ruary. The plan went into effect on March 1, 1913.

The plan is similar to those in successful operation in many great manufacturing corporations in the United States. It is a contributory system, the subscribing employees contributing 3 per cent. of their salaries, and the trustees contributing an equal amount to the fund.

The plan already briefly noted in SCIENCE provides:

1. Pensions.—Six classes of pensions according to length of service and age, the pensions varying from 25 per cent. to 50 per cent. of the average salary of the last three years.

2. Health Insurance.—Gratuity to the employee in case he is totally disabled through illness, or his position is abolished.

3. Life Insurance.—A gratuity to a beneficiary, in the event of the death of the employee, and under certain conditions in the event of the death of a pensioner.

4. For the return of the employee's contribution with simple interest at 3 per cent. in case the employee leaves the service of the museum before he is eligible for a pension.

The plan also makes provision for exceptional cases; leave of absence without pay; absence from the service for a certain period; return to the service; reduction of present rate of contribution when feasible, and for the amendment or alteration of the plan as circumstances may warrant in the future.

SCIENTIFIC NOTES AND NEWS

AT the annual meeting of the American Academy of Arts and Sciences held on May 14 last, it was voted to award the Rumford Premium to Professor Joel Stebbins, of the University of Illinois, for his development of the selenium photometer and its application to astronomical problems.

THE gold medal of the Swiss Geographical Society will be presented to Admiral Peary at a banquet to be given at Geneva, on May 31.

DR. ALFRED H. BROOKS, of the U. S. Geological Survey, has been awarded the Conrad Maltebrun gold medal of the Paris Geographical Society.

IN appreciation of his services in reestablishing the American Rainbow trout in Germany, Dr. Hugh M. Smith, United States Commissioner of Fisheries, has been presented with a medal by the German Fishery Society.

DR. HENRY S. CARHART, emeritus professor of physics in the University of Michigan, and Professor F. R. Moulton, professor of astronomy in the University of Chicago, have been made honorary corresponding members of the British Association for the Advancement of Science.

PROFESSOR HERMANN VON VÖCHTING has been elected a foreign member of the Linnean Society, London.

DR. GISBERT KAPP, professor of electrical engineering in the University of Birmingham, has been appointed president of Section G (engineering) of the British Association for the meeting to be held in Birmingham in September next.

ANNOUNCEMENT is made at the University of Chicago of the joint award to Dr. George L. Kite and Mr. Esmond R. Long, graduate students in the department of pathology and bacteriology, of the Howard Taylor Ricketts prize of $250 for original research in that department. The prize was established by the widow of Dr. Ricketts, who died in the City of Mexico from typhus fever contracted while studying the disease.

THE committee on medical research of the American Medical Association has awarded a grant of two hundred and fifty dollars to the department of bacteriology of the Hoagland Laboratory, Brooklyn, to defray the expenses of an investigation on the immunity reactions of edestin, a report of which is shortly to appear in the *Journal of Infectious Diseases.*

AMONG American astronomers who expect to attend the meeting of the International Solar Union to be held at Bonn, Germany, in August next, are Professors E. C. Pickering, Harvard College Observatory; Frank Schlesinger, Allegheny Observatory; J. A. Parkhurst, Yerkes Observatory; C. E. St. John,

Mount Wilson; H. N. Russell, Princeton, and J. S. Plaskett, Ottawa.

MR. EDWIN HATFIELD ANDERSON has been promoted to be director of the New York Public Library, succeeding the late Dr. John S. Billings.

C. S. RIDGWAY, assistant professor of botany at the Alabama Polytechnic Institute, Auburn, Ala., has resigned in order to accept an appointment in the Bureau of Plant Industry at Washington.

MR. LLOYD B. SMITH, professor of geology in the Carnegie Institute of Technology of Pittsburgh, Pa., has resigned to enter the employ of the Associated Geological Engineers in the examination of oil and gas properties.

DR. KARL GEISER, head of the department of political science in Oberlin College, will spend the summer in Germany investigating rural problems with special attention to rural local government.

