

students may be able to get practical training, whether they seek employment later in the mechanical or electrical branches of engineering or in constructional or administrative work. Some scheme might be evolved linking the colleges and the manufacturing, municipal, or other public works, so far that the first stage of practical experience might be gained under conditions less haphazard than at present. No doubt college graduates who want to fit themselves for service in India or for starting in private business are fairly asked to pay for the privilege of entering works or office. But in other cases well-trained students who are quite capable of being useful might very well be taken on easy terms, for a trial of a year or two, in the expectation that they would remain afterwards as valuable assistants. In the engineering departments of municipalities greater facilities for apprenticeship might be given. By choosing technically well-educated lads and directing their practical training, they would form a loyal staff, ultimately more competent and useful than others less educated, but selected as more immediately useful. Further, it is now proved that technically educated lads are very fit, with some experience added, for the commercial branches of an engineering business.

If a university degree or college diploma is to be taken as a qualification for beginning an engineering career, it must not be overlooked that degrees and diplomas are of very varied value, and that one great function of a college is to distinguish the more and the less capable amongst its students.

I believe there are no schools of university rank where the work is more strenuous, the methods more practical, or new ideas more welcome, than in the best of the engineering schools of the day.

I have touched on various subjects, unavoidably in a short address, with some one-sidedness. We have been driven lately to recognise how intimately the very existence of society as now constituted depends on the work of the engineer. It is because I have come to believe in the importance of coherent and systematic instruction and in the value of the play of mind on mind and the influence of generous rivalry, best enjoyed at a plastic and impressionable age during studentship, that I have ventured to urge the claims of engineering schools in preparing the engineer for service in shaping the destinies of the Empire.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

BIRMINGHAM.—A scholarship of 150*l.* a year for three years has been awarded by the Board of Agriculture and Fisheries to Mr. Gilbert E. Johnson, a student in the department of zoology. This scholarship is one of the number recently founded by the Board with the object of encouraging research in agriculture. Mr. Johnson is at present engaged in research in connection with the subject of eel-worms.

OXFORD.—The statute allowing honour students in mathematics and natural science to dispense with Greek in Responsions passed Congregation on November 7. No canvas had been made on either side, and the division, showing 33 for the statute and 11 against, was without any particular significance. The real struggle will take place when the measure is submitted to Convocation, the ultimate legislative authority of the University. This will probably take place before the end of the present term.

SIR HENRY CRAIK, K.C.B., M.P., has accepted the principalship of Queen's College, London, in succession to Canon G. C. Bell, resigned.

At a meeting of the governors of the South-Eastern Agricultural College, Wye, held on November 6, it was decided to approach the Board of Agriculture and the Development Commissioners with regard to the foundation of a research institution for fruit-growing, including the practical treatment of plant diseases, in the County of Kent, and also to apply for a grant in aid of the proposed extension of the college buildings.

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THE first meeting of the Association of Teachers of Mathematics for the south-eastern part of England will be held at Tonbridge School on Saturday, November 25, at 3 p.m., when the inaugural address will be given by the president, Dr. A. N. Whitehead, F.R.S. This meeting will be open to all who are interested in the teaching of mathematics. Further information can be obtained from the honorary secretary of the association, Tonbridge School, Kent.

WE learn from *Science* that the will of Miss E. C. Woerishoffer leaves 125,000*l.* to the trustees of Bryn Mawr College, of which she was a graduate. From the same source we find that the estate of the late Mr. John S. Kennedy is even larger than has been previously announced. The share of Columbia University is 486,000*l.* New York University and the Presbyterian Board of Aid for Colleges each receive 195,000*l.*, and Robert College, Constantinople, 370,000*l.* The specific bequests, not dependent on the size of the estate, include 20,000*l.* each to Yale, Amherst, Dartmouth, Bowdoin, Hamilton, and Glasgow.

At a Congregation of the University of Wales, held in Bangor on November 10, the following degrees were conferred, *honoris causa*:—For the degree of Doctor of Science, Prof. Conwy Lloyd Morgan, F.R.S., sometime Vice-Chancellor of the University of Bristol, and Sir William H. Preece, K.C.B., F.R.S., sometime electrician to the General Post Office. For the degree of Doctor of Laws, Dr. William Thomas Edwards, J.P., and Sir Isambard Owen, Vice-Chancellor of the University of Bristol, sometime Senior Deputy Chancellor of the University of Wales. For the degree of Master of Arts, Miss Isabella Cleghorn, distinguished for her services in the cause of education.

"THE Moral Influence of a University Pension System" forms the subject of an article in *The Popular Science Monthly* for November by Dr. Henry S. Pritchett. It will be remembered that the author is president of the Carnegie Foundation for the Advancement of Teaching, which has provided for the staffs of American universities and colleges a liberal scale of retiring pensions. Although the system has been organised on a non-contributory basis, Dr. Pritchett seems, on the whole, inclined to favour the contributory system. Probably the conditions are somewhat different in America from those prevailing in this country, where Government old-age pensions have been arranged on a non-contributory basis, and where the main reason for not adopting the same course in our universities has been on financial grounds.

THE present session is the thirtieth during which the City of Bradford Technical College has been at work. The new calendar, which has been received, gives full particulars concerning the very complete provisions which have been made to provide technical instruction in connection with the various industries of the West Riding. The buildings have been greatly extended in recent years. Among other important developments we notice the dye-house is now ready in which the material required for, and produced in, the textile department will be dealt with. The equipment is such that students will have the opportunity of carrying out practical work of an instructive character. The machinery is capable of dealing with loose wool or cotton, slubbing, yarns of all materials, warps, and piece goods. The machines represent the latest practice. In connection with the extension, it was decided to put down a plant for the engineering department which, although primarily intended for educational purposes, would at the same time serve for supplying light and power to the present building, the new extensions, and the school of art. This is probably the most important step in the history of the department which has yet been taken. We notice also that a systematic course in sanitary science, suitable for sanitary and other inspectors in the West Riding, has been arranged to comply with the requirements of the Sanitary Inspectors' Examination Board, and that the college has been placed by the Board of Trade on the list of technical institutions recognised by the Board for the purpose of the regulations relating to the examinations for engineers in the mercantile marine.