

# THE RADIO RECORD

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## Wireless as the Bond of Empire

**A** COMPREHENSIVE survey of the part played in Empire stability by full and rapid means of communication is given in "World Radio" by the Director-General of Post and Telegraphs, Australia, Mr. H. P. Brown, M.B.E. In this Mr. Brown pays tribute to the rapid progress now being made by various phases of wireless development, and stresses the importance of ready commercial communication. Recently he had the unique experience in London of hearing by radio his daughters converse in Melbourne!

**T**HE great progress being made by beam wireless in cheapening communication is indicated in the daily Press by the rumours of mergers with the cable companies. Our illustration below shows the English end of one of the beam services. A service with Melbourne has proved of great convenience and value.

**L**ATELY an opportunity has been afforded me of studying the developments which are taking place in the United Kingdom in all spheres of communication, including broadcasting (if one may be permitted the latitude of regarding that as a communication service).

A close contact with the work which is being done by the engineers and scientists opens up a vista of possibilities, the realisation of which must have far-reaching influences in all kinds of Empire relationships.

Association with the work of the Imperial Cable and Wireless Conference has contributed still further to my earlier convictions that our Commonwealth of Nations must seek to strengthen its commercial and economic structure by pursuing a vigorous policy in the improvement and extension of its communication and transportation systems. It must be realised that these matters are vital. They affect every one of us. It is our duty to take an interest in the subject and see that public opinion is adequately informed so that it may exercise its wholesome influence. We must strive to bring about a greater intimacy between the units of Empire by taking advantage of every opportunity which will enable us to annihilate space and time by bringing within the reach of all the facilities to be derived from great scientific discoveries in their practical application.

**I**N present circumstances only the comparatively wealthy can afford to send messages of a social character for overseas transmission. Those who have been separated from their friends and relatives by great distances will realise most the drawbacks and anxieties inseparable from an absence of information concerning current events. The post is a great boon, and one would not minimise its blessings, but when weeks must elapse before a reply can be received to some inquiry of a personal and intimate nature, it has to be admitted that that mode of communication falls short of what we are entitled to expect in these progressive days. Even in business transactions there are severe restrictions, imposed by cost, on the free use of expeditious means of communication which, if they could be made available, would be an inestimable benefit.

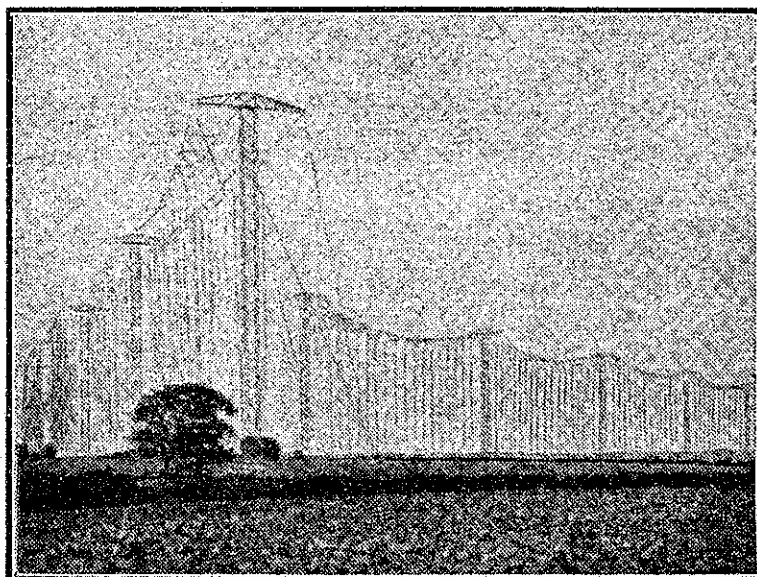
The mail services of the Empire are remarkably good, and were it not for the fact that Britain is one of the world's greatest carriers, we could not enjoy the advantages of those services which are now available to us. Many of the large shipping companies have shown a commendable enterprise and have taken considerable risks in expending capital for the improvement of their services, anticipating that the provision of a facility will bring in its train increased business and a development of the resources of the countries which it serves.

