

air within the hive in really cold weather by guarding the entrance is more important than any external packing.

To obtain currents of 1-20 watts from a 230-volt circuit requires resistances which, if wire-wound and suitably insulated, are relatively costly. On the other hand, two miniature lamps of suitable rating in series will give results of the right order at a moderate cost with reasonable life, and will admit of wiring a number of hives in parallel off a mained loop from hive to hive.

The hive used for preliminary experimental work consisted of a standard National body on a base with deep cover, a 6-in. lift being used to carry the heating units and packing so that the deep cover just overlapped the top of the body box. The hive was located in a well-ventilated wooden shed to protect it from winds. In certain tests a small fan was used to blow a stream of air at a speed of about 12 m.p.h. diagonally at the entrance. The hive used represents roughly the minimum size of stock hive that would be employed for wintering in Great Britain.

It has been shown that a small increase in the difference between the internal and external temperatures of the hive has a useful effect in reducing condensation and consequent dampness. Two periods have to be considered, namely, the quiescent period and the early brood-raising period. The useful applications already made belong to the early brood-raising period; the difficulties met with are mainly difficulties of control.

Twenty-four heating units are being built for Rothamsted Experimental Station, where they will be used with and without thermostatic control during next winter.

FORTHCOMING EVENTS

Monday, May 5

ROYAL SOCIETY OF ARTS (at John Adam Street, Adelphi, London, W.C.2), at 2.30 p.m.—Dr. G. Stafford Whitby: "Chemotherapy", II.

BRITISH PSYCHOLOGICAL SOCIETY (at 55 Russell Square, London, W.C.1), at 1.20 p.m.—Mrs. Winifred Raphael: "War-Time Grouses in Industry".

Thursday, May 8

INSTITUTION OF ELECTRICAL ENGINEERS (at Savoy Place, London, W.C.2), at 2.30 p.m.—Prof. S. Chapman, F.R.S.: "Electrical Works by Helios, or The Sun and the Ionosphere".

Friday, May 9

GEOLOGISTS' ASSOCIATION (at the Geological Society of London, Burlington House, Piccadilly, London, W.1), at 5.30 p.m.—Mr. C. E. N. Bromehead: "The Early History of Mining".

APPOINTMENTS VACANT

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

TEACHER OF ENGINEERING WORKSHOP PRACTICE AND/OR WOODWORK AND DRAWING, and a TEACHER OF MATHEMATICS AND SCIENCE, at the Mexborough Schofield Technical Institute—The Secretary to the Managers, Education Office, Mexborough, Yorks. (May 10).

SENIOR ASSISTANT MASTER TO TEACH SCIENCE AND MATHEMATICS at the Sparkhill Commercial School—The Chief Education Officer, Higher Education Department, Education Offices, Council House, Margaret Street, Birmingham 3 (May 12).

PRINCIPAL of the Shrewsbury Technical College—The Secretary, for Education, County Buildings, Shrewsbury (May 21).

PROFESSOR OF MECHANICAL ENGINEERING—The Registrar, University of Sydney, Sydney, N.W.S., Australia (June 1).

REPORTS AND OTHER PUBLICATIONS

(not included in the monthly Books Supplement)

Great Britain and Ireland

University College of Wales, Aberystwyth: Welsh Plant Breeding Station. War Food Production Advisory Bulletin No. 2: Ley-Farming. By Sir R. George Stapledon. Pp. 22. (Aberystwyth: Welsh Plant Breeding Station.) 1s. [313]

Spectrochemical Abstracts. Vol. 2, 1938-1939. By Ernest H. S. van Someren. Pp. 38. (London: Adam Hilger, Ltd.) [313]

Scientific Proceedings of the Royal Dublin Society. Vol. 22 (N.S.), No. 37: Studies in Peat, Part 10: Activated Charcoals from Peat Residue. By Dr. Joseph Reilly and James R. O'Donoghue. Pp. 367-377. (Dublin: Hodges, Figgis and Co., Ltd.; London: Williams and Norgate, Ltd.) 1s. [84]

Imperial Forestry Institute: University of Oxford. Sixteenth Annual Report, 1939-40. Pp. 18. (Oxford: Imperial Forestry Institute.) [84]

Thirty-eighth Annual Report, 1940-1941, of the Imperial Cancer Research Fund. Pp. 34. (London: Royal College of Surgeons.) [94]

Proceedings of the Royal Society of Edinburgh. Section A (Mathematical and Physical Sciences). Vol. 61, Part 1, No. 4: On an Elementary Solution of a Partial Differential Equation of Parabolic Type, Part 1. By E. T. Copson. Pp. 37-53. 1s. 6d. Vol. 61, Part 1, No. 5: On an Elementary Solution of a Partial Differential Equation of Parabolic Type, Part 2: The Nature of the Singularity. By E. T. Copson. Pp. 54-60. 6d. (Edinburgh and London: Oliver and Boyd.) [224]

