ammonia per kilowatt hour.—The age of the calcareous strata in the neighbourhood of Athens: Const. A.

April 2.-M. A. Chauveau in the chair.-The calculation of the inferior contraction of the sheet flowing over a weir with sharp edge and moderate height, and fitted with a horizontal plate above: J. **Boussinesq.**—An extension of the summation method of M. Borel: A. **Buni.**—The nature of the body extracted from certain rich alloys of nickel and tin: Em. Vigouroux. Following the methods described in a previous paper, the substance NiSn has been isolated as a crystalline powder, showing brilliant facets under the microscope. It is non-magnetic, and has a density of 8-44, the density calculated from its composition on the assumption of no contraction being 7.93. —The influence of manganese salts on alcoholic fermentation: E. Kayser and H. Marchand. The increased yield in alcohol resulting from the addition of minute proportions of manganese salts has been shown in a previous paper. It is now shown that yeast thus treated preserves its acquired properties through several generations, and the practical applications of this fact are indicated.—Rectal gills in the larvæ of Simulium damnosum. The adaptation of a larva of Simulium to life in the streams of equatorial Africa: E. Roubaud.

The nephro-poietic activity of the blood and of the kidney in the course of the renal regenerations: P. Carnot and A. Lelièvre.—The evolution of carbon, water, and ash as a function of the age in plants: J. Tribot. -Some seismic constants deduced from the carthquake of April 4, 1904: E. Oddone.

DIARY OF SOCIETIES.

THURSDAY, APRIL 11.

ROYAL INSTITUTION, at 3.—The Birth and Affinities of Crystals: Prof. Henry A. Miers, F.R.S.

MATHEMATICAL SOCIETY, at 5.30.—A Theorem in the Crystals: Prof. Functions: Dr. U. F. V. Henry A. Miers, F.R.S.

MATHEMATICAL SOCIETY, at 5.30.—A Theorem in the Theory of Functions: Dr. H. F. Baker.

FRIDAY.* April 12.

ROYAL INSTITUTION, at 9.—Conservation of Historic Buildings and Frescoes: Prof. A. H. Church, F.R.S.

**INSTITUTION or CIVIL ENGINEERS, at 8.—An Engineer's Visit to Japan and Canada: R. W. Allen.

MALACOLOGICAL SOCIETY, at 8.—Notes on New Zealand Polyplacophora, with Descriptions of Five New Species: H. Suter.—Descriptions of New Mollusca from New Caledonia: G. R. Sowerby.—Some New Species of Drymæus from Peru, Mexico, &c.: S. I. Da Costa.—A New Species of Vallonia from India: G. K. Gude.

INSTITUTION OF MECHANICAL EMGINEERS, at 8.—Continued discussion:—Petrol Motor-Omnibuses: W. Worby Beaumont.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Early and late Perseid:: W. F. Denning.—Determinations of Personal Equation depending on Magnitude, made with the Transit-Circle and the Heliometer at the Royal Observatory, Cape of Good Hope: Sir D. Gill and S. S. Hough.—Determination of the Secular Perturbations of the Minor Planet Ceres, arising from the Actions of the Eight Major Planets: C. J. Merfield.—The Electric Arrangements of an Observatory: W. E. Cooke.—Probable Papers: The Perturbations of Halley's Comet: P. H. Cowell and A. C. D. Crommelin.—On the Value of the Solar Parallax from the Greenwich Photographs of Eros, 1899–1900: Royal Observatory, Greenwich (Communicated by the Astronomer Royal).

SATURDAY*, April 13.

**ROYAL INSTITUTION at 2.—Studies in Magnetism: Prof. Silvanue D. at 5.30.-A Theorem in the Theory of SATURDAY, APRIL 13.

ROYAL INSTITUTION, at 3.—Studies in Magnetism: Prof. Silvanus P.

Thompson, F.R.S.

MONDAY, APRIL 15.

SOCIETY OF ARTS, at 8.—Detergents and Bleaching Agents used in Laundry Work: Prof. Herbert Jackson.

TUESDAY, APRIL 16.
ROYAL INSTITUTION, at 3.—Wings and Aëroplanes: Prof. G. H. Bryan,

SOCIETY OF ARTS, at 8. - Joinery and Furniture Making: A. Romney

Green.

ROYAL STATISTICAL SOCIETY, at 5.

ANTHROPOLOGICAL INSTITUTE, at 8.15.—Note on some Palæolithic and Neolithic Implements from East Lincolnshire: S. H. Warren.—Exhibition of Flints from Cornwall: A. L. Lewis and S. H. Warren.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Pyrmont Bridge: P. Allan.—Swing Bridge over the River Avon at Bristol: W. H. B. Savile.

WEDNESDAY April. 12.

GEOLOGICAL SOCIETY, at 8.—The Toadstones of Derbyshire: their Field-Relations and Petrography: H. H. Arnold-Bemrose.—Data bearing on the Age of Niagata Falls: Prof. J. W. W. Spencer. ROYAL MICROSCOPICAL SOCIETY, at 8.—On the Podura Scale: E. M. Nelson.—Exhibition of Slides of Foraminifera: A. Earland SOCIETY of ARTS, at 8.—Aërial Navigation: Major B. F. S. Baden-Powell.

Powell.