A BIOLOGICAL expedition is being sent out by the University of the Philippines and the Bureau of Science. It started from Manila on April 5 for Taytay Bay on the northeastern coast of the Island of Palawan, and will remain in the field for two months. The party will consist of Dr. Merrill, chief of the division of botany of the Bureau of Science, Mr. Schultze, entomologist of the Bureau of Science; Mr. Rowley, instructor in geology, of the University of the Philippines; Messrs. Griffin, Cowles, Wharton, Day and Light, of the department of zoology of the university, and Mr. Barnes, teacher of zoology of the Bureau of Education. Including the assistants and laborers, the working party will consist of about twenty-five persons. The expedition will be under the direction of Professor Griffin. The region to which the party goes is entirely unexplored, but is said to be extremely rich in its fauna and flora.

AT the annual general meeting of the Institution of Civil Engineers, held in London on April 29, the result of the ballot for the election of officers was declared as follows: *President,* A. G. Lyster; *Vice-presidents,* B. H. Blyth, J. Strain, G. R. Jebb, A. Ross; *other Members of Council,* J. A. F. Aspinall, J. A. Brodie, W. B. Bryan, Col. R. E. B. Crompton, C.B., J. M. Dobson, Sir H. F. Donaldson, K.C.B., E. B. Ellington, W. H. Ellis, W. Ferguson, Sir Maurice Mitzmaurice, C.M.G., Sir J. P. Griffith, Dr. C. A. Harrison, W. Hunter, H. E. Jones, Sir Thomas Matthews, Dr. W. H. Maw, C. L. Morgan, B. Mott, A. M. Tippett, Sir Philip Watts, K.C.B., W. B. Worthington, Dr. Dugald Clerk, F.R.S., R. S. Highet, Dr. E. Hopkinson, F. Palmer and H. N. Ruttan.

THE special faculty committee from the University of Wisconsin appointed by President Charles R. Van Hise to receive and provide entertainment for the party of over 100 citizens of Pennsylvania, Maryland and Connecticut who spent the four days between May 21 and May 24, inclusive, inspecting the University of Wisconsin consisted of the following men: Professor L. E. Reber, dean of the Extension Division; Professor J. G. D. Mach, representing the College of Engineering; Frank Barron Morrison, representing the College of Agriculture; Professor Julius E. Olson, of the Scandinavian Department; Professor Ralph Starr Butler, of the Extension Division; W. H. Lighty, secretary of the Extension Division; Professor Dana C. Munro, head of the History Department; Professor George C. Comstock, head of the Astronomy Department; Dr. Hermon C. Bumpus, business manager of the university; Professor Scott H. Goodnight, of the German Department, and Professor E. A. Ross, head of the Department of Sociology.

PROFESSOR HENRY L. BOLLEY, head of the botany department at North Dakota Agricultural College, gave a public lecture at the College of Agriculture of the University of Wisconsin this week, in which he explained his theory for crop failure which results when cereal grains are planted in the same fields for several years. It was argued that the failure of the crop is not due to exhaustion of the soil fertility, but to the accumulation of soil parasites which are poisonous to the cereal grains.

Professor Julius Stieglitz, of the University of Chicago, lectured on May 21 at the University of Illinois on "Combustion, or the Electric Theory of Oxidation."

Dr. Frank Schlesinger, director of the Allegheny Observatory, delivered a lecture on "Astronomical Photography" before the Royal Astronomical Society of Canada, at Ottawa, on April 22 and at Toronto University on April 24.

The Bakerian lecture of the Royal Society was delivered by Sir J. J. Thomson on May 22, the subject being "Rays of Positive Electricity."

The first Wilbur Wright memorial lecture was delivered by Mr. Horace Darwin, F.R.S., at the Royal United Service Institution on May 21, under the auspices of the Aeronautical Society, which has raised a fund for the annual delivery of a lecture to commemorate the work of Wilbur Wright.

