

New Chemistry Building at University of Leeds

SIR FREDERICK GOWLAND HOPKINS, president of the Royal Society, formally opened the new chemistry building at the University of Leeds, on January 12, in the presence of the Pro-Chancellor of the University, Col. C. H. Tetley, the Vice-Chancellor, Sir James Baillie, and a representative gathering of past and present members of the University and of visitors from other universities. Sir Frederick Hopkins, in an address entitled "Modes of Thought in Chemistry", stressed the importance of chemical knowledge for national progress and emphasised the importance of experimental inquiry in pure chemistry, one of the fundamental sciences. In a critical and stimulating discussion of the differences in the habits of thought of workers in the several sections of pure chemistry, he dwelt on the great results which have been achieved especially in organic chemistry by the use of a mode of thought essentially pictorial and non-mathematical, which is as necessary as the more quantitative methods of the physical chemist. After the ceremony in the large lecture theatre, an inspection was made of the new laboratories. The rapid growth of the Department under Prof. Arthur Smithells, who succeeded Sir Edward Thorpe and by whose efforts the chairs of organic and physical chemistry were instituted, called for an extension of space but for many years the only quarters available were buildings of a temporary nature and geographically separated. Now, thanks to the generous response of the public and the policy of the University Council, all the various sections of pure chemistry have been gathered together under one roof in a new building facing Woodhouse Lane, which forms the latest addition to the general scheme for the extension of the University of Leeds.

Ball Lightning

PROF. J. C. JENSEN, of Nebraska Wesleyan University, Washington, describes in *Physics*, vol. 4, October, 1933, how he was fortunate enough to photograph ball lightning when he was taking photographs of ordinary lightning in an August thunderstorm. The display of lightning was taking place in the region of the outrushing cold squall in advance of the main mass of the storm, and this squall was carrying with it great quantities of dust. In the wake of one of the flashes came the globular lightning, apparently floating slowly downwards. Two or three brilliant globular structures of the kind known as ball lightning appeared to travel along a pair of high-voltage power lines for a considerable distance, eventually falling to the ground and disappearing with a loud report. Two are clearly visible on one of the photographs, and, as their distance was known, it was an easy matter to determine their diameters, which were found to be very much larger than numerous observations of the phenomenon made elsewhere would have led one to expect, namely, 28 ft. and 42 ft. Unfortunately, ball lightning is so rare compared with ordinary lightning that the much desired confirmatory evidence of the occurrence of such

large globular structures that might result from further photographs may be a long time in coming. There seems no doubt from the repeated observations of ball lightning made inside houses, and from the size of holes made by it through window-panes, that it is generally much smaller.

Mind, Brain and Survival

DR. WILLIAM BROWN, lecturing on "Modern Science and the Possibility of Survival", at the Survival League at Caxton Hall on January 11, discussed the various theories of relation of mind to brain, and expressed the view that nothing firmly established in modern science makes personal survival after bodily death intellectually inconceivable. But the task of obtaining reliable evidence is beset with enormous difficulties. The results and messages in mediumistic trance should be closely scrutinised in the light of modern knowledge of the psychology of the unconscious, and sifted with due regard to the statistical laws of chance coincidence. Spontaneous psychic experiences on the part of private individuals, though more reliable in other respects, are specially difficult to assess statistically. There is little doubt that a large proportion of the apparent evidence for survival has to be rejected by strict science; but when all the sifting has been done there remains a small residuum very difficult to explain. Phenomena can only be fitted into a scientific system if their conditions of causation are known, and this is far from being the case with psychic phenomena, although some of the more general conditions are being gradually revealed. Very thoroughgoing psychological analysis of selected mediums will advance our knowledge considerably in this dim borderland of science, and may indicate further lines of investigation.

Administration and Management in Industry

THE number of societies and institutions dealing with the administrative or managerial side of industry is now very considerable and covers a wide and varied field in works management, costing, salesmanship, advertising, research, etc. That there is plenty of work and scope for organisations of this sort is evident enough, but there is certainly some ground for supposing that their number may soon become excessive, and some at least may be unable to obtain sufficient financial support to keep going, especially since the subscription rates are necessarily rather high and correspondingly onerous to manufacturers and their executives in these difficult times. From its name, the Institute of Industrial Administration should be capable of covering the whole territory, but it has many rivals. It is to be hoped there is room for all, and that there will be no desperate struggle for survival. The Institute held its annual general meeting on December 12, and an increase in the subscription of corporate members from 3 guineas to 5 guineas was recommended. This is to be interpreted, we hope, as a measure of increased usefulness to members rather than as an expiring clutch for more funds. The papers presented at the 1932-33 session have just been published, on

'Roneod' sheets bound in paper covers (London : Institute of Industrial Administration, 1933. 5s.). They are none the worse for this, and two of them deal in an effective manner with difficult problems of distribution, and another is on research in industry, by Mr. A. P. M. Fleming.

