

The use of gas producers for propelling road-vehicles has been studied at the Fuel Research Station since 1923 and in recent years more intensely. The work reported has been concerned mainly with the choice of suitable fuels and done largely in close association with the officers of the Coal Survey. The number of vehicles propelled by producer gas and seen on the roads is relatively small—possibly because the need for petrol substitutes has not been too pressing. There has, however, been no lack of scientific and industrial effort.

The section on domestic heating is largely concerned with the measurement of smoke emission and the means for its abatement. It was found that design of fire-places conducive to securing admixtures of products of combustion with air and to conserving their high temperature would make a considerable reduction in smoke. Unfortunately, present circumstances do not make the advantages of smoke reduction so evident as they will be when peace returns.

H. J. HODSMAN.

## FORTHCOMING EVENTS

Wednesday, January 8

ROYAL SOCIETY OF MEDICINE (at 1 Wimpole Street, London, W.1.) at 2.30 p.m. Prof. S. Zuckerman: "The Problem of Blast Injuries."

## APPOINTMENTS VACANT

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

PRINCIPAL OF LISBURN TECHNICAL SCHOOL AND ORGANIZER OF TECHNICAL EDUCATION—The Secretary, Lisburn and Belfast (Rural) Regional Education Committee, Castle Chambers, Lisburn, Co. Antrim (January 15).

LECTURER IN MECHANICAL ENGINEERING—The Principal, Walsall Technical College, Bradford Place, Walsall (January 18).

ASSISTANT EXECUTIVE ENGINEERS in the Punjab Service of Engineers, Class I—The High Commissioner for India, General Department, India House, Aldwych, London, W.C.2 (quoting Appointment 1/11/A (January 24).

PROFESSOR OF ANATOMY—The Secretary and Registrar, University, Bristol (January 30).

TEACHER OF ELECTRICAL ENGINEERING in the Smethwick Municipal College—The Chief Education Officer, 215 High Street, Smethwick.

SENIOR LECTURER IN MECHANICAL ENGINEERING—The Clerk to the Governors, South-West Essex Technical College and School of Art, Forest Road, Walthamstow, London, E.17.

## REPORTS AND OTHER PUBLICATIONS

(not included in the monthly Books Supplement)

### Great Britain and Ireland

Amgueddfa Genedlaethol Cymru: National Museum of Wales. Mammals and Man: Handbook to a Temporary Exhibition, November 1940 to April 1941. By Colin Matheson. Pp. 22. (Cardiff: National Museum of Wales and Press Board of the University of Wales.) 3s. [212]

Proceedings of the Royal Society of Edinburgh, Session 1939-1940. Vol. 60, Part 3, No. 26: Some Confluent Hypergeometric Functions of Two Variables. By A. Erdélyi. Pp. 344-361. 1s. 6d. Vol. 60, Part 4, No. 27: The Design and Interpretation of Experiments based on a Four-fold Table; the Statistical Assessment of the Effect of Treatment. By Dr. W. O. Kermack and Dr. A. G. M'Kendrick. Pp. 362-375. 1s. 3d. (Edinburgh: Robert Grant and Son, Ltd.; London: Williams and Norgate, Ltd.) [212]

Department of Scientific and Industrial Research. Index to the Literature of Food Investigation. Vol. 12, No. 1, June 1940. Compiled by Agnes Elisabeth Glennie, assisted by Gwen Davies and Catherine Robson. Pp. iv+74. (London: H.M. Stationery Office.) 4s. 6d. net. [512]

Hannah Dairy Research Institute. Annual Report for the Year ending 31st March 1940. Pp. 20+4 plates. (Kirkhill: Hannah Dairy Research Institute.) [612]

Town Planning Institute. Town and Country Planning: Compensation and Betterment. Report of Committee of the Institute approved by the Council of the Institute, 31st May 1940. Pp. 60. (London: Town Planning Institute.) [612]

Memoirs of the Cotton Research Station, Trinidad. Series B: Physiology. No. 13: The Effect of Ringing on the Upward Movement of Solutes from the Root; The Effect of Ringing and of Transpiration on Mineral Uptake. By E. Phillis and T. G. Mason. Pp. 16. (London: Empire Cotton Growing Corporation.) 2s. 6d. [1012]

University of London: Institute of Archaeology. Geochronological Table No. 2: The Age of Neanderthal Man, with Notes on the Cotte de St. Brelade, Jersey, C.I. By Frederick E. Zeuner. (Occasional Paper 3.) Pp. 20. (London: Institute of Archaeology.) 3s. [1012]

The Control and Extermination of Wild Rabbits. By A. D. Middleton. Pp. 28. (Oxford: Bureau of Animal Population.) [1212]

Herbage Publication Series. Bulletin 30: The Grasslands of the Argentine and Patagonia. By William Davies. Pp. 48+7 plates. (Aberystwyth: Imperial Bureau of Pastures and Forage Crops.) 2s. 9d. [1212]

Amgueddfa Genedlaethol Cymru: National Museum of Wales. Thirty-third Annual Report 1939-40 presented by the Council to the Court of Governors on the 25th October 1940. Pp. 49+2 plates. (Cardiff: National Museum of Wales.) [1312]

