

living animals of the lower forms, and an exhibit of such wild flowers as may be in bloom.

The Nunnemacher collection of arms has been extended and it is noted that this probably contains the best series of firearms exhibited in any museum in the country.

There is the usual plea for more room and it is to be hoped that this plea may meet with a favorable response and the fine building extended to meet the exigencies of the case.

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THE SMITHSONIAN INSTITUTION.

WE reproduce from the Washington papers the accounts of the meeting of the regents of the Smithsonian Institution, held in Washington on January 27, which it is understood are given out by the secretary. As an adjourned meeting was held in the evening, for the first time in recent years at least, it may be assumed that the general policy and administration of the institution were under discussion.

The annual meeting of the board of regents of the Smithsonian Institution was held at the institution at ten o'clock on the morning of January 27. Of the members of the board those present were: Mr. Chief Justice Fuller, the chancellor of the institution, who presided; Senator S. M. Cullom, Senator O. H. Platt, Senator F. M. Cockrell, Representative R. R. Hitt, Representative Robert Adams, Jr., Representative Hugh A. Dinsmore, ex-Senator John B. Henderson, Dr. A. Graham Bell, Dr. James B. Angell, ex-Secretary of State Richard Olney and the secretary of the institution, Dr. S. P. Langley. Senator William P. Frye, president *pro tempore* of the Senate; Judge George Gray and Dr. Andrew D. White were unable to be present. It was announced that Representatives Hitt, Adams and Dinsmore had been reappointed regents on the part of the House for a term of two years, and that Mr. John B. Henderson and Professor A. Graham Bell had been elected regents from the District of Columbia for a period of six years.

The secretary presented his annual report reviewing the work of the year ending June 30, 1903. The total permanent fund now stands at \$937,000, deposited in the treasury. Certain railroad bonds forming a part of the Hodgkins fund make the total fund of the institution about \$1,000,000.

The institution in addition was charged with the disbursement of congressional appropriations for the United States National Museum, the Bureau of American Ethnology, the international exchanges, the Astrophysical Observatory and the National Zoological Park, amounting in all to \$472,400.

Under the Hodgkins fund a memoir has been issued by Dr. Barus, entitled 'The Structure of the Nucleus,' and grants have been made to Professor M. W. Travers, of University College, London, for researches 'on the attainment of very low temperatures'; to Dr. Victor Schumann, of Leipsic, for work on vacuum spectroscopy, and to Professor E. W. Scripture, of Yale University, for the construction of a 'vowel machine.'

The subscription to the Smithsonian table at the Naples Zoological Station has been renewed. During the year this table was occupied by eight American biologists, all of whom conducted special researches of value.

In the series of 'Contributions to Knowledge' two valuable publications have been issued, those of Dr. Barus and Dr. Schumann, while a memoir by Dr. Frederick W. True, entitled 'The Whalebone Whales of the Western North Atlantic, compared with those occurring in European Waters, with some Observations on the Species of the North Pacific,' and a work by Professor N. S. Shaler, of Harvard University, entitled 'A Comparison of the Features of the Earth and the Moon,' are in course of publication. A number of papers have been issued in the series of 'Miscellaneous Collections,' and a work by the late Dr. G. Brown Goode, 'What Has been Done in America for Science,' is now being prepared for the press.

The usual reports have been issued and greatly sought after. The library has received valuable additions from Gen. John Watts De Peyster, in Napoleoniana, and on gypsies. The museum library has received two important gifts, being the E. A. Schwartz collection of books on American coleoptera, and the W. H. Dall collection of books on recent and fossil mollusks.

The institution has taken over for America the work of the International Catalogue of Scientific Literature.

At its last session Congress authorized the construction of a fireproof building for the use of the National Museum, at a cost not to exceed \$3,500,000. The plans for this structure are now practically finished, and borings for the foundation have been made. The actual work will begin in warm weather, though it will probably be three or four years before the building is completed.

Two hundred and thirty-six thousand specimens

were received, making the present total over 5,650,000, and about 33,000 objects were distributed to educational establishments. Among the most interesting accessions were those illustrating the native arts and industries of Sumatra and the Straits Settlements, collected by D. W. L. Abbott; a series of models of United States war vessels and of land and naval ordnance; and some relics of General and Mrs. Grant, of much intrinsic and historic interest.

