

News and Views

Prof. H. S. Carslaw

PROF. HORATIO SCOTT CARSLAW, whose approaching retirement from the chair of mathematics, pure and applied, at the University of Sydney has just been announced, was appointed to that post some thirty-two years ago. Born in 1870, he is a son of the late Rev. W. H. Carslaw, D.D., of Helensburgh, a well-known writer on the martyrology of the Scottish Reformation and of the Covenants. After graduating at Glasgow, Carslaw proceeded to Cambridge, where, among other distinctions, he gained a Smith's prize and was elected to a fellowship at Emmanuel College. Prof. Carslaw has always taken advantage of the sabbatical years granted periodically by the University of Sydney to renew his connexion with his old college. On the last of these occasions Emmanuel College showed its appreciation of his eminence as a mathematician by re-electing him to a fellowship. The University of Glasgow, in which, before going to Australia, he served for five years as senior lecturer in mathematics, also took this opportunity of conferring on him the honorary degree of LL.D. Prof. Carslaw has been a prolific writer of mathematical papers and textbooks. His "Fourier's Series and Integrals", published in 1906, is regarded as a standard work. In later and amplified editions, this book has been divided, the part dealing with applications to the "Conduction of Heat" appearing as a separate treatise. In 1912 Carslaw published a translation of Bonola's "Non-Euclidean Geometry", and in 1916 he produced a textbook of his own on the same subject. Other writings include "An Introduction to the Infinitesimal Calculus" and a "Plane Trigonometry". To Prof. Carslaw increased leisure means opportunity for further researches; the fruits of these activities are awaited with interest by his many friends.

Aberdeen Meeting of the British Association

THE local honorary secretaries for the Aberdeen meeting of the British Association, which will be held on September 5-12, refer in our correspondence columns this week (p. 144) to a rumour that lodging accommodation is difficult to obtain in Aberdeen during the week of the meeting. The explanation of that rumour probably is that in the preliminary programme of the meeting it was intimated (as usual) that members wishing for hotel accommodation might find it more convenient to apply direct to hotels (of which a list was given) than to ask the help of the local committee in finding accommodation. Some members, having unsuccessfully attempted the first course, may have not availed themselves of the second; if so, they need not hesitate to do this. Of all the duties which the Association imposes upon its voluntary helpers at the place of meeting, that of securing accommodation for visiting members is probably the most onerous, but it is always cheerfully undertaken, to the honour of the locality and to the lasting gratitude of the Association. There is

not the slightest reason to fear that Aberdeen will fail to sustain the one, or to merit the other.

New Arctic Expedition

A BRITISH expedition to Ellesmere Land left London on July 17 in the Norwegian sealer *Signalhorn* under the leadership of Dr. Noel Humphreys. Other members include the organiser, Mr. E. Shackleton, Mr. A. W. Moore, Mr. R. Bentham and Mr. D. Haig-Thomas. A sergeant of the Canadian Police, with wide experience of the Arctic, will also join the expedition. At Disko in Greenland, 70 dogs will be taken on board, and thence the ship will sail to Thule to embark two Eskimo families. It is hoped to pass north along Smith Sound as far as Fort Conger, the site of the Greely expedition of 1882-83 in Lady Franklin Bay at the north end of Kennedy Channel. Ice may prevent this, in which case winter quarters will be set up at Bache Peninsula further south. During the autumn, depots will be laid out as far north as possible in Grant Land, the northern end of Ellesmere Land. The ship will not winter. The main area of exploration will be the little-explored Grant Land of which the coasts are known chiefly from the work of Nares and Peary and a little of the interior from MacMillan's works in 1924. The geological discoveries promise to be of special interest in relation to the probable extension of Caledonian foldings in that area. The expedition hopes to return in the summer of 1935.

A New American Ascent into the Stratosphere

NEWS has been received through Science Service, Washington, D.C., that arrangements for a new observation balloon ascent into the stratosphere are well advanced. This new attempt is being organised jointly by the National Geographic Society and the U.S. Army Air Corps. The pilot will be Major W. E. Kepner, who holds a long and distinguished record as aeroplane pilot and racing balloonist, whilst the observer will be Capt. A. W. Stevens, who is also an expert in long-range photography. A strong motive for the new flight is the breaking of the altitude record of 50 m.m. (62,000 ft.) held at present by *Stratostat USSR* made last year and the higher-claimed Russian flight of January this year, which ended disastrously. Generally, however, from the nature of the equipment included, which is said to weigh a ton, the aims of the projected flight are to investigate cosmic radiation with particular reference to the Steinke bursts. The instruments include spectrographs, air samplers and special cameras the records of which, if the weather is clear, will give heights by triangulation, wind direction and velocity. Barometers will be checked for height, and the influence of height on radio-transmission will be studied. The lessons of the past have been learnt. To safeguard the crew, a pneumatically controlled hydrogen release valve can be operated from the gondola, and in case of necessity the gondola can be

brought to the ground by parachute. The crew have personal parachutes and exit portholes. The balloon itself is three times as large as any previously built. It will contain 3 million cubic feet of hydrogen which will fill it to one tenth of its capacity on the ground. The flight is intended to be of twelve hours' duration, the take off being from a hollow in Black Hills near Rapid City, S.D., when the wind conditions are from the north-west.

