with a long speech, it would be out of

place in proposing such a toast. I cannot tell you about the Institute, you know more about it than I do, nor can I speak of the intricacies of the marine engine. The marine engineer is a most valuable asset to this country, and I assure you he is most heartily and highly appreciated. The Society you belong to is a most useful one, because you are not selfish ; you put out your theories in your papers and these are read and circulated. I do not know whether they go by wireless yet, but at all events they are circulated all over the world and read with the greatest interest. The Society over which I have the honour to preside, Lloyd's Register of British and Foreign Shipping, knows how to appreciate the services of engineers. The Diesel engine is now coming into use, the combination of the reciprocating engine and the turbine, which has proved so valuable, and other new systems are all doing their best to keep the marine engineer in the foreground. I ask you to drink the toast of "The Institute of Marine Engineers," coupled with the name of the President, Mr. Summers Hunter.

THE PRESIDENT: In responding to this Toast, I do so with great pleasure, but not without feelings of responsibility, relieved, however, by the kind and sympathetic way in which Mr. Devitt has referred to the Institute, and the hearty and appreciative way in which you have received the Toast. Most of you know, although this Institute of Marine Engineers was officially founded in 1889, that the initiation took place a few months earlier. But it was not until 1891 that the Institute was considered to have passed through the period of infantile ailments, for in that year the first Dinner was held under the Chairmanship of Dr. Peter Denny, and since its foundation, the name of Denny has been identified with all that pertains to the welfare and progress of the Institute. Then, the majority of the Institute was celebrated last year by the twenty-first Dinner. It is now fully twenty-four years since a few serious and enthusiastic men, realizing the necessity, set to work and laid the foundation for what is to-day one of the most important Institutions connected with the shipping industry. Many of the founders are still with us, and as keenly interested in the work as they were twenty-four years ago, but, as in the natural order of things men come and go, so younger men have filled the vacant places, and in every possible way, the

work so well commenced is being continued. And like those who have gone before, I am here to-night by your favour, in this most honourable position, to bear testimony to this work and to the objects and aims of the Institute. I will endeavour to show how the aspirations of the founders have been realized, and further, how the handsome tangible support and encouragement given to the Institute by shipowners, engineers, shipbuilders, classification societies, merchants, and others, have been, I hope, fully justified. Its objects and aims are the same to-day as when it was founded. With this difference, that there is really a greater work to be done and a wider sphere of influence to be covered. The primary objects are "the progressive advancement of the marine sea-going engineer, in all that pertains to the machinery, the fitting on board, and the economical working of the machinery on board ship; the creating of greater facilities for self-culture, and the exercise of those faculties which tend to ennoble and elevate."

Now, I think you will agree that this is a most comprehensive charter; it is eminently practical and yet idealistic. The unusual combination is not to be wondered at, if you refer to the original founders—all practical men and seeking to do good in their respective spheres, and particularly with regard to sea-going engineers. A reference to the Transactions shows that the papers are always of a high standard, and the discussions are serious and of an educational nature. The Denny Gold Medal for the past year was awarded to Mr. McLaren for his excellent paper on "Wireless Telegraphy"—a thoroughly practical and sound paper, and most useful to all in charge of the apparatus on board ship. Then, papers have been read and discussed on the various new methods of propulsion; in fact, the most recent inventions and developments with regard to the main machinery, the auxiliary machinery, almost everything having an influence on the efficient and economical working of the vessel, are all brought before the Members through the medium of the Institute. Those who are ashore permanently, and those who are in port with their vessels, can, and do attend the Meetings and take part in the discussions. Those members who are at sea receive the Transactions, and in this way are kept up to date; but more than this is required. By an increasing membership, by a wider sphere of influence, by the recognition of some of the greatest men of our day, by the sympathetic help and encouragement of the shipowner and

merchant, the shipbuilder and the engineer, and still further by the numbering amongst its members, representatives of our great classification societies, so the Institute has justified its initiation, its birth and growth, and its motto is still "Ahead." Nay, more than that, for with the development of the Institute, and in no small extent due to the progress and advancement of its Members, we find many of its Members closely identified with the Royal Navy, and from time to time the names of Chief Constructors, Chief Engineers and members of the engineering *personnel* of the Navy have been associated with the Institute, and now, on behalf of the Institute, I wish to welcome again one of our oldest and most respected supporters—Sir William White, also Admiral Fremantle.

This connection, through the medium of the Institute, between the Engineer of the Royal Navy and his brother of the Mercantile Navy is important, and of more than passing significance.

Gentlemen, I hope the day is far off—but come when it will, I venture to say that the engineers of the Mercantile Marine, comprising the Naval Reserve, and those in the rank and file who to-day are endeavouring to qualify for the work, and who, when the call comes, will readily respond, they will give their services and their lives for the protection of their country, and count it but a small sacrifice.