Town and Country Planning Association. Forty-second Annual Report. Pp. 8. (Welwyn Garden City: Town and Country Planning Association.) [224]

British Trust for Ornithology. Seventh Report, for the Year 1940. Pp. 12. (Oundle: British Trust for Ornithology.) [244]

Other Countries

Imperial Council for Agricultural Research. Scientific Monograph No. 14: Further Studies on Cereal Rusts in India. By Dr. K. C. Mehta. Pp. vii+224+12 plates. (Delhi: Manager of Publications.) 6 rupees; 9s. 6d. [313]

Union of South Africa: Department of Agriculture and Forestry. Pamphlet No. 222 (Chemistry Series No. 163): The Inoculation of Clover. By W. B. Goldschmidt and Dr. E. R. Orchard. Pp. 8. (Pretoria: Government Printer.) 3d. [24]

Carvão de Santa Catarina. Relatório a apresentado em 1890 a o Governo da Republica pelos Luiz F. Gonzaga de Campos, Fabio Hostillo de Moraes Rego, João Caldeira d'Alvarenga Messeder. Pp. 91. Duas Notas sobre os Cimentos Nacionais—os 'Compostos' do Cimento. Pelo Paulo Sá. Pp. 39. A industria e o Laboratorio: o auxilio dos Laboratorios as Industrias de Construção. Pelo Paulo Sá. Pp. 32. A especificação Brasileira para Cimento Portland e as tendências modernas sobre o assunto. Pelo Paulo Sá. Pp. 28. Metalografia das Ligas de Alumínio: alumínio-ferro. Por E. Orosco e Helena Brandão Orosco. Pp. 16+12 plates. Estabilização de solos. Pelo Paulo Sá. Pp. 51. (Rio de Janeiro: Instituto Nacional de Tecnologia.) [34]

Antuario del Observatorio Astronómico de Madrid para 1941. Pp. 300. (Madrid: Instituto Geográfico.) [34]

Colony of Mauritius: Department of Agriculture. Tenth Annual Report of the Sugarcane Research Station for the Year 1939. Pp. 48. (Mauritius: Government Printer.) 70 cents. [84]

Indian Central Cotton Committee: Technological Laboratory. Technological Bulletin Series A, No. 51: Technological Reports on Trade Varieties of Indian Cottons, 1940. By Dr. Nazir Ahmad. Pp. vi+107. 1.3 rupees. Technological Bulletin, Series A, No. 52: Technological Reports on Standard Indian Cottons, 1940. By Dr. Nazir Ahmad. Pp. iv+110. 1.3 rupees. (Bombay: Indian Central Cotton Committee.) [84]

Memoirs of the National Academy of Sciences. Vol. 23, Third Memoir: Observations and Measurements on the Members of the National Academy of Sciences. By Aleš Hrdlička. Pp. x+108. (Washington, D.C.: Government Printing Office.) 30 cents. [114]

Smithsonian Miscellaneous Collections. Vol. 99, No. 19: Notes on Mexican Snakes of the Genus *Geophis*. By Hobart M. Smith. (Publication 3629.) Pp. ii+6. Vol. 99, No. 20: Further Notes on Mexican Snakes of the Genus *Salvadora*. By Hobart M. Smith. (Publication 3630.) Pp. ii+12. (Washington, D.C.: Smithsonian Institution.) [114]

Punjab Irrigation Research Institute. Report for the Year ending April 1939. Pp. v+7+189+102 plates. Research Publication, Vol. 2, No. 24: Experiments for the Haveli Project on a Model of the Rivers Jhelum and Chenab Downstream of their Confluence. By Dr. N. K. Bose and L. Thakar Dass Gulati. Pp. 58+27 plates. 1.8 rupees. Research Publication, Vol. 2, No. 25: Experiments for Silt Control on a Model of the Emerson Barrage. Left Undersluices, Left Regulator, with a Part of the River Chenab Upstream. By Dr. N. K. Bose and L. Thakar Dass Gulati. Pp. 12+26 plates. 6 annas. Research Publication, Vol. 3, No. 4: The Formation and the Reclamation of Thur Lands in the Punjab. By M. L. Mehta. Pp. 54+17 plates. (Lahore: Government Printing Office.) [104]

Canada: Department of Mines and Resources: Mines and Geology Branch, Geological Survey. Paper 40-15: Preliminary Map, Grave Flats, Alberta. By B. R. MacKay. 10 cents. Paper 40-16: Preliminary Map, Pembina Forks, Alberta. By B. R. MacKay. 10 cents. Paper 40-19: Preliminary Map, Bearberry, Alberta. By H. H. Beach. 10 cents. Paper 40-20: Preliminary Map, Assinica Lake, Quebec. By G. Shaw. 10 cents. Paper 40-21: Preliminary Map, Mishagomish Lake, Quebec. By G. Shaw. 10 cents. (Ottawa: King's Printer.) [174]