

produce a linear beam of very small aperture, directed from the transmitting to the receiving station. The reflectors must be in direct sight. In the cross-Channel communications, for example, one of the stations was at St. Inglevert on the French side, the other at Lympne in England, the distance between being about 50 kilometres. The electro-optical equipments were installed on suitable steel towers at St. Inglevert and Lympne. The results of operation were very good on this link, which represents the shortest wave-length circuit in commercial use. The link was used for two-way teleprinter messages as well as duplex telephony. Atmospheric effects are never heard on the circuits. No interference whatever is caused either by thunderstorms or motor-cars; the background noise in the receiver exactly resembles normal tube noise.

A very important step was taken when Southworth, Carson, Mead and Schelkunoff, of the Bell Laboratories, first began investigating short-wave propagation along conducting hollow tubes (so-called dielectric cables). Very similar researches were started almost at the same time by Barrow at the Massachusetts Institute of Technology. Brillouin concludes by discussing the theory of dielectric cables for various kinds of cross-sections. These high-frequency oscillations have opened up a new field of research in which are very curious theoretical and technical problems, and good prospects for important practical applications.

FORTHCOMING EVENTS

[Meeting marked with an asterisk is open to the public.]

MONDAY, NOVEMBER 10

FARMERS' CLUB (at the Royal Empire Society, Craven Street, London, W.C.2), at 3 p.m.—Mr. Thomas Peacock: "Farming's Great War Effort".

ROYAL GEOGRAPHICAL SOCIETY (at Kensington Gore, London, S.W.7), at 3 p.m.—Lieut. A. R. Glen: "Recent Changes in the Spitsbergen Glaciers".

SOCIETY OF CHEMICAL INDUSTRY (under the auspices of the Institute of Chemistry in the General Lecture Theatre of the University of Leeds), at 6.30 p.m.—Dr. Dorothy Jordan Lloyd: "Application of X-Rays to Leather Manufacture".

TUESDAY, NOVEMBER 11

CHADWICK PUBLIC LECTURE (at the London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1), at 2.30 p.m.—Mr. Fredk. R. Hiorns: "Hygiene Technique in Building, or the Economic, Psychological and Health Aspects of Surface Treatment".*

WEDNESDAY, NOVEMBER 12

SOCIETY OF CHEMICAL INDUSTRY (FOOD GROUP) (at the Chemical Society, Burlington House, Piccadilly, London, W.1), at 2.30 p.m.—Dr. A. J. Amos: "Microbiology and Baking".

THURSDAY, NOVEMBER 13

PHARMACEUTICAL SOCIETY (at 17 Bloomsbury Square, London, W.C.1), at 2.30 p.m.—Dr. Harold King, F.R.S.: "Chemistry and Pharmacy".

ROYAL COLLEGE OF SURGEONS OF ENGLAND (at the Royal Society of Medicine, 1 Wimpole Street, London, W.1), at 3.30 p.m.—Dr. W. E. Gye, F.R.S.: "Filterable Tumours" (Imperial Cancer Research Fund Lecture).

APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned:

HEAD OF THE MATHEMATICS DEPARTMENT—The Secretary, The Technical College, Sunderland (November 15).

CHIEF ASSISTANT ENGINEER—The Engineer to the Witham and Steeping Rivers Catchment Board, 50 Wide Bargate, Boston, Lincs. (November 17).

LECTURER IN ELECTRICAL ENGINEERING—The Principal, County Technical College, Worksop, Notts. (November 18).

PROFESSOR OF EDUCATION—The Bursar and Deputy Registrar, University College of North Wales, Bangor (November 22).

SENIOR PHYSICS MASTER at the Rutherford College Boys' School, Newcastle-upon-Tyne—The Director of Education, City Education Office, Newcastle-upon-Tyne, 2 (November 29).

ASSISTANT ENGINEER to the Sudan Government Railways—The Controller, Sudan Government London Office, Wellington House, Buckingham Gate, London, S.W.1 (endorsed 'Assistant Engineer').

