

Societies and Academies.

LONDON.

Institute of Metals (Annual Autumn Meeting, Liverpool), Sept. 5.—**R. May**: Eighth report to the Corrosion Research Committee. Further investigations of 'impingement attack' were undertaken to interpret the results of certain tests on condenser tubes, and, in particular, to explain the relationship which appeared to exist between the effects of intermittent cavitation in the water and the effects of air-bubble impingement. The behaviour of protective films under various conditions of impingement has been studied by measurements of the 'film potential.' When there is no intermittent cavitation, 'impingement attack' can still take place as a result of air-bubble impingement, and it is concluded that there are two separate main causes of 'impingement attack,' namely, intermittent cavitation as shown by Sir Charles Parsons, and air-bubble 'impingement' as shown by Dr. Bengough, R. Pirret, and the author. Both depend on the occurrence of rotating motions of the water.—**Ulick R. Evans**: Corrosion at discontinuities in metallic protective coatings. The cracks produced by bending are more dangerous than uniformly distributed pores. If the coating metal is cathodic to steel, the steel is corroded; copper under some conditions causes marked acceleration of the corrosion of steel at exposed places, nickel being less dangerous. If the coating metal is anodic to steel, the coating suffers corrosion preferentially, the steel thereby receiving protection; thus steel coated with zinc usually suffers no corrosion even at cracks until the zinc becomes exhausted. Steel thickly covered with zinc usually fares better than thinly covered steel, notwithstanding the greater tendency to cracking; old galvanised sheet carried more zinc than the modern material and generally lasted longer. Coatings of aluminium or zinc-iron alloys are themselves less attacked than coatings of free zinc, but for that very reason they afford less sacrificial protection to the underlying steel in certain waters. Zinc itself is rather rapidly attacked when partially immersed in a chloride solution, but alternate salt-spraying and drying builds up a protective film.—**A. G. C. Gwyer, H. W. L. Phillips, and Miss L. Mann**: The constitution of the alloys of aluminium with copper, silicon, and iron. The ternary systems aluminium-copper-silicon and aluminium-copper-iron are considered. The former of these is eutectiferous, with a ternary eutectic of CuAl_2 , aluminium and silicon, containing 26 per cent. of copper, 6.5 per cent. of silicon, and freezing at 525°C . The aluminium-copper-iron system is rather more complex; a peritectic reaction occurs at 590°C . between FeAl_3 and liquid resulting in the formation of a constituent isomorphous with 'X'; the latter forms a ternary eutectic with CuAl_2 and aluminium, containing 32.5 per cent of copper, 0.3 per cent of iron, and freezing at 542°C . A quaternary eutectic occurs at 26 per cent copper, 6.5 per cent silicon, 0.5 per cent iron, freezing at 520°C ., the constituents being aluminium, CuAl_2 , 'X,' and silicon. The paper deals exclusively with metastable conditions.—**C. J. Smithells, S. V. Williams, and J. W. Avery**: Laboratory experiments on high-temperature resistance alloys. A series of nickel-chromium alloys containing from 10 to 60 per cent of chromium, and a few ternary alloys containing tungsten and molybdenum, have been made from specially pure materials melted in hydrogen. For the binary alloys resistance to oxidation increases with increase in chromium content up to 30 per cent. With more than 40 per cent of chromium, a second phase appears and resistance to oxidation falls. Ter-

nary alloys containing only 10 per cent of chromium show low resistance, while those containing 20 per cent of chromium show high resistance to oxidation. For high resistance to oxidation the oxide layer must contain at least 50 per cent of chromic oxide. The composition of the oxide layer is determined by, but is not generally the same as, the composition of the alloy. For the binary alloys resistance to sag at high temperatures decreases with increase in chromium content. The ternary alloys sag more than the binary alloys having a similar nickel content. Small amounts of impurities lower both the resistance to oxidation and sag.—**W. R. D. Jones**: The copper-magnesium alloys, Part 3. Notched-bar impact tests on forged and heat-treated copper-magnesium alloys are discussed. There is no advantage in adding more than about 2 per cent of copper to magnesium; alloys containing more than 5 per cent are brittle. The embrittling effect is decreased as the temperature rises. On exposure to cold, the toughness of these alloys has been decreased. Forging breaks down the eutectic network, improving the mechanical properties. Heat-treatment increases slightly the size of the globules of Mg_2Cu and the crystal grains, which are rendered equiaxed and more regular in size.—**J. E. Malam**: The Rockwell hardness test. The Rockwell ball test in its present form yields so-called 'hardness numbers' which are quantitatively misleading. Unscientific results are also obtained owing to the arbitrary numbering of the scleroscope scale. The whole subject of hardness testing should be examined by a representative committee.

