

ceiling when fire breaks out. This breaks a closed electric circuit, and an electrical relay at once starts a clockwork motor. The motor drives a small dialling drum, the small metal discs on which correspond to the letters and figures of the telephone number of the nearest fire station. The station is thus called up and a gramophone record then comes into action giving, in a verbal message, the location of the fire and all essential details. This message is repeated continuously for $3\frac{1}{2}$ minutes. If necessary, also, it can be made to ring up a second number—for example, that of the owner of the building—and repeat its message. When used as a burglar alarm, the signaphone is connected with an electric circuit in the building. In this case, a burglar who opens a door or window, takes down a picture or tries to open a safe or desk, without knowing it thereby summons the police, who learn from the the gramophone message what is happening. Anyone who desires to have both a fire and burglar alarm must have two signaphones installed. The Post Office has given permission for these devices to be attached to telephones on automatic exchanges. It has also met with the approval of the Metropolitan Police, to whom it has been demonstrated.

Equalising Supply and Demand

IN the first number of *Trends—A Monthly Graphical Review of Business Movements* (H. Whitehead and Staff, 20 Buckingham Gate, S.W.1, October 1935), Mr. Harold Macmillan contributes an interesting article on "Equalising Supply and Demand" in which he emphasises the importance of planning an adjustment of productive effort, so as to ensure the production of all goods and services in the quantities which will enable them to exchange for one another at prices covering their production costs. The regulation of production in relation to demand for the products of each industry requires that some common policy should be pursued by all the units collectively, for example, in regard to scientific research, observance of standard wages and conditions, maintenance of standards of quality or standardisation of the range of patterns. But as things are, a common policy must depend on voluntary agreements, and in the great majority of cases voluntary agreements break down because, when they have created conditions of stability and profitability, other producers are attracted who can exploit the market by the old methods. Mr. Macmillan therefore urges that it is necessary to give industry legal powers to enforce upon a recalcitrant minority decisions which have been approved by a large majority of the producers and have been sanctioned by Parliament. It is essential, however, that there should be adequate safeguards to defend the general public interest and the special interests of consumers and workers affected in each case.

Despotic and Democratic Governments

THE question as to whether parliamentary democracy can survive its present crisis and whether the rise of dictatorships in Italy, Germany and Russia

does not indicate the decline of a long epoch of parliamentary government, is discussed by Mr. Herbert W. Stewart in an article in the *Hibbert Journal* (April, 1935). Mr. Stewart definitely rejects the modern scepticism, although he is far from denying many of the difficulties and real dangers involved in the parliamentary system, such as party intrigues, the corruption of the free but corruptible Press, the demagogic misuse of public institutions under parliamentary control. The unavoidable dilemma of this system seems to be that current affairs are run either by expert commissions, more or less on account of the initiative of the electorate and its parliamentary representatives—or by the masses themselves, and this involves the danger of delicate political matters becoming dependent on the issue of demagogical party activities and political bargainings.

COMPARING these dangers with those of Fascist States, however, Mr. Stewart concludes that Fascist State policy is apt to replace a comparative evil by a much more radical one; for an oligarchy controlling the key positions of the State is worse than the personal power of local cliques under parliamentary government. Parliamentary corruption is the smaller evil as compared with the possible and hidden corruption under a despotic government. The disadvantages of democratic governments should not be over-stressed. In the United States, Canada and Great Britain, after all, the individual voter does not feel that the electoral victory of any one of the existing parties might jeopardise the country. Parliamentary institutions are capable of adapting themselves to new circumstances and of modifying themselves. In the long run, the masses do not wish to be without these means of self-expression.

Solar Activity and Radio Transmission

RECENTLY, Dr. J. H. Dellinger, head of the radio section of the Bureau of Standards at Washington, suggested that a close watch should be kept to see whether there was a fade-out of radio transmissions at any time between October 21 and 25. He was led to make this suggestion by the discovery of severe fading occurring on March 20, May 12, July 6 and August 30, which indicate a 54-day cycle. According to a report issued by Science Service, Washington, D.C., certain short wave-lengths were wiped out by eruptions of the sun for the single day October 24. This fade-out sheds new light on the difficult problem of the connexion between radio transmission, sun-spots and magnetic storms. Ordinary transmissions having wave-lengths approximately the same as those used in domestic broadcasting were not affected; but experimental radio transmission was completely wiped out, and the sending of commercial and amateur radiograms was greatly hampered.