### Other Countries

Southern Rhodesia Geological Survey. Short Report No. 32: Report on the Geology and Mines of the Insiza-Fort Rixon Gold Belt. By R. Tyndale-Biscoe. Pp. 23. (Salisbury: Government Printer.) [212]

Report of the Aeronautical Research Institute, Tôkyô Imperial University. No. 191: Measurement of the Period of Natural Vibration of an Airscrew Blade. By Jûichi Obata and Yahei Yosida. Pp. 97-108. 30 sen. No. 192: Viscosity Characteristics of Lubricating Oils as related to their Chemical Structure. By Bunnosuke Yamaguchi, Pp. 109-136. 50 sen. No. 193: Dynamical Stability of a Column under Periodic Longitudinal Forces. By Ikuo Utida and Katsutada Sezawa. Pp. 137-184. 80 sen. No. 194: On the Subsonic Flow of a Compressible Fluid past an Elliptic Cylinder. By Isao Imai and Takasi Aihara. Pp. 185-212. 45 sen. No. 195: Some Experiments on the Forced Vibration of Varying Period. By Katsutada Sezawa and Wataru Watanabe. Pp. 213-228. 30 sen. (Tôkyô: Kôgyô Toshô Kabushiki Kaisha.) [212]

New Zealand: Marine Department. Fisheries Bulletin No. 8: Natural Reproduction of Trout in New Zealand and its Relation to Density of Populations. By Derisley F. Hobbs. Pp. 93. (Wellington: Government Printer.) 3s. [312]

Bulletin of the American Museum of Natural History. Vol. 77, Art. 5: *Merychoerinae*, a New Subfamily of Oredonts. By C. Bertrand Schultz and Charles H. Falkenbach. Pp. 213-306. (New York: American Museum of Natural History.) [312]

U.S. Office of Education: Federal Security Agency. Bulletin, 1940, No. 2: Statistics of Public High Schools, 1937-38. (Biennial Survey of Education in the United States, Chapter 5.) Statistical Tables prepared under direction of David T. Blose; Text prepared by Carl A. Jessen. Pp. vi+192. (Washington, D.C.: Government Printing Office.) 15 cents. [312]

Madras Fisheries Department. Administration Report for the Year 1938-39. By Diwan Bahadur Dr. B. Sundara Raj. Pp. iii+76+2. (Madras: Government Press.) 8 annas. [312]

Proceedings of the United States National Museum. No. 3077: Further Studies on the Opalinid Ciliate Infusorians and their Hosts. By Maynard M. Metcalf. Pp. 465-634. (Washington, D.C.: Government Printing Office.) [412]

Anthropological Records. Vol. 2, No. 5: The Social Organization of the Haisla of British Columbia. By Ronald L. Olson. Pp. 165-200. 35 cents; 2s. net. Vol. 4, No. 1: Culture Element Distributions, 12: Apache-Pueblo. By E. W. Gifford. Pp. vi+208. 2 dollars; 12s. net. (Berkeley, Calif.: University of California Press; London: Cambridge University Press.) [612]

New Zealand: Department of Lands and Survey. Annual Report on Public Domains and National Parks of New Zealand. Pp. 10. 6d. Report on Scenery Preservation for the Year ended 31st March 1940. Pp. 8. 6d. (Wellington: Government Printer.) [612]

The Dissection of the Shark *Eulamia menisorrah* (Müller and Henle): an Illustrated Guide for the use of First-Year University Students. By G. A. C. Herklots. Pp. 28. (Hong Kong: The University.) 1 dollar; 2s. [1012]

U.S. Office of Education: Federal Security Agency. Bulletin, 1940, No. 1: Educational Directory, 1940. Pp. iv+48+28+86+72. Know Your School Leaflet No. 55; Know Your State Educational Program. By W. S. Deffenbaugh. Pp. iv+26. 5 cents. (Washington, D.C.: Government Printing Office.) [1012]

Commonwealth of Australia. Report of the Director of the Commonwealth Solar Observatory to the Advisory Board. Pp. 8. (Canberra: Commonwealth Government Printer.) [1012]

Malayan Forest Records. No. 13: Timber Utilization in Malaya. By H. E. Desch and A. V. Thomas. Pp. ix+81+35 plates. (Kuala Lumpur: Forest Department.) 3 dollars; 7s. 6d. [1212]

Canada: Department of Mines and Resources: Mines and Geology Branch: Geological Survey. Paper 40-13: Preliminary Map, Wapiabi Creek, Alberta. By B. R. MacKay. 10 cents. Memoir 222: Malartic Area, Quebec. By H. C. Cumming and J. W. Ambrose. (No. 2454.) Pp. v+142+7 plates+4 maps. 50 cents. (Ottawa: King's Printer.) [1312]

Ministry of Agriculture: Technical and Scientific Service. Bulletin No. 150: Hot Air Treating Machines used in the Gineries for the Destruction of Pink Boll Worm in the Cotton Seed. By Mohammad Fouad El Gammal. Pp. 20+40 plates. P.T. 5. Bulletin No. 219: Variety-Tests on some Introduced Sugar Cane Varieties. By Gadašah Abou Ela. Pp. 14. P.T. 2. (Cairo: Government Press.) [1912]