Sept. 6.—**R. Genders, R. C. Reader, and V. T. S. Foster**: Die-casting of copper-rich alloys. Examination in the form of chill-cast bars and die-cast test-pieces has indicated that a variety of such alloys exists, suitable for die-casting and offering mechanical properties to meet varying requirements. The aluminium brasses have a wide range of properties, high proof stress, slow rate of attack on mould and core materials, and are cheap. Mould and core materials were tested by immersion in molten alloys; high-carbon steel and special steels of the heat-resisting type showed little deterioration, while low-carbon steel and engineering steels were rapidly attacked. The behaviour of cast iron in molten aluminium-bronze is largely influenced by the phosphorus content of the iron.—**S. L. Archbutt, J. D. Grogan, and J. W. Jenkin**: Properties and production of aluminium die-castings. Five alloys have been employed: namely, 4 per cent copper, 8 per cent copper, 12 per cent silicon, 4 per cent copper and 3 per cent silicon, and Y-alloy. Satisfactory castings were produced in the tubular form from all the alloys studied. With the test-piece form, castings of satisfactory mechanical strength were obtained in Y-alloy, 12 per cent silicon, and 3 per cent copper, 4 per cent silicon, but less satisfactory results were obtained with the binary copper-aluminium alloys owing to hot-shortness. In the investigation into hot-shortness the same five alloys have been studied together with L 5 alloy (copper 2.5-3.0, zinc 12.5-14.0 per cent). Hot-shortness is only exhibited at temperatures close to the temperature of commencement of melting; the range over which the rapid fall in impact strength takes place varies from 5°C . with the 12 per cent silicon alloy to 45°C . with L 5.—**T. F. Russell, W. E. Goodrich, W. Cross, and (in part) N. P. Allen**: Die-casting alloys of low melting point. Sixteen zinc-base alloys, having either copper and tin, or copper and aluminium, and—in some cases—with further additions of either nickel, cadmium, lead, or magnesium, have been examined. The copper-aluminium-zinc alloys are

approximately twice as strong as the copper-tin-zinc alloys. For any one alloy, the casting conditions—within reasonable limits—have only a small effect on the tensile strength when compared with the influence of the form of the test-piece, and of non-axial loading. The effects on the strength and on the permanency of dimensions, after atmospheric ageing, have been investigated, and tests of the so-called 'accelerated ageing' type have been made. The 'accelerated ageing' consists in subjecting the castings to the action of hot air, hot air saturated with moisture, and to steam at 100° C. Within the limits of the compositions examined, the effect of the chemical composition on the rate of growth is insignificant when compared with the effect of the form and mechanical condition of the actual casting.—C. S. Smith: The α -phase boundary of the copper-silicon system. The α -phase boundary has been redetermined by annealing and quenching experiments. The solubility reaches its maximum value, 6.7 per cent silicon, between 721° and 782° C. At 852° C.—the temperature of the peritectic horizontal—the solubility is 5.25 per cent, while at 400° C. it is only 4.1 per cent silicon.—C. H. M. Jenkins: The strength of a cadmium-zinc and of a tin-lead alloy solder. Although a general similarity in type between the two materials was found, the cadmium-zinc alloy shows markedly higher values under the various tests. The tensile strength of the cadmium-zinc alloy as ordinarily determined is approximately four times that of the tin-lead solder, but under prolonged stress tests the values obtained are approximately six times as great. At 120° C. both materials show a diminished resistance to prolonged stress, the numerical values falling to less than one-tenth of those observed at room temperatures.—G. B. Brook and H. J. Simcox: Note on practical pyrometry. An instrument has been designed which eliminates stray currents and magnetic fields of great intensity and is accurate even when placed in the field surrounding a conductor carrying as much as 20,000 amp.—F. Hargreaves and R. J. Hills: Work-softening of eutectic alloys.—The micrographic changes on working and annealing the lead-tin eutectic afford an explanation of the existence of the critical amount of work observed at about 30 per cent reduction. A recrystallised sample of eutectic softens when the amount of work exceeds about 20 per cent, showing that softening is not a peculiarity of the eutectic structure but is due to the presence of two phases. Experiments on 0.5 and 15 per cent lead-tin alloys are described; the latter behaves very similarly to the eutectic, whilst the former may be rendered softer than the cast sample by working.—William Hume-Rothery: Methods for the thermal and microscopic investigation of alloys of reactive metals. Methods and materials are discussed. The method, introduced by the early German workers, in which the composition of a phase is deduced from the duration of the arrests of the cooling curves, whilst difficult to carry out, is sound in the case of simple eutectic arrests where no solid solutions are formed; but in the case of peritectic reactions, or where solid solutions are present, the method is by its very nature unsound at all except very high temperatures.—D. R. Tullis: Note on the treatment of aluminium and aluminium alloys with chlorine. Most aluminium alloys contain dissolved gases; the methods devised for their removal are: The slow solidification method, the inert gas method, the active gas method. Chlorine has been used as a means of removing dissolved gases and comparison is given between the slow solidification and the chlorine methods.

