

years of active service shall be considered the active pay.

Retiring allowances shall be granted under the following rules, upon the application of the institution with which the professor is connected. Application blanks for this purpose are furnished by the foundation. The ground upon which the application is recommended, whether it is upon the basis of age or upon the basis of service, should be stated in each case.

1. *Basis of Age*.—Any person sixty-five years of age, who has had not less than fifteen years of service as a professor and who is at the time a professor in an accepted institution, shall be entitled to an annual retiring allowance, computed as follows:

(a) For an active pay of twelve hundred dollars or less, an allowance of one thousand dollars, providing no retiring allowance shall exceed ninety per cent. of the active pay.

(b) For an active pay greater than twelve hundred dollars the retiring allowance shall equal one thousand dollars, increased by fifty dollars for each one hundred dollars of active pay in excess of twelve hundred dollars.

(c) No retiring allowance shall exceed four thousand dollars.

Computed by the formula:  $R = A/2 + 400$  where  $R$  = annual retiring allowance,  $A$  = active pay.

2. *Basis of Service*.—Any person who has had a service of twenty-five years as a professor, and who is at the time a professor in an accepted institution, shall be entitled to a retiring allowance computed as follows:

(a) For an active pay of twelve hundred dollars or less, a retiring allowance of eight hundred dollars, provided that no retiring allowance shall exceed eighty per cent of the active pay.

(b) For an active pay greater than twelve hundred dollars, the retiring allowance shall equal eight hundred dollars, increased by forty dollars for each one hundred dollars in excess of twelve hundred dollars.

(c) For each additional year of service above twenty-five, the retiring allowance shall be increased by one per cent. of the active pay.

(d) No retiring allowance shall exceed four thousand dollars.

Computed by the formula:  $R = A/100(b + 15) + 320$  where  $R$  = retiring allowance,  $A$  = active pay and  $b$  = number of years of service.

3. Any person who has been for ten years the

wife of a professor either in receipt of a pension or entitled to receive one shall receive during her widowhood one half of the allowance to which her husband was entitled.

4. In the preceding rules, years of leave of absence are to be counted as years of service, but not exceeding one year in seven. Librarians, registrars, recorders and administrative officers of long tenure, whose salaries may be classed with those of professors and assistant professors, are considered eligible to the benefits of a retiring allowance.

5. Teachers in the professional departments of universities, whose principal work is outside the profession of teaching, are not included.

6. The benefits of the foundation shall not be available to those whose active service ceased before April 16, 1905, the date of Mr. Carnegie's original letter to the trustees.

7. In counting years of service toward a retiring allowance, it is not necessary that the whole of the service shall have been given in institutions upon the accepted list of the foundation.

8. In no case shall any allowance be paid to a teacher who continues to give the whole or part of his time to the work of teaching as a member of the instructing staff of a college or technical school.

9. The Carnegie Foundation for the Advancement of Teaching retains the power to alter these rules in such manner as experience may indicate as desirable for the benefit of the whole body of teachers.

#### SCIENTIFIC NOTES AND NEWS

THE Berlin Academy of Sciences has awarded its Helmholtz medal to Professor Emil Fischer, for his work on the sugars and albuminoids.

DR. FRANK D. ADAMS, dean of the faculty of applied science and professor of geology at McGill University, has been elected an honorary life member of the Institute of Mining and Metallurgy of Great Britain.

THE Royal Society of Arts has presented its Albert medal to Sir James Dewar, F.R.S., for his investigations into the liquefaction of gases and the properties of matter at low temperatures.

THE managers of the department of archeology of the University of Pennsylvania have awarded the Lucy Wharton Drexel medal, for

important work in exploration and publication, to Professor Rudolph E. Brunnnow, for his work in Assyria and in the exploration of Arabia.

MR. ARTHUR HILL, regent of the University of Michigan, has made the offer to the board of regents of a bronze or marble bas-relief of President James B. Angell, in commemoration of his eightieth birthday and the valuable services which he has rendered to the university, state and nation. The monument will be placed in the new Memorial Hall.

DR. EDGAR F. SMITH, professor of chemistry and vice-provost of the University of Pennsylvania, is recovering from a somewhat serious illness.

DR. C. C. CLARK, associate statistician of the Department of Agriculture, has accepted an appointment as chief of the Bureau of General Statistics and Agricultural Information in the International Institute at Rome.

At the annual meeting of the Royal Astronomical Society on February 12 Mr. H. F. Newall, the president, extended a cordial welcome to Professor O. Backlund, director of the observatory, Pulkowa, Russia, to whom the society's gold medal had been awarded. The Jackson-Cwilt bronze medal and gift were handed to Mr. P. Melotte, of the Royal Observatory, Greenwich, in recognition of his discovery of the eighth satellite of Jupiter. Sir David Gill was elected president of the society for the coming year; Sir W. H. M. Christie and Messrs. J. W. L. Glaisher, H. F. Newall and H. H. Turner, vice-presidents; Major E. H. Hills, treasurer; Messrs. A. R. Hinks and S. A. Saunder, secretaries, and Sir W. Higgins, foreign secretary.