Museum of Science and Industry at Newcastle-upon-Tyne

A NOTABLE event for Tyneside, and indeed for the north of England generally, was the opening at Newcastle-upon-Tyne on July 20 of the Municipal Museum of Science and Industry. The ceremony was performed by Mr. R. J. Walker, President of the North East Coast Institution of Engineers and Shipbuilders, which has helped the scheme materially. The gift was accepted on behalf of the citizens by the Lord Mayor of Newcastle, Councillor J. Lead-bitter. An institution to record and illustrate the many-sided scientific and industrial advances made in this district had long been talked of, but it was the exhibition held at Newcastle in 1929 which gave impetus to the effort which has culminated in the present Museum. It is housed in a building on the Town Moor, formerly part of that exhibition, and refitted for its present purpose by the Town Moor and Parks Committee of the Corporation. The task of collecting and arranging objects has been in the capable hands of Capt. E. W. Swan, acting with the above Committee. The aim of the Museum is to illustrate development, like the Science Museum, South Kensington, and its scope is similar, but restricted. Excellent progress has been made, in shipbuilding and electricity especially, as might be expected, but a great deal is still to be done. However, with the evident enthusiasm, the material available, more adequate funds, and willing helpers, the task should not be too heavy, and we wish the new Museum every success.

Progress in Materia Medica

In few provinces is it more difficult to define the direction of progress than in the province of materia medica. To eat your enemy's heart that you may add his courage to your own seems a relapse into a barbarism centuries old. Yet medicine has but recently rediscovered that raw liver or the scrapings of the stomach of the pig have a virtue in remedying deficiencies of those organs in man. In 1820, Paris ascribed "the revolutions and vicissitudes which remedies have undergone" to, among other causes, "Superstition, Credulity, Devotion to Established Routine, the assigning to peculiar substances Properties deduced from Experiments made on Inferior Animals, Ambiguity of Nomenclature, the application and misapplication of Chemical Philosophy". As Mr. C. H. Hampshire pointed out in his chairman's address to the British Pharmaceutical Conference at Leeds on July 17, "drugs are introduced on high authority and supported by expressions of clinical confidence, they flourish for a time and then sink

into a position of relative unimportance and finally pass almost completely out of use". There is, nevertheless, a point on the circle which represents the best scientific and medical practice of the day, a point which Mr. Hampshire fairly infers to be represented by the "British Pharmacopœia, 1932", a fact which justifies use of that book as a criterion for determining the extent to which the pharmacopœias of other countries reflect what is best in modern medical and pharmaceutical practice.

Modern Pharmacopœias

APPLYING the yardstick of the British Pharmacopœia to its contemporaries, he finds the Spanish Pharmacopœia of 1930 one of the most satisfying and instructive of the modern pharmacopœias, although still retaining some aroma of the past by the inclusion of castoreum and musk. The Swiss Pharmacopœia of 1933 is an excellent production pharmaceutically, although omitting modern methods of biological testing, through the absence of a public laboratory for performing these tests in Switzerland, comparable with that of the Pharmaceutical Society in Great Britain. The utility of the Yugoslavian Pharmacopœia, 1934, is limited by its being printed in Slavonian, a difficulty which the Hungarian Pharmacopœia, 1934, overcomes by the use of Latin, the scientific *lingua franca* of two hundred years ago and still current, though in a bastard form, where physicians and pharmacists work together. The language problem is one only of those disclosed by an examination of eight of the most modern of the European pharmacopœias, and the conclusion to which Mr. Hampshire is drawn is that the steps taken by International Conferences in 1902 and 1925 towards the international unification of the formulæ of potent medicaments should be actively followed up, a proposal which the innocent abroad with his prescription will endorse. His further proposal that there should be a permanent body charged with this duty is probably less likely to be welcomed by a generation grown sceptical of the activities of international committees and disinclined to put its hand in its pocket for the maintenance of yet another.

Future Changes in Medical Practice

IN addressing the graduates in medicine at the graduation ceremonial at the University of Edinburgh on July 18, Prof. A. J. Clark pointed out that to-day the prevention of disease, or its cure at an early stage, is becoming the chief function of the doctor. It is more interesting to try to enable the human machine to work with full efficiency than to patch up human wreckage so that it can just continue to function, but undoubtedly the diagnosis and treatment of slight deviations from the normal present problems of exceptional difficulty. Another point worthy of notice when considering their future careers, is that the demands of the public will be further modified by inevitable changes in the composition of the population. The figures for the birth rates during the last few years show that the average size of the family in the near future will be nearer