After paying a tribute to the late Major John W. Powell, the first director of the Bureau of American Ethnology, the report describes the continuance of the work, under the direction of its new chief, Professor W. H. Holmes. Systematic field work has been successfully prosecuted in many states and territories, and in Santo Domingo and Porto Rico. The preparation of the dictionary of Indian tribes has been taken up with renewed vigor.

The number of correspondents and beneficiaries of the international exchange service is now over 44,000.

In the National Zoological Park a new elephant house has been built. In view of the increased number of buildings in the park, each one of which has now to be provided with its own heating apparatus, it is recommended that a special building in the park, lying within a reasonable radius, be erected for a central heating plant. Much interest has been shown in the park by our officers abroad, of whom there may be specially mentioned Dr. F. W. Goding, United States consul at Newcastle, New South Wales, who has sent more than 140 specimens from that region.

The astrophysical observatory has been enriched by a large horizontal telescope, to be used for studies of special portions of the solar radiation. Results of uncommon interest have been reached in the bolographic work, and it has been shown that the earth's atmosphere has been more opaque than usual within the present calendar year, so as to reduce the direct radiation of the sun at the earth's surface by about ten per cent. throughout the whole visible spectrum, and by more than double this amount in the blue and violet portions of the spectrum. This alteration of the transparency of the air has not been confined to the region of Washington. A new determination of the temperature of the sun, based on the distribution of the solar radiation in the spectrum, has yielded a result of 5,920 degrees of the centigrade scale above absolute zero. A horizontal reflecting telescope of 140-foot focus and 20-inch aperture, and a coelostat of improved construction, to fur-

nish at all times a 20-inch horizontal northerly directed solar beam, has been provided. The most interesting part of the results consists in showing a notable variation of atmospheric transparency which is likely to have affected climate and the growth of vegetation over a considerable part of the earth's surface, and in the studies relating to the solar constant, so that there seems renewed promise of progress toward the goal 'for telling by such means those remoter changes of weather which affect harvests,' which is one of the aims had in view in the foundation of the observatory.

The question of vandalism and exploitation for commercial purposes of archeological sites having been brought to the attention of the board, the following resolution was adopted: *Resolved*, that the passage by congress of an act for the preservation of archeological objects on the public domain is in the national interest, and would aid in promoting the science of archeology and ethnology; and that the secretary be requested to present to the congress the draft of a bill having this end in view.

Dr. Alexander Graham Bell, who was a committee of one on behalf of the regents charged with the duty of bringing the remains of Smithsonian to the United States, submitted a report. Dr. Bell reached Genoa on December 25, and on the 31st of that month the remains of Smithsonian were exhumed in the presence of the American consul and six other witnesses. He submitted a certificate of the United States consul, Mr. William Henry Bishop, describing the exhumation. Mrs. Bell then placed within the coffin a wreath of leaves from the grave of Smithsonian and the United States consul placed an American flag as a covering for the casket. Brief addresses were made immediately before the removal of the remains from the mortuary chapel by the United States consul and Dr. Bell and Mr. Noel Lees on behalf of the British burial ground fund committee.

The regents, after the report, voted that there be placed upon the record an expression of their profound appreciation of the services of Dr. Bell in going to Genoa and returning with the remains of James Smithsonian that they might find a resting place in the grounds of the institution he so nobly founded 'for the increase and diffusion of knowledge among men.'

A committee was appointed to choose the spot in the Smithsonian grounds where the remains of Smithsonian may be interred and a monument erected to his memory. The committee includes the chancellor, the secretary and the executive committee.

SCIENTIFIC NOTES AND NEWS.

DR. WILHELM WALDEYER, of Berlin, has been elected a foreign member of the Paris Biological Society.

PRESIDENT JORDAN, of Stanford University, will be absent from Palo Alto for about three weeks on a visit to the east. He will make an address at Yale University, at the meeting of the Association of American Universities, on February 18, and will visit other universities. Dr. Jordan has been invited to give the address at the opening of the new science building of the University of Colorado.

GENERAL I. J. WISTAR, president of the American Philosophical Society, Philadelphia, sailed on February 2 for a visit to the Mediterranean and the Orient.

DR. H. V. HILPRECHT, of the University of Pennsylvania, is making arrangements for another expedition to Babylonia next fall.