MR. ECKLEY BRINTON COXE, JR., founder of the Coxe archeological expedition from the University of Pennsylvania, and Dr. George B. Gordon, curator of the museum, have sailed for Egypt to join members of the expedition who are working in Nubia.

DR. J. K. SMALL, head curator of the museums and herbarium of the New York Botanical Garden, accompanied by Mr. J. J. Carter, of Pleasant Grove, Pa., has been in south

Florida for botanical exploration and collecting on the everglade keys, in continuation of his previous work in that region and his studies of the plants of the southeastern United States. Dr. J. A. Shafer, museum custodian in the garden, is in Cuba, commissioned to spend about three months collecting in the northeastern portion of that island, which has been little visited by botanists.

DR. HIRAM BINGHAM, JR., instructor in Latin-American history at Yale University, who is now in southern Peru on his South American trip of historical research, is reported to have made important discoveries of Inca remains near Abancay, Peru.

A MEETING of the Columbia Chapter of the Society of Sigma Xi was held on March 4 in Fayerweather Hall. "The Sanitary Protection of Tidal Waters" was the topic of the evening, and George A. Soper, C.E., Ph.D., president of the Metropolitan Sewerage Commission, the lecturer. The address described the harmful consequences resulting from the discharge of sewage into tidal harbors and the measures taken to prevent excessive pollution.

MR. W. H. FINLEY, assistant chief engineer of the Chicago and Northwestern Railway Company, gave a lecture before the College of Engineering of the University of Illinois on Friday, February 19 on "The Quebec Bridge Failure."

At the 658th meeting of the Society of Arts, Boston, on February 27, Professor Charles E. Lucke, of Columbia University, made an address on the subject of internal combustion engines.

PRESIDENT TAFT gave the annual Washington's Birthday oration at the University of Pennsylvania, being presented by the governor of the state. Among those on whom the doctorate of laws was conferred was Dr. Samuel G. Dixon, formerly professor in the university and now Commissioner of Health in the state of Pennsylvania.

PRESIDENT HADLEY, of Yale University, made the commemoration day address at the Johns Hopkins University on February 22, which was entitled "Two Sides of University Life."

PROFESSOR E. S. MORSE lectured at Tufts College on February 24 on "Natural Selection and its Application to the Darwinian Theory of the 'Survival of the Fittest.'"

PROFESSOR LIGHTNER WITMER, of the University of Pennsylvania, is giving this term a course of lectures on psychology to the fourth year students of the medical department.

EDWIN KATZENELLENBOGEN, Ph.D. (Leipzig), assistant physician at the Danvers Hospital for the Insane, and fellow for research in logic at Harvard University, is to give a course of lectures on psychopathology, consisting of a treatment of selected topics in abnormal psychology. These lectures, which will be open primarily to graduate students, will occupy one hour and a half weekly. In each month three of the lectures will be delivered in the Psychological Lecture Room; the remaining exercise each month will take place at the Danvers Hospital for the Insane, at Hathorne. Special attention will be given to the legal aspects of psychopathology.

THE Kaiser Wilhelm has recalled his veto of the Virchow monument design and has approved the second sketch. The monument will now be erected on the Karl Platz near the Charité.

DR. WILLIAM TILLINGHAST BULL, professor of the practise of surgery at Columbia University and one of the most prominent surgeons in New York City, died on February 22, at the age of fifty-nine years.

THE death is announced of Sir George King, F.R.S., late director of the Botanical Survey of India, aged sixty-eight and of Professor Julius Thomsen, president of the Royal Danish Society of Science, aged eighty-two.

THE "sundry civil" bill for the fiscal year 1910, as reported to the House of Representatives February 19, provides for a new building in Washington to accommodate the Geological Survey, the General Land Office, the Office of Indian Affairs and the Reclamation Service, to cost \$2,500,000, and appropriates \$100,000 for preliminary work in construction. The site named in the bill is the square bounded by E and F and Eighteenth and Nineteenth

streets, west of the building occupied by the State, War and Navy departments and about three blocks west of the White House. For twenty-five years the survey has occupied a rented building on F Street, in the heart of the business section of the city, the annual rental of which now amounts to \$34,900. This building is not fireproof and has been three times visited by destructive fires, the last one, in December, 1908, burning government property worth \$15,000. The annual rentals paid by the survey and the Reclamation Service amount to about \$43,000, and the provision made for the Indian and Land offices in the new building will permit the transfer of other bureaus, now in rented quarters, to a building owned by the government. The annual net saving accomplished will be \$51,400.