Addison Brown, ex-judge of the United States Court, for many years a member of the New York Academy of Sciences, a fellow and a patron, died at his residence in New York City on April 9, 1913, in the eighty-fourth year of his age. Judge Brown's favorite studies were botany and horticulture, but he also took great interest in astronomy. He was a member and benefactor of the New York Botanical Garden, one of its original incorporators, and, at the time of his death, its president. The council of the New York Academy of Sciences has passed a resolution, drawn up by a committee consisting of N. L. Britton, J. J. Stevenson and E. O. Hovey, which reads as follows:

Whereas, The council of the New York Academy of Sciences has learned of the death of Ex-Judge Addison Brown, who for many years has been active in promoting the welfare of botany and its related sciences in this city,

Resolved: That the council appreciates his services to science, and mourns his loss; that the above memorial and preamble be entered on the minutes of the council and a copy be sent to his bereaved family.

Dr. William Hallock, professor of physics in Columbia University since 1892, known for his researches in physics and for his interest in educational and scientific organization, died on May 20, aged fifty-six years.

Dr. William McMurtrie, one of the leading industrial chemists of the United States, formerly chief chemist of the Department of Agriculture and professor of chemistry in the University of Illinois, died on May 24, aged sixty-two years.

Dr. Ernest Kittl, director of the Royal Natural History Museum at Vienna, professor in the Vienna Institute of Technology, known for his contributions to geology, died on May 1, in his fifty-ninth year.

The U. S. Civil Service Commission announces an examination for electro-metallurgist on June 18, 1913, to fill a vacancy in the Bureau of Mines, Department of the Interior, for service in the field, at a salary ranging from $1,500 to $1,800 a year.

The Newcastle city council has decided to invite the British Association to meet in Newcastle in 1916.

The Minister of the Interior of the Canadian government has authorized the purchase and installation of a reflecting telescope of not less than sixty inches aperture for the Dominion Observatory. The telescope will probably be erected at a suitable site in the Canadian Rockies.

The legislature of California has passed a bill, drawn by Dr. Charles L. Edwards and introduced in the assembly by Mr. Frank H. Mouser, providing for a survey of the coastal waters preliminary to the establishment of a legally protected aquaculture. It is intended to divide the California coast into from three to five districts within which a considerable number of perpetual reservations will be formed for the natural and artificial propagation of animals and plants inhabiting the sea. The law will provide for leasing of sea farms and the patrol and protection of the coastal waters. The survey is placed under the Scripps Institute of Biological Research of which Dr. W. E. Ritter is director. A report is to be made to the governor on or before November 1, 1914.

THE United States Geological Survey had another close call on Sunday, May 18, in a destructive fire that practically gutted the basement of the entire building which it occupies. Owing to the congested condition of the store rooms and document rooms and to the escape of gas, the fire proved to be most stubborn and difficult to handle and resulted in the collapse of some 20 firemen, among them the chief of the Washington fire department. There was little flame, but the smoke poured in dense volumes from the Survey building, suffocating the firemen, who, however, fought desperately to keep the fire confined within the basement. The chief of the fire department states that had it got past the staircase which the men were holding and into the elevator shafts probably the entire building and possibly other adjacent buildings would have been consumed. The destruction, as it was, resulted in a loss of about $75,000, mostly in topographic maps, geologic folios, and reports, which, however, can be replaced. The unpublished data and other material in the upper floors of the building, having an estimated value between four and a half and five million dollars, were fortunately unharmed. "The only thing that saved the rest of the survey building from total destruction," said Director Smith in an interview, "was the efficiency of the Washington fire department, aided as it was by some fireproof doors leading from the basement to the upper hall, which had been erected on the recommendations of the chief of the fire department and the fire marshal. In its present quarters, after installing every possible safeguard, it appears that the government must rely upon the bravery and efficiency of the Washington fire department." The survey's campaign of last winter resulted in the authorization by congress of a new survey building to cost $2,596,000, but work on it can not begin until the money is made available in the next appropriation bill. Then, according to the usual time required in the construction of government buildings, it will be from three to four years before the survey can get out of its present quarters.

