

International Congress for the History of Science

THE arrangements for the Fourth International Congress for the History of Science, to be held in Prague on September 22-27, are proceeding. The President of Czechoslovakia, Dr. Eduard Beneš, has agreed to give his patronage, and with him are Dr. Em. Franke, Minister of Education, Dr. Kamil Krofta, Minister of Foreign Affairs, Dr. Josef Zadina, Minister of Agriculture, the rectors of the Czechoslovak universities and corresponding schools, the presidents of the academies of science and of the scientific societies of Czechoslovakia, and the Chief Mayor of Prague. On the Committee of Honour, prominent leaders in industry and science in Czechoslovakia are represented. For the plenary meetings lectures have been promised by Prof. B. Němec, formerly rector of the Charles University, president of the National Research Council of Czechoslovakia; Prof. O. Grosser, formerly rector of the German University in Prague; Prof. K. Studnička, of the Charles University; Prof. Gino Loria, of the University of Genoa, formerly president of the International Academy for the History of Sciences; Prof. Abel Rey, of the Sorbonne, director of the Institute for the History of Sciences and Technics. About a hundred papers, from Czechoslovakia and from Belgium, England, France, Germany, Italy, Poland, Portugal, Rumania, U.S.S.R., and Yugoslavia, have already been received. Members of the Congress will enjoy reductions on the railways of Czechoslovakia and of the other countries interested. Further information can be obtained from the general secretary of the Congress, Prof. Fr. Ulrich, Albertov 6, Praha II.

Institute for Research in Metals, Sendai

PROF. KÔTARÔ HONDA has lately completed his twenty-fifth year as professor of physics in the Tôhoku Imperial University, and the occasion has been commemorated by the publication of a special volume of the Science Reports of that University, contributed by his pupils and by friends from many countries. This substantial volume, of 1,126 pages, is an indication of the prominent part that Prof. Honda has played as teacher and also as director of the very active Institute for Research in Metals at Sendai. As might be expected from the special interests of Prof. Honda, from his work at Göttingen onwards, many of the papers, some sixteen in all, deal with the magnetic properties of metals, but the work of the Institute has covered a wide field in metallurgy, and most branches of the physical study of metals are represented. Another group treats of transformations of alloys in the solid state including steels. The development of improved steels for permanent magnets has been one of the most important results of the investigations at Sendai, the discoveries made there having had profound industrial effects, through reducing the size of magnets and even of enabling them to take the place of electro-magnets in machine tools, etc. Terrestrial magnetism is also represented, whilst other papers describe investigations in chemistry. Many well-known names

are to be found among the contributors, and the occasion has been used to present surveys of the position of knowledge concerning several of the properties of alloys of current interest.

Transmission of Electricity in France

AN instructive lecture was given by P. M. J. Ailleret to the Transmission Section of the Institution of Electrical Engineers on April 29, the subject of the discourse being recent developments of electric transmission in France. The French system includes lines operating at 110, 120, 150 and 220 kV. The reason for this difference is partly historical and partly geographical. The grid was begun in France in 1920, the pressure used being 120 kV.; a few years later it was considered necessary to raise it to 150 kV., and the first 220 kV. line was erected five years ago. Every time a new line was proposed which did not interest existing producers, a new company had to be formed, and the whole system was financed by the co-operation between producers, distributors and interested industries. No less than thirty-nine companies were formed to finance the construction of the lines, but the responsibility for operation is entrusted to a fairly small number of them. Another reason for the use of several voltages is that in France the price of coal varies much more from one part of the country to another than it does in England. Hydro-electric generation is concentrated in limited mountain areas and nearly half the total production comes from this source. Some regions which are rich in water power have practically no local consumers, others have an important electrochemical and electrometallurgical load, constant during the day, but with seasonal fluctuations which are advantageously combined with the usual loads of a distribution system. For these reasons a voltage of 220 kV. has in some cases been necessary. An eleven mile underground cable at this voltage was found necessary to transmit the energy from the south-east to the St. Denis power station through a densely populated suburban area. This oil-filled cable can carry 150,000 kilovolt-amperes.

Fishing Gear

THE third edition of "An Account of the Fishing Gear of England and Wales" (H.M. Stationery Office. 6s. net), has recently been issued, since the first publication in 1923, a fact which bears full witness to its value. The subject is a vast one, for Mr. Davis's account ranges from the single hook hand-line to the modern otter trawl, from the whelk-pot to the fish weir nearly a quarter of a mile long. The most important modern fishing gears—otter trawl and drift net—are dealt with in detail, and the methods of shooting, fishing and hauling clearly explained. In this connexion it may be mentioned that many east coast drifters now shoot mackerel-nets forward, rather than over the stern. There is a section on the Danish plaice seine, and Mr. C. F. Hickling has rewritten the account of the Vigneron-Dahl trawl. Many of the instruments of the inshore