No. 3072, Vol. 122]

PARIS.

Academy of Sciences, July 30.—Charles Moureu, Charles Dufraisse, and Antoine Willemart: Recherches on rubrene. Coloured hydrocarbons of the rubrene family. Two new hydrocarbons analogous with rubrene have been prepared, dimethylrubrene and dibenzorubrene.—Gabriel Bertrand and Mme. M. Rosenblatt: Potassium and sodium in marine algæ. The statement, due to Boussingault, that potassium is not present in *Fucus*, is shown to be inaccurate. Marine algæ are unequally sensitive to the action of distilled water: some, like *Pelvetia canaliculata*, retain their alkalis practically unchanged after repeated washing with distilled water, while others, such as *Padina pavonia*, lose their alkali salts rapidly under the same treatment.—V. Grignard and J. Dœuvre: The constitution of citronellol and of rhodinol.—Alex. Froda: Some descriptive properties of functions of real variables.—S. Saks: A theorem of M. Montel.—D. Lagrange and D. Rosenthal: The influence of the form of the ends of the elements of certain soldered joints on the value of the breaking load and on the deformation.—A. Danjon: The curve of light and elements of the photometric double star β -Lyræ. The mean curve of light (diagram given) is symmetrical, except in the immediate neighbourhood of the principal minimum.—A. Gougenheim: The use of the prism astrolabe for the study of the variations of latitude.—Louis Kahn: The astronomical determination of a point with the aid of a conformal map, utilisable as an orthodromic map.—Jean Cichochi: The conductivity of pulverised salts.—Henri Muraour: The relation between the temperature of explosion of a powder and its velocity of combustion. Experiments were carried out with explosive composed of equal weights of gun cotton and nitroglycerol, mixed with varying quantities of centralite (symmetrical diethyldiphenylurea), in such a manner as to vary the explosion temperature between wide limits. It was found that the logarithm of the combustion velocity was a linear function of the explosion temperature.—A. Sanfourche and L. Rondier: Sulphonitrous and sulphonitric mixtures.—G. Valensi: The dissociation of chromium nitride. The nitride, of composition CrN approximately, was prepared by heating pyrophoric chromium with pure nitrogen at 800° C. The curves of dissociation of this substance for temperatures between 810° C. and 1000° C. are given.—Mlle. Choucroun: Rule relating to the diffusion of electrolytes in charged jellies.—Jean Cournot: Some cementations of steels by special alloys with a manganese base.—Paul Dutoit and Armand Schnorf: Calcium nitride. Studies on the various factors affecting the rate of combination of nitrogen with calcium, including the state of division of the metal, the catalytic effects of traces of impurities, and the effect of temperature.—Ch. Mauguin: The X-rays do not always give the true network of crystals. Examples drawn from the study of micas.—Jacques de Lapparent and Ernest Stempfel: Dehydrated gibbsite. Crystallised aluminium hydroxide on dehydration by heating does not leave an amorphous residue.—G. Nadson and N. Krassinikov: A new genus of Endomycetaceæ: *Guilliermondella*.—H. Colin and R. Franquet: The genesis of starch in the bean.—L. H. Dejust, Mlle. Van Stolk, and E. Dureuil: The presence of ergosterol in human blood. The mixture of cholesterol and ergosterol was extracted from blood serum by suitable solvents and the presence of the latter demonstrated by means of its absorption spectrum.—Swigel Posternak and Théodore Posternak: The lability of the chains of serin-phosphoric acids and a general reaction for tyrones.—A. Magnan and

A. Sainte-Lague: A method of morphometry of fishes.—A. Sartory, R. Sartory, Marcel Meyer, and Jacques Meyer: Study of a new case of osseous mycosis.

