

induced in a relay by the operation of a neighbouring relay.

A fluxmeter working on these principles has been developed in the Bell Laboratories and is described by E. L. Norton (*Bell Lab. Rec.*, 20, No. 10; June, 1942). It has a pulse generating device operating high-speed relays which reverse simultaneously the current producing the flux and the meter connexions. Pulse rates of 30, 15, 7.5 and 3.75 per sec. are obtained from gas tube discharges as submultiples of 60-cycle alternating current. The measuring circuit includes a bridge which is used when flux is measured by the voltage induced in the coil itself. Switching is so arranged that, when not pulsing, the bridge may be balanced using the indicating meter as a galvanometer. A loss pad is incorporated enabling the meter to read one third or one tenth of the actual current. This apparatus gives readings more conveniently and accurately than previous magnetic fluxmeter readings usually made with a ballistic galvanometer. In addition, it has the added advantage of being suitable for adaption to a portable construction.

FORTHCOMING EVENTS

Tuesday, September 22

INSTITUTE OF PHYSICS (at the Royal Institution, Albemarle Street, London, W.1), at 11 a.m.—Discussion on "The Determination of Equilibrium Diagrams by X-Ray Methods". (Opening speakers: Dr. A. J. Bradley, F.R.S., Dr. W. Hume-Rothery, F.R.S., Dr. M. L. V. Gayler, Prof. E. A. Owen.)

Wednesday, September 23

BRITISH SOCIETY FOR INTERNATIONAL BIBLIOGRAPHY (at the Science Museum, Exhibition Road, South Kensington, London, S.W.7), at 2.15 p.m.—Presidential Address. Mr. H. Rottenburg: "Publishers and the Universal Decimal Classification".

Saturday, September 26

SOCIETY OF CHEMICAL INDUSTRY (JOINT MEETING OF THE MANCHESTER SECTION AND THE FOOD GROUP) (in the Reynolds Hall, College of Technology, Manchester), at 2.30 p.m.—Dr. L. H. Lampitt: "The Preservation of Foodstuffs".

APPOINTMENTS VACANT

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

DRAINAGE ENGINEER to the Hampshire Rivers Catchment Board—The Clerk to the Board, The Castle, Winchester (September 28).

DIRECTOR OF THE CHEMICAL RESEARCH LABORATORY, TEDDINGTON—The Secretary, Central Register (Ref. F690), Ministry of Labour and National Service, Sardinia Street, Kingsway, London, W.C.2 (September 30).

TEACHER OF ELECTRICAL ENGINEERING—The Principal, Wolverton Technical College, Wolverton, Bucks. (October 3).

LECTURER IN PHYSIOLOGY—The Principal, Liverpool Physical Training College, Barkhill Road, Liverpool 17.

GRADUATE LECTURER with good Honours or higher qualifications in MATHEMATICS—The Principal, Neath Mining and Technical Institute, Neath, Glamorgan.

REPORTS and other PUBLICATIONS

(not included in the monthly Books Supplement)

Great Britain and Ireland

Ministry of Health. First and Second Interim Reports of the Medical Personnel (Priority) Committee. Pp. 12. (London: H.M. Stationery Office.) 2d. net. [89]

Reports of the Progress of Applied Chemistry. Vol. 26, 1941. Pp. 545. (London: Society of Chemical Industry.) [89]

Scottish Society for Research in Plant-Breeding. Report (abridged) by the Directors and Report by the Director of Research to the Annual General Meeting, 16th July 1942. Pp. 34. (Edinburgh: Scottish Society for Research in Plant-Breeding.) [89]

Amgueddfa Genedlaethol Cymru: National Museum of Wales. Plant Illustration from Woodcut to Process Block: Handbook to a Temporary Exhibition, based on the Collection in the Department of Botany, July-December 1942. By A. E. Wade. Pp. 32. (Cardiff: National Museum of Wales.) 3d. [89]

Medical Research Council: Industrial Health Research Board. Emergency Report No. 3: The Personal Factor in Accidents. Pp. 20. (London: H.M. Stationery Office.) 4d. net. [89]

Economic Proceedings of the Royal Dublin Society. Vol. 3, No. 9: Notes on some Lepidopterous Pests on Fruit Trees, and their Parasites, in Ireland during 1941. By Dr. Bryan P. Beirne. Pp. 107-118. (Dublin: Hodges, Figgis and Co., Ltd.; London: Williams and Norgate, Ltd.) 1s. [89]

Imperial Bureau of Soil Science. Technical Communication No. 41: The Take-All Disease of Cereals. By S. D. Garrett. Pp. iii+40. (Harpenden: Imperial Bureau of Soil Science.) 2s. 6d. [89]

Scientific Proceedings of the Royal Dublin Society. Vol. 22 (N.S.) No. 49: Salmon of the River Erne—Results of the Examination of a Small Collection of Scapes and Data. By Arthur E. J. Went. Pp. 471-480. (Dublin: Hodges, Figgis and Co., Ltd.; London: Williams and Norgate, Ltd.) 1s. [89]