THE Bureau of Standards describes the occurrence on October 24 as a wiping out of radio transmission above a certain frequency. It is also stated that there was probably some eruption in the sun much more sudden than the growth of a sunspot, and that this abruptly changed the rate at which the sun

sent certain waves or particles into the earth's atmosphere. Previously there has been no way of identifying the magnetic disturbances associated with such eruptions. As the radio effects are easily identified, it is hoped to get a closer insight into the connexion between them and solar disturbances. In a later report by Prof. H. G. Gale of Mount Wilson Observatory, it is stated that on the morning of October 24 a group of dark granular flocculi was observed on the sun's disk. This group was observed frequently during the day, and at its maximum it was the largest object on the sun's surface as observed by the hydrogen spectroheliograph. The increased solar activity paralleled the strange radio fade-out. Technical details are given in the November 15 issue of the *Physical Review*.

Science and Vegetable Production

MR. F. A. SECRETT lectured before the Royal Society of Arts on November 27, the subject of the discourse being "Modern Methods of Vegetable Production and Marketing". Mr. Secrett, as the owner of Holly Lodge Farm, Walton-on-Thames, is well qualified to speak on this topic (see *NATURE*, May 25, p. 866). Mr. Secrett's outlook combines the enthusiasm of the amateur with business acumen and scientific discrimination. One of the problems of intensive culture is to obtain sufficient humus for the soil. Sewage waste and town refuse may possibly fill the need, but Mr. Secrett insisted that fresh or green manure has a denitrifying effect on the soil. The technique of irrigation by overhead sprays, and of heating the soil by hot water pipes laid in troughs of water below the soil, were described in detail, for Mr. Secrett is an authoritative exponent and pioneer in the application of these practices. Particular attention was given to methods of aerating the irrigation water, and of incorporating soluble fertilisers. The section on marketing dealt with the use of non-returnable packages, the re-organisation of commission sales, and the revision of railway rates. Much criticism of the work of marketing boards was given, and Mr. Secrett showed, by reasoned argument and without caustic remark, that the unvaried edict of bureaucratic control is often opposed to the best interests of a dynamic and changeable industry such as vegetable growing.

Mount Everest Expedition

In preparation for the new Mount Everest expedition of 1936, a reconnaissance party was at work last year. At the Royal Geographical Society on December 2, Mr. E. E. Shipton gave an account of this expedition. The main objects were to investigate snow conditions at high altitudes and decide on the best season for the attempt on the summit, to examine the possibility of alternative routes either by the north-west ridge from the head of the Central Rongbuk glacier or by the unknown Western Cwm, and to test equipment. An exploration of the western approaches to Mount Everest revealed no possible way of approach to the summit. Moreover, it was found that the ice slopes of the North Col were

in a very dangerous condition during the whole of the monsoon, and always liable to be swept by avalanches the occurrence of which it was impossible to foretell. The expedition scaled numerous hitherto unclimbed peaks in the district in the course of its work.

Housing and Overcrowding

THE Ministry of Health has recently issued several circulars dealing with the subjects of housing and overcrowding, all published by H.M. Stationery Office. "Housing" (*2d. net*) summarises the principal provisions of the Housing and Public Health Acts in relation to maintenance of dwellings in a reasonably fit condition. "Housing, England" (Statutory Rules and Orders 1935 No. 1115. *1d. net*) relates to the appointment of a committee, to be called the Central Housing Advisory Committee, for the purpose of advising the Minister on questions relating to overcrowding. "Circular 1507" deals with Section 1, Housing Act, 1935, and fixes dates for (1) the completion of inspection—April 1, 1936, (2) submission of report—June 1, 1936, and (3) submission of proposals—August 1, 1936. "Statutory Rules and Orders 1935 No. 1086" (*3d. net*) makes regulations applying to polls of local government electors in connexion with the promotion of bills by councils other than councils of metropolitan boroughs. The Central Housing Advisory Committee appointed by Sir Kingsley Wood includes among other prominent members the names of Lord Balfour of Burleigh, the Earl of Crawford and Balcarres and the Earl of Dudley, the Bishop of Winchester, Miss Megan Lloyd George, Sir Francis Fremantle, Dr. Greenwood Wilson and Mr. Silkin.

A Long Barrow in East Anglia

It has been supposed that no long barrows exist in Norfolk and Suffolk, and various theories have been put forward to account for the absence of the long-barrow culture in these counties. Some have supposed that it never existed in these areas, while others have thought that the non-existence of the burial mounds is to be accounted for by their removal through ploughing or other agricultural operations. It now seems that the latter is the more likely explanation as, recently, Mr. J. E. Sainty, of The Hedges, West Runton, near Cromer, and his friend Mr. A. Q. Watson, of Holt, have discovered, in west Norfolk, what has every appearance of being a long barrow, surrounded by a ditch. This is a noteworthy find and the discoverers hope to be able to excavate the site in the near future.

Science in the Public Press

WE are glad to direct attention to a series of eight articles on scientific problems of particular human interest now being contributed to the *Evening Standard* by competent authorities on the subjects with which they deal. The first article, by Prof. H. Levy, in the issue of December 9, presents a philosophical picture of the universe. Succeeding articles in the series are "What is Death?", Prof. J. B. S.