GENEVA.

Society of Physics and Natural History, June 7.—M. Minod: A new stand for drawing in a camera clara. The author describes an apparatus based on the principle of the camera clara and allowing a magnification up to 15 times of objects in strong relief, by the successive focussing of different planes.—Amé Pictet and Hans Vogel: The synthesis of raffinose and that of sugar in general. Raffinose has been obtained synthetically by heating in a vacuum for an hour at 160° C. an equimolecular mixture of saccharose and galactose. The authors emphasise the fact that this synthesis is not the result of chance reactions. In the biological field it appeared to them that in the mammal at certain times a part of the glucose of the blood is transformed by the transposition of one of its hydroxyl groups into galactose, and that the latter unites with another portion of glucose to form milk sugar.—F. Chodat and V. Pfister: The bacteriological study of a vinegar factory. The following organisms have been found: *Bacterium xylinum*, inactive and objectionable, inactive Micrococci, active types of *B. acetosum* and *B. Schutzenbachii*; yeasts, *Wilbia anomala* producing the esters of the vinegar.—E. Joukowsky: The periodical variation of the proportion of materials in solution in the water of the Arve at Geneva. The author traces for the year 1890, from daily data, the curve showing the variation in the total solids in solution and suspension in the water of the Arve, and also the curve of average temperatures of that region. From these curves it is concluded that the chief source of dissolved chalk must be the water produced by melted snow (cold water with high solvent power) which is added to the water filtering in slowly, whilst the materials in suspension arise from running waters with rapid circulation.

LENINGRAD.

Academy of Sciences (*Comptes rendus*, No. 14-15).—V. N. Ipatiev, N. A. Orlov, and A. D. Petrov: The hydrogenation of ketones under pressure. Hydrogenation of the ketones under pressure leads easily to the formation of the respective aromatic carbohydrates, but fully hydrogenated products are obtained only with difficulty.—A. Frank-Kamenetsky and V. Koncevič: The Emykey saline spring on the Osinskij island on the Angara River. Analyses of water of the spring.—V. V. Bogačev: A new find of Mediterranean elements in the Caspian fauna. The mollusc *Mytilaster lineatus* known from the Black Sea was found in the Caspian, where it probably must be regarded as a post-Pliocene immigrant.—A. I. Tolmačev: A new arcto-alpine species of *Senecio*. Description of *Senecio tundricola*, sp. n., from Arctic Siberia.—L. N. Bogojavlenskii: A radium deposit at Uchta. Water from the oil-wells in the Uchta oil-fields proved to contain radium in a quantity exceeding that known from any other analogous sources. It is interesting that high concentration of radium and mesothorium coincides with complete absence of uranium and thorium.—A. N. Pytkov: Preparation of ionium from a Ferghana mineral. Certain preparations of ionium were obtained from the crude urano-copper-vanadium ore from the Ferghana mines.—B. Zemliakov: The ancient continental dunes of the Nizhni-Novgorod province. The dunes are studied in some detail, and it is concluded that they date back to one of the interglacial periods.—D. S. Beliankin: The problem of mullite. Mullite is a homogeneous solid solution of

Al₂O₃ in sillimanite, according to some authors, but detailed studies of its properties show that mullite should be better regarded as quite independent from sillimanite.—V. Bodylevskii: Notes on the *Aucella* from the Taymyr collection of Middendorf.—L. Ahrens: The northern limit of distribution of the lizard *Eremias arguta* in eastern Europe. The species was discovered in the Kursk province, considerably farther north than before.—A. I. Zaitseva: Ferrous phosphate from the Bargusin region in Siberia. An analysis is given.—E. F. Miram: Description of the hitherto unknown male of *Metrioptera pusilla* Mir. (Orthoptera) from the Kherson province.—E. Cheisin: A preliminary communication on some parasitic infusoria of Lake Baikal. Descriptions of several new species.

ROME.