THE Council of the Geological Society of London has this year made the following awards: Wollaston Medal to Professor Albert Heim of Zurich; Murchison Medal to Professor G. A. Lebour of Newcastle-on-Tyne, chiefly in recognition of his work on the carboniferous rocks and in connection with coal; Lyell Medal to Professor A. G. Nathorst of Stockholm; Wollaston Fund to Miss E. M. Wood, joint-author of the 'Monograph on British Graptolites,' and assistant to Professor Lapworth of Birmingham; Murchison Fund to Dr. A. Hutchinson, demonstrator of mineralogy at Cambridge; the Lyell Fund is shared between Professor S. H. Reynolds of Bristol, who is whole or part author of several contributions to English stratigraphy, and Mr. C. A. Matley of Dublin, another British stratigraphical paleontologist; Barlow-Jameson Fund to Mr. H. J. Beadnell for his stratigraphical work in connection with the Egyptian Geological Survey. We understand that the new president is likely to be Mr. J. E. Marr of Cambridge. We regret to learn that the out-going president, Professor Lapworth, is still prevented by ill health from undertaking his professorial or presidential duties, among them the delivery of the annual address.

THE Royal Society of New South Wales has awarded the Clarke memorial medal to Mr. A. W. Howitt, of Melbourne.

DR. GEORGE F. KUNZ, special agent of the United States Geological Survey, has been appointed commissioner of the radium exhibit at the St. Louis Exposition, and has been authorized to prepare and procure material comprising radio-active substances of all kinds and also exhibits to illustrate the action of radium compounds, ultra-violet light and Röntgen rays upon mineral and chemical substances. This exhibit is to be made by the United States Geological Survey in the United States building at St. Louis. There will be a second exhibit of radium and radio-active substances in the mines building.

DR. F. H. BAKER, superintendent of the National Zoological Park, will be in charge of the aviary at the St. Louis Exposition. The cage for the flying specimens, now building at the fair grounds, will be 200 feet long, 60 feet wide, and 70 feet high.

THE patents of Professor Michael I. Pupin, concerned with long distance telephony, have been upheld by the German courts, as against the contention of the postal administration. Professor Pupin is at present in Berlin.

SIR WILLIAM WHITE, F.R.S., president of the British Institution of Civil Engineers, has been appointed a member of the Engineering Standards Committee.

At the annual meeting of the Anthropological Institute of Great Britain and Ireland, Mr. H. Balfour gave an address and was re-elected president.

THE Zoological Society of London has elected the following members: Dr. Lorenzo Camerano, of the Royal Zoological Museum, Turin, Italy; Dr. Fritz Sarasin and Dr. Paul B. Sarasin, of Basle, Switzerland.

A SOCIETY for the prehistoric study of France has been founded at Paris, with M. Emile Rivière as first president.

THE president of the British Board of Trade has appointed Lord Rayleigh, F.R.S. (chairman); Sir William de W. Abney, F.R.S.; Robert Farquharson, Esq., M.D., M.P.; William King, Esq.; and J. Fletcher Moulton,

M.P.; to be a committee to inquire and report as to the statutory requirements relating to the illuminating power and purity of gas supplied by the metropolitan gas companies, and as to the methods now adopted for testing the same, and whether any alteration is desirable in such requirements or methods, and, if so, whether any consequential alteration should be made in the standard price of gas.

THE Swiney prize, founded by Dr. Swiney, who died in 1844, for a work on jurisprudence, has been awarded to Sir Frederick Pollock, LL.D., D.C.L., and Professor Frederic William Maitland, LL.D., D.C.L., for their book on 'The History of English Law before Edward the First.' The prize consists of a silver cup of the value of £100 and money to the same amount. The award is made jointly by the Society of Arts and the Royal College of Physicians, and the prize, under the terms of Dr. Swiney's will, is given every fifth year on the anniversary of the testator's death.

PROFESSOR DEBOVE, dean of the Medical Faculty of the University of Paris, has been appointed president of the French Consultative Committee of Hygiene, in the room of Professor Brouardel, who has been named honorary president. Dr. Roux, sub-director of the Pasteur Institute, has been reelected vice-president of the committee.

PROFESSOR ANGELO HEILPRIN lectured before the People's Institute at Cooper Union, New York, on February 5, his subject being 'Mount Pelée Revisited.'

DR. CHARLES B. DUDLEY, chief chemist of the Pennsylvania Railroad Company, delivered a lecture on February 1, at the Cosmos Club, Washington, on 'The Work of a Chemist on a Railroad.'

LORD RAYLEIGH will give a course of six lectures, at the Royal Institution, London, on 'The Life and Work of Stokes,' beginning on February 20.

