

est value for producing the strongest acid, and avoids especially any necessity for concentrating plants. For weaker acid, such as chamber acid, it is probable the old process will always be more economical. The new process has, however, the further advantage of giving an acid exceptionally pure and especially free from arsenic. This would seem at the present outlook to be the most important advance in technical chemistry in the last few years.

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A COMMENCEMENT has already been made with the new Geological Museum which will cost about £44,000, of which sum the fund raised as a memorial to Professor Sedgwick will supply £27,000. The contributions to the Benefaction Fund have made it possible to consider the erection of new buildings for Law, part of the funds for which will, it is understood, be contributed by the trustees of Miss Squire's will, for Medicine, Botany, Archæology and rooms for business purposes and examinations; but it is impossible to say until plans have been drawn and estimates made whether the resources of the University will allow of the erection of all these buildings at the present time.

Although the extreme pressure upon the funds of the University is thus removed and some of the most urgent of long-standing claims can be satisfied, the response made as yet to the Chancellor's appeal will not allow of any of the new developments of University work which many friends of the University consider opportune. In the interests of national progress it is greatly to be desired that laboratories of applied science should not be isolated, but should be established in connection with schools which are already strong in pure science. Technical training in any limited sense of the expression is impossible. In every subject of practical application, whether it be a learned profession or an industrial art, success depends upon breadth of knowledge of the sciences upon which the profession or art is based. Advances in technology are almost invariably due to the application by practical men of principles dis-

covered by those who carry out investigations in pure science. Conversely the strength and vitality of the school of pure science is largely increased when opportunities are afforded to students of passing on to its applications.

The remarkable progress of Natural Science in Cambridge is closely associated with the growth of the Medical School. During the past twelve years a larger number of students have entered for the Natural Sciences Tripos than for any other examination for honors, notwithstanding the fact that but few students are in a position to allow their prospects in life to depend upon the discovery in themselves of a special aptitude for pure science. Almost all those who have since distinguished themselves in various branches of science have commenced their career by preparing to qualify for a profession. The majority of the graduates, for example, who are at present prosecuting researches in the physical, chemical, botanical, zoological, physiological, anatomical and pathological laboratories, making, to the great credit of the University, additions to knowledge which are not exceeded, if they are equalled in amount, by any other university in the world, entered as medical students. The phenomenal growth of the Engineering Department under Professor Ewing is also beginning to produce similar results; students who entered with the intention of becoming engineers have discovered in themselves a special aptitude for pure mathematics or for physics in one of its various branches. Thus experience shows that whereas there can be no doubt as to the advantages which a professional or technical department reaps from the support of a school strong in pure science, the advantages which pure science reaps from the proximity of departments of applied science are not less substantial. An examination of the class-lists, as well as the records of work done after graduation, shows with equal clearness that the older subjects of university culture do not suffer from the rivalry of new departments.

GRADUATE STUDY AND THE SMITHSONIAN INSTITUTION.

It will be remembered that a committee representing the American Association of Agricul-

*From the report of the retiring Vice-Chancellor, Dr. Alexander Hill, Master of Downing College.