### AERIAL COMMUNICATIONS

**T**HE Australian Government has been responsible for opening up somewhat extensive aerial routes within the Commonwealth, and is at present endeavouring to bring into operation a further link which

will prove a great boon to travellers and will speed up the mails to and from the Homeland. The plan is to have a regular service over the 2000 miles stretch between Perth and Adelaide, the flights conforming to a time-table which will link up the overseas steamers and reduce the transportation time of travellers and freight destined for the eastern States by many days.

Whatever may be accomplished in the direction of accelerating actual transportation, there will still remain the necessity to develop telegraphic communication. It may be taken as a corollary that as the time of transportation is reduced there must be an increasing need to improve the telegraphic services. It will be an urgent problem for those responsible for overseas telegraphic communications to develop new classes of traffic and procure for the peoples of the Empire the great benefits which can be afforded by a comprehensive exploitation of the means now available for the rapid transmission of intelligence. An enormous traffic capacity is avail-



What a modern beam receiving station looks like. This view depicts the masts and aerials of the Marconi Beam Receiving Station at Dorchester, England.

able by the existing cable and wireless services, and when this is absorbed further channels can be provided at comparatively small cost. Use must be made of every device which will reduce the expense of long-distance communication. We cannot countenance an artificial restriction because of adherence to old ideas and of being wedded to old methods of commercial enterprise. The achievements of scientific workers must be applied to the utmost by enlightened administrators who will have the vision to make themselves worthy of the unstinted and very frequently unselfish work of our scientists.

### WIRELESS PICTURE TRANSMISSION.

**T**HE readers of this journal are probably well acquainted already with advances which have been made during the past few years. The capacity of submarine cables has been increased manifold; improvements in apparatus used for the transmission of morse signals are of a very substantial character; long-distance morse-operated wireless services have been established and have

proved so efficient and so rapid that they have created a revolution in the sphere of overseas telegraphic operations. Facsimile transmission has gone beyond the stage of laboratory experimentation and is now being applied daily in commercial practice. It is being operated over land-line circuits and also over wireless channels in the ether. He would be a bold man who ventured to predict the limitations of this latest achievement. Drawings, pictures, manuscript and printed matter can now be transmitted at great speeds and faithfully reproduced at their destination. Refinements in the process are continually being introduced, and the method of transmission is being closely studied so that the liability to failure may be almost eliminated, or at any rate reduced to a point comparable with that appertaining to the transmission of morse characters for ordinary telegraphic communications over land lines. Moving picture transmission has reached an almost incredible degree of efficiency. It has been my privilege to witness transmissions, over a short distance certainly, but of almost perfect quality.

**I**N telephony also the developments have been astounding. It is an every-day occurrence to transmit the human voice with perfect articulation and the retention of its individual characteristics over distances of 3000 or 4000 miles. In Australia the Post Office is in the position of rendering commercial services between points separated by 3000 miles and is developing plans to link up the furthestmost points separated by some 5000 miles. In Europe and America almost equivalent distances are being covered.

The association of land-lines with wireless links for the transmission of telephonic speech is a development in the past few years which has now been incorporated in regular commercial services. Rapid progress is being made in the improvement of long-distance wireless telephone transmission, and the means which are being adopted are of a character which will render long-distance wireless service much less costly than transmission over land-lines. I should be surprised and disappointed if the intensive work which is now being undertaken does not result in commercial services being established between the most remote parts of the Empire within the next two or three years.

### A BROADCASTING THRILL.

**A** FORTNIGHT ago, during one of the experimental long-distance transmissions attempted by the broadcasting station in Melbourne (3LO), my own daughters, whom I had not seen for nine months, were able to speak to me in London, and although there were periods of fading, their voices were as clear as though they had been transmitted by telephone from an adjoining room. There was not the slightest distortion that the human ear could detect—not the loss of a single characteristic in their speech. The thrill of that experience has only to be felt to bring home to one the marvellous achievement of modern science and the benefits which will follow from its commercial exploitation.

**I** HAVE been permitted to see some of the work which is being done by the British Broadcasting Corporation, including the long-distance transmissions which are being made daily in co-operation with the Marconi Company from station 5SW. It is earnestly to be hoped that all the Dominions will heartily co-operate in this work, for it is only by joining forces that rapid progress can be made in bringing these marvels of science to such a stage that they can be placed permanently at our disposal for everyday use.