AN oil painting of the late Dr. Thomas G. Morton was presented to the Pennsylvania Hospital by the Association of Resident Physicians of that institution, January 11. Dr. Morton was connected with the hospital

in various capacities for more than forty years.

WE regret to announce the death of Arthur William Palmer, D.Sc. (Harvard), head of the Department of Chemistry of the University of Illinois. Dr. Palmer was graduated from the University of Illinois in 1883, and was for two years assistant in the Department of Chemistry. In 1890, after studying for two years at Harvard University and one year in Germany, he was appointed professor of chemistry and has since served continuously in that capacity. As member of the Chemical and Biological Survey, he had lately completed an important report on the water supply of the state of Illinois, and was the author of many papers embodying the results of chemical investigation.

THE Rev. Dr. Jacob Cooper, professor of philosophy and rhetoric in Rutgers College since 1893 and previously professor of Greek, has died at the age of seventy-three years.

DR. FRIEDRICH VON HEFNER-ALTENECK, the eminent German engineer, died on January 7 at the age of fifty-eight years.

REUTER'S AGENCY reports that on January 16 the chief of the laboratory of the Imperial Institute of Experimental Medicine for the preparation of plague remedies, whose name is not given, was taken ill after having been engaged in experimenting with living plague cultures. He died of plague on January 20, in spite of every medical assistance and repeated injections of anti-plague serum. Injections of the anti-plague serum were made in good time into all persons who had been in contact with him. The laboratory is in Fort Alexander I., which is on a small island completely isolated from Kronstadt and the other forts.

DR. FELIX KANITZ, known for his archeological and ethnographical researches in the Balkan peninsula, died at Vienna on January 5, in his seventy-fifth year.

WE also regret to record the death of Dr. August G. Garcke, professor of botany at Berlin, at the age of eighty-four years.

A DESPATCH from Buenos Ayres to the *Figaro* announces that the *Français*, with

Dr. Charcot's antarctic expedition on board, reached Ushuaia, Patagonia, on January 15. An Argentine vessel brought her coal supply and mails, and the *Français* then left for the south.

THERE will be a civil service examination on March 9 and 10 to fill vacancies in the position of geologic aid and assistant geologist in the Geological Survey, at salaries ranging from \$1,000 to \$2,000 per annum.

BARON LÉON DE LENVAL, of Nice, has given 3,000 francs to found a prize to be awarded periodically to the otologist who has made the greatest progress in the practical treatment of the affections of the ear since the previous award, to the inventor of a portable apparatus susceptible of notably improving the hearing of deaf persons. The value of the prize is the interest on this sum accruing in the interval of two meetings of the International Otological Congress.

The Illustrated Review of Physiologic Therapeutics offers the sum of fifteen hundred dollars in cash prizes for the best essays on X rays in medicine and surgery, the first prize being \$1,000.

SIR NORMAN LOCKYER's address as president of the British Association for the Advancement of Science on 'The Influence of Brain Power on History' has been reprinted from *Littell's Living Age* by the New England Education League and International Education Conference. Copies may be obtained in large or small quantities at the rate of two cents each (postage extra) by addressing Mr. W. Scott, secretary, 40 Dover Street, West Somerville Station, Boston, Mass.

SENATOR CULLOM has introduced a bill for the preservation of aboriginal monuments, ruins and other antiquities to apply to all government reservations.

THE agricultural appropriation bill, as passed by the house on February 5, carries a total of \$5,711,240, being an increase of \$233,080 over the current law. Only two salaries are raised by the bill, and these only temporarily, being \$500 each to the chiefs of the Bureau of Animal Industry and the Division of Entomology. Commenting on the amount carried,

Chairman Wadsworth says in the report: "It has been asserted by some that the United States is not spending enough toward the promotion of agriculture. Having this in mind your committee requested the Census Bureau to furnish it with statistics showing the amounts spent by the several states and territories for this purpose, and as near as can be ascertained by that bureau the aggregate yearly expenditures by the states and territories are something over \$4,500,000, which, added to the \$6,250,000 spent annually by the United States government for the same cause, makes a total of \$10,750,000 spent annually for the promotion of agriculture. Certainly," the report concludes, "this is a most liberal figure and much more than is being expended by any other government in the world for the same purpose." The bill contains the following new clause regarding the relation of the agricultural experiment stations to the Department of Agriculture: "The Secretary of Agriculture is hereby authorized and directed to coordinate the work of the several stations and the work of the stations with the Department of Agriculture, to the end of preventing unnecessary duplication of work, of increasing the efficiency of the stations and the Department of Agriculture, and to unify and systematize agricultural investigations in the United States."

It appears from the reports in the press that in discussing the agricultural bill in the house on February 5, Mr. Sheppard (Dem., Texas) made a determined but vain effort to bring about a reform in the matter of the distribution of seeds by the government, and specially for the purchase of rare and untried seeds. He read a letter from a constituent who asked him to send certain seeds and in addition a suit of clothes. He declared that the system was degenerating into a farce, and said that if the congressional comedy continues and drifts into a continuous performance, congressmen will no longer be statesmen but seedsmen. Mr. Sheppard developed to the merriment of the house, in a colloquy with Mr. Candler, that the latter had received a request from a man for a hat for himself and his wife. Mr. Cochran (Dem., Mo.) said he re-

ceived a letter from one of his constituents a few months ago asking for a piano for his daughter. Mr. Cochran wrote back that he was very sorry that he could not gratify him, but he was in the minority and could not get any allowance of pianos. However, he said, Mr. Bartholdt, being the only republican from the state, could get all the pianos he wanted. He had just received twelve as his allowance. In a few days Mr. Bartholdt got several letters asking for pianos, and now he is receiving four or five letters every day from Missouri making the same request.

A CORRESPONDENT writes as follows to the London *Times* with reference to Mr. J. S. Budgett, of Trinity College, Cambridge: By the death of Mr. Budgett Cambridge has lost one of the most promising of her biologists and one of the most active of those who take an interest in volunteering in the university. Mr. Budgett was educated at Clifton College and came up to Trinity College about ten years ago. From early childhood he showed a keen interest in all matters of zoological interest; and these tastes whilst he lived in his father's house at Stoke Bishop, near Clifton, were fostered by the friendship and sympathy of Professor Lloyd Morgan and of Professor S. H. Reynolds, of University College, Bristol. During his third year at Cambridge Mr. Budgett accompanied his friend Professor Graham Kerr to the Gran Chaco of Paraguay, where he made large collections of the local fauna, especially of amphibians and birds. Returning to Cambridge, he took his degree in 1898, and almost immediately started for the Gambia. Here he remained the best part of a year endeavoring to secure material for the study of the development of the archaic fish *Polypterus*. He revisited the Gambia in the rainy season of 1900 with the same object; and although in these trips he did not absolutely succeed in his object he collected a vast quantity of valuable material, notably a complete series of the eggs and larvæ of the African lung-fish, *Protopterus*, and of several other fresh-water fishes and amphibians. In 1902 Mr. Budgett was appointed Balfour student in the university, and with indomitable courage he renewed his ef-

forts to solve the riddle of the development of *Polypterus*. He set out in June for Uganda, and proceeding from Mombasa by the Lakes Victoria and Albert, his caravan reached the head waters of the Nile, and he finally returned home by the Sudan and Egypt. Last June he started on his fourth and at last successful expedition to Africa. On the delta of the Niger he found what he had so long and courageously sought, and he returned home last November with a complete series of eggs and larvæ of *Polypterus*, and immediately began to work up the material he had collected. On his return it was evident that his health had been affected by the climate. Mr. Budgett was a man gifted in many ways. His power with the pen and pencil were a great help to his scientific work. In 1901 he raised a detachment of mounted infantry in connection with the Cambridge volunteers, and has continued to command that body till his death. He was a man of strong personality, and of a high and sensitive personal honor.

THE fifth International Congress of Zoology, held at Berlin in 1901, selected Switzerland as the place of meeting for the sixth session, and elected Professor T. Studer president. *Nature* states that in accordance with this resolution, the congress will meet at Bern from August 14-19 of this year. Professor Studer, Bern, is president of the general committee, and the vice-presidents are: Professor E. Beraneck, Neuchâtel; Professor H. Blanc, Lausanne; Dr. V. Fatio, Geneva; Professor L. Kathariner, Fribourg; Professor A. Lang, Zürich; Professor E. Yung, Geneva, Professor F. Zschokke, Basel; and Professor R. Blanchard, Paris. The secretaries are Professor M. Bedot, Geneva; Dr. J. Carl, Geneva; and Dr. W. Volz, Bern. The general meetings will be held in the Palace of Parliament, at Bern, and the sectional sittings in the new university. During the congress there will be an excursion to Neuchâtel and to the Jura lakes, in order to visit the lake-dwellers' settlements. The closing meeting of the congress will be held at Interlaken. Afterwards members will be invited to visit other Swiss cities. Communications or inquiries referring to the con-

gress should be addressed to the president of the sixth International Congress of Zoology, Museum of Natural History, Waisenhausstrasse, Bern. The congress is open to all zoologists and to all who are interested in zoology.