As a result of the fire in the Geological Survey building the director has announced a "fire sale" of geologic folios. The entire basement, in which the folios were stored, was filled with dense smoke and many of the folios were burned, others scorched, and all more or less damaged by water. With the approval of Secretary Lane the director announces that he will sell the entire remaining stock of some 150,000 folios, four fifths of which are probably as near perfect as goods usually offered in a smoke or fire sale, at the nominal price of 5 cents each. The regular retail price of the standard folios is 25 cents, but a few unusually large folios have sold for 50 cents, and the regular price of the "field edition" of the later folios, a more convenient form for use in the field, is 50 cents. All these are now to be had at 5 cents each, but no wholesale rate applies. The stock includes probably 50,000 to 100,000 copies on which the real damage is practically negligible. Application should be made to the director, U. S. Geological Survey, Washington, D. C., and remittance made by money order or in coin. Lists will be sent on application.

AN exhibition by the Pennsylvania Forestry Association was held in Horticultural Hall, Philadelphia, May 19 to 24. The association had arranged to make this exhibition as comprehensive as possible and, to that end, had included specimens of various woods, barks, leaves, seeds and other indicative features, growing seedlings, forest animals, fish, birds and insects of Pennsylvania, uses of lumber, wood preservation, wood substitutes, utilization of waste forest products. Exhibits were received from: Pennsylvania Department of Forestry, Chestnut Tree Blight Commission, Pennsylvania Fish Protective Association, Lumberman's Exchange of the City of Philadelphia, Pennsylvania State College, Pennsylvania State Museum, University of Pennsylvania, U. S. Forest Service, and a number of important associations or corporations interested in forest preservation, lumber production, etc. A series of addresses (some liberally illustrated) was given by men prom-

inent in the field of forestry, in the afternoons and evenings of the week.

The Wistar Institute in Philadelphia is remodeling a building 90′ × 31′, three stories in height, to be used for an animal house. The first floor and basement are to be entirely of iron and concrete construction with rooms varying in temperature and light according to the requirements of the colony. The building will have space sufficient for 1,000 cages, and will be equipped with steam heat, electric lights and hot and cold water. A covered passageway will connect it with the present museum and laboratory building. The building will contain a balance room where accurate weights and measurements may be taken. The necessary apparatus for the preparation of food and a crematory for the disposition of waste material and the heating of water will be installed. The building will furnish more ample space for the work in progress and give opportunities for extending the experimental work with animals. The colonies of white rats and opossums will be transferred from the laboratory building and the farm in New Jersey to this building as soon as it is ready.

A hundred new maps a year are the product of the big engraving and printing plant of the United States Geological Survey at Washington. About two atlas sheets a week are turned out in the construction of the great topographic map of the United States. The 15 new sheets added during the last six weeks to the 2,200 now carried in the regular stock show good examples of the widely different kinds of country covered by the government topographers. The areas mapped on these sheets range from the high forested mountain region of Colorado to the low, rich alluvial bottom lands of Mississippi and Louisiana—lands valuable for mineral resources, and lands rich in agricultural possibilities beyond the dreams of avarice. For any comprehensive development of these areas the topographic base map becomes the first engineering necessity. The scale of the maps varies from 1 inch on the paper, representing half a mile of country, with a contour interval of only 5 feet, for the Mississippi delta lands —showing a very detailed survey suitable for a drainage base—to 1 inch representing 2 miles, with 100-foot contours, for the Castle Rock quadrangle, Colorado—covering an area which does not require such refined work. The Castle Rock area contains coal and lignite and a report on it will be made later by the survey in the form of a geologic folio; but the vicinity of Castle Rock is also famous for its potatoes, which are comparable to the famous Greeley potatoes, and for other agricultural products. The western portion of the area includes part of the Pike National Forest, and for national forest administration the map affords an ideal base. Three of the maps represent lands along Mississippi River in the Yazoo Delta; they show parts of the Moon Lake quadrangle, the Hollywood (Tunica County) quadrangle and the Lake Cormorant quadrangle, all in Mississippi. These maps were made in cooperation between the Federal Survey and the Tallahatchie Drainage Commission of the state of Mississippi. They are on the scale of 1 inch to half a mile, with 5-foot contour intervals, and show every slough and swampy place and every inequality of the area which must be taken into consideration in planning a drainage system that shall make these lands the most productive in the United States. Farther down the river, in Louisiana, similar areas have been mapped in cooperation between the Federal Survey and the Fifth Louisiana Levee District of the state of Louisiana, the sheets portraying portions of three quadrangles, the Ashton Bridge, Millikin and Millikens Bend—land built from the silt brought down by the great river and of nearly inexhaustible fertility. Another map of an area cut by the course of the Mississippi—the Milan quadrangle, Illinois—shows country of a different character. Here at Rock Island the Father of Waters is less of a problem. This map was made in cooperation between the Federal Survey and the state geologist of Illinois. The scale of this map is 1 mile to 1 inch and the contour interval 20 feet. A still different contour interval—50 feet—is that of the map showing the Salinas quadrangle, in Monterey County, California, where the work was done in coopera-

