

## DIARY OF SOCIETIES.

THURSDAY, JANUARY 22.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Dr. R. R. Terry: Renaissance Music in Italy and England.

ROYAL SOCIETY, at 4.30 (Special General Meeting). At 4.30.—Prof. E. G. Coker and K. C. Chakko: The Stress-strain Properties of Nitro-cellulose and the Law of its Optical Behaviour.—S. Marsh: Alternating-Current Electrolysis.—W. H. Eccles and J. H. Vincent: The Variations of Wavelength of the Oscillations Generated by the Three-Electrode Thermionic Tube due to Changes in Filament Current, Plate Voltage, Grid Voltage, or Coupling.—S. D. Carothers: Plane Strain. The Direct Determination of Stress.—F. Horton and Ann C. Davies: An Investigation of the Effects of Electron Collisions with Platinum and with Hydrogen, to ascertain whether the Production of Ionisation from Platinum is due to Occluded Hydrogen.—L. Baird, R. H. Fowler, and D. R. Hartree: The Pressure Distribution on the Head of a Shell moving at High Velocities.

INSTITUTION OF MINING AND METALLURGY (at the Geological Society), at 5.30.—W. Broadbridge: Froth Flotation: Its Commercial Application and its Influence on Modern Concentration and Smelting Practice.

INSTITUTION OF ELECTRICAL ENGINEERS (at the Institution of Civil Engineers), at 6.—J. L. Thompson: Transformers for Electric Furnaces.

CONCRETE INSTITUTE (296 Vauxhall Bridge Road), at 7.30.—Dr. J. S. Owens: The Attrition of Concrete Surfaces exposed to Sea Action.

HARVELAN SOCIETY (at the Medical Society of London), at 8.15.—Annual General Meeting.

FRIDAY, JANUARY 23.

ROYAL SOCIETY OF MEDICINE (Study of Disease in Children Section), at 4.30.

PHYSICAL SOCIETY OF LONDON (at the City and Guilds Technical College, Leonard Street), at 5.—Dr. J. H. Vincent: Maintained Oscillations in Triode Valve Circuits.—Dr. W. Eccles: Measurements of the Chief Parameters of Triode Valves.—F. W. Jordan: Measurement of Amplification of a Radio-frequency Amplifier.—E. E. Smith: The Measurement of Amplification given by Triode Amplifiers at Audible and at Radio Frequencies.—Hon. C. W. Stopford and C. R. Darling: Exhibition of a Method of Determining the Hardening Temperature of Steel.—C. R. Darling: Exhibition of a Thermal Cell of Constant Voltage.

ROYAL COLLEGE OF SURGEONS, at 5.—Prof. A. Keith: John Hunter's Observations and Discoveries in Anatomy and Surgery: His Contributions to our Knowledge of the Alimentary System (Hunterian Lecture).

INSTITUTION OF MECHANICAL ENGINEERS, at 6.—E. M. Bergstrom: Recent Advances in Utilisation of Water Power.

JUNIOR INSTITUTION OF ENGINEERS (at 39 Victoria Street), at 7.30.—J. A. Reavell: Evaporation in the Chemical Industry.

ROYAL SOCIETY OF MEDICINE (Epidemiology and State Medicine Section), at 8.30.—Dr. F. G. Crookshank: Principles of Epidemiology.—Dr. Cleland and Dr. Campbell: Epidemiology of Acute Encephalomyelitis.

ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Hon. Sir Charles Parsons: Researches at High Pressures and Temperatures.

SATURDAY, JANUARY 24.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—A. Noyes: Aspects of Modern Poetry.

PHYSIOLOGICAL SOCIETY (at King's College), at 4.

MONDAY, JANUARY 26.

ROYAL COLLEGE OF SURGEONS, at 5.—Prof. A. Keith: John Hunter's Observations and Discoveries in Anatomy and Surgery: His Contributions to our Knowledge of the Kidneys, Bladder, and Urethra, and Diseases connected with these Structures (Hunterian Lecture).

ROYAL SOCIETY OF ARTS, at 8.—Capt. H. Hamshaw Thomas: Aircraft Photography in War and Peace (Cantor Lecture).

ROYAL SOCIETY OF MEDICINE (Odontology Section), at 8.—S. F. St. J. Steadman: Dental Sepsis in Children: Its Consequences and Treatment.

MEDICAL SOCIETY OF LONDON, at 8.30.—Pathological Evening.

TUESDAY, JANUARY 27.

ROYAL HORTICULTURAL SOCIETY (at Vincent Square, S.W. 1), at 4.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. G. Elliot Smith: The Evolution of Man and the Early History of Civilisation: I. Man's Origin.

