

the absence of the nervous complications of syphilis in spite of the prevalence of that disease, the low incidence of diseases of the liver, the rarity of appendicitis, the frequency of pain in the region of the solar plexus, the prevalence of the osteo-articular and glandular forms of tuberculosis and the frequency of cataract in elderly persons.

Euthanasia

IN the April issue of the *Quarterly Review*, Sir Arthur Hurst discusses the question of euthanasia from a practical point of view without any sentimental considerations. Those in favour of the practice, he points out, maintain that euthanasia should only be carried out on persons who are affected with an incurable and painful disease, which cannot be controlled by any form of treatment. On the other hand, the cases in which euthanasia appears most desirable do not come within the scope of the Euthanasia Act, which requires the expressed desire of the patient that his life should be ended. Such cases are those of new-born babies with severe deformities or conditions preventing normal mental development, or that of the intelligent man who becomes paralysed and is unable to communicate his wishes by speech or writing.

Sir Arthur condemns the unjustifiable confidence displayed by the advocates of euthanasia in the ability of two independent medical advisers, however experienced they may be, to decide whether a disease is incurable, and quotes several examples of patients condemned to death by eminent physicians or surgeons making an unexpected and complete recovery. In undoubted cases of incurable and painful disease, in which no relief can be obtained except by morphia, Sir Arthur recommends that the patient should be kept permanently free from pain by gradually increasing the dose and giving the injections as often as is necessary. Moreover, pain can be controlled not only by drugs but also by surgical operation, which is particularly indicated when the painful disease is not likely to be rapidly fatal and the administration of morphia is therefore undesirable.

Photo-cell Applications in the Foodstuffs Industries

IN commerce the difference between one quality of rice and another consists mainly in the proportion of discoloured grains present. Since hand-sorting has never been commercially practicable, the mechanical and electrical method of sifting out the discoloured grains by a machine, described in a paper by A. Seymour in the *Electrical Times* of June 6, may have far-reaching effects. The machine utilizes the properties of a photo-cell. By an ingenious mechanical method, the grains emerge from the feeder in a single line at a speed of 5 ft. per sec. and pass under the electric 'eye'. The perfect grains shoot straight forward into a tube leading downwards to a sack. Discoloured grains cause an electrical impulse through the photo-electric cell; this brings into action a jet of compressed air, which sends them into another receptacle.

Examination of granulated sugars is more elaborate,

as it includes a classification of the finished sugars for general appearance and an evaluation of the colour and turbidity of the sugar solutions. Experiments with photo-electric apparatus have shown that good correlation exists between the appearance of a sample of granulated sugar and its reflectance relative to magnesium oxide. A specially designed optical system in the photo-electric apparatus permits measurements of the transmittancy of sugar solutions as well as of the reflectance of the sugar in granulated form. Numbers obtained from these data enable the expert to compare the relative merits of the samples.

The Edinburgh Botanic Garden

A PAPER by John M. Cowan (*J. Roy. Hort. Soc.*, 65, Pt. 3; March 1940) describes the various botanical personalities who have contributed thought and organization to the development of the Royal Botanic Garden, Edinburgh. This is one of the oldest 'physic' gardens in Britain, and was established in 1670 by Robert Sibbald, with help from his friends Andrew Balfour and Patrick Murray. The first 'intendant' was James Sutherland, whose subsequent appointment as the first professor of botany at the University of Edinburgh ensured that close co-operation between academic plant science and practical horticulture which has been so marked a feature of the institution throughout its history. The Prestons, Charles Alston and John Hope succeeded Sutherland, each adding patiently a solid quota of work. Rutherford, discoverer of nitrogen, was also in charge of the garden, and more recently, J. Hutton Balfour and Sir Isaac Bayley Balfour have enhanced the reputation of the garden as an academic centre. It now possesses modern laboratories, and provides a stimulating part of the curriculum for students in medicine, arts, pure science, forestry and agriculture.

Road Obstruction Lanterns

THE General Electric Co., Ltd., has developed a road obstruction lantern which complies strictly with the Lighting (Restrictions) Order, 1940. The use of these electric lanterns for fixing to street bollards or other supports has many advantages. Not only does it mean a saving ranging from 2d. to 6d. per lamp per day, but it also saves in oil and man-power. According to *Roads and Road Construction* of June 1, in one London borough alone the saving effected in this way amounts to nearly £5,000 a year. The G.E.C. lantern is constructed of lead-coated sheet steel and has three sides, stencilled with the approved St. Andrew's Cross sign and backed with white opal glass. Inside are a detachable baffle and a B.C. lamp-holder for use with a 15-watt pearl Osram lamp. This provides the correct amount of light (0.5 candle per square foot) on the crosses. The lamp is easily accessible for wiring and maintenance. The lantern is supplied finished with either black or white outside. A two-lamp unit is preferred by some authorities because of the advantages of ensuring that there is a light on the island even if one lamp fails. The cost of the G.E.C. two-lamp lantern is little greater than that of the standard unit.