

for greater application of technical training for the smaller industrial units—possibly by co-operative effort. The sale of solid fuel in small quantities by weight without allowance for calorific value is criticized. It must, however, be recognized that there are peculiar difficulties, and in some countries solid fuel is sold by volume. The heating value of gaseous fuels in public supply can be easily controlled, whereas it cannot vary appreciably in the case of liquid fuels of given chemical character. Moreover, coal as mined contains variable proportions of incombustible matter, sometimes hard to separate. It is often overlooked that the cleaning of coal involves the production of considerable quantities of coal 'fines' or 'slurry' of little or no commercial value, while accumulations of small coal, if ignited, may become a public nuisance. For steam raising, it is considered possible that consumers will have to adapt themselves to the use of a lower grade of coal. Already the need for widening the range of fuel in use has caused official encouragement to be given to the installation of suitable mechanical equipment.

The lecture mentions a number of fuel problems still in the more speculative stage, and in all gives an interesting survey of the questions now in the minds of modern fuel technologists. H. J. HODSMAN.

## FORTHCOMING EVENTS

(Meeting marked with an asterisk \* is open to the public)

### Saturday, October 14

ASSOCIATION FOR SCIENTIFIC PHOTOGRAPHY (at Caxton Hall, Westminster, London, S.W.1), at 2.30 p.m.—Mr. H. Emmett: "Cinematography of Crystal Growth"; Mr. R. McV. Weston: "Cinematography in Biological Research".

### Monday, October 16

INSTITUTION OF ELECTRICAL ENGINEERS (LONDON STUDENTS' SECTION) (at Savoy Place, Victoria Embankment, London, W.C.2), at 7 p.m.—"Brains Trust" Meeting.

ASSOCIATION OF AUSTRIAN ENGINEERS, CHEMISTS AND SCIENTIFIC WORKERS IN GREAT BRITAIN (at the Austrian Centre, 69 Eton Avenue, Hampstead, London, N.W.3), at 7.30 p.m.—Mr. E. Pribram: "Jet Propulsion, Rocket Propulsion".

### Tuesday, October 17

INSTITUTION OF BRITISH AGRICULTURAL ENGINEERS (at the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, London, W.C.2), at 2 p.m.—Mr. Cornelius Davies: "Harvesting Machinery".

SOCIETY OF CHEMICAL INDUSTRY (AGRICULTURE GROUP) (at the Chemical Society, Burlington House, Piccadilly, London, W.1), at 2.30 p.m.—Dr. H. C. Gough: "Soil Insecticides".

EUGENICS SOCIETY (at the Royal Society, Burlington House, Piccadilly, London, W.1), at 5.30 p.m.—Dr. Innes H. Pearse: "The Health Centre and the Family".

CHEMICAL SOCIETY, the ROYAL INSTITUTE OF CHEMISTRY, and the SOCIETY OF CHEMICAL INDUSTRY (EDINBURGH SECTIONS) (joint meeting with the EDINBURGH UNIVERSITY CHEMICAL SOCIETY) (in the Medical Chemistry Lecture Theatre, The University, Teviot Place, Edinburgh), at 7 p.m.—Prof. G. F. Marrian, F.R.S.: "Some Aspects of Heroid Metabolism".

### Wednesday, October 18

INSTITUTE OF FUEL (NORTH-WESTERN SECTION) (at the Engineers' Club, Albert Square, Manchester), at 2.30 p.m.—Mr. G. N. Critchley: "The Economics of Saving Fuel, with particular reference to the Insulation of Steam Ranges".

INSTITUTION OF ELECTRICAL ENGINEERS (TRANSMISSION SECTION) (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Mr. H. W. Gimmitt: Inaugural Address as Chairman.

BRITISH ASSOCIATION OF CHEMISTS (LONDON SECTION) (at Wigmore Hall, Wigmore Street, London, W.1), at 6.30 p.m.—Discussion on "The Safeguarding of Key Industries" (to be opened by Mr. Norman Sheldon).\*

IRON AND STEEL INSTITUTE (joint meeting with the MANCHESTER METALLURGICAL SOCIETY and the INSTITUTE OF METALS) (at the Engineers' Club, Albert Square, Manchester), at 6.30 p.m.—Prof. H. W. Swift: "Deformation of Metals".

### Thursday, October 19

CHEMICAL SOCIETY (at Burlington House, Piccadilly, London, W.1), at 2.30 p.m.—Prof. Wilsin Baker: "Non-benzenoid Aromatic Hydrocarbons" (Tilden Lecture).

INSTITUTE OF FUEL (EAST MIDLANDS SECTION) (in the Lecture Theatre of the Nottingham Corporation Gas Department, Parliament Street, Nottingham), at 3 p.m.—Dr. E. W. Smith and Mr. Theodore Turner, K.C., will speak at a *Conversazione*.

SOCIETY OF CHEMICAL INDUSTRY (ROAD AND BUILDING MATERIALS GROUP) (at Gas Industry House, 1 Grosvenor Place, London, S.W.1), at 5 p.m.—Mr. D. C. Broome: "The Substitution of Coal Tar Pitch for Asphaltic Bitumen in Building Mastic".