INSTITUTION OF CIVIL ENGINEERS, at 5.30.—J. Mitchell: Whitty Harbour Improvement.—R. F. Hindmarsh: The Design of Harbours and Breakwaters with a View to the Reduction of Wave-action Within Them.—J. W. Sandeman: Wave-action in Harbour Areas; with Special Reference to Works for Reducing it at Blyth and Whitty Harbours.—W. Simpson: The Improvement of the Entrance to Sunderland Harbour, with Reference to the Reduction of Wave-action.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN (Lantern Meeting), at 7.—Major W. Bladon: Life on the Gold Coast.

ROYAL ANTHROPOLOGICAL INSTITUTE, at 8.15.—Annual General Meeting

WEDNESDAY, JANUARY 28.

ROYAL SOCIETY OF ARTS, at 4.30.—Sir Cecil Hertslet: The Ruin and Restoration of Belgium.

ROYAL COLLEGE OF SURGEONS, at 5.—Prof. A. Keith: John Hunter's Observations and Discoveries in Anatomy and Surgery: His Contributions to our Knowledge of the Genital and Reproductive Systems (Hunterian Lecture).

BRITISH ACADEMY (at the Royal Society), at 5.—Dr. C. Singer: Magic and Medicine in Early England.

THURSDAY, JANUARY 29.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Dr. R. R. Terry: Renaissance Music in Italy and England.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: Prof. W. Bateson: The Genetics of "Rogues" among Culinary Peas (*Pisum sativum*).—L. T. Hogben: Studies on Synapsis. I. Oogenesis in the Hymenoptera.—H. Onslow: A Periodic Structure in many Insect Scales, and the Cause of their Iridescent Colours.

ROYAL COLLEGE OF PHYSICIANS, at 5.

ROYAL SOCIETY OF MEDICINE (Balneology and Climatology Section), at 5.30.—Dr. N. Wood and Others: Discussion on the Merits and Defects of the British Health Resorts.

NO. 2621, VOL. 104]

WIRELESS SOCIETY OF LONDON (at Institution of Civil Engineers), at 6.—R. C. Clinker: A Portable Valve Set and some properties of C.W. Circuits.

FRIDAY, JANUARY 30.

ROYAL COLLEGE OF SURGEONS, at 5.—Prof. A. Keith: John Hunter's Observations and Discoveries in Anatomy and Surgery: His Contributions to our Knowledge of the Eye, Ear, and Nose (Hunterian Lecture).

INSTITUTION OF ELECTRICAL ENGINEERS (Students' Meeting) (at the City and Guilds Technical College, Leonard Street), at 7.—Major K. Edgcombe and Others: Discussion on Quantity Production as a Panacea.

ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—S. G. Brown: The Gyrostatic Compass.

SATURDAY, JANUARY 31.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir F. W. Dyson: The Astronomical Evidence bearing on Einstein's Theory of Gravitation I. Movement of the Perihelion of Mercury.

PHYSIOLOGICAL SOCIETY (at King's College), at 4.

## CONTENTS.

PAGE

Wind and Barometric Gradient. By W. H. Dines, F.R.S.	525
Researches on Fluorescence. By R.	526
Scientific Study of the Sugar Group	526
Nutrition and Longevity	527
Cheese- and Butter-making	528
Our Bookshelf	529
Letters to the Editor:—	
Gravitation and Light.—Sir Joseph Larmor, M.P., F.R.S.	530
The Outlook of British Technical Optics.—Prof. F. Cheshire	530
Power from the Sun.—A. A. Campbell Swinton, F.R.S.	532
Sedimentation of Blood Corpuscles.—Prof. A. E. Boycott, F.R.S.	532
The Einstein Theory and Spectral Displacement.—H. Fletcher Moulton and Dr. Andrew C. D. Crommelin	532
Use of a Prismatic Binocular for Viewing Near Objects.—Capt. D. Wilson Barker	532
The Nitrogen Problem. I.	533
The Microscopy of Metals. ( <i>Illustrated</i> ). By C. H. D.	535
Report of the Calcutta University Commission. By Sir E. Denison Ross	537
Notes	539
Our Astronomical Column:—	
Large Fireball on January 16	544
Prof. W. H. Pickering's Lunar Studies	544
The Solar Eclipse of May 29, 1919	544
Symposium on the Microscope	545
Construction and Use of Microscopes. By J. E. Barnard	546
Microscopical Optics. By Prof. A. E. Conrady	548
Paris Academy of Sciences: Bonaparte and Loutreuil Foundations	550
The Mathematical Association. By Prof. William P. Milne	550
Industrial Research Associations	551
The Organisation of Imperial Statistics. By G. H. Knibbs	551
Italian Papers on Relativity. By Dr. L. Silberstein	552
Agriculture at the British Association. By Prof. Alex. Lauder	553
University and Educational Intelligence	554
Societies and Academies	554
Books Received	555
Diary of Societies	556

Editorial and Publishing Offices:

MACMILLAN AND CO., LTD.,

ST. MARTIN'S STREET, LONDON, W.C.2.

Advertisements and business letters to be addressed to the Publishers.

Editorial Communications to the Editor.

Telegraphic Address: PHUSIS, LONDON.

Telephone Number: GERRARD 8830.