

the U.S.S.R.; the planning of housing programmes; the participation of the community in housing and environmental hygiene in Ceylon; and economic and financial problems associated with housing.

Procter and Gamble, Ltd.

PROCTER AND GAMBLE, LTD., with world-wide ramifications, but operating in Britain at Gosforth, Newcastle upon Tyne, manufactures a large variety of products, of which perhaps the most familiar in domestic circles are many well-known brands of detergents popular with the housewife and others. Other products include edible materials for the bakery trade, industrial soaps, textile brands, air entraining agents and mortar plasticizers, refined and hardened edible oils, soap for emulsifying raw materials in synthetic rubber manufacture, glycerine, fat additives for animal feeds, etc. In the *Financial Statement* for the year ended June 30, 1964, apart from the commendably summarized profit and loss and balance sheet figures, a considerable amount of space is devoted to the aims and activities of this organization, not only in meeting present-day retail demands, but also in being 'one step ahead' by both technical and economic research, to discount the future (Pp. 16. Newcastle upon Tyne: Procter and Gamble, Ltd., 1964). The stress is on 'innovation and change'. "Product Innovation results from the effort to provide better goods; Operational Change from the search for better methods. In the competitive fields in which our company operates, we have to seek both these things continuously. Over the years it is not just the health of the company but its survival that depends on our ability to serve the consumer with better products more efficiently produced." There is a great deal of sound common sense, quite apart from business acumen, disclosed in this booklet; it is a pleasure to read an annual *Statement* which breaks away from many of the cut-and-dried documents conventionally issued to shareholders and others concerned. In this case, that pleasure is enhanced by the inclusion of some beautiful illustrations of Newcastle and Northumberland scenes in colour, the work of David Knight. This modest and artistic approach to the public, devoid of all the usual photographs of factories, plant and people, is in itself quite sufficient advertisement, a model which could well be emulated by some of the larger industrial groups in Britain.

Personnel Management

THE control and welfare of workers in industry, whether in the open air or under cover, in agriculture, civil service, factory, office or shop, have in recent years become the province of people specially trained and selected to take care of the humanities of mass employment such as is experienced to-day in Britain. The qualifications are essentially 'A-levels' at least in practical knowledge of the work concerned, whatever and wherever it may be, and, perhaps at even higher rating, the psychological effects of administration and environment on both men and women. The issues affect everyone, the 'small man', the business executive, and the boards of major industrial and nationalized concerns. It may not be generally recognized that to co-ordinate, organize and publicize much of this important relationship between employers and employees, there exists the Institute of Personnel Management (80 Fetter Lane, London, E.C.4), whose quarterly publication, *Personnel Management*, always reflects the public interest in this subject. Quite a number of people have not fully appreciated the impetus of recent legislation on the new legal status of the average employee, quite apart from mandatory improvements in the conditions under which he or she works. An article by J. E. Genders entitled "The Contracts of Employment Act: A Challenge" (*Personnel Management*, 46, No. 369, September 1964) directs attention to the implications of at least this phase of the problem of industrial humanities. Great changes in the

deployment of manpower are inevitable in the near future, under the pressure of advances in automation, which none can stop. As Mr. Genders rightly says: "... the achievement of the ... Act may lie not nearly so much in what it itself lays down, but in the incentive it offers for proper attention to be focused to-day on security of employment in order to provide the right conditions for mobility of employment to-morrow".

Sulphur Dioxide as an Air Pollutant

ONE of the most widespread and dangerous constituents of atmospheric pollution, especially in and around heavily industrialized areas, is sulphur dioxide, derived principally from the combustion of various fuels, for example, coal and the heavier mineral oils. Its well-known corrosive properties are injurious not only to human beings but also to animal health and to vegetation alike. At its conference at Harrogate in October 1964, the National Society for Clean Air presented a timely report on this subject arising from research carried out by the Technical Committee of the Society (*Sulphur Dioxide as an Atmospheric Pollutant*. Pp. 32. London: National Society for Clean Air, 1964. 2s.). From the outset it is frankly admitted that there is no single solution to this sulphur problem and therefore the purpose of the report is to "... break the problem down into its component parts, both in respect of the different sources of pollution and the possible lines of attack on each". Sulphur is present in certain fuels in both mineral and organic forms, and, since the continued use of sulphur-bearing fuels is to-day unavoidable, there is little hope of removing it before combustion. Thus the problem resolves into ways and means of efficiently dispersing the products of combustion where sulphur dioxide is potentially active, and, when it is practicable, using non-sulphur-bearing fuels and sources of heat and power that are virtually sulphur-free, such as nuclear and hydro-power, gas, and the lighter mineral oils. "For larger installations, such as power stations, the policy of discharge of flue gases from chimneys at high velocity, to secure effective dispersion, is regarded as preferable to the wet washing processes that have been tried. . . . Chimneys should be designed to be of a height that will give satisfactory dispersion of flue gases, and these needs should not be subordinated to architectural and landscaping considerations. . . . If the latter are of paramount importance . . . the building should be equipped with heat or power installations that do not require chimneys". The report also considers the importance of low-level sulphur dioxide emission from domestic chimneys, and here the picture is a somewhat brighter one, especially in smoke control areas, where modern preventive measures are aimed at eliminating smoke (hence winter fogs), incidentally reducing substantially the amount of sulphur dioxide polluting the air, or getting rid of this hazard altogether. It has been estimated that by using town gas, paraffin or light domestic oil, as, for example, in oil-fired domestic boilers, there is a 99 per cent reduction in sulphur dioxide pollution of air; with solid fuel room-heaters, up to 60 or 70 per cent reduction; with electricity low-level emission is entirely replaced by high-level emissions. In the final section of the report, "Conclusions", it is stated: "... the problem of sulphur dioxide in the atmosphere is one that calls for a variety of contributory solutions . . . there is no prospect in the immediate future of entirely eliminating this gas, but . . . through the means that have been indicated, much can be done to reduce its concentration in the air we breathe".

British Species of *Lepidodendron*

THE publication of *Fossil Plants of the Carboniferous Rocks of Great Britain* (Second Section), part 3, is welcome, for it has been long delayed (Memoirs of the Geological Survey of Great Britain. Palaeontology, Vol. 4, part 3. Pp. 217-354. Pls. 59-81. London: H.M.S.O., 1964. 140s.