IN few branches of social study, however, is there a greater tendency to discursiveness and mere talk than in these various divisions of industrial administration, especially in salesmanship and advertising ; and in fewer still is there a greater misuse of the term 'science'. In the papers here published it must be admitted that this tendency is little in evidence. They are indeed bright, brief and stimulating. The discursive tendency is perhaps exhibited most in the first paper on personal and impersonal management, by H. N. Munro, although his theme, so far as it can be definitely apprehended, seems sound enough. The next two papers, on distribution, are well worth reading and serious reflection, not only because this subject is one of the most important and difficult in the present age, but also because the authors strongly condemn that 'production complex' which is still too much in evidence in industrial management. One of them, based largely on personal experience, has an air of convincing reality and logic which is very attractive. It is scarcely necessary to say that Mr. Fleming's paper on research is characterised by his usual methodical and orderly presentation, and overwhelming arguments in support of far-sighted research policies and carefully thought-out research programmes. Other papers deal with finance and secretarial duties.

Flood and Erosion Control

AMONG the various expedients put forward for dealing with the problem of unemployment in the United States, one of considerable interest from a scientific point of view is that of Dr. L. E. Freudenthal, chairman of the Institute of Irrigation Agriculture, American Farm Bureau Federation, Las Cruces, N.M. In an address to the South-Western Division of the American Association for the Advancement of Science, which appears in *Science* of November 17, 1933, he points out that flood and erosion control are matters of national importance in America in that they are beyond the capacities of individual States to deal with. He instances the huge sums of money which have been beneficially expended on water supply, irrigation, water power and waterway undertakings and the equally enormous losses of life and property due to floods and erosion. The Mississippi flood of 1927, which inundated 18,000 square miles, drove 750,000 persons from their homes, did some 300,000,000 dollars worth of damage and took 246 lives, is, he states, an example of what is happening annually on a smaller scale in nearly every State. For the last twenty years, flood damage in South Carolina and Tennessee has averaged nearly one million dollars per annum.

THE attendant erosion of fertile lands is stated by Dr. Freudenthal to be a national menace and he

quotes a report of the U.S. Bureau of Soils to the effect that not less than 126 billion pounds of plant food material is removed from the fields and pastures of the United States every year, the value of the plant food elements in the waste being 2½ billion dollars annually. Erosion, adds Dr. Freudenthal, has been the principal cause for abandoning millions of acres of cleared land, and he goes on to suggest various directions in which Government assistance might be rendered in the matter of flood control measures with the object of providing relief for unemployment, including stream regulation, tree and brush planting, contour furrowing, protective fencing and seeding. He believes that flood and erosion control work are ideally suited for unemployment relief, not only for the reasonably effective results which could be obtained, but also because of the possible excellent effect upon the unemployed themselves.

Darwin's Parish

SIR BUCKSTON BROWN'S generous gift to the British Association, in trust as a national possession, of Down House, Charles Darwin's home for forty years, and his further benefaction of the Research Farm of the Royal College of Surgeons at Downe, have revived the association with science of a secluded Kentish village which has retained much of its rural character, although within twelve miles of Charing Cross. It is sometimes forgotten that Downe was the residence of the Lubbocks and that it was here that John Lubbock, afterwards the first Lord Avebury, entered into the close and lifelong friendship with Darwin which exercised so great an influence on his scientific work. It is only reasonable to expect that those who visit Down House, now that it has become a place of scientific pilgrimage, should wish to know more of the history of its village. This need has been met in a little book ('A History of Darwin's Parish : Downe, Kent', Russell and Co., Southern Counties Ltd., Southampton, pp. viii + 88. 1s. 6d.) written by Dr. O. J. R. Howarth, secretary of the British Association, and Mrs. Howarth, with a foreword by Sir Arthur Keith, now also a resident of Downe. The parish history has nothing sensational to relate ; but apart from the association with Darwin, it is interesting as a record of the life of a typical secluded English village—a life, which as the authors allow us to see by their skilful selection from humdrum records, was not without its humours and its tragedies. The evidence, which, so far as written documents are concerned, begins about A.D. 1100, is fragmentary at the best ; but the authors have made the most of their material and have produced a really informative and interesting account of the parish.

Psychology in Germany

THE German Psychological Association's proceedings at its thirteenth congress, held at Leipzig on October 15–19, are reviewed in a thoughtful article, "Psychology under Hitler" by Goodwin Watson of Columbia University, in *School and Society* of