

University and Educational Intelligence

CAMBRIDGE.—The Gedge Prize for 1934 has been awarded to J. S. Turner, of Selwyn College.

Two lectures will be delivered by Prof. J. Schouten of the Technical High School, Delft, on "Projective Relativity". They will be delivered at 5.30 on October 23, and 4.30 on October 24 in St. John's College.

In connexion with the visit of His Majesty the King to open the new Library on October 22, it is proposed to confer the honorary degree of Sc.D. on Prof. L. J. Henderson, professor of biological chemistry at Harvard University and upon Dr. Karl Landsteiner, member of the Rockefeller Institute for Medical Research.

Dr. F. Kidd, St. John's College, has been appointed superintendent of the Low Temperature Research Station in succession to the late Sir William Hardy.

At Trinity College, M. Black, University demonstrator in geology, has been elected to a fellowship.

OXFORD.—In his oration delivered on the termination of his second year of office, the Vice-Chancellor dealt with several matters of scientific interest. After noticing the completion of the extension of the Radcliffe Science Library, which is to be opened for use on November 3 by the Princess Royal, he reported the successful setting up of the new solar telescope, with its accessory apparatus, under the skilful direction of the Savilian professor. Permission, subject to certain conditions, has been granted to the Radcliffe Trustees to establish an observatory in South Africa. Future developments of the means for scientific study will be carried out as soon as the necessary funds are forthcoming. Among these are the extension of the Lewis Evans collection into a museum of the history of science, the further endowment of the Department of Anthropology, an addition to the staff of the Hope professor of zoology, and further provision for the teaching of embryology and neurology. Several of these are regarded as urgent, but, for the time being, impracticable.

WALES.—It was announced at a meeting of the Court of Governors of University College, Cardiff, that the college has received a gift of £23,000 "from a generous donor and old friend of the college". The number of students in residence during the current session is 1,347. The figure shows an increase of 24, as compared with last year, in spite of new restrictions on the entry of medical students, and those in receipt of Board of Education grants.

On October 12, Sir William James Thomas officially opened the new laboratories of materia medica and pharmacology in the Department of Preventive Medicine at the Welsh National School of Medicine.

THE following awards of the Institution of Naval Architects have recently been made: Vickers Armstrong scholarship in naval architecture (1934) of the value of £150 a year for four years at the University of Glasgow to Mr. Gordon S. Milne, of Messrs. Hall Russell and Co., Glasgow; Duke of Northumberland prize (in connexion with the 1934 examinations for National (Higher) Certificates in naval architecture) to Mr. William P. Walker, of the Royal Technical College, Glasgow.

Science News a Century Ago

Diseases in Potatoes

In the early part of 1834, the Highland Society of Scotland (now the Highland and Agricultural Society) offered a premium of ten sovereigns "for the best essay on the nature and causes of the injury or disease of the Potato and on the best means of preventing or palliating it in future. . . . The attention of the writer is especially directed to the probable existence of insects in the sets or tubers, and if such have been detected, he is required to give a description of them and if possible, to transmit with his Essay, specimens of the insects". The essays had to be submitted before October 20, 1834, and some twenty competitors took part. The premium was offered because of the failure of the potato crop in Great Britain in the previous year. Various organisations interested themselves in the problem—notably the Highland Society and the Royal Dublin Society. The general conclusion arrived at was that the failure was due to the drought of the summer of 1833, as a consequence of which the crop was harvested very early, and in an immature condition. It is interesting to note that it was agreed that "the plant itself does not appear to have become materially deteriorated by having been so long in cultivation".

The North-West Passage

In 1833, Admiral Sir George Back (1796–1878), then holding the rank of commander, was sent out with an expedition to obtain information about Capt. John Ross, who had been in the north since 1829. On October 23, 1834, the *Times* said that "Letters from Captain Back were received yesterday morning at the office of the Royal Geographical Society the latest date being the 29th of April last, when the intelligence had just reached him of Captain Ross's return". Their contents were of a mixed character. He and his party were all well with the exception of Augustus, the Eskimo interpreter who had accompanied Sir John Franklin in both his journeys, but who had died on his way to join Back's party. The expedition had experienced a most distressing winter and many of the unhappy natives had fallen victims to famine in situations the most revolting to human nature. In a private letter, Back said, "My day is chiefly spent thus—before breakfast I read a portion of Scripture, and afterwards attend to my observations, study, draw (I have plenty of pencil sketches), work up my survey, take notes on Aurora, etc. At the same time I keep my eye upon whatever duty is going on, have an evening school twice a week, and read the service in French and English every Sunday. My guitar is cracked and jars abominably, but you will not be surprised at this when I add that I have been obliged to grease my hands daily to prevent their cracking also, for such is the dryness of the atmosphere that nothing can stand it." Back's expedition was notable for the discovery of the Great Fish River.

Hancock's Steam Carriages

Of the various projectors of steam road carriages, none came nearer commercial success than Walter Hancock (1799–1852). On October 25, 1834, the *Mechanics' Magazine* published a communication from him entitled, "A Statement of the Performances of the Autopsy and Era on the Road between London

and Paddington, from the 18th August to the 11th October, 1834", in which he gave some particulars of the defects which had occurred in those steam vehicles, and the difficulties which had arisen from the bad state of the roads. "I have up to this time," he said, "carried nearly 4,000 passengers in perfect safety, and I am happy to say that the Jehus of the road get more friendly and reconciled to us; and as it is my intention to employ steady coach drivers as steersmen the sooner this feeling is fully developed the better. Why should there be the least ill-will? What difference can it make, whether they drive horses or

"Sweep o'er the hills in the glory of steam'."

