

Birthdays and Research Centres.

Aug. 26, 1860.—Sir THOMAS RANKEN LYLE, F.R.S., formerly professor of natural philosophy in the University of Melbourne.

During the last ten years, in addition to being associated in many public utilities, both industrial and educational, I have, in conjunction with my private assistant, Mr. Z. A. Merfield, been carrying on researches aiming at the improvement of diffraction gratings and microscopic test-rulings. The late Mr. Grayson's ruling machines, which I purchased from his executors, have in many respects been reconstructed and improved.

We have developed a type of speculum metal with a high reflecting power which is untarnishable, and we can prepare and polish the ruling diamond so as to have any desired operating faces. Thus we are able to produce gratings by which the major portion of the incident light is diffracted into any desired spectrum.

We have supplied rulings to different research institutes, on speculum for optical work and on glass for X-ray investigations. We have also succeeded in producing microscopic rulings for ultra-violet investigations with rulings at rates up to 250,000 an inch.

The work is being continued; at present, on further improvement of speculum and on more accurate temperature control of the ruling chamber.

Sept. 23, 1850.—Prof. RICHARD HERTWIG, foreign member of the Linnean Society of London and formerly professor of comparative anatomy and zoology in the University of Munich.

Zurück blickend auf die sechsig Jahre meiner zoologischen Thätigkeit, empfinde ich es als ein grosses Glück, dass in diesen Zeitraum der gewaltige Aufschwung fiel, den die Biologie dem Wirken Darwins verdankt. Dieser Aufschwung kam zunächst der Morphologie zu Gute, der vergleichenden Anatomie und Entwicklungsgeschichte. In den letzten Jahrzehnten folgte die experimentelle Zoologie, die exacte Erblichkeits- und Variabilitätsforschung und die vergleichende Physiologie.

Mir will es sogar scheinen, als ob durch die grossen Erfolge der experimentellen Zoologie die morphologischen Probleme allzusehr in den Hintergrund gedrängt würden. Lange Zeit mit experimentellen Untersuchungen beschäftigt, habe ich mich neuerdings wieder der Morphologie der Radiolarien zugewandt und mich überzeugt, wie viel Interessantes hier noch zu entdecken ist. Die Morphologie bildet die Basis, auf der die Physiologie weiter baut. Wir müssen trachten, diese Basis ständig zu verbreiten und zu sichern. Damit werden wir auch der Palaeontologie und Tiergeographie gute Dienste leisten.

Sept. 23, 1850.—Prof. W. MITCHINSON HICKS, F.R.S., emeritus professor of physics in the University of Sheffield.

I should like to publish a new edition of my "Analysis of Spectra", which is now out of print; but the advances in real observational knowledge and in that of spectral relationships since its appearance in 1922 are so enormous that it would be hopeless at my age to attempt it. I am anxious, however, to put into form for publication a connected account of the fundamental quantitative relations in spectra contained in that book and of new data in support.

Sept. 24, 1874.—Prof. ALEX. FINDLAY, professor of chemistry in the University of Aberdeen.

The fact that Pasteur's method of resolving racemic compounds by crystallisation from solution has found

application in only a small number of cases, provoked the investigations in which I have been engaged in recent years. What connexion, if any, exists between the constitution of a racemic compound and its stability relative to that of the active antipodes, and what are the factors which influence the temperature at which the relative stability of racemic and active forms undergoes change? Answers to these questions have been sought by a study of freezing point and solubility curves.

I have also been much interested in the pedagogy of chemistry, and in my leisure time I am collecting materials for a history of chemical teaching in Aberdeen.

Sept. 24, 1865.—Prof. C. F. JENKIN, formerly professor of engineering science in the University of Oxford.

I am chiefly interested in investigations on the fatigue of metals and building materials; and in earth pressures.

Sept. 26, 1881.—Mr. P. P. LAIDLAW, F.R.S., pathologist to the Medical Research Council.

I am at present engaged on the improvement of dog distemper anti-serum and the separation and purification of the most active constituent of whole serum, so that a therapeutic product of high potency can be secured at will. It is hoped that the knowledge gained from this study may be of assistance in the production and improvement of anti-sera for other virus diseases.

The outstanding problem for the research worker in virus diseases is believed to be luxuriant cultivation of viruses, apart from living cells, and it is hoped that many workers will endeavour to solve this problem.

Societies and Academies.

LONDON.

Institute of Metals, Sept. 14 (Annual Autumn Meeting, Zurich).—H. Waterhouse and R. Willows: The effects of cold-rolling and of heat-treatment on some lead alloys. The hardness numbers of the cast alloys ranged from 5 to 18 Brinell. Cold-rolling hardened the soft alloys and softened the hard alloys, the hardness immediately after cold-rolling lying in all cases between 8 and 11 Brinell. Most of the alloys, especially those containing cadmium and antimony, were re-hardened to approximately the 'as cast' hardness by suitable heat-treatment, quenching and ageing. Certain alloys age-hardened after air-cooling or even more restrained cooling from the heat-treatment temperature. The age-hardness persists for several months at least, but is destroyed by severe cold-working and self-annealing.—H. Sutton and L. F. Le Brocq: The protection of magnesium alloys against corrosion. Of the methods of protection examined the most promising appeared to be that of chemical treatment of the surface followed by the application of lanolin or a suitable enamel.—D. G. Jones, L. B. Pfeil, and W. T. Griffiths: Nickel-copper alloys of high elastic limit. The elastic limit is low in substantially pure nickel-copper alloys in the fully annealed and in the cold-drawn conditions, but high elastic limits are developed in all compositions as a result of low temperature heat-treatment following cold-working. High elastic limits may also be produced in nickel-copper alloys containing small amounts of such elements as silicon, which render the alloys susceptible to heat-treatment.—D. Hanson and I. G. Slater: Unsoundness in aluminium sand-castings. (1) Pin-holes: their causes and prevention. To eliminate pin-holes treatment with nitrogen or with chlorine is sometimes successful, but cannot always be relied upon to produce castings perfectly free from