Royal National Academy of the Lincei, April 15.—G. Cesàro: Viviani's curve. The case of a spherical curve projected on to the base of a hemisphere following a circumference tangential to this base is considered, and it is shown that the surface intercepted by the curve on the sphere is expressed by the product of the square of the radius of the sphere, and the difference between the latitude of the culminating point of the spherical curve and the sine of such latitude. Thus, if $2S$ and ϕ are the surface and the latitude respectively, $S = R^2 (\phi - \sin \phi)$. The case of Viviani's window corresponds with $\phi = \pi/2$, so that $S = R^2 (\pi/2 - 1)$, and Viviani's curve represents the points of the sphere for which the longitude is equal to the latitude. The stereographic projection of Viviani's curve on the base of the hemisphere is a strophoid, and, if the term spherical strophoid is applied to a curve analogous to the plane strophoid, but constructed with a circumference of a great circle instead of with a straight line, Viviani's curve represents a spherical strophoid.—G. A. Crocco: The torsional rigidity of aeroplane wings.—R. Calapso: Reduction of the projective deformation of a surface R to the transformation C_m of isothermal surfaces.—G. Vitali: Covariant derivations in generalised absolute calculus.—G. Vranceanu: Periodic solutions to very large periods in mechanics.—E. Gugino: The problem of the elastic equilibrium of rotating bodies with cylindrical contour.—A. J. McConnell: The principle of stationary action and stability in a static gravitational field. On the basis of Levi-Civita's combination of the equations for the motion of a material point in a static gravitational field to a variational formula, which may be interpreted as a principle of stationary action, the stability of a trajectory in such a field is discussed.—F. Sbrana: The plane motions of an incompressible fluid, in which the stream lines are isotachic.—C. Dei: The phase of the thermionic saturation current in a circuit with pulsating voltage. The conditions in a circuit having in series a valve, an ohmic resistance, a coil of known coefficient of self-induction, and a pulsating electromotive force of the type $E = \bar{E} + E_0 \sin \omega t$, but sufficient for the valve to be always saturated, are considered.—A. Rostagni: An influence of X-rays on the crystallisation of bismuth. No appreciable alteration can be detected in the thermo-electric properties or the specific heat of bismuth as a result of exposure of the metal to the influence of X-rays.—G. Carobbi: Chemical investigations on the olivine of Linosa (Pelagic Islands). It is not certain whether the ferric iron, almost always found in olivines of volcanic origin, owes its presence to alteration, or whether it is pre-existent in the molecule as an isomorphous substituent of the ferrous iron and magnesium. If, however, all the iron found by the author's analyses is calculated as ferrous oxide,

and the sum of all the components is made up to one hundred (water being neglected), molecular ratios are obtained which are in absolute accordance with those required by the formula of olivine. The small proportions of lead present apparently replace isomorphically the magnesium and the other metals of its isomorphogenic group.—F. Rodolico: Investigations on sulpho-salts (5). Additive compounds with urotropine. Gradual replacement of the oxygen of the additive compounds, $MgMoO_4$, $C_6H_{12}N_4$, $10H_2O$, and $MgWO_4$, $C_6H_{12}N_4$, $10H_2O$, by sulphur is not accompanied by corresponding morphotropic variations in the crystals.—G. Spagnol: Chemical factors which determine the fixation of colloids. Experiments on dogs, rabbits, guinea-pigs, and moles show that, if chloroform is applied for a few seconds to the skin of an animal, and, almost at the same time, a colloidal substance is injected endovenously, the colloid becomes fixed in the tissues, corresponding exactly with the place of application of the chloroform. If the duration of the latter is 5–15 seconds, the fixation of the colloid takes place mainly in the cutis and the subcutaneous tissue, whereas with an application of 1–2 minutes, certain of the underlying muscles are affected. Histological examination shows that the colloid is, to a slight extent, fixed in the granular state on the walls of the blood vessels, but mainly diffuses in a highly disperse state into the surrounding tissue, and there soon passes in a granular condition between the phagocytes. This fixation is observed only with electro-negative colloids. Analogous results are obtained if carbon tetrachloride, ethyl bromide, or ether is used in place of the chloroform.—A. Cavinato: New investigations on the transformations of scolécite. The optical transformations occurring when scolécite is heated are related to the dehydration produced.—R. Savelli: Humification of cellular membranes in *Beta vulgaris*. Humification, which is normal and general for the fruit of all varieties of the beet, is shown also in the root in exceptional varieties, resulting possibly by mutation, and would hence depend on a new factor determining a new localisation of a phenomenon which pre-exists and forms a part of the normal physiology of the plant.—G. Santori: The influence of partial irradiation of the bone on the stromatic system of the osseous medulla and of the remaining hæmo-lymphatic apparatus. Localised action of X-rays on the tibial osseous medulla of the rabbit induces in the hæmo-lymphatic apparatus modifications which are greatest in the medulla directly exposed to the rays, but sensible also in the non-irradiated medulla and in the other organs of the apparatus. The alterations in the osseous medulla affect all its components—the specific cellular elements, and the stromatic apparatus; those in the spleen, lymph glands, and liver are mainly in the vascular and reticular components; appreciable alterations were observed in one case only in the thymus, and never in the suprarenals.—E. Barsali: Contribution to the study of radioscopy in vegetable organisms. Results are described which justify the hope that in the vegetable as well as in the animal kingdom radioscopy may prove of service, particularly in pathological cases.—A. Galamini: Alimentary value of the potato for albino rats. Raw potatoes, even if ingested in large quantity, do not form a sufficient food either for the growth or for the life of the albino rat. Boiled potatoes enhance the resistance towards contagious, broncho-pneumonic processes less than a complete diet. Growing rats die after losing 29–27 per cent of their weight, while with adults the diminution is 40 per cent; the loss is more rapid with raw than with cooked potatoes. When either of these is administered for a long time, alkaline urine, diarrhoea,