Civil Service Reform: the Interim Report of the Sub-Committee on the Reform of the Civil Service appointed by the Industrial and Social Reconstruction Committee of the Liberal Party. Pp. 16. (London: Liberal Publication Department.) 3d. [89]

Infant and Maternal Mortality in relation to Size of Family and Rapidity of Breeding: a Study in Human Responsibility. By C. M. Burns. Pp. viii+247. (Newcastle-upon-Tyne: King's College Medical School.) 5s. [109]

Other Countries

Bulletin of the American Museum of Natural History. Vol. 79, Art. 7: Results of the Archbold Expeditions, No. 43: Birds of the 1938-1939 New Guinea Expedition. By A. L. Rand. Pp. 425-516. Vol. 79, Art. 8: Results of the Archbold Expeditions, No. 44: Some Notes on Bird Behavior. By A. L. Rand. Pp. 517-524. (New York: American Museum of Natural History.) [278]

Proceedings of the United States National Museum. Vol. 92, No. 3145: Notes on Beetles related to *Phyllophaga* Harris, with Descriptions of New Genera and Subgenera. By Lawrence W. Saylor. Pp. 157-165+plate 17. Vol. 92, No. 3146: Descriptions of the Larvae of some West Indian Melolonthine Beetles and a Key to the Known Larvae of the Tribe. By Adam G. Böving. Pp. 167-176+plates 18-19. (Washington, D.C.: Government Printing Office.) [288]

Bericht über das Geobotanische Forschungsinstitut Rübel in Zürich für das Jahr 1941. Von E. Rübel und W. Lüdi. Pp. 37+2 plates. (Zürich: Geobotanische Forschungsinstitut Rübel.) [288]

Agriculture and Animal Husbandry in India, 1938-39. Pp. v+422+10 plates. (Delhi: Manager of Publications.) 6 rupees; 6s. 9d. [89]

Consejo Superior de Investigaciones Científicas: Instituto Nacional de Geofísica, No. 3 (Memorias del Observatorio del Ebro, 8): Contribución al estudio general del problema de la repetición de los eclipses. Por Dr. José M^o Torroja Menéndez. Pp. 98. (Tortosa: Librería de Algueró y Baiges.) [89]

Proceedings of the California Academy of Sciences, Fourth Series. Vol. 23, No. 31: Notes on a Collection of Reptiles and Amphibians from Guatemala. 2. Lizards. By Joseph R. Slevin. Pp. 453-462. Vol. 23, No. 32: Notes on a Collection of Reptiles from Boquete, Panama, with the Description of a New Species of *Hydromorphus*. By Joseph R. Slevin. Pp. 463-480+plates 39-42. (San Francisco, Calif.: California Academy of Sciences.) [89]

Indian Forest Bulletin No. 111 (Utilisation, New Series): Cheap and Simple Types of Tanks for the Treatment of Timber by the Dipping, Steeping or Open Tank Process. By Dr. D. Narayanamurti. Pp. iii+3+6 plates. (Delhi: Manager of Publications.) 6 annas; 7d. [89]

Publications of the Dominion Observatory, Ottawa. Vol. 13: Bibliography of Seismology, No. 11: Items 5280-5356, January to June, 1942. By Ernest A. Hodgson. Pp. 189-200. (Ottawa: King's Printer.) 25 cents. [89]

Canada: Department of Mines and Resources: Mines and Geology Branch, Geological Survey. Paper 42-1: Preliminary Map, Mansonville, Quebec. By J. W. Ambrose. 10 cents. Paper 42-2: Second Preliminary Map, Manson Creek, British Columbia. By A. H. Lang. 10 cents. Paper 42-3: Marble Mountain Map-Area, Alberta (Summary Account). By H. H. Beach. Pp. 15+map. 10 cents. Paper 42-4: Brock River Map-Area, Abitibi and Mistassini Territories, Quebec (Summary Account). By E. D. Kindle. Pp. 7+map. 10 cents. Paper 42-5: Preliminary Map, Cypress Lake, Saskatchewan. By G. M. Furnival. 10 cents. Paper 42-6: Preliminary Map, Princeton, British Columbia. By H. M. A. Rice. 10 cents. Paper 42-8: Preliminary Map, Bassano, Alberta. By J. S. Stewart. 10 cents. Paper 42-10: Preliminary Map, Eastmain, Quebec. By G. Shaw. 10 cents. (Ottawa: King's Printer.) [89]

Catalogues

ST'R Electronic Controls. (AH-243.) Pp. 4. (London: L.A. Steiner). A Supplement of Scientific Books. (No. 17c, 1942.) Pp. 12. (Cambridge: W. Heffer and Sons, Ltd.)

Gestyl Organon: Gonadotropin of Pregnant Mare Serum. Pp. 6. (London: Organon Laboratories, Ltd.)

General Catalogue. (Catalogue No. 663.) Pp. 74. (London: Francis Edwards, Ltd.)