ROVAL METEOROLOGICAL SOCIETY, at 7.30.—Poenomenal Rainfall in Suva. Fiji, August 8, 1906: R. L. Holmes.—Temperature around the British Islands in Relation to the Gulf Stream: R. Strachan.—Weather regarded as a Function of Climate: L. C. W. Bonacina.

NO. 1954, VOL. 75

THURSDAY, APRIL 18.

ROYAL SOCIETY, at 4.30.—Probable Papers: On Reciprocal Innervation of Antagonistic Muscles: Tenth Note: Prof. C. S. Sherrington, F.R.S. Fatty Degeneration of the Blood: S. G. Shattock and L. S. Dudgeon.—
(1) The Rate of the Assumption of Chloroform by the Blood during Anæsthesia; (2) Function of the Red Corpuscles in Chloroform Anæsthesia: G. A. Burkmaster and J. A. Gardner.—The Fermentation of Glucosides by Bacieria of the Typhoid-coli Group, and the Acquisition of New Fermenting Powers by Bacillus Dyschteriae and other Micro-organisms: F. W. Twort. F. W. Twort.

ROYAL INSTITUTION, at 3.-The Birth and Affinities of Crystals: Prof.

F. W. Twort.

ROYAL INSTITUTION, at 3.—The Birth and Affinities of Crystals: Prof. Henry A. Miers, F.R.S.

Linnean Society, at 8.—On the Ecologic Functions of Stolons and Cleistogamous Flowers: J. C. Shenstone.—On the Ecologic Aspect of Constitutional Variation in Fruit-culture: A. O. Walker.—On an Aberrant Form of Cocidae: Hugh Scott.—Some Results of Inoculation of Leguminous Plants: P.of. W. B. B. Stomley — Exhibits: Nepal Barley and other Cereals cultivated at High Altitudes in Tibet: Dr. George Henderson.—Photographs of Sections of Woods: J. A. Weale.—Lantern Sildes of Witches' Brooms: J. Saunders.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Flexibles: with Notes on the Testing of Rubber: A. Schwartz.

CHEMICAL SOCIETY, at 8.30.—The Magnetic Rotation of Hexatriene, CH2: CH. CH: CH: CH: CH2, and its Relationship to Benzene and other Aromatic Compounds, also its Refractive Power: Sir W. H. Perkin.—Aromatic Azoimides, Part i., *Hydroxyphenylazoimide: M. O. Forster and H. E. Fierz.—The Action of Hydrogen Peroxide on Potassium Cyanide: O. Masson.—The Action of Ethyl Oxalate on Thioacetanilide and its Homologues: S. Ruhemann.—Measurements of the V-Delcities of Saponification of the *Menthyl and *Bornyl Esters of the Stercoi-omeric Mandelic acids: A. McKenzie and H. B. Thompson.—Indican: Preliminary Notice: A. G. Perkin and W. P. Bloxam.—Cupric Nitrite: P. C. Rây.—The Constituents of the Essential Oil of American Pennyroyal: Occurrence of a Dextro-Menthone: M. Barrowcliff.—The Action of Tribromopropane on the Sodium Derivative of Ethyl Actetacetate: T. E. Gardner and W. H. Perkin.

FRIDAY*, April 19.

FRIDAY, APRIL 19.

ROYAL INSTITUTION, at 9.—Nerve as a Master of Muscle: Prof. C. S. Sherrington, F.R.S.

CONTENTS.	PAGE
Mechanism of the World, By J. L. E. D.	rra
Mechanism of the World. By J. L. E. D The Mathematical Aspect of Spectroscopy. By	553
Origin of the Frantist Marie State of the St	554
G H. B. Origin of the English Nation. By W. A. Craigie	555
The Rainfall of North Germany	. 556
"The Zoological Record," Vol. xlii.—R. L.	
Webb: "The Principles of Horticulture. A Series	557
of Practical Scientific Lessons"	
of Practical Scientific Lessons". Fisher: "Dr. Schlich's Manual of Forestry," Vol. iv	557
	. 558
and Practical" de Nansouty: "Actualités scientifiques"	558
de Nansouty: "Actualités scientifiques"	558
Letters to the Editor:	
A Hydraulic Analogy of Radiating Bodies for Illus-	
traing the Luminosity of the Welshach Mantle	
(With Diagram,)—Prof. R. W. Wood	e e 2
Retardation of Electroscopic Leak by means of recor-	
nised Radio-active Substances Dr. W. S.	
Lazarus-Barlow	559
Atmospheric See-Saw Phenomenon and the Occurrence	
of Typhoon Storms.—Wilhelm Krebs	560
Early Reference to Red-light Treatment of Small-pox.	
The I wid Meteors John P. Hanny	560
—Alfred Sang	560
trated.) By G. R. Dunell	-6.
British Nests and Eggs. (Illustrated)	561 562
	-
Seas	563
The Commemoration of Lord Lister's Eightieth	J V J
Diffiuay	564
Notes	565
Our Astronomical Column :-	5-5
Comet 1907a	569
The Brightness of the Sky near the Sun's Limb.	569
Radial Velocity of η Piscium	569
Simultaneous Observations of Jupiter	569
Effects of Pruning on Fruit Trace	569
The Sun as a Variable Star Effects of Pruning on Fruit Trees Standards and Exact Measurement. By J. L. M.	569
The Influence of Parasites on their Hosts.	570
The Belgian International Balloon Service	571
Terrestrial Physics in the United States	572 573
University and Educational Intelligence	573
Societies and Academies	573 574
Diary of Societies.	576
	٥,