

soapy water are also recommended for contact with mustard gas that has not done serious injury, and hot water, soap and soda scrubbing for lewisite contact if blisters have not developed. The difficulties of providing for cats and birds, or of devising a gas mask for any animal, are stated to be considerable. Research is continuing in this work.

Royal Botanic Gardens, Kew

It has been reluctantly decided to close the Royal Botanic Gardens, Kew, for the present owing to the impossibility of providing adequate air raid shelters in the Gardens. It will be readily understood that should an air raid occur and the Gardens were at all crowded with visitors, grave risks might be incurred. Not only would there be difficulty in evacuating the public before the gates were closed, but there would also be the practical impossibility of their being able to find sufficient shelter outside or means of transport to their homes. Even were it possible to provide air raid shelters, owing to the large extent of the Gardens and the six different means of entrance, the public would scarcely be likely to discover the shelters, however well labelled, at a critical moment, unless a large staff of wardens was available. Since so many of the staff have had to be detailed for guarding the Herbarium and other vulnerable spots in the Gardens, as well as the employees, there is no one who could be detailed to look after a large body of visitors. Adequate steps, it is hoped, have been taken to safeguard the collections in the Herbarium, the museums, etc., and work is proceeding so far as possible on normal lines.

The Toll of Accidents

THE Inter-Departmental Committee on the Rehabilitation of Persons Injured by Accidents has issued its final report (H.M. Stationery Office. 3s. 6d. net). The report refers to the loss to the community resulting from injuries by all classes of accidents as being "enormous", and the cost must run into many millions of pounds annually. Fractures in particular are dealt with, and the Committee recommends in the first instance concentration on the provision of fracture services, and concludes that the treatment of fractures can be satisfactorily carried out only in specially organized hospital departments. Some 15 per cent of all fractures are due to road traffic, and 29 per cent to industrial, accidents, and the Committee recommends a revision of the Road Traffic Act whereby the limits imposed on the amounts recoverable for the treatment of road accidents may be abolished. The Committee considers that every hospital with a medical school should have an organized fracture service, and that a period of training in a fracture department should be an obligatory part of medical students' training. Questions of organization and finance of fracture services are considered, and under the Workmen's Compensation Acts it is recommended, with certain reservations, that so long as the patient requires treatment by the fracture service he should continue to receive compensation as for total incapacity.

New Laboratory for Virus Research

THE Squibb Biological Laboratories, New Brunswick, New Jersey, have established a new laboratory for the study of filterable virus diseases. Dr. Raymond C. Parker, biologist of the Rockefeller Institute for Medical Research, has been appointed head of the laboratory, which will operate as a unit of the Biological Division of E. R. Squibb and Sons. The new building is a continuation of a programme of expansion which began in 1938 with the dedication to pure science of the 750,000-dollar laboratory of the Squibb Institute for Medical Research. Among the common diseases caused by filterable viruses are smallpox, rabies, equine encephalitis, measles, chicken pox, poliomyelitis, and the common cold. No specific product for the prevention of four of these diseases—the common cold, poliomyelitis, chicken pox, and measles—is yet available.

THE new virus laboratory, which was opened during a tour of the Squibb Institute and the Biological Laboratories on September 6-7, is housed in a specially constructed building, and is equipped for work with chick embryos and tissue culture, two of the techniques for work in this field. The actual working quarters consist of a large general laboratory equipped with every facility for chemical and histological work, a general preparation room for washing, drying, packing, and storing the various materials that are used, two special culture and operating rooms provided with filtered ventilation, a spacious incubator room, an animal preparation room, a bleeding room, and ample animal quarters. The arrangement of the rooms is such that the air of the culture suite proper is protected at all times from the air of the general laboratory and office quarters on one side, and of the animal rooms on the other. It is also possible for visitors to observe every step of the work in progress without entering any of the various rooms of the culture suite.

Experimentation and Disease

THE thirteenth Stephen Paget Memorial Lecture was delivered at the annual general meeting of the Research Defence Society on June 13 by Sir Edward Mellanby, who took as his subject "The Experimental Method in the Conquest of Disease" (*The Fight against Disease*, 27, Nos. 2 and 3). After a tribute to the memory of Stephen Paget, Sir Edward referred to the exhibition in an anti-vivisection office window of models of dogs suffering from rickets (incidentally, models of his own experimental animals), and remarked that it is difficult now to find throughout Great Britain children suffering from the same kind of deformity. Sir Edward Mellanby then proceeded to give instances in which the experimental method had solved the nature and causation of various diseases. In the case of facial paralysis ('Bell's palsy'), in 1844 Bell surmised on anatomical grounds that this form of paralysis was caused by paralysis of the facial nerve, and demonstrated the truth of this surmise experimentally by cutting the facial nerve in an

animal and producing the condition, thus solving an age-old problem. The experimental work on the elucidation of the nature of rickets and scurvy as being due to vitamin deficiency, on the discovery of drugs curative for streptococcal infections, such as puerperal fever and pneumonia, and on the nature of cancer, were described. Finally, Sir Edward pointed out both the importance and the limits of clinical observation, and discussed some of the criticisms and failures of the experimental method.

