

### Radio Communication Conference at Lisbon

THE third meeting of the Comité Consultatif International des Radiocommunications (C.C.I.R.) opened at Lisbon on September 22, and will extend over a period of about two weeks. This committee was formed at the Washington Radiotelegraphic Conference in 1927 to provide a means for representatives of those administrations operating radio communication services to meet and discuss various technical matters of mutual interest, with the view of facilitating international radio communication. The previous meeting of the C.C.I.R. was held in Copenhagen in 1931, concurrently with the meeting of the Union Radio Scientifique Internationale, which has just held its plenary congress in London. The Lisbon meeting is considering a number of problems relating to broadcasting, which arose out of the Lucerne conference, in addition to questions of more general interest. The British delegates now at Lisbon include representatives of the Post Office, the British Broadcasting Corporation, the National Physical Laboratory, the Defence Services and the commercial organisations operating radio communication services in Great Britain.

### Exploring the Greenland Ice-Sheet

DURING the recent summer, several attempts have been made to explore the mountainous interior of King Christian IX Land on the east coast of Greenland, between Scoresby Sound and Angmagssalik. The coast of this land, though somewhat inaccessible on account of pack-ice, has been explored by Amdrup, Mikkelsen, Watkins, Wager, Rasmussen and others, but penetration to the interior has so far proved to be baffling. Mr. Martin Lindsay has been successful in reaching this unknown area by crossing the Greenland ice-cap from the west coast. The *Times* reported his safe arrival at Angmagssalik on September 8, after a sledge journey of 1,050 miles from Rittenbak near Jakobshavn. He was accompanied by Lieut. A. S. T. Godfrey and Mr. A. Croft, and they took with them dog teams and stores for the entire journey. Details of the work are still lacking, but the plan was to go eastward on the seventieth parallel of north latitude towards the head of Scoresby Sound and then turn south by Mount Forel to Angmagssalik. Apart from the survey work in King Christian IX Land, this expedition will have thrown new light on the ice-sheet, which it crossed in one of its wider parts. The party is returning to Aberdeen in the trawler *Jacinth*, having arrived on the coast too late to take passage in the Danish Government ship *Gertrud Rask*.

Two other attempts on the east coast of Greenland have been less successful. The *Times* reports that an Italian expedition of five, under the leadership of Count L. Bonzi, did some work on the south of Scoresby Sound, but, owing to difficulties with the pack-ice, had to abandon the project of penetrating inland from Cape Brewster. The expedition returned to Iceland on September 16. A French expedition under Dr. P. Victor failed to penetrate the belt of

pack-ice off the Blosseville Coast and was landed by the *Pourquoi Pas?* at Angmagssalik in order to pass the winter in preparation for an attempt next year. Another crossing of the Greenland ice-sheet was made in August by Mr. Grierson, who flew from Angmagssalik to Godthaab in the course of his flight from England to Ottawa. Mr. J. M. Wordie's expedition to Ellesmere Island returned to Aberdeen on September 15, after charting new territory in Baffin Island. Earlier in the season, heavy pack in Melville Bay had held them on the west coast of Greenland and prevented access both to Cape York and to Ellesmere Island. There was in consequence no time to push westward to the Parry Islands and Banks Island, and any hope of making the North-West Passage was frustrated. Valuable work, however, is reported.

### Effects Produced by Large Electric Currents

In the *Electrician* of September 21, an account is given of experiments carried out in the high-voltage laboratory of the International General Electric Co. at Pittsfield, Mass., where artificial lightning at ten million volts was first produced. The engineers of the company have observed the effects produced by electric currents up to a quarter of a million amperes, which is much greater than any currents hitherto obtained. The object of the research was to find out the best way of protecting electric equipment against lightning discharges. A copper wire one tenth of an inch in diameter was completely vapourised in the few millionths of a second required for the discharge. When a piece of iron wire was used, it 'exploded', the ends of the wire that were left remaining white hot for several seconds. A section of reinforced concrete placed between the electrodes was broken into bits by the current in the same way that a concrete structure is shattered when struck by natural lightning. Most of a silver-plated tea-spoon vanished in a shower of sparks, but the bowl, discoloured by heat, was left. Metallic armoured cable was in some cases destroyed, and occasionally caught fire. If the arc is confined to a small fibre tube, the tremendous pressure developed blows the tube to pieces even although it has a wall a quarter of an inch thick. In the open air, the pressure produced by the discharge shatters a pane of glass several inches away. When the current is passed through a flat copper strip, the strip is crumpled until its section is nearly round. The high ampere generator is formed by a battery of condensers suitably arranged. The discharges have to be confined within strong protecting cylinders as the explosion is very violent and makes a loud report.

### Illuminating Engineering in the United States

AN address on illuminating engineering in the United States given by S. G. Hibben, the director of the Westinghouse Lamp Company, New York, has been published in the *Illuminating Engineer* of September, 1934. For underwater use, the Americans have developed special lamps. They have very strong bulbs, and both the base and the wires are wrapped