stoppage of the bowels, and dilation of the ileo-cecal tract are observed.—Constantino Gorini: Progressive culture and microbial dissociation. In the natural dissociations of the acido-proteolytes, such as *Bacillus acidificans presamigenes caset*, the biochemical manifestations are accompanied by cultural morphological phenomena, which are characterised particularly by variations in the colonies, mainly into two principal types, and by variations in the aggregation and in the cellular mobility, which may be controlled by means of the author's progressive culture, so that the more active and mobile granular type may be selected. By the same means it is possible to detect, in a group of sporogenic bacilli, a transitory mobility restricted to initial stages of development, this giving rise to colonies of a type differing from the type characteristic of the respective species.

SYDNEY.

Royal Society of New South Wales, July 4.—A. R. Penfold and F. R. Morrison: The occurrence of a number of varieties of *Eucalyptus dives* as determined by chemical analysis of the essential oils (2). A field inspection was made in the Tumbarumba District of New South Wales in connexion with Variety 'C.' This field had been closed to commercial distillation for some time on account of the periodical occurrence of phellandrene, which spoils an otherwise excellent oil for pharmaceutical purposes. Belts of country were resolved into 'good' and 'bad' by simply crushing the leaves between the fingers and judging according to the odours evolved. The examination of the essential oils from representative samples of leaves and terminal branchlets confirmed in a remarkable manner the field observations. Opportunity was taken to test out the new cresol method for determination of cineol in these oils. It was found necessary, however, to make the determination on the portion of oil distilling below 190° as the presence of terpineol in the hard boiling fraction gave high results. The method is strongly recommended as a standard one.—R. J. Noble: Some observations on the woodiness or bullet disease of passion fruit. The disease may be recognised in the stunting of the vines, in twisting, curling, or mottling of the foliage, and in the hard malformed fruits of *Passiflora edulis*. The hardening of the fruits is due to lignification of the inner parenchymatous tissues of the pericarp. The disease occurs generally in the winter months, but is considered one of the major causes of unproductiveness of passion fruit vines in N.S.W. Infection experiments have demonstrated that the disease is due to the action of a virus which may be transferred by mechanical means. Control measures are recommended.

Official Publications Received.

BRITISH.

- Melbourne Astrographic Catalogue, 1900-0. Vol. 2: Zones -67° and -68° . Rectangular Co-ordinates and Diameters of Star Images, from Photographs taken and measured under the direction of R. L. J. Ellery and Pietro Baracchi. Revised and prepared for publication under the Supervision of Dr. J. M. Baldwin. Pp. xi+291. (Melbourne: H. J. Green.)
- The Journal of the Institution of Electrical Engineers. Edited by P. F. Rowell. Vol. 66, No. 380, August. Pp. 805-908+xxx. (London: E. and F. N. Spon, Ltd.) 10s. 6d.
- Reports of the Imperial Economic Committee. Tenth Report: Timber. (Cmd. 3175.) Pp. 52. (London: H.M. Stationery Office.) 9d. net.
- Air Ministry. Aeronautical Research Committee: Reports and Memoranda. No. 1137 (Ae. 307): Tests of a Metal Aircraft in a Closed Tunnel for Comparison with American Tests in an Open Jet Tunnel. By H. C. H. Townsend and J. H. Warsap. (T. 2548.) Pp. 4+5 plates. 6d. net. No. 1139 (Ae. 308): The Connection between Lift and Circulation for an Inclined Flat Plate. By A. Fage and F. C. Johansen. (T. 2558.) Pp. 7+1 plate. 6d. net. (London: H.M. Stationery Office.)