abolition of the use of curare. (3) The abolition of the application by way of experiment to the conjunctiva of any matter or substance for absorption. (4) The abolition of all experiments in which the animal is kept alive after an operation under anesthetics (Certificate B). (5) The abolition of all experiments as an illustration of lectures in a medical school where, as at present, the animals are kept under an anesthetic during the whole of the experiment, and killed before recovering consciousness (Certificate C). (6) To kill or to administer, and keep under, a respirable anesthetic every animal which has been subjected to an operation not calculated to give pain, should it begin to suffer pain after the operation (Certificate A). (7) The presence of an inspector during and throughout the whole course of every experiment which is calculated to cause pain, although the animal is under an anesthetic and is killed before regaining consciousness. (8) No license to be granted for more than one experiment or for one series of not more than six connected and consecutive experiments. (9) Every license shall specify the time and place of each experiment or series of experiments. (10) A detailed chronological report of the description, course and result of each experiment is to be sent to the Secretary of State within *seven days* after the completion of each experiment.

THE *Electrical World and Engineer* states that the committee for the 'Galileo Ferraris Award,' instituted in 1898, and composed of the representatives of the executive committee for the General Italian Exhibition, held in Turin, in 1898, of the chamber of arts and commerce, of the Royal Academy of Science and of the Royal Industrial Museum in Turin, have decided to open an international competition for the award of said prize on the occasion of the unveiling of the monument to Ferraris, in Turin, in the latter half of the month of September next. The award is 15,000 lires ($3,000), together with the compound interest accumulated since the year 1899 up to the day of the award. It will be granted to the inventor of some practical application of electricity likely to lead to noteworthy progress. Competitors may submit either pamphlets, projects and drawings, or machines, apparatus and appliances relating to their invention. The jury, composed of the aforesaid committee, shall have full power to cause practical experiments to be made upon the inventions entered for competition, and upon the corresponding apparatus. Competitors are to file their application and deliver their credentials appertaining to their invention not later than September 15, 1902, at the office of the secretary of the committee, care of the Adminstrative Committee on the First International Exhibition of Modern Decorative Art in the buildings of the Chamber of Commerce and Art, 28 Via Ospedale, Turin, Italy.

THE deep well borings of the United States, made for water, oil and gas, are the subject of a statistical report by N. H. Darton, in the series of Water-Supply and Irrigation Papers of the United States Geological Survey. The list of deep wells is arranged by States, in alphabetical order, and appears in two pamphlets known as Water-Supply Papers Nos. 57 and 61. All wells 400 feet or over in depth are carefully listed. Depth, diameter, yield per minute, and other characteristic data are given, and many instructive details are noted indicating for what purpose the borings were originally made, the character of the product obtained, and whether the wells are in use or abandoned. For the benefit of persons desiring more detailed information concerning wells in any particular region, references are given to the literature or other sources from which the data were obtained.

UNIVERSITY AND EDUCATIONAL NEWS.

PRESIDENT REMSEN, of the Johns Hopkins University, has succeeded in securing the million-dollar endowment fund, to which we have called attention. This money is to be used for supporting the educational work of the university and not for the erection of buildings on the new site, as has in some places been stated.

ALUMNI and friends of Amherst College have given $65,000 to build an observatory for the

astronomical department and for an observatory house, to be occupied by the astronomer, Professor D. P. Todd.

Mrs. Anne Eliza Walsh, of Brooklyn, has given $450,000 to a board incorporated under the laws of New York State, the interest to be used for the education of candidates for the priesthood of the Roman Catholic Church.

Governor Aaron T. Bliss has given $21,000 to Albion College, Albion, Mich.

Dr. Conan Doyle has given $5,000 of the $7,000 cleared on his pamphlet 'The War in South Africa' for a scholarship which shall enable some poor South African, either Boer or British, to take a course in Edinburgh University.

According to the statistics for the entering class at Yale University next year the numbers in the academic department will be about the same as last year, and the numbers in the Sheffield Scientific School show an increase of about twelve per cent.

Professor William Lowe Bryan, head of the departments of philosophy and pedagogy, has been elected President of the University of Indiana.

Dr. E. H. Lindley has been appointed professor of psychology and Dr. J. A. Bergström, professor of pedagogy, at the same institution.

Mr. John Hays Hammond has been appointed professor of mining engineering in the Sheffield Scientific School of Yale Unversity. Mr. Hammond graduated from the Sheffield Scientific School in 1876 and is a prominent consulting engineer.

Dr. P. A. Fish has been promoted to a full professorship of comparative physiology and pharmacology at Cornell University.

Two appointments have been made at the newly established college of Clark University —Mr. Rufus C. Bentley, now fellow in pedagogy at the University, to be dean and professor of Latin and Greek, and Mr. Frederick H. Hodge, now fellow in mathematics, to be instructor in mathematics.

The following announcements were made at the commencement exercises of Washington University: Robert Heywood Fernald, graduate of the Maine State College in mechanical engineering, 1892; assistant professor of mechanical engineering in Case School of Applied Science, 1896–1900; M.E., Case School, 1898; M.A., Columbia, 1901; Ph.D., 1902; appointed professor of mechanical engineering in place of Professor J. H. Kinealy, who resigns to go into the practice of his profession in Boston. Arthur W. Greeley, A.B., Stanford, 1896; A.M., 1899; Ph.D., Chicago, 1902; appointed assistant professor of zoology. A single course in this subject has been given during the past year by Mr. S. M. Coulter, who hereafter will devote himself exclusively to botany. Frederick M. Mann, C.E., Minnesota, 1898; M.S. in architecture, Massachusetts Institute of Technology, 1895; instructor in architectural design in the University of Pennsylvania, 1895–98; practicing architect in Philadelphia, 1898–1902; appointed professor of architecture. Sherman Leavitt, B.S. in chemistry, Washington University, 1900; and Samuel W. Forder, B.S. in chemistry, Washington University, 1902; appointed instructors in chemistry. These two appointments are to take the place of Doctor Gellert Alleman, who becomes professor of chemistry in Swarthmore College. P. R. Goodwin, graduate of the University of Maine in civil engineering, 1900; instructor in same institution, 1900–1901; appointed instructor in civil engineering.

Dr. W. A. P. Martin has accepted the presidency of the new university at Wu-Chang, China.

Professor Wislicenus, of Wurzburg, has been called to Tübingen, to succeed the late Dr. von Pechmann as director of the Chemical Institute of the University; Dr. Paul Hensel, of Heidelberg, has been called to the professorship of systematic philosophy at the University at Erlangen; Dr. Alfred Schaper has been appointed a chief of division in the Anatomical Institute at Breslau and Dr. von Gerichten, director of the Institute for Chemical Technology at the University at Jena.