SOCIETY OF CHEMICAL INDUSTRY (NEWCASTLE SECTION) (at the King Edward VII School of Art, King's College, Newcastle-upon-Tyne), at 5.45 p.m.—Mr. J. Brown: "Assay of Coal for Carbonisation Purposes".

### Friday, October 20

INSTITUTION OF ELECTRICAL ENGINEERS (MEASUREMENTS SECTION) (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Dr. W. G. Radley: Inaugural Address as Chairman.

INSTITUTION OF MECHANICAL ENGINEERS (at Storey's Gate, St. James's Park, London, S.W.1), at 5.30 p.m.—Dr. H. R. Ricardo, F.R.S.: "Applied Research" (Presidential Address).

NORTH-EAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS (in the Lecture Theatre of the Literary and Philosophical Society, Newcastle-upon-Tyne), at 6 p.m.—Annual General Meeting. Sir Summers Hunter: Presidential Address.

### Saturday, October 21

BRITISH RHEOLOGISTS' CLUB (at the University, Reading), at 2.30 p.m.—Annual General Meeting. Discussion on "The Measurement of Tack" (Introductory Papers by Dr. N. A. de Bruyne and Dr. R. F. Bowles).

SHEFFIELD METALLURGICAL ASSOCIATION (at 198 West Street, Sheffield, 1), at 2.30 p.m.—Mr. A. Preece: "The Oxidation of Steels in Furnace Atmospheres".

QUEKETT MICROSCOPICAL SOCIETY (at the Royal Society, Burlington House, Piccadilly, London, W.1), at 2.30 p.m.—Dr. Nellie B. Eales: "Some Aspects of the Malaria Problem".

## APPOINTMENTS VACANT

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

LECTURER (full-time) IN CHEMISTRY, and a LECTURER (full-time) IN ENGINEERING for Day and Evening Classes—The Principal, College of Technology and Commerce, The Newark, Leicester (October 18).

MATHEMATICS MASTER for the Junior Day Technical School for Boys—The Principal, Wimbledon Technical College, Gladstone Road, London, S.W.19 (October 20).

MATHEMATICS MASTER in the Bristol Junior Technical School—The Chief Education Officer, 2 Cecil Road, Clifton, Bristol, 8 (October 21).

LECTURER (full-time) IN ENGINEERING SUBJECTS in the Midway Technical College, Gillingham—The District Education Officer, Fort Pitt House, Rochester (October 21).

ASSISTANTS AT THE FUEL RESEARCH STATION, Blackwall Lane, Greenwich, London, S.E.10, for abstracting and translating scientific literature relating to Fuels (candidates should have qualifications in one or more of the following subjects: Chemistry, Physics, Engineering; together with a good knowledge of French and German)—The Ministry of Labour and National Service, Room 432, Alexandra House, Kingsway, London, W.C.2 (quoting Reference No. F.2985.A) (October 21).

EXPERIENCED ORGANIC MICROANALYST—The Professor of Organic Chemistry, Imperial College, South Kensington, London, S.W.7 (October 21).

ELECTRICAL ENGINEER to the Borough of Darwen—The Town Clerk, Town Clerk's Office, Darwen (endorsed 'Electrical Engineer') (October 23).

WORKS ENGINEER for development of a permanent Electro-chemical Plant in South Wales—The Ministry of Labour and National Service, Room 432, Alexandra House, Kingsway, London, W.C.2 (quoting Reference No. C.2303.XA) (October 23).

BOROUGH ELECTRICAL ENGINEER AND MANAGER to the Borough of Willesden—The Town Clerk, Town Hall, Dyne Road, Kilburn, London, N.W.6 (endorsed 'Borough Electrical Engineer and Manager') (October 23).

PRINCIPAL of the Blackburn Municipal Technical College, and HEAD of the TEXTILE DEPARTMENT—The Director of Education, Education Office, Library Street, Blackburn (October 23).

LECTURER IN MATHEMATICS, a LECTURER IN PHYSICAL AND INORGANIC CHEMISTRY, and a LECTURER IN MECHANICAL ENGINEERING—The Principal, Brighton Technical College, Brighton (October 23).

FOOD CHEMIST in Food Standards and Labelling Division, Colwyn Bay—The Ministry of Labour and National Service, Central Register, Room 432, Alexandra House, Kingsway, London, W.C.2 (quoting Reference No. F.3042.A.) (October 24).

BOROUGH ENGINEER AND SURVEYOR—The Town Clerk, Town Hall, Kensington, London, W.8 (November 1).

SPEECH THERAPIST—The Chief Education Officer, West House, Halifax.

TEACHER mainly for MATHEMATICS and ENGINEERING SCIENCE in the Junior Technical School and in Senior Day and Evening Classes—The Principal, County Technical College, Gainsborough.

GRADUATE ASSISTANT MASTER to teach MATHEMATICS, SCIENCE and ENGINEERING DRAWING in the Junior Technical School and National Certificate Classes—The Director of Education, 8 Warrington Street, Ashton-under-Lyne, Lancs.

LECTURER IN GEOGRAPHY—The Principal, Training College, Lincoln.

ASSISTANT CURATOR for the Kaffrarian (Natural History) Museum—The Director, Kaffrarian Museum, King William's Town, C.P., South Africa.