THE *Yale Daily News* has made a statistical study of the early training of the 15,142 men, sketches of whose lives appear in Appleton's *Cyclopedia of American Biography*. 5,326 of these prominent men are college trained, with the colleges, credited with over one hundred, represented in the list as follows: Harvard, 883; Yale, 713; Princeton, 319; Dartmouth, 208; Columbia, 198; Brown, 189; Union, 188; Pennsylvania, 175; Williams, 157; Bowdoin, 104; Amherst, 102. Yale's honor roll is divided among the professions as follows: clergymen, 194; lawyers, 149; educators, 83; statesmen, 55; authors, 53; doctors, 43; scientists, 38; soldiers, 37; business men, 19; journalists, 15; in government service, 14; philanthropists, 6; artists, 4; inventors, 3.

WE learn from the *Journal of the American Medical Association* that the International Bureau of Public Health was formally inaugurated at Paris on November 10, 1908, and the director and secretary were installed in office by the committee, composed of one representative from each of the countries which have agreed to support the newly created bureau. Dr. S. B. Grubbs, of the Public Health and Marine Hospital Service, was the United States delegate. The idea of having a central and international office for the purpose of gathering and distributing information concerning the graver epidemic diseases,

especially cholera, plague and yellow fever, was first presented for consideration at the international sanitary convention of Paris, in 1903, although it had been advocated for some time previously by many sanitarians, notably the late Professor Proust, of Paris. At the request of the convention of 1903, the French government undertook the task of presenting to the nations interested propositions regarding the organization of such a bureau. These propositions were submitted in a final form in August, 1907, and a conference was invited by the government of the French republic, at the instance of the Italian government. This conference was held at Rome, December 3, 1907, the delegates signing for the governments of Belgium, Brazil, Spain, the United States, the French republic, Great Britain and Ireland, Italy, the Netherlands, Portugal, Roumania, Russia, Switzerland and Egypt. It is believed that the exchange of ideas that will take place at the semi-annual gathering of the governing committee will have a beneficial effect on international sanitation. In organization the bureau resembles the permanent International Postal Bureau and the Bureau of Weights and Measures.

IN a letter to the editor of the *Yale Alumni Weekly*, in reply to a notification of his accession to the title of oldest living graduate of the university, Chester Dutton, '38, wrote recently as follows:

The position of Oldest Living Graduate is *very temporary*. About seven years ago it fell to my early neighbor & friend Mr. L. W. Cutler of Watertown Conn, (Yale 1829), who was a perfect specimen of physical manhood, as well as a man without faults and without enemies, and he held it, I think, for a few weeks.

I recall that more than seventy years ago both Prof. Silliman & Prof. Olmsted predicted many of the wonderful utilities of present day life—Both discussed photography and telegraphy and the use of electro magnetism for power as assured results, only waiting on human ingenuity for methods of production and application. The Ocean Steamer however, the Ocean Cable, & the telephone and the skyscraper—and electrical lighting were not talked of; perhaps not thought of. One problem then regarded with much concern was the future supply of light, as the *whales* were be-

coming scarce. Petroleum was peddled for *medicine* in pint bottles under the name of "rock oil from Kentucky"—Friction (or explosive) matches had come into use about 1834 or 5, 100 matches in a little box, for 25 cents. Prof. Silliman suggested the probable necessity of governments prohibiting their manufacture & sale, on account their possible use by incendiaries.

#### UNIVERSITY AND EDUCATIONAL NEWS

AT the exercises on February 22 in commemoration of the founding of Johns Hopkins University, which opened thirty-three years ago, it was announced that the gift of Mr. Henry Phipps, of New York, for the psychiatric clinic was considerably in excess of \$1,000,000.

A GIFT of \$200,000 to the University of Pennsylvania from an anonymous donor was announced at the exercises on Washington's birthday by provost Harrison. It will be used to establish a department of medical research. The gift was received through Dr. John H. Musser, of the faculty of medicine.

THE sons and daughters of the late Mr. and Mrs. F. C. A. Denkmann, of Rock Island, Ill., have promised to give a library building to Augustana College and Theological Seminary, Rock Island, the building to cost not less than \$100,000, and to be known as "The Denkmann Memorial Library."

By the will of Dr. Gordon W. Russell, of Hartford, class of '34, Trinity College, receives \$5,000 for the natural history department and a collection of books on that subject.

AN addition has been made to the observatory building at the University of Michigan, including a new dome 40 feet in diameter. The university is also installing a large reflecting telescope which is now approaching completion, and has been designed especially for photographic and spectroscopic work.

COMER HALL, the new engineering building of the University of Alabama, will be ready for occupancy about May 1. It is a large structure of two stories with a ground-floor space something over three quarters of an acre, and will accommodate the departments of civil, mechanical, mining and electrical