Gentlemen, the sea-going engineer, in whatever class of vessel he serves, is a national asset; he is of value to the nation, but to maintain this value, he must be kept abreast of the times, fully informed as to the advancement and progress in engineering science, particularly as regards all that pertains to the design, construction and working of the vessel and its machinery.

The increasing importance of this has been fully recognized and most efficiently dealt with by the controlling Chiefs of your Navy from time to time, and to a laudable extent, apart from party politics, so that to-day the education and training of the officers and engineers of the Royal Navy are the admiration of all who follow the progress of engineering science, and its application to the warship, as well as the merchant vessel. But there is more than this to be considered. How are the engineers who are at sea to be kept properly informed and educated as to all the advances that are being made? How

are they to be kept up to date—abreast of the times? This is essential if they are to be efficient, for during the last few years, engineering matters have moved quickly. Yet we know that advantage is taken of every opportunity by which our naval engineers can be kept advised and instructed as to all the most recent inventions and developments.

For the Royal Navy, I have only one word, and that is, Congratulations on what you have done so well. And in particular may I mention the name of one man to whom we should all be grateful for his magnificent work, and of whom the Empire and the nation should be proud—Sir J. A. Ewing, the Director of Naval Education.

Now I hark back to the farsighted policy of those who initiated and founded this Institute. What was happening then? And what did the future portend? Higher boiler pressures, the triple expansion engine, and the turbine; forced draught; oil and gas as prime movers; an extended knowledge and use of electricity. Small wonder then that these men said we must look to the future of our engineers, and the position is the same to-day but to a greater extent.

The complexity of machinery, the aggregation of power in many of our modern leviathans is (apart from fighting machines) nearly as great as in a warship; and the engineer is expected to know all about it. Well, he does his best, and I speak from a personal knowledge of many sea-going engineers, who, in spite of great difficulties, do keep up to date, and I take this to indicate the desires of the majority.

Shipowners are alive to the importance of this matter, and in all seriousness I ask them to give to this Institute their continued and cordial support.

And now I have to report to you the progress of the new Premises Fund. Let me here say that this important scheme was first considered by the Council in 1907. A Committee was appointed in March, 1908, and the present City Premises Committee was appointed in May, 1910—that is, $2\frac{1}{2}$ years ago. The first Meeting of this Institute over which I had the honour of presiding in June last, was in connection with the new Premises. Negotiations are proceeding satisfactorily for a most suitable site, between the Tower Bridge and the City, and convenient for Fenchurch Street and Mark Lane Stations.

On the back of your menu you will see an illustration of the new buildings. I need not go into details of the building

and rooms, etc., beyond stating that the leading features are—the securing of an annual income by letting a portion for offices, etc.; the building will contain lecture hall, reading rooms, offices, and all the rooms necessary for the carrying on of the work of a scientific institution. The Library will be taken in hand, and supplied with the most recent books dealing with engineering matters. There will be a good supply of engineering literature, and our hope is to make the Institute the home of the Marine Engineer, and especially those in active service, both on shore and at sea. Naturally we wish to increase the membership, and we are confident that, with the premises in this central position, and the better facilities which we shall be able to offer to Members, it will induce many to join, and in this we hope to have the assistance of shipowners.

With regard to the capital sum required, my predecessor (The Most Hon. the Marquis of Graham) stated a year ago that £20,000 was required. Six months ago, we had in hand about £5,000, in cash and promises, and to-day the sum has reached £5,800 and here let me, on behalf of the Institute, sincerely thank those who have so generously subscribed to this Fund. I also wish (on behalf of the Committee) to thank the Members of the Institute for their support.

I think it is desirable that the Members should clearly understand that there is no personal liability to be feared in connection with the matter. The Institute is incorporated, and every Member is exempt from liability, so long as the Constitution is not violated. Needless to say, the Committee are being most careful.

Now as to the completion of the scheme and the future of the Institute. Even with the amount in hand, that is, say £6,000, the Committee feel justified in making a commencement. I have said that every inquiry has been made, not only by the Committee, but also, I may say, that one President after another has personally inquired into the scheme, and now it is my turn to say that I have done so, and I consider it perfectly sound and workable, but to put the Institute on a permanent and a strong basis, the balance of the £20,000 should be raised. Spread over our large shipping industry, it is but a small sum. My predecessor remarked that the sea-going engineer is by no means a wealthy man, yet he pays his subscriptions to this Institute, and he has given his guinea towards the Building Fund.

The site is being taken on a 99 years' lease ; the total annual expenditure has been most carefully estimated, and let me emphasize this : the Committee have exercised the greatest caution ; there has been no undue haste. The scheme is quite feasible, and financially sound.

