

of great importance. Having proved by the expeditions of 1905 and 1906 that the variation of solar radiation is highly probable, and also that numerous days suitable for solar-constant observations were found in the months from May to November on Mount Wilson, it is now proposed to erect on a small, well-isolated plot of ground leased from the Carnegie Institution a fireproof observing shelter to be occupied by Smithsonian observers each year during the months mentioned.

The annual report of the board of regents of the Smithsonian Institution, showing the operations, expenditures, and condition of the institution for the year ending June 30, 1907, has also been received. As is customary with these handsome volumes, the greater part of the available space, which here runs to 726 pages, is devoted to the general appendix, composed of important papers by men of science of different nationalities. Among papers included in this appendix may be mentioned two Royal Institution lectures, that of the Hon. Charles A. Parsons, F.R.S., on the steam turbine on land and at sea, and that of Prof. J. A. Fleming, F.R.S., on recent contributions to electric-wave telegraphy. Other papers by British men of science include that of Prof. J. W. Gregory, F.R.S., on the geology of the inner earth—igneous ores, being his address as president of the geological section of the British Association at the Leicester meeting in 1907; Mr. G. G. Chisholm's paper to the Royal Geographical Society, on inland waterways; that of Dr. D. H. Scott, F.R.S., on the present position of Palæozoic botany; and Mr. Henry Balfour's, on the fire piston. As is customary with these volumes, the illustrations are numerous and excellent.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

THE chair of chemistry in the United College of the University of St. Andrews will be vacant at the end of the summer session on account of the resignation of Prof. T. Purdie owing to ill-health.

THE Senate of the University of Glasgow has decided to confer the honorary degree of LL.D. upon Dr. C. S. Sherrington, F.R.S., professor of physiology, Liverpool University, and Mr. W. H. Maw, editor of *Engineering*, and past-president of the Royal Astronomical Society.

INDUSTRIAL education, says the *Pioneer Mail*, is receiving a considerable amount of attention in the Central Provinces. During the last school year three students were granted State scholarships and sent to England, and one was given a scholarship to study under the director-general of the Geological Survey. As it is difficult to secure qualified candidates for State technical scholarships, tenable in England, scholarships have been instituted to enable students to take the preliminary course in textile industries at the Victoria Institute in Bombay, but the question of establishing similar scholarships at Sibpur Engineering College has been deferred pending the settlement of the scheme for starting a technical college or school at Nagpur for engineering and mining.

AMERICAN universities and colleges continue to benefit from the munificence of wealthy citizens in the United States. A recent issue of *Science* announces that Yale University has received a gift of 10,000*l.* from an unknown donor for the purpose of establishing a memorial to the late Prof. Ely. Hamilton College is to receive a bequest of 10,000*l.* from Mrs. Annie P. Burgess, of New York City, who died about three years ago, leaving for educational and charitable purposes upward of 40,000*l.* This included 2000*l.* to Columbia University and to Barnard College for scholarships. After making some other specific bequests, she left the remainder of her estate to Hamilton College, Columbia University, and Barnard College. Among the bequests left by the late Mrs. Emma Cummings, of East Hampton, L.I., are 5000*l.* to Dartmouth College and 5000*l.* to Bowdoin College. The late Dr. Charles H. Roberts, of Highland, N.J., in his will provided for the founding of five scholarships of 48*l.* annually at Cornell University. Finally, Harvard University has received a gift of 30,000*l.* for the endowment of the University chapel.

THE report of the Board of Education for the year 1907-8 has now been published (Cd. 4566). Referring to the further education required by those who have already taken as full advantage of the facilities afforded in elementary or secondary schools as their circumstances permit, the report states that the position is one of promise; the record of performance in all sections of the work is improving steadily, there is a fairly widespread recognition of existing shortcomings, and much serious effort is being made to overcome the difficulties inherent in the case. The machinery for the education of those who can give their whole time to study, including technical study, until they reach manhood, is already in existence. In particular centres and in relation to particular occupations there is a sufficient supply of adequately prepared students to enable the teaching institutions to develop their power to the full. Others still suffer from the inadequacy of this supply and from the difficulty of retaining their students long enough to complete the allotted courses. In each type of school improvement is observable in several directions; students are coming up better prepared and with several years in hand for study, technical colleges are adjusting their teaching more directly to the requirements of the related occupations, and employers are finding it of advantage to secure the services of young men who have had the technical training the colleges afford. There is, the report maintains, sufficient evidence that the teaching institutions are capable of raising the standard of their work when they have the opportunity. Attention is directed also to some aspects of evening-school organisation. It is a plain duty at the present time, says the report, to increase the number of trained teachers available for work in evening schools who are capable of bringing their teaching to bear directly upon some of the courses of instruction required in these schools in their areas.

ABUNDANT evidence of the growing desire on the part of our educational authorities to adapt the instruction provided in elementary schools to the future needs of the children is given in the latest report (Cd. 4566) of the Board of Education. For instance, the report shows that the tendency to organise rural education so that it may be a real preparation for rural life is a growing one. In one of the eastern counties (Lindsey) a rural education sub-committee has been appointed to report to the Education Committee on the subject. In this district the demand for small holdings under the recent Act has been active, and it is satisfactory that the authority should have recognised in this way the important place that must be given to education preparatory to rural life if small holdings are to be successful. It is clear, as the report points out, that if rural education is to be efficient, the teachers must be trained properly for the work. To meet this need for suitable training, candidates for the preliminary examination of the Board of Education for the certificate can now take a course of nature-study alternatively to the course of elementary science in which botany is optional, and this should provide more inducement to secondary schools to include these subjects in their curricula. Moreover, for the certificate examination, candidates can now either continue their course of botany or follow their nature-study by a course of rural science and gardening. The importance of this is that the summer courses and Saturday classes for teachers held at the agricultural colleges can afford a direct preparation for the certificate examination. The course of rural science, introduced as an optional subject for training colleges, has so far only been adopted by one college, and it is doubtful whether, in view of the already crowded curriculum, many of the colleges will be able to adopt a comprehensive rural course. To provide an alternative method of preparing teachers for work in rural schools, the Board has expressed willingness to approve an agricultural or horticultural college as an institution affording a third year's course of training for students who have completed already the ordinary course. Up to the present little advantage has been taken of this facility, but now that certain education authorities are considering the establishment of special rural schools, and are beginning to recognise that for rural (evening) school work special qualifications are necessary, it seems likely that advantage will be taken of it.