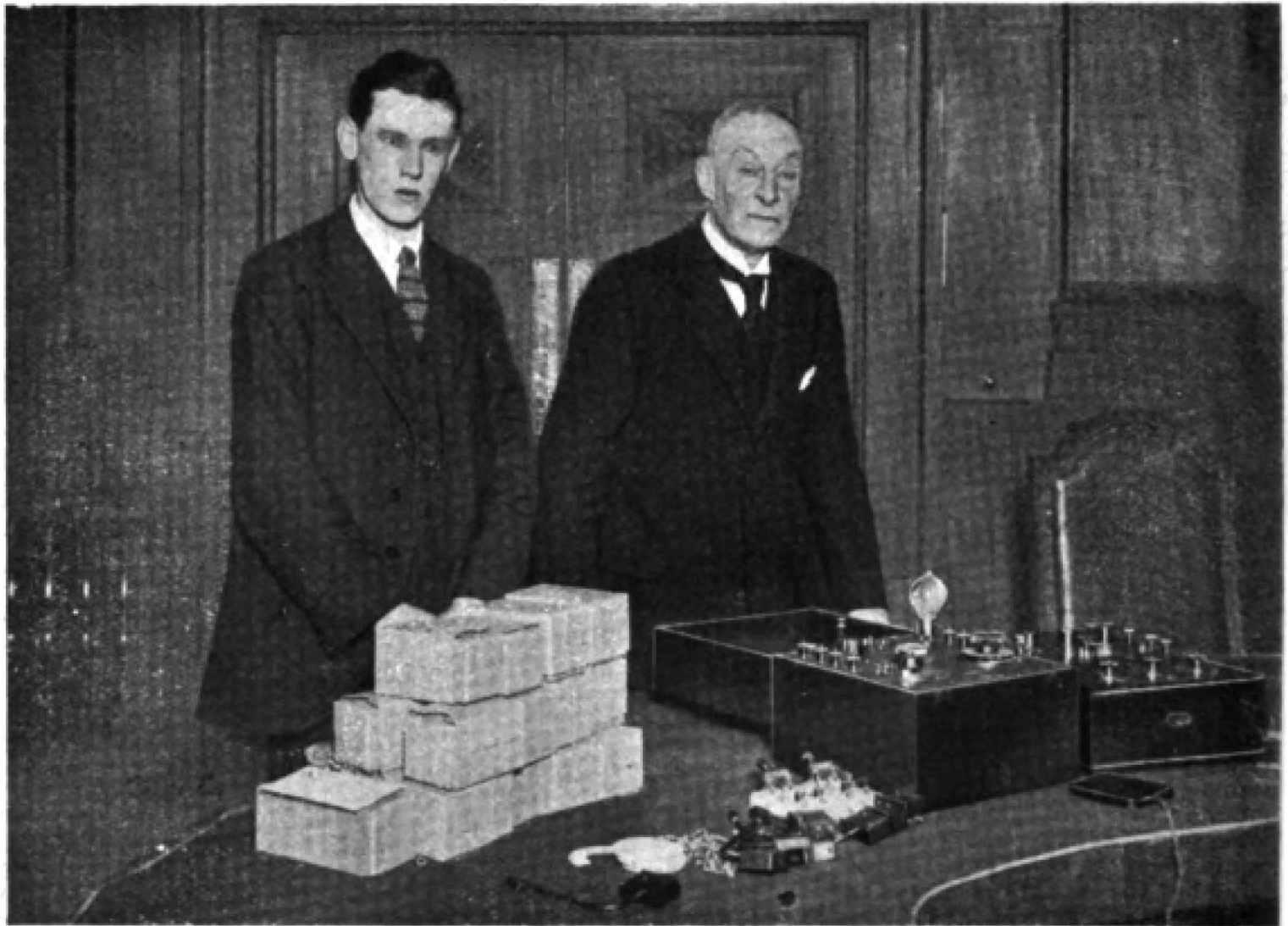


Presentation of Prizes to the First Prize Winner in the Transatlantic Amateur Tests.

