

annual general meeting of Baird Television, Ltd., held in a theatre in the west end of London on March 20, the shareholders heard and saw distinctly the chairman address them from a studio at the Crystal Palace, nearly eight miles distant. To the shareholders, and afterwards to representatives of the Press, the Baird Company arranged a programme of transmissions by radio from the Crystal Palace to enable the audience to see persons talking on various subjects, a cartoonist sketching at his easel, excerpts from popular films and 'still' pictures. All these items were reproduced in the receiver with sufficient detail for an audience of more than a hundred persons to 'look in', although the receiver was devised for use in the home rather than a theatre. The success of these demonstrations is attributed to the state of perfection of the large cathode ray oscillographs made exclusively for the Baird Co. by the research staff of a British industrial concern, the excellence of the photoelectric cells in use at the transmitting end, and the construction of amplifiers which are capable of dealing without phase distortion with a range of frequencies from 25 to 1,000,000 cycles per second. The subject matter to be televised is divided up into 180 lines (or strips) corresponding to 24 times the definition obtainable with the old 30-line apparatus. Vision is being transmitted from a dipole aerial on a wave-length of 6.0 metres, and sound on 6.25 metres.

JUDGING from the demonstrations given last week, the Baird Company's engineers have successfully overcome interference effects due to motors, lifts and other electro-magnetic disturbances met with at these short wave-lengths. A series of experiments have been carried out to ascertain the effective range of reception, as a result of which it is claimed that the Crystal Palace transmitting station can provide an ultra-short wave high definition television service for the whole of the Greater London area, which includes a population of about eight millions. Capt. A. G. D. West, who joined the board of the Baird Company last June to direct its technical development, is to be warmly congratulated on his achievement; and the Company on the first public demonstration of the broadcasting possibilities of high-definition television. We understand that a demonstration will shortly be given of the intermediate film-method, described by Major A. G. Church in *NATURE* of September 30, 1933, by means of which televised images of topical events will be thrown on screens in cinema theatres as well as on home-receivers within a few seconds of their occurrence. Another series of experiments on a new system of 'scanning' invented by Mr. Baird is nearing completion. These experiments aim at securing sufficient illumination in a studio to enable 'crowd' scenes to be televised directly with detailed fidelity.

#### Statistics in India

IN a paper on "India's Trade and Industrial Statistics", read before the Royal Statistical Society on March 20, Sir H. A. F. Lindsay, the Government

of India Trade Commissioner in London, pointed out that progress in the compilation and preparation of official statistics in India has been from departmental to expert control. In 1871, when Sir William Hunter was appointed as the first Director-General of Statistics, the local authorities submitted their statistics to the appropriate Government department, which was responsible for tabulating and publishing them. Afterwards, expert control was gradually introduced, and now the Director-General is directly responsible for compilation and review. A new series of monthly statistics recently introduced relates to the output of the more important Indian industries and includes jute manufacture, paper, cement, matches, sugar, iron and steel, kerosene, petrol, sulphuric acid and sulphate of ammonia. In addition, cotton spinning and weaving statistics have been collected and published for many years past. The main difficulty has been to obtain statistics of the output of the numerous cottage industries which exist alongside modern large-scale factories, sometimes in active competition with these factories and sometimes catering for quite a different class of consumer. The Indian factory, however, provides a useful unit for the collection, compilation and publication of statistics of industrial output, and India has made a good start in this direction. There are many countries of no little industrial importance which have not yet made comparable efforts in the sphere of industrial statistics.

#### Origin of Bronze

AT a meeting of the Newcomen Society held on March 21, three short papers were read. The first of these, entitled "The Origin of Bronze", was by Prof. C. H. Desch, who gave an account of the results of the inquiries made for the committee of the British Association appointed to investigate the sources of the copper used by the Sumerians. Many specimens of objects found recently at Ur, Kish, Tell Asmar and other places have been analysed, and earlier analyses have been critically examined. A striking discovery is that true bronzes were made at a very early date and some of these contain certain 'key' elements, such as nickel and arsenic. So many of the early Mesopotamian objects examined contained small quantities of nickel that a search was made for copper ores containing nickel. One ore was found, accompanied by slag, at Jabal al Ma 'adan, in the State of Oman, and there are reasons for supposing this was a source from which the Sumerian cities drew their copper. Bronze, said Prof. Desch, must have originated in the East, and for further light on its origin an examination of ores from such places as Anatolia, northern Persia and Baluchistan must be made.

#### Early Dredging Machine

ANOTHER paper read at the meeting of the Newcomen Society on March 21 was by Mr. G. Bathe and dealt with the dredging machine of Oliver Evans. Oliver Evans was one of the outstanding pioneers of American engineering, constructing machinery for flour mills and introducing high-