REPORTS AND OTHER PUBLICATIONS

(not included in the monthly Books Supplement)

Great Britain and Ireland

British Rubber Producers' Research Association. Publication No. 13: Analytical Methods in Rubber Chemistry, 4: The Determination of Peroxidic Oxygen. By J. L. Bolland, A. Sundralingam, D. A. Sutton and G. R. Tristram. Pp. 4. (London: British Rubber Producers' Research Association.) [1510]

Department of Scientific and Industrial Research. Index to the Literature of Food Investigation. Vol. 13, No. 1, June 1941. Compiled by Agnes Elisabeth Glennie, assisted by Gwen Davies and Catherine Alexander. Pp. iv+78. (London: H.M. Stationery Office.) 4s. 6d. net. [1510]

Memoirs of the Cotton Research Station, Trinidad. Series A: Genetics. No. 17: The Comparative Genetics of *Gossypium anomalum* and the Cultivated Asiatic Cottons. By R. A. Silow. Pp. 259-358. (London: Empire Cotton Growing Corporation.) 2s. 6d. [1510]

Other Countries

Publications of the Observatory of the University of Michigan. Vol. 8, No. 9: The Measurement of Space Motions of Solar Prominences. By Robert R. McMath, with the collaboration of H. E. Sawyer and Orren C. Mohler. Pp. 123-132+1 plate. Vol. 8, No. 10: Fourth List of New Southern Double Stars found at the Lamont-Hussey Observatory of the University of Michigan at Bloemfontein, Orange Free State, South Africa. By Richard A. Rossiter. Pp. 133-140+2 plates. (Ann Arbor, Mich.: University of Michigan.) [1310]

Smithsonian Miscellaneous Collections. Vol. 101, No. 2: A New Salamander of the Genus *Gyrinophilus* from the Southern Appalachians. By M. B. Mittleman and Harry G. M. Jopson. (Publication 3638.) Pp. ii+5+1 plate. (Washington, D.C.: Smithsonian Institution.) [1310]

Transactions of the Academy of Science of St. Louis. Vol. 30, No. 5: Archaeological Investigations in Jefferson County, Missouri, 1939-40. By Robert McCormick Adams. Pp. 145-222. (St. Louis, Mo.: Washington University.) [1710]

National Research Council of Canada. N.R.C. No. 1002: Twenty-fourth Annual Report of the National Research Council of Canada, 1940-41. Pp. 28. N.R.C. No. 1012: Review of Potato Research, Part 1: Potato Research in Canada. By Muriel E. Whalley. Pp. iii+54. 50 cents. (Ottawa: National Research Council of Canada.) [2010]

India Meteorological Department. Scientific Notes, Vol. 8, No. 91: The Hindu Kush Earthquake of November 21, 1939. By S. M. Mukherjee and A. R. Pillai. Pp. 85-90+2 plates. (Delhi: Manager of Publications.) 8 annas; 9d. [2010]

Commonwealth of Australia: Council for Scientific and Industrial Research. Pamphlet No. 106: A Report on Agricultural Features of the Australian Potato Industry. By Dr. J. G. Bald. Pp. 72. (Melbourne: Government Printer.) [2010]

Field Museum of Natural History. Zoological Series, Vol. 24, No. 21: The Herpetological Fauna of the Salama Basin, Baja Verapaz, Guatemala. By Karl P. Schmidt and L. C. Stuart. Pp. 233-248. 15 cents. Zoological Series, Vol. 24, No. 23: A New Subspecies of *Sceloporus jarrovi* from Mexico. By Hobart M. Smith and Bryce C. Brown. Pp. 253-258. 10 cents. (Chicago: Field Museum of Natural History.) [2010]

U.S. Department of Agriculture. Farmers' Bulletin No. 1880: Control of Insect Pests of Grain in Elevator Storage. By R. T. Cotton and Geo. B. Wagner. Pp. ii+22. (Washington, D.C.: Government Printing Office.) 5 cents. [2010]

Catalogues

Electrochemical Analysis Apparatus: a New Apparatus designed for use in the Speedy and Accurate Analysis of Alloys of all Kinds. (GT. 1325.) Pp. 4. (London: Griffin and Tatlock, Ltd.)

New Glaxo Products and Revised Price List. Pp. 8. (Greenford: Glaxo Laboratories, Ltd.)

Rotherham's Instruments. (Ref. L.123/41.) Pp. 4. (Coventry Rotherham and Sons, Ltd.)

General Catalogue of Books of All Ages. (Catalogue No. 658.) Pp. 102. (London: Francis Edwards, Ltd.)

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