AT the meeting of the Wireless Society of London, held at the Institution of Electrical Engineers, Victoria Embankment, on Tuesday, February 28th, a presentation of prizes gained by Mr. W. R. Burne, first prize winner in the Transatlantic Amateur Tests, was made.

Mr. W. R. Burne had been invited to London from Manchester for the occasion by the Wireless Society of London, and in receiving the prizes at

table here. Only one successful member is present to-night, and I think that all the apparatus on the table and something that I have in my pocket, presented by Messrs. G. Z. Auckland & Son, has been won by him. But we are really congratulating all the successful competitors, eight in all, and their prizes either have been or will be sent to them in due course. I will ask Mr. Coursey to give a short description of the Tests. (*Applause.*)



The Presentation to Mr. W. R. Burne.

[Photopress.]

the hands of the President he represented also those other successful competitors in the Tests who had gained Second and Third Prizes. Addressing the meeting, the PRESIDENT said:—

The next business is a very pleasant one indeed, and that is to present the prizes to the successful competitors in the Transatlantic Radiotelegraphic Communication Tests in December. Mr. Coursey is going to give a brief description of the work done by the successful receiver, so that I will not take up the time of the meeting, except to say that I feel we ought to be very grateful to the firms who have encouraged this work by their very generous offers of these prizes, some of which are on the

MR. P. R. COURSEY.

I have been asked to say two or three words this evening on the subject of these American short wave tests, which were carried out in December last. Probably many of the audience here this evening remember Mr. Godley's visit to this country and his attendance at one of the meetings of this Society, when he told us about the American Radio Relay League, which is one of the largest amateur organisations in the United States.

The first organised Transatlantic Test was made in February, 1921. It lasted three days only with one blank day in between the Tests. Nothing definite, however, was received on this side, and a

considerable amount of disappointment was in consequence felt both in this country and in America. These negative results were due not so much to any failure on the part of either the transmitting stations in America, or of the receiving stations on this side, but to the fact that the tests lasted for too short a period for definite communication to be established in view of the very variable atmospheric conditions.

The second test took place between the 7th and 17th of December last, and lasted for ten successive days or, rather, nights. There was, therefore, much more chance of signals being heard, and we can now say that American amateurs certainly got into communication with amateurs in this country using comparatively small apparatus, as compared with the high-power transatlantic stations. The chief point of interest in the Tests lies in the short wavelengths employed, most of them being round about 200 metres, but some going up to 360 or 375 metres. The bulk of the stations worked on round about 200 metres.

Before the tests were carried out opinion in America was very divided as to whether spark or C.W. stations would come out best. I think in this country we had very little hesitation in saying which we thought would be the best. But very good results had been obtained in America with spark sets having an input of 1kW, and these led them to expect that quite good results might be obtained from their spark transmitters. This in a sense proved to be the case, as signals from spark stations were heard by Mr. Godley at Ardrossan, Scotland, but no definite signals from spark stations were heard by the British listeners. Mr. Godley's reception results showed that although he heard some spark signals, he heard far more C.W. stations. I think this conclusively proved, if such proof were needed, that C.W. transmission is undoubtedly more effective than spark over long distances for the same power.

The scientific interest of the tests lies in the accomplishment of radio communication, including the reception of at least one complete message over such a long distance with such short wavelengths and such small power. Some somewhat misleading statements have been made as to the possibility of the value of such signals; but it is quite obvious that to secure commercial transmission over such a range requires much larger power in order to secure regular communication, not only every night, but every day as well. These Tests showed that the signals came over very much better on about two nights than they did for the remainder of the period. The transmission qualities over the Atlantic during the period rose to a maximum after about three or four days, and then fell off to zero, and practically nothing more was heard.

