

increase in the long-distance telephone traffic, engineers are doing their utmost to prevent disorganization of the traffic at that period.

THE British Post Office and the American telephone authorities have decided that the best way to obviate the effects of 'sunspot' activity is to adopt a new technique for the reception of short-wave transmissions. A number of receiving aerials will be suitably spaced in the direction of the incoming signals. The Post Office has issued a statement giving an ideal reception station. It would accommodate six receivers for twelve circuits and sixteen separate aerials erected so as to face America. Very stringent conditions are laid down for an ideal site for the station. It must be at least two miles long, a quarter of a mile broad, the length being in the direction of America. It must be flat and reasonably damp. It should be remote from roads carrying motor traffic and yet be a reasonable distance from London to keep the cost of the land lines low. The present Post Office receiving station at Baldock does not even approximately satisfy these conditions. The Cooling Marsh at Rochester nearly fulfilled the required conditions and this has been selected. It is expected that the new station will be in use early next year, and that even under very bad conditions it will be possible to maintain a satisfactory commercial telephone service.

New Metallurgical Laboratories at Sheffield

SIR WILLIAM BRAGG opened the new Sir Robert Hadfield Metallurgical Laboratories at the University of Sheffield on September 15. The laboratories mark the first stage in a scheme of development of the University for which an appeal was issued two years ago. Sir Robert Hadfield contributed generously in response to the appeal, and as a mark of appreciation of this and his many other benefactions to the University, and particularly the Department of Metallurgy, the laboratories have been named after him, and a commemorative plaque in the main laboratory was unveiled by Sir William Bragg. The following telegram was sent to Sir Robert Hadfield: "Members of the University and others assembled at the inauguration of the Sir Robert Hadfield Metallurgical Laboratories send you hearty greetings. They remember with gratitude your continuous generosity to the University, and regret your absence from this ceremony. They send you best wishes for a speedy recovery to health." The University of Sheffield is unique among the universities of Great Britain in that it confers degrees in metallurgy as distinct from degrees in science; these were established so long ago as 1907. The new laboratories will be used primarily for teaching, but research work will also be carried out. In his address, Sir William Bragg referred to the relation of science to industry, and said that although they may be forced together by circumstances, a metallurgical school, like the restraining constituent in an alloy which prevents separation of the components, holds theory and practice together and gives the industry strength and adaptability.

International War on Locusts

THE Fifth International Locust Conference held at Brussels at the end of August was attended by delegates from more than twenty countries. The great economic importance of the problem was emphasized by the results of a statistical inquiry organized by the International Centre for Anti-Locust Research in London. The information collected from the majority of the countries suffering from locusts and grasshoppers showed that the average cost of these pests to the world amounts to not less than 15 million pounds per annum. Discussions at the Conference were centred mainly round the necessity of establishing permanent organizations for the supervision of the original centres of locust outbreaks, with a view to the prevention of such outbreaks in future. An agreement was reached by the various delegations that such organizations should be established without delay and financed on an international basis. This decision was made possible by the extensive investigations carried out during recent years by an international team of entomologists surveying some of the most inaccessible parts of Africa and Arabia. There is every hope that the recommendations made by the Conference will be adopted and acted upon by the Governments concerned, and that the control of locusts by the prevention of the swarm formation will become an accomplished fact.

Launch of the *Graf Zeppelin*

A NOTABLE example of the progress of aeronautical science was provided by the launching on September 14 of the new German airship L.Z. 130, to which Dr. Hugo Eckener gave the name *Graf Zeppelin*. The launch is described as having been carried out with precision and the great ship took to the air perfectly. It will be recalled that, on a similar occasion two years ago, the *Hindenburg* took about half an hour to rise and then twice lurched downwards before her height was brought under control. It may therefore be inferred that the designers and constructors have now at their disposal much more complete knowledge as to the factors which influence the stability and behaviour of large airships and that the new vessel is thereby the more assured of a successful career. On the first of her acceptance trial flights she cruised for a period of eight hours and made a good landing at the Loewenstadt Military Aerodrome. Hydrogen was used as the lifting medium. When the *Hindenburg* was wrecked at Lakehurst in the United States, it was stated that hydrogen would not in future be used. As, however, helium is practically unobtainable outside America, the engineers have devised a method whereby it is claimed that the main risk is largely eliminated. This is associated with the necessity for releasing free hydrogen as the load diminishes due to the consumption of the fuel, but by arranging for the storage of the water formed during combustion, they have provided the necessary ballast so that the ship's height can be controlled with little or no recourse to wastage of hydrogen. The motive power is supplied by four Daimler-Benz engines, each of more than