Early Cultural Relations in Central America

AMONG communications dealing with the archaeology of Central America presented to the Twenty-seventh International Congress of Americanists, which met in Mexico City on August 5-15 (see NATURE, Aug. 19, p. 319), there were several, it would appear from a preliminary report issued by Science Service of Washington, which brought forward suggestions and advanced conclusions of considerable interest in reference to the cultural relations of, and cultural successions among, the early inhabitants of Mexico and the adjacent regions. Dr. Alfonso Caso, president of the Congress, for example, in describing the results of his excavations on Monte Alban, not only argued for the common origin of the culture of that site with that of the not far distant ruined city of Mitla on the evidence of architectural affinities, but also put forward the conclusion that three stages of development are to be distinguished, which can be linked respectively with the Archaic culture of Mexico, dating from before the Christian era, the Toltec of Teotihuacan, and the Aztec. Further, Dr. A. V. Kidder, reporting on his excavations in pit-tombs near Guatemala city, assigns their builders to a period corresponding with the middle period at Monte Alban, or when the great Toltec civilization of central Mexico was approaching its decline. It would appear that the pottery from the Guatemalan pit-tombs provides a key which links the tomb builders with other early cultures of tropical central America. Some light was also thrown on the development of agriculture among the early peoples by Dr. Pablo Martínez del Rio, who advanced the theory that agriculture may have had a more rapid rise in the New World than in the Old, on the ground that differences in methods of seed selection and cultivation speeded up results for the Indian farmer, so that it was not necessary to postulate, as some botanists have done, an extremely long period of development.

Electrical Development in Iraq

IN a paper communicated to the *Electrical Review* of August 18 by W. H. Peters of Baghdad, a review is given of the post-War development of Iraq. Both Baghdad, the capital city, and Basra, its modern seaport, were left electricity systems installed by the British Army during the occupation. Being war products, they were limited in capacity and of antiquated design. During the past fifteen years these supply undertakings have been transferred to concessionaries or to the Government. The most

provincial of the centre towns have shown initiative in the promotion of schemes for small plants primarily to serve the requirements of the administrative authorities for fans and for street lighting. The largest supply undertaking is that in the capital city, Baghdad, the population of which is about 250,000. It is directed by the Baghdad Light and Power Co., which is registered in the United Kingdom. It is the only supply station left which is of foreign ownership. The main thoroughfares of the city are copiously lighted, the load exceeding 300,000 watts. The port of Basra set up an efficient power station five years ago and the sale of energy in the port and the municipal area which it supplies has exceeded all expectations. The rate at which it sells power is 4½d. per unit for lighting and 2½d. per unit for domestic power.

WITHIN a year the Iraqi State Railway will be finally completed to the northern city of Mosul and will permit of railroad goods traffic both westwards to Syria and southwards to Basra passing en route Basra, Baghdad, Syria, Turkey and so on to Europe. This great need once fulfilled is almost certain to develop the import and export trade of Mosul, thereby increasing its prosperity. Until three years ago all the Diesel power stations were run by plant entirely of British origin, but recently German plant has made considerable headway. Iraq's exports of oil and agricultural progress show a very satisfactory increase year by year and these contribute to increased national wealth and a higher standard of living. This increase in the standard of living is not confined to the property owners and married classes, but is apparent almost everywhere. It is noteworthy that Britain has hitherto enjoyed no commercial privileges in Iraq.

Coal Utilization by Electricity

ACCORDING to the *Electrical Review* of September 1, Mr. M. Anderson, the director of the Coal Utilisation Council, estimated that to keep the public properly warm would necessitate the consumption of eight million more tons of coal per annum. To raise the standard of 'heat comfort' was one of the principal aims of the plan of campaign outlined at the last National Coal Convention. Since the success of the campaign would depend largely upon the development of the domestic and industrial demand for electric power and especially that used for 'space heating', convenience rather than necessity would be the controlling influence in regulating the demand for coal for power. Mr. Anderson referred to several other methods of increasing the coal output to compensate for the falling off in the direct demand for coal owing to the increasing use of electric power and heating in many trades. Trolley buses, also, although they have greatly diminished the demand for electric tramways and in spite of the competition of oil-engine buses, have probably increased the total demand for electric power from the public mains and consequently for coal. Trolley-buses move faster and give a much better service than almost any other