I think it would be of interest to point out here that the British entrants made greater use of high-frequency magnification than did the Americans. The first four of the most successful of our amateurs on this side all used high-frequency magnification on the short wavelengths. Mr. Godley brought apparatus with him which was typical of the best American practice that they had evolved for long distance short wave reception, and he did not have any high-frequency magnification in front of his first detector valve. He used the Armstrong super-heterodyne principle, in

which the incoming signals are heterodyned before the first detector valve. That scheme has been used in this country, and one listener at least, I know, obtained very good results with it; but in broad outline the successful receivers followed the same general scheme—one, two or three, or even four or five, high-frequency stages with tuned anode coupling between the valves, followed by a detector valve and possibly one or two stages of low-frequency amplification. The best reception as regards the number of stations heard was made by Mr. W. R. Burne, of Sale, Cheshire, who intercepted signals from seven American stations. Three for certain of these were received correctly, with the code words which were allotted to these stations, as a means of definitely verifying the reception. Others were not doing individual test transmission work, and had therefore no definite code signals, but were heard during a "free for all" period, and the remaining one was a special C.W. station put up by a group of American amateurs using practically the full licensed power of 1 kW input. The signals from that station were certainly very much more powerful than heard from any other United States station, and it has subsequently transpired that the other C.W. stations that were heard were using much less power than 1 kW.

The next best reception was made by Mr. Whitfield, of Birmingham. He received three stations—IBCG, the above-mentioned special station, and two others with complete code words. For the next best reception two have been put together. They are Mr. Corsham, of Willesden, and Mr. Spence, of Huntly, Aberdeenshire. Each of these received one station with the correct code group. Others who received signals were Mr. A. E. Green-slade and Mr. E. McT. Reece, of Clapham, who made a very prolonged reception of IBCG; Mr. T. Cutler, of Southampton, Mr. J. R. Forshaw, of Liverpool, and another one in the South of England, who does not wish his name to be divulged.

The American set used by Mr. Godley contained in all ten valves—two oscillators and the remaining ones detecting and amplifying. As a comparison to this there was one British amateur who heard signals from IBCG, and used two valves and a crystal detector. It is, I think, extremely creditable that signals should have been heard on such simple apparatus. Others used up to four or five stages of high-frequency amplification.

Another interesting point might be mentioned with regard to the comparison between the times at which signals were heard by Mr. Godley and by the British workers. On the morning of the 8th Mr. Godley reported hearing a station 1AAW. That has not been verified, as it has been proved since that that station was not sending, so it seems that somebody was using a false call. On the morning of the 9th he reported no signals. On the morning of the 10th he heard IBCG, the special transmitting station. On the morning of the 11th he heard the greatest number of signals; he reported fifteen stations that morning, that is on the first Sunday morning during the Tests. As against Godley's first definite reception, reported on the morning of the 10th, we have that of Burne, who heard four stations on the morning of the 8th December.

As regards the methods of valve amplification on

this side, we were probably in advance of Mr. Godley in that respect. We do not come up to him with regard to the number of stations heard, but when taking into consideration the fact that at the beginning of the Tests he used an aerial 1,350 ft. long, and afterwards cut that down to 850 ft., whereas all the British people had not more than the Post Office aerial of 140 ft., it does not seem surprising that he should hear more signals. In fact, I think it is all the more creditable to the British workers that they heard any at all, and, taking into account the difference in the aerial sizes, our results show not at all badly as compared with Mr. Godley's. He also heard signals on the morning of the 12th; but on the 13th, 14th, 15th and 16th he reported no signals. As against that we certainly have several signals on the 8th; we have one on the 10th, we have several on the 11th, and we have one on the 14th, so that again in two cases we may say we were hearing signals when he did not do so. A receiving station in the South of France also heard signals towards the end of the Test when Mr. Godley reported nothing.

