

ror intercepts parallel rays of light, they will be concentrated at one point, and that the focus. Conversely, if a point of light be situated at this focus the beams will leave the mirror travelling in a parallel direction. Marconi found that this could be applied to wireless, the reflectors being suspended aërially. The first transmission of this nature took place between London and Birmingham. It was then that its outstanding value was realised. It required less power, it was less susceptible to atmospheric conditions, tracts of mountains interfered little with its course, it could be relied on for sixteen hours of the day, it required less power for the same signal strength, and it could be kept relatively secret.

Following this discovery, a beam service between England and Canada was established, and later, between England and Sydney. For a while, it seemed that it would displace cables, but a merger between the cables and the beam took place this year.

Wireless Compass.

ANOTHER important development was that of Tossi and Belini—the wireless compass. This is an application of the principle of the frame antenna, which will receive signals strongest when pointing in the direction of the transmitting station. In 1916 the value of this compass was evident by an incident in the Battle of Jutland. When the German fleet was moving rapidly towards the English shores, and the Grand Fleet had been called, it was stated that a wireless compass was the means of a final decision for the Grand Fleet to go to the scene of action. A signal was picked up from a German ship 300 miles distant, and an hour and a half later this had varied by 1½ degrees, showing that the fleet was moving rapidly towards the English coast.

This has been an invaluable discovery for aeroplanes. A small indicator scarcely larger than a cigarette packet is now installed upon aeroplanes flying on certain routes in America and England. Transmitting stations are arranged on these routes so that the strongest path of the signals will be along the route to be taken by the aeroplane. Two reeds within this apparatus indicate whether the plane is moving to one or the other side of this wireless path. The shortening of these reeds indicates that their destination is being neared. They entirely disappear

Community Singing

Christchurch Suggestion

A MEETING of the SYA Musical and Dramatic Committee was held on August 7. There were present: Mr. W. H. Dixon (Royal Musical Society), Mr. T. W. Dent (Orchestral Society), Mr. G. L. Donaldson (Operatic Society), Mr. M. Richards (Harmonic Society), Mr. A. C. Bretherton (Repertory Theatre), Mr. A. Brewins (Competitions Society), Mr. Geo. Manning (W.E.A.), Mr. L. Slade (station director, SYA), Mr. C. S. Booth (Broadcasting Company).

There was a useful round-table talk concerning broadcasting and its relation to the work of the various musical societies.

During the discussion the chairman, Mr. W. H. Dixon said that for a long time during the war he was musical organiser for community singing among the soldiers, and that after the war a scheme was devised by the British Broadcasting Company for broadcasting community singing with some wonderfully successful results. At the first performance in London the conductor, before an audience of 10,000, spoke into the microphone asking the people in their homes to join in, and thousands and thousands of listeners carried it on.

Mr. Dixon said that he would like to start this in New Zealand, with the singing of national songs of New Zealand. He hoped that it might be the means of stirring creative artists into composing songs of their own country, and for this purpose he intends writing to Alfred Hill asking for Maori songs and legends.

pear when over the transmitting station. By this means, an airplane can be on time to the minute when land has not been seen since it left its point of origin.

Next week this article will be concluded by an account of the development of picture transmission, radio vision, modern valves, and radio of the future.

Public Trust

Charges Reduced

THE Prime Minister (the Right Hon. Sir Joseph Ward) announces that important reductions in the charges made for legal and administration work performed in the Public Trust Office will take effect as from July 1, 1929.

"The work of the office," said Sir Joseph, "has shown a remarkable expansion in recent years, as the following figures demonstrate:—In 1914 the value of estates under administration totalled £12,282,883; in 1919, £19,242,347; in 1924, £32,404,724; and 1929, £48,334,790.

"On March 31, 1929, the business-exceeded £48,000,000, representing almost a fourfold increase in the last fifteen years.

"Every effort is made to manage the office on an economical basis by the adoption of efficient methods of organisation and the application of business principles. As a result of the very gratifying increase in business, it is now found possible to grant further valuable concessions to clients. Valuable concessions are granted to borrowers of all classes, and specially-reduced fees have been fixed in the case of loans not exceeding £2000 on rural securities. It is felt that the maximum benefit of reduction should be enjoyed by those classes in the community who are least able to afford payment of expensive fees."

Distance Annihilated

Mother Speaks to Son

THE future of two-way communication is reflected in the following incident: Jack Sigrist, an eighteen-year-old apprentice on a Cunard liner, fell down a hold a month ago, and since then has been lying at death's door in the Prince Alfred Hospital in Sydney, making pathetic appeals for his mother, who resides in Gosport, England. Last week the mother was able to speak direct with a hospital nursing sister in Sydney concerning her son's condition, as a result of the intervention of the "Daily Express," London, which had induced the radio section of the British Post Office to place its entire radio resources at the disposal of Mrs. Sigrist, who conducted a trunk call conversation for ten minutes. She learned that her son had had a good day. The conversation was quite audible and created a profound impression in the hospital. During the evening special arrangements were made to enable Sigrist to talk directly to his mother, 12,000 miles away. Wires were taken right into the ward, and the boy greeted his mother most affectionately. She said a few comforting words to him, and the doctors think the conversation will greatly assist his recovery.

The Fruit Crop

Radio Advice to Orchardists

A VALUABLE lecture to orchardists was given from SYA on Thursday last by Mr. S. Frew, of the Orchard Division of the Department of Agriculture. The lecturer covered his subject comprehensively and concluded as follows:—

Summarised then, the work with fruit trees at present and in the near future is as follows: Firstly, clean up the trees after pruning, by burning all prunings and leaves, and, further than that, dig round the trees to bury anything left as well as for cultivation. Secondly, if there is any scale or red mite in evidence, spray with red oil in the dormant period. Even if they are comparatively clean, an oil spray now is a good preventive and also softens the bark and helps to invigorate the tree for the growing period. Thirdly, in the "green tip," spray with lime sulphur on Cox's Orange and Duns and with Bordeaux on other apples and all pears for black spot. Spray all stone fruit with Bordeaux. In conclusion, it may be mentioned that no spraying is of any value unless it is done thoroughly. Satisfactory results are only obtained by reaching all crevices and sheltered branches with at least a moderate force. Cleanliness is necessary, and to avoid trouble all spray utensils should be washed out after use.

Do You Know?

That when a testator appoints the Public Trustee his executor he can appoint one or more advisory trustees to co-operate in the administration of his estate? A testator if he so desires can have an intimate friend, a public accountant or his family solicitor work in conjunction with the Public Trustee.

ADVISORY TRUSTEES

This is a heading of an interesting folder just issued by the Public Trust Office. It sets out briefly the advantages of appointing advisory trustees in certain instances.

Free copies may be obtained from any Office or Agent of the Public Trustee, or post free from the Public Trustee, Wellington.

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