

Shipbuilders on Friday, October 23, Prof. C. J. Hawkes took as his main theme "The Training of the Engineer" and, as a background, his work and experience in the revision of the engineering degree courses at the University of Durham lent an unusual interest and value to his remarks. Engineering is not a science but an art depending on science and, between the two, there are still many gaps, which the engineer has to bridge. His decisions have to be in a form capable of being translated into practice, and he has to be trained to make use of established scientific principles in conjunction with a knowledge of the needs of the world, of the natural forces to be contended with, of the properties of the materials to be used, of the capacities and limitations of those through whom the work has to be done and of the plant, tools, and machinery on which the processes depend. Prof. Hawkes indicated how the curricula at Durham have been revised to comply with these comprehensive demands. The more human aspects are provided for by weekly reports and discussions in college, and by the personal contact during the workshop training with men of all classes, perhaps the most broadening influence that could be found. By the limitation of available time, the graduate course is mainly confined to the study of scientific principles and their applications. Such subjects as economics, works organization and administration are considered preferably as post-graduate studies. Prof. Hawkes also took occasion to report the progress of research work at Armstrong College, which has been greatly fostered by the members of the Institution he was addressing.

Observatory for St. Albans High School for Girls

ON October 23, Sir Frank Dyson inaugurated at St. Albans High School for Girls the observatory recently bequeathed to the school by the late Dr. William Alfred Parr. Dr. Parr, a well-known amateur astronomer and past-president of the British Astronomical Association, resided in St. Albans during the last few years of his life, and had erected in his garden a small but well-equipped observatory, containing a four-inch clock-driven equatorial by Cooke, with a photo-visual object-glass, Evershed solar spectroscope and other accessories. The entire observatory, which is of wood, surmounted by a 10-foot revolving dome, was, with its small annexe, removed from Dr. Parr's garden during the summer, and re-erected in the school grounds near the new gymnasium, under the supervision of Dr. W. H. Steavenson. Following an address by Sir Frank to the staff and pupils, assembled in the latter building, the observatory was formally opened and dedicated with picturesque ceremony, the Dean of St. Albans, the senior science mistress and the head girl taking part.

Food and the Family Budget

THE Engineers' Study Group on Economics, which was formed towards the end of 1933 to investigate the economic and social problems presented by the co-existence of poverty and actual or potential

plenty, has now published its investigations on family budgets in a pamphlet entitled "Food and the Family Budget" (Engineers' Study Group, Hazlitt House, Southampton Buildings, W.C.2. 1s. 6d.). This investigation has been confined to conditions as they exist in Great Britain to-day. The problem is treated quantitatively, and an attempt is made to deduce some general minimum standard of living which would be both desirable and practicable. The method used was that of analysing and comparing published data on family budgets, at the same time taking into consideration modern trends in consumption and requirements indicated by scientific research. The total budget required to provide the minimum standard desirable was found for a "statistical average family" of 3.72 persons to be about £6 per week (equivalent to about 63s. per week for each wage earner) and of this sum about 37s. a week would be required for expenditure on food. The suggested food budget is shown to be compatible with (a) the dietetic requirements laid down by the British Medical Association Committee on Nutrition; (b) actual national consumption; and (c) the increased consumption of home-grown foodstuffs that would raise the dietetic standard to a level adumbrated by Sir John Orr. There is little doubt, it is stated, that a large part of the population is suffering from lack of nutritious foodstuffs, particularly fresh dairy produce, fruit and vegetables.

Noise on the Road

THE Departmental Committee which was set up in 1934 by the Minister of Transport, under the chairmanship first of Sir Henry Fowler and afterwards of Dr. G. W. C. Kaye, to study the question of motor-vehicle noises, has issued its second interim report (London: H.M. Stationery Office. 1s. net). The report elaborates and extends the first report of the Committee, which dealt with new vehicles including motor-cars, sports-cars, motor-cycles and goods- and passenger-carrying vehicles. It appears from the report that a consensus of opinion considered that a loudness of ninety British standard phons represents in general a transition point between tolerably noisy vehicles and unduly noisy ones. Two types of tests are therefore proposed by the Committee: (a) normal-running tests in which a vehicle running under full throttle at 30 m.p.h. must not generate an overall noise exceeding 90 phons at 18 feet lateral distance; (b) racing-engine tests in which a stationary vehicle the engine of which is racing at maximum-power speed must not generate an overall noise exceeding 90 phons at 25 feet behind the open end of the exhaust pipe. A temporary tolerance limit is suggested for motor-cycles and commercial vehicles. In the meantime, the Minister has received an assurance from the manufacturers of motor-cycles and sports-cars, which are among the chief offenders on the road, that no new vehicle shall in future leave their works the noise of which can be regarded as offensive. The Ministry of Transport is proposing to set up six noise-testing stations to assist the industry in this laudable object. Meanwhile, work is