Societies and Academies

PARIS

Academy of Sciences, September 3 (*C.R.*, 199, 545-560). K. ZAREMBA: An extension of the idea of the differential equation. ROLF NEVANLINNA: A general principle of analysis. ED. LE DANOIS and L. BEAUGÉ: The relief of the edge of the continental plateau to the west of the entrance to the English Channel. A chart of the western entrance to the Channel is reproduced showing the extreme complexity of the relief of the continental edge. The hydrographical work upon which this chart is based was carried out with the Marti self-recording sounding apparatus, supplemented and confirmed by the Langevin-Florisson apparatus. QUIRINO MAJORANA: A new interference apparatus. This consists of a slit and a prism of very small angle, about 1° : the author calls it the monoprism and outlines some of its applications. JEAN RATELADE: The rhythmical precipitation of silver chromate in "Cellophane". CHARLES COURTOT and JOSEPH FRENKIEL: The phenyltolyl and ditolylsulphinones.

September 10 (*C.R.*, 199, 561-592). CHARLES RICHET: Anaphylaxy in therapeutics. Medical and therapeutic treatments ought to be brought into relation with toxic actions of which they are only the first stage. Certain observations have proved that the repetition of a dose originally inactive has a therapeutic effect. HENRI ADAD: Researches on surfaces several times encircled. CHARLES PLATRIER: The small elliptical vibratory movements of the most general homogeneous material medium. M. DODERO: The preparation of cerium silicide and lanthanum silicide by igneous electrolysis. The cerium silicide $CeSi_2$ can be obtained by the electrolysis of small quantities of cerium oxide in baths of calcium silicate, at relatively low temperatures ($1,000^\circ C.$). Substitution of the cerium oxide by lanthanum oxide gives the silicide $LaSi_2$, not hitherto described. MME. ANNE JOFFÉ and A. JOFFÉ: The spectral distribution of the photoelectric effect in cuprous oxide. From the observations of the author and of other workers it is concluded that the photoelectric effect of cuprous oxide or of selenium is due to the reduction of resistance produced by the illumination of the thin arresting layer. E. DUCHEMIN: The magnetic susceptibility of some hydrates of magnesium sulphate and of some salts of the magnesium series. Measurements of magnetic susceptibility lead to the conclusion that the salts $MgSO_4$, H_2O and $MgSO_4 \cdot K_2SO_4$, are unstable complex compounds in the solid state. The first of these remains a complex

compound on hydration but the latter is converted by addition of water to molecular combination. M. BOBTELSKY and B. KIRSON: Reaction of complex salts of copper on the decomposition of hydrogen peroxide. ED. CHAUVENET and Mlle. J. BOULANGER: The combinations of zirconyl iodide and the alkaline iodides. From the results of a thermochemical study the existence of the following compounds is deduced, $ZrOI_2 \cdot KI$, $2ZrOI_2 \cdot RbI$, $2ZrOI_2 \cdot CsI$, and $2ZrOI_2 \cdot NH_4I$. There was no evidence of the formation of similar compounds with lithium and sodium iodides. PAUL BASTIEN: The properties of sublimed calcium. A comparison of the properties of resublimed calcium (99.3 per cent calcium) with two commercial specimens (98.6 and 93 per cent). ROBERT DELAVAILLANT: The mechanism of oxidation of alloys of magnesium and of calcium at a high temperature. PIERRE LAURENT: The use of the specific inductive capacity in the study of reactions in organic solution. ROGER PERROT: The action of nitrosyl chloride on some aromatic nitriles. RAYMOND-HAMET and L. MILLAT: A new alkaloid from *Mitragyna*, mitrinermine. The bark from *Mitragyna inermis* is used by certain tribes in tropical Africa as a febrifuge. A crystalline alkaloid has been extracted from this bark, of the composition $C_{22}H_{28}N_2O_4$. P. ZÉPHIROFF and MME. N. DOBROVOLSKAIA-ZAVADSKAIA: A liposoluble oestrogenic substance isolated from spontaneous mammary tumours of mice.

CAPE TOWN

Royal Society of South Africa, June 20. A. OGG, E. N. GRINDLEY and B. GOTSMAN: Diurnal and secular variations of the earth's magnetic field at Cape Town. In a former communication (*Min. Proc.*, October 18, 1933), the monthly means of the declination and the secular variation ($+4.2'$) for August 1923-33 were given. The mean variation from seven such determinations extending to February 1933-34 gives for all days of the month a value of $+3.8'$ (that is, to the east). This determination that the secular change of declination in this latitude is of the order of $+4$ is of importance since magnetic tables gives the value $+10$ for the epoch 1925. A Fourier analysis of the declination referred to meridian $18^\circ 30' E.$ gives a good agreement between corresponding months of the year. From the above data the secular variation of the horizontal intensity is -97 gamma, probably the largest secular variation at any point on the earth's surface between the latitudes $60^\circ N.$ and $60^\circ S.$ R. S. ADAMSON: The vegetation and flora of Robben Island. I. DONEN: Studies in deciduous fruit: the effect of time of picking on the keeping quality of plums, with especial reference to the internal browning of the Kelsey plum. Plums were chosen from four orchards differing in soil, climate and cultural treatment, kept at $34^\circ-36^\circ F.$ for 30 days and at room temperature for four or twelve days, and percentage breakdown recorded. Kelsey plums in store exhibited two types of breakdown: internal and invasive browning. The extent of browning is associated with the amount of skin colour of the plum on picking. For export, they should be picked with 5-8 per cent colour and should not be kept in store for periods much longer than 30 days.

GENEVA

Society of Physics and Natural History, June 21. R. WAVRE: Fourier's integrals and the representation of certain multiform harmonic functions. R. MORTIER: