

News and Views

Prof. G. G. Henderson, F.R.S.

THE medal of the Society of Chemical Industry has been awarded to Prof. G. G. Henderson, regius professor of chemistry in the University of Glasgow. The Medal is presented every alternate year for conspicuous service to applied chemistry. Prof. Henderson began a life-long association with teaching in 1884, when he became assistant to the professor of chemistry in the University of Glasgow. He also possesses the unique distinction of having been president of the Chemical Society, the Institute of Chemistry and the Society of Chemical Industry. For a number of years, he was one of the secretaries of Section B (Chemistry) of the British Association, in 1905 he became recorder, and in 1916 he was president. Much time and energy has been devoted by Prof. Henderson to the prosecution of original research—mostly in the organic field and particularly the chemistry of terpenes—and to the supervision of the research work of students.

Destruction of the Bed Bug

A PROMISING advance in solving the problem of the destruction of bed bugs is reported in the *British Medical Journal* of February 27, p. 459, by Messrs. S. A. Ashmore, of the Government Laboratory, and A. W. McKenny Hughes, of the Natural History Museum, acting for the Committee of the Medical Research Council. That the evil is a grievous one, although often passed by on account of the unsavoury nature of the subject, can be gathered from conversations with medical officers of health, who have been known to declare that they can identify streets with infested houses from the paleness of the children due to sleeplessness produced by bites. It has been said that in hot weather children are driven from their beds to play in the streets in some quarters during the light night hours. Disadvantages attach to most of the treatments previously tried. Thus hydrocyanic acid in the gaseous form is lethal to the insects and also to their eggs, but the use of this highly toxic substance obviously requires great precautions, especially, for example, in treating a room situated in the midst of tenements. Certain chlorinated aromatic derivatives appeared promising, but were found to act as liver poisons on the animal organism, and presumably on man, if traces were left unevaporated.

THE authors put forward a simpler method with which they have had promising results both in the laboratory and in about two hundred infested houses. It consists in spraying the room at a temperature not below 60° F. with a quantity of fairly high boiling coal-tar naphtha for which a specification is given, the room being thereafter sealed for eighteen to twenty-four hours. It is claimed that this sub-

stance is not only lethal to the insects, but is also an ovicide, and that it is not harmful to other animals. The concentration of vapour necessary is well below that of the flash-point of its mixture with air. Research is going on at the Field Biological Station of the Imperial College of Science to determine which of the many constituents of this coal-tar naphtha is specially efficacious, but the above-quoted report points to a remedy, by the careful use of a cheap and easily obtained product. It is greatly to be hoped that this method proves successful, for this social evil is a very great and widespread one.

The Boulder Dam

A LECTURE on the remarkable engineering achievement, known as the Boulder Dam, across the Colorado River about thirty miles south-east of Las Vegas, Nevada, where the river forms the boundary between the States of Nevada and Arizona, was delivered to the Institution of Civil Engineers on April 15 by Mr. John Lucian Savage, chief designing engineer, Bureau of Reclamation, United States Department of the Interior. The Dam has already been referred to in *NATURE* (Feb. 9, 1935) and the leading particulars will be given in one of a series of articles on "Water Power Developments in the United States", already prepared and awaiting publication. Mr. Savage's lecture was a very detailed account of the engineering features of the undertaking and of the constructional methods employed. It is interesting to note that the four diversion tunnels for the river (which were a necessary provision at the outset of operations) each 56 ft. diameter bore and 4,000 ft. long, were driven through unusually sound monolithic rock, with the result that 1,500,000 cubic yards of excavation in the three miles of tunnel were removed without the use of timbering or roof supports of any sort. "The ideal character of the andesite breccia rock for tunnelling purposes, as evidenced by this record, is one of the marvels of Boulder Dam." The reservoir behind the dam, called "Mead Lake" in honour of the late Dr. Elwood Mead, has a capacity of 30,500,000 acre-feet, of which 9,500,000 acre-feet has been reserved for flood control. This volume of flood storage, combined with the 520,000 cusecs (cubic feet per second) of flood discharge capacity, provides for an estimated inflow into the reservoir of nearly a million cusecs without overtopping the dam. This extraordinary provision for inflow is made in view of the remote contingency of the failure of an upstream dam.