tion between the Federal Survey and the state of California.

WE learn from *Nature* that it is proposed to celebrate the centenary of the foundation of the Indian Museum in Calcutta next February. Originally founded as a branch of the Asiatic Society of Bengal at the suggestion of Wallich, the botanist, on February 2, 1814, the Indian Museum became a government institution in 1867, after prolonged negotiations with the government of India, which accepted the society's collections to form the nucleus of an imperial museum in Calcutta. A centenary committee has been formed with Lord Carmichael, the governor of Bengal, as chairman, and Sir Asutosh, Mookerjee, vice-chancellor of the Calcutta University, as vice-chairman. The committee has decided to publish an official history of the museum, to raise a special fund for the improvement of the public galleries, and to hold a reception in the museum on the anniversary of its foundation.

UNIVERSITY AND EDUCATIONAL NEWS

THE General Education Board at its May meeting made appropriations of $837,600. Conditional appropriations for colleges are as follows:

John B. Stetson University, Deland, Fla.	$ 50,000
Northwestern University, Evanston, Ill.	100,000
Pomona College, Claremont, Cal.	150,000
Union College, Schenectady, N. Y.	75,000
Williams College, Williamstown, Mass	100,000

Appropriations for special purposes are as follows:

For demonstration work in agriculture in the southern states, which include the boys' corn club work	180,050
For the promotion of girls' canning and poultry clubs throughout the south	75,000
For agricultural demonstration work in five counties of Maine	14,500
For the beginning of agricultural demonstration work in New Hampshire	7,500
For professors of secondary education in the several state universities of the southern states	30,550
For state supervisors of negro schools in several southern states	20,000
Schools for negro students in the south	35,000

A NEW chair of bacteriology is to be founded in Edinburgh University under a bequest from Mr. Robert Irvine, of Royston, Granton. *Nature* states that at his death, eleven years ago, Mr. Irvine bequeathed 230 shares of £10 each in a company for developing the resources of Christmas Island for the purpose of establishing the chair when the interest from the shares should reach £25,000 or £30,000. The accumulated dividends on these shares now reach more than £30,000. It is understood that £25,000 will go towards the maintenance of the professorship, and that the remaining £5,000 will be used in providing the class-rooms, laboratories and the necessary equipment.

DR. P. M. DAWSON, a graduate of Johns Hopkins University, and of its medical school, and for eleven years a member of its physiological staff, has been appointed instructor in physiology at the University of Wisconsin Medical School.

THE following promotions and new appointments have been made in the Stanford University Medical Department: Dr. Thomas Addis has been promoted to associate professor of medicine, Dr. E. C. Dickson and Dr. W. W. Boardman have been made assistant professors of medicine; Dr. Leo Eloesser and Dr. F. E. Blaisdell have been made assistant professors of surgery. Dr. R. G. Brodrick, of the San Francisco Board of Health, has been appointed assistant clinical professor of hygiene and public health. In the division of medicine Dr. W. F. Schaller has been made assistant clinical professor, assigned to neurology, and Dr. J. M. Wolfsohn, clinical instructor, assigned to neurology. Dr. A. A. O'Neill has been promoted to clinical instructor in medicine and Dr. G. A. Rothganger has been appointed instructor in surgery.

DISCUSSION AND CORRESPONDENCE

THE CALIFORNIA ACADEMY OF SCIENCES

THE California Academy of Sciences in San Francisco is an institution of about 400 cor-