Like my predecessor, and with the Committee, I have tried to indicate the importance of the Institute, and therefore of this scheme, to the whole shipping industry. I am personally convinced of this, that, more than ever, it is necessary that all should look to the future. The Institute by its work and its records has amply justified its existence. Ever since its inception, 24 years' steady progress has been made, but, like other and older Institutions, it must be put on a sound financial basis. Only one more effort is required, but it must be a combined one—by the Members themselves, and those who are alive as to the usefulness of the Institute, and those who benefit by its work.

The subscription list shows the general appreciation of the work. The efficiency and the up-to-dateness of the sea-going engineer is of vital importance to the trade and commerce of the country, and the Institute of Marine Engineers is a national asset. Other Institutions there are more noted—but none more practical.

“THE GUESTS AND KINDRED INSTITUTIONS.”

MR. JAMES H. ROSENTHAL : Mr. President and Gentlemen. I feel sure the toast I have the honour to submit will be well received. The Institute of Marine Engineers has a connection not only with other engineering societies, but, as you will have noticed from the fact that this toast was undertaken last year by an eminent astronomer, Sir David Gill, it has a connection with scientific societies apart from engineering. The importance of “Kindred Institutions” will be well appreciated when you bear in mind that, except for marine engineers, there is no State certificate of competency, and membership of these kindred institutions to a large extent takes the place of an examination or certificate of competency. The membership of these kindred institutions gives to the engineer practically the “hall mark,” as it is well known that these institutions only admit to membership men who by training and occupation are qualified engineers. I feel certain that the kindred institutions will look with interest upon our endea-

vours to emerge into greater prominence by the erection of a suitable building, because it is not so very long ago that the Institution of Civil Engineers was the only institution that had its own building, and now the Institution of Mechanical Engineers and the Institution of Electrical Engineers have their own buildings also. I believe and hope that in a year from now we shall be able to entertain kindred institutions in our own building, and I think they will have an opportunity of appreciating, as I have done since I have been a member of the Institute of Marine Engineers, how extraordinarily useful and practical the papers are. I feel sure they will admit that the usefulness of our papers is not excelled by those of any other Institution. We are fortunate in having present with us this evening, Professor Unwin, President of the leading Institution, that of the Civil Engineers. Professor Unwin's name is a household word; there are few of us who have not profited by his works. Mr. Charles Booth, of the Booth Steamship Company, will also respond to this toast. His usefulness is apparent to all, because there must be shipowners to make use of the marine engineer. Gentlemen, I give you the toast of "Kindred Institutions and the Guests," coupled with the names of Professor Unwin and Mr. Charles Booth.

Professor WM. C. UNWIN, LL.D. : I have to thank you for the honour of being asked to respond for this toast, for the kind words which have been said and for the way in which you have received them. Perhaps, to prevent misunderstanding, I should say that I appear at this moment on your programme under false colours, for my successor as President of the Institution of Civil Engineers was appointed three days ago. Your secretary has not supplied me with any definition of "kindred institutions." Engineering practice involves the application of so many sciences that I imagine this term will embrace, not only technical societies, but other societies of a scientific nature. For example, the great Royal Society, founded two and a half centuries ago, which has done such extraordinary work for the advancement of science, and which has been the mother of so many societies. It is curious that in this country, the advances in science have been so very largely due to amateur work. By amateur work, I mean work produced without any direct prospect of advantage, and for which little assistance was received, much less assis-

tance than in other countries, from public bodies and government. May I remind you that the condenser of the steam engine was due to the physicist Black, and to the mathematical instrument-maker, James Watt. The work of such men in science would not have been done without the aid they received from the societies to which they belonged, without intercourse with other members of those societies, or without open discussion of their ideas with those carrying on similar work. The earliest of the technical societies, that of the Civil Engineers, founded in 1817, was specifically formed to promote intercourse among its members, whereby, the founders said, they would benefit by the interchange of individual observations and individual experiences. Engineering has become so manifold and spreads her works over so wide a range, that no one society can fulfil all the objects which the founders of the Institution of Civil Engineers had in view. All the branches of engineering have felt the need of a centre of action; they have ascertained the value of open and full discussion and the usefulness of placing on record the experiences of their members. Your society has sprung from the same needs and no doubt fulfils the same objects. It is to you as marine engineers that we owe so much of the means of safety as a nation and the peace and prosperity we enjoy. You are inheritors of a position achieved by the experience, the investigations and the skill of a long race of engineers. You and we of kindred societies have the obligation to hand on what we have received enriched by our own contributions.