It is also interesting to note that the United States station 2ZL owned by Mr. J. O. Smith, of Long Island, was heard by the first three British prize-winners, but was not heard at all by Mr. Godley at Ardrossan.

I will only detain you a little longer to mention the fact that a number of prizes, as already stated by our President, were offered by wireless firms in this country to those who made the best reception, and two or three prizes were offered in some cases. Some of the prizes carried conditions attached to them to the effect that they would not be awarded unless the successful amateur used apparatus supplied by these firms, and that has cut out the award of a few prizes. But the remainder, as already announced in *The Wireless World*, have been allocated. Several of the instruments are here on the table, but one or two remain to be chosen by Mr. Burne, who has been offered the choice of apparatus to the value of the prize. Well, I do not think I need detain you any longer in discussing this matter. The Tests have been successful, and it is hoped that before long further definite communications may be established and possibly also in the course of time regular working between the amateurs of the two countries. (*Applause*).

THE PRESIDENT.

Mr. Burne is present in person as a guest of the Wireless Society this evening, and I think we will ask him to represent all the other successful competitors; and I should like to ask him to come to the table to hand him a cheque which, as has been stated, I have in my pocket, and let that represent my presentation to him and to the other successful competitors. I should like to tender to them my personal congratulations on the successful completion of the Test. (*Applause*). I think we must also thank Mr. Coursey for his very lucid description of what happened; I think we ought to thank those in America who sent the messages through for this most interesting and instructive competition. I hope that we will repeat it again next year with even better results.

MR. W. R. BURNE.

May I just say a few words, as I have come up to London from Manchester, and am expected to represent all the successful people. I would like to thank you very, very much indeed for the splendid way in which you have dealt with me in inviting me up to London to receive these prizes. I assure you it is a great thing for me, as I have not been in London before. What is more, I was hoping it would be wet. People who come to Manchester from London say Manchester is always wet, and those who come from Manchester to London say in London it is always raining. I was hoping it would be wet, so that I could say the same. However, I am very glad it did not rain, because of it being Princess Mary's wedding day: it would not have been at all nice.

With regard to further tests across the Atlantic, I have got into communication with Mr. J. O. Smith (2ZL), Mr. Estey (1AFV) and others, who very kindly sent again to a few of us who listened. Mr. Corsham, Mr. Whitfield and myself listened until about 2.30 a.m. from the beginning of this month, and I cannot say that the tests have been altogether successful; but I think that one station was heard one night by Mr. Whitfield and myself. On another morning at 2.15 a.m. a station was undoubtedly heard by myself. I do not know whether the others heard it. To-day I had a letter from Mr. J. O. Smith, of Long Island, saying he was very keen on further tests, and saying that he would be sending every night at 8 o'clock, New York time (i.e., at 1 o'clock a.m. G.M.T.) calling 2KW, and if anybody else would like to listen for him I shall be pleased to hear from you.

I think it is a great thing, this Transatlantic signalling, and I am only sorry that I did not do better. Having had an accident I was not able to rig up my apparatus until the morning of the Tests. Everything was so hurried that I could not possibly do better really, but I am very, very pleased that other Britishers besides myself have been successful, and I hope it will not be the first or second time, or anything like that, but that we will be able to get into communication with the American people, and not only receive their signals, but send to them as well, if only the Post Office could be persuaded to grant us licences for short wave work. (*Applause*).

French Amateur Transmitting Stations.

The French amateurs are taking full advantage of their recently granted facilities for experimental wireless transmissions. We learn that some ten stations have already been licensed and we are able to publish the calls of the first of these, which are as follows:—SAB, SAD, SAE and TSFM (the station of *La T.S.F. Moderne*), and SAH.

The station SAB belongs to Mr. Léon Deloy, of Nice. We understand that this station which has already begun to transmit has been heard in London. We shall be glad to receive reports of the reception of any of these stations or any other stations bearing the distinguishing figure eight, which it appears is to be allotted to the French experimental stations.