A Film of the Royal Botanic Gardens, Kew

A PRIVATE view of a new 'documentary' film of the Royal Botanic Gardens, Kew, was given to a number of men of science in London on April 14. The film, which was made by Short Film Productions,

Ltd., and produced by Mr. Harold Lowenstein with the co-operation of Sir Arthur Hill and his staff, gives a 'cross-section' of the activities of Kew as a public garden and as the centre of economic botany and horticulture in the Empire. The opening views give a picture of the Gardens as seen by the ordinary visitor, followed by sequences showing some of the work that goes on behind the scenes, both out of doors and under glass, in order to keep the Gardens in good condition and to provide a constant succession of bloom throughout the year. The most interesting section of the film from the scientific point of view is that illustrating the work that is carried out in the Herbarium, Jodrell Laboratory and Museums. The process of drying, pressing, mounting and storing botanical specimens is shown in the film in detail, and the method of examining and describing new species is also dealt with. The work of the Jodrell Laboratory consists largely of identifying fragments of plants (roots, stems, leaves, etc.) by microscopical examination, and one of the best sequences in the film illustrates the technique of examining a portion of stalk found in the stomach of a poisoned cow. The film ends with an impressionistic treatment of the part that Kew has played in the foundation and improvement of many of the important agricultural enterprises throughout the Empire. The introduction of Para rubber and cinchona (quinine) from South America via Kew to the East in the middle of last century is illustrated, and more recent instances show that this type of work is still being undertaken. This film will undoubtedly be of value in spreading a knowledge of the great importance of the Royal Botanic Gardens in the botanical and horticultural work of the Empire, and it is hoped that it will obtain a wide circulation, especially among schools and other educational institutions.

Palestine Folk Museum

AN appeal for financial assistance towards the needs of the Palestine Folk Museum, appearing in *The Times* of April 19, should meet with a sympathetic reception from the widespread public in Great Britain and America, which is interested in the history and culture of Bible lands. The museum, which is situated in Jerusalem, was opened in 1936 under a committee formed in the preceding year and composed of representatives of the resident English, Arab and Jewish communities. Unfortunately it has no funds, and its work is carried on by voluntary helpers—no inconsiderable burden, even with a tolerant standard of efficiency. No Government grant has been made towards the expenses of the Museum, nor is it eligible to receive assistance from the funds provided by the Carnegie Corporation to aid the museums of the Empire through the Museums Association, Palestine being a mandated territory. Until something in the nature of an assured income is provided, it will not be possible to appoint a curator, an obvious necessity, or to carry on research. Folk museums now have a recognized and an increasingly important part to play in the record and study of cultural history; but the value to the student,

whether archæologist or historian, of a folk museum in a country in the near East, such as Palestine, is exceptional. A prolonged period of little cultural change has preserved peasant arts and industries, with their characteristic implements and appliances, domestic and other, virtually unchanged for many centuries, so that objects can be seen in daily use in the villages, which are identical in form and purpose with finds from Palestinian sites of the Bronze and Iron Ages. This period of comparative immobility is rapidly drawing to a close under the impact of an expansion of population and industry under Western influence.

Science and the Conservation of Food

IN his Friday evening discourse at the Royal Institution on April 16, Mr. T. Macara described some special problems of "Science and the Conservation of Food". While the term 'conservation of food' may be applied to many aspects of the production and handling of foods, he confined himself to problems connected with some common types of manufactured food. The first problems discussed were mould growth and fermentation, crystallization, and absence of jelly property in jam. As regards mould growth and fermentation, Mr. Macara put forward the theory that their prevention depends on the production of a jam having a higher osmotic pressure than that of mould spores or yeast cells, and he showed how this result could be achieved. The jelly property of jams is due to the fruit pectin, and it was shown how the jellifying property of this pectin may be lost or destroyed through lack of knowledge of its properties. Problems connected with the preservation of fruits, vegetables and meat products were then discussed. The British Food Manufacturers' Research Association has found certain bacteria the spores of which show an extraordinary high resistance to heat. Boiling for 8 hours or heating to 230° F. for an hour fails to destroy them. It was pointed out that these times apply to small quantities of materials, and that when larger quantities have to be sterilized it is necessary to know the rate at which heat penetrates the product. The question of food storage in cans is surrounded with difficulties on account of defects in the coating of tin on the cans. A number of cases have been met with where the cans became perforated after three or four months' storage.

Joint Committee on Materials and their Testing

A COMMITTEE having the above title has now been set up by leading technical institutions and societies in Great Britain to act as the British national organization in matters relating to materials and their testing. The need in Great Britain of some means to provide for more adequate co-ordination of the study of materials and their testing has, during the past year, received the earnest consideration of the principal technical institutions and societies which are concerned directly and indirectly with these important subjects. Twenty-two institutions and societies are represented on the Joint