Mr. CHARLES BOOTH, Junr.: I esteem it a privilege to be permitted to respond to the toast of "The Guests" in this distinguished gathering. I am sure my fellow-guests will agree with me when I say that we appreciate the honour which your President and Council have done us in inviting us to this magnificent entertainment, and, personally, I wish to add that I always feel a very great pleasure when I find myself in a company of marine engineers. I have a great admiration for the members of your profession, and I feel a special sympathy for the sea-going branch of that profession, with which my business as a shipowner brings me into daily contact. It is sometimes thought that sea-going engineers are not as fully appreciated by the public at large as perhaps they ought to be, but it must be some consolation to them to know that their

services are appreciated by those who know, and most of all by those who employ them. They live laborious lives, but we know that in times of stress and danger they will always do their duty, and we count upon them. But if I feel a great sympathy and admiration for marine engineers, I ask you to extend a little of your sympathy to the poor shipowner. Pity the poor man's doubt and confusion in these fast moving times, when considering what type of engine, or what sort of fuel he is to adopt in the steamers he is proposing to build. I was assured by a distinguished engineer not long ago that the great Cunard liner the *Aquitania*, which we all hope will soon be the pride of the North Atlantic, will be obsolete, so far as her engines are concerned, when she is launched. The problem vexing shipowners who, like myself, are content with vessels of a modest size, though not so overwhelming, is none the less harassing. If we make mistakes, it will not be for lack of good advice. I may assure you confidentially that I have received a good deal from your President, and with this object in view he has lately taken an office in my building in Liverpool. These experts tell us that coal is doomed; that triple and quadruple expansion engines are played out; that the steam turbine has already seen its best days. As for oil fuel for raising steam in boilers, it is all very well, but the internal combustion engine is the thing. Well, my brain is simply in a whirl; I do not know what to do; but I think, on the whole, I shall stick to steam for the present—and to coal. But if I do go in for a steamer with internal combustion engines, I am not going to have one of those horrible things without any funnels. A ship with a fine large well-painted funnel is a splendid advertisement for a steamship company. You cannot get the passengers if you cannot have funnels. There was almost a riot a short time ago, when a large number of passengers who had been attracted by pictures of a vessel with four funnels, were asked to embark in a vessel with one. What they would say if they were asked to go on a vessel without a funnel at all I don't know. My experience is that the more funnels you have the higher fares you can charge. I have to thank you for the very cordial way in which this toast was proposed and the kind manner in which you received it.

“THE CHAIRMAN.”

Mr. E. B. ELLINGTON : Mr. Chairman and Gentlemen. Ow-

ing to the enforced absence of Sir Theodore Doxford, I have had the honour of being asked to propose the toast of "The Chairman." Fortunately that toast requires few words from me to commend it to your notice. "Good wine needs no bush" and a good toast needs no speech. I should like to say that it is an additional pleasure to me to propose this toast at a dinner of the Marine Engineers, because marine engineering was my first love. I remember marine engineering so long ago that really most of you here present would know nothing about my early experience. It was in the days when the highest pressure of steam in marine engines was 30 lb. to the square inch; when there were no water-tube boilers, and multitubular boilers were of a very primitive type. There was a great controversy at that time as to whether compounding was of value or not, and there were various other strange ideas of historical interest which occur to me this evening but which I must not enter upon. The first toast this evening was received with enthusiasm, and I trust this last toast, that of your "king" to-night, will be similarly received. I ask you to drink the health of Mr. Summers Hunter. You all know him as your President and as the head of one of the largest marine engineering firms in the North of England.

The toast was received with musical honours.

THE PRESIDENT: I thank you very much for the way in which you have received this toast. Mr. Ellington told you that marine engineering was his first love. It is rather interesting, but my first love was mechanical engineering. Now, both of us having changed, Mr. Ellington is President of the Institution of Mechanical Engineers, and I am here to-night as President of the Institute of Marine Engineers. In explanation of this I should say that, having completed my apprenticeship as a mechanical engineer, the sea called me, and within a year or so, owing to shipwreck, the sea very nearly kept me. Hence, my sympathy with the sea-going engineer is a very real one. Dr. Unwin's remarks reminded me that, when an apprentice, I had to assist some very eminent engineers of the day, men whose names will be respected for all time by engineers—Mr. George Bidder and his brother Samuel. Without going into details, I may say that, at that time, I was an apprentice engineer, and working on a coal-cutting machine—in other words, a machine for getting coal out without using

gunpowder, and as an apprentice engineer, I worked on the machine in the shops, and also down in the coal pits on experiments.

Amongst the party was the first Sir George Elliott, Bart. (then Mr. George Elliott). Even to-day, it is an inspiration to me, having been in touch with such eminent men at an early time of my life. I greatly appreciate the honour of presiding here to-night as President of the Institute of Marine Engineers, and no efforts shall be wanting on my part to maintain its prestige and advance its best interests.