COLUMBIA UNIVERSITY, in cooperation with the Academy of Political Science, has arranged for a series of nine free lectures on 'The Problems of Municipal Administration,' to be given in Earl Hall by the heads of departments of the last city administration. The lectures are to be as follows:

February 26—'The Dock Department' (illustrated), McDougall Hawkes.

March 4—'The Street Cleaning Department' (illustrated), John McG. Woodbury.

March 11—'The Police Department,' Gen. Francis V. Greene.

March 18—'The Fire Department,' Thomas Sturgis.

March 25—'The Board of Education,' C. C. Burlingham.

April 1—'The Department of Charities,' Homer Folks.

April 8—'The Tenement House Department,' Robert W. DeForest.

April 15—'The Health Department' (illustrated), Dr. Ernst Lederle.

April 22—'Bellevue and Allied Hospitals,' John W. Brannan.

The British Medical Journal states that new county buildings at Chelmsford containing laboratories for Essex were formally opened recently by the Earl of Onslow, president of the Board of Agriculture. The new buildings, which are conveniently situated near the center of the town, have cost about £12,000. They comprise chemical, physical and biological laboratories and class rooms, together with agricultural and horticultural museums and libraries, and provide facilities for systematic instruction in agriculture and horticulture, as well as in pure science. They are under the control of the Essex Education Committee, and were built by the Essex County Council. As the chairman of this committee, Mr. E. N. Buxton pointed out at the inaugural proceedings that Essex was an agricultural county and the laboratories were intended to be a center for agricultural or horticultural

information for the whole county; they included rooms for the analysis of soils, manures, foods, seeds, etc., and for other scientific work carried on in the interests of these industries. There is also a large dairy, in the basement, for instruction in butter and cheese making and the treatment of milk, and within three quarters of a mile is the school garden, three acres in extent, provided with potting-shed and hothouses. In addition to the more purely agricultural and horticultural courses of lectures and practical work, classes are held in chemistry, physics and biology, largely for the training of teachers. Several scholarships are offered by the county council, while several of the classes are free to selected candidates resident in Essex. The laboratories are large, well arranged, and well fitted up, and should prove, with the agricultural departments, of great service to the cause of agriculture and technical education in Essex. In the prospectus of the dairy school it is stated that 'it is also proposed to give a one-week's course of instruction in milking and the treatment of milk for selling.' Such a course, if properly given and attended, should be of value in promoting a more satisfactory and hygienic treatment of milk, and will be welcomed by all interested in a pure milk supply.

PROFESSOR HARRY FIELDING REID, of Johns Hopkins University, who is in charge of earthquake records for the United States Geological Survey, was designated by the State Department as the delegate from the United States to the International Seismological Conference held in Strassburg last July. The object of the conference, which was held at the invitation of the German Government and was attended by delegates from nineteen countries, was to form an International Seismological Association of the various countries for the purpose of cooperative work in such earthquake investigations as could be carried out only by cooperation. The conference adopted a constitution, which is to be submitted to all civilized countries, and they will be asked to join the association. The constitution provides for a general assembly, to meet at least once in four years, and a permanent commission, composed of one delegate from each

nation, which will direct the work of the association in accordance with the resolutions of the General Assembly. A Central Bureau is to be located at Strassburg in connection with the Imperial Seismological Station there, and reports are to be forwarded to its director as frequently as possible. These reports will be edited and published. The nations, members of the association, are to contribute sums varying from \$100 to \$800 annually, according to their population. The amount thus obtained is to be used for the expenses of administration and publication and may be used in part for such special purposes as the prosecution of special investigations ordered by the General Assembly or for the support of particular observatories founded by the association, observations from which are considered of special importance, and which could not otherwise be made. Each country is to enjoy the utmost liberty in the method of making observations and in the choice of instruments, but the reports are all to be sent to the Central Observatory in terms of Greenwich civil time.

UNIVERSITY AND EDUCATIONAL NEWS.

PROFESSOR JOHN HAYS HAMMOND has added \$50,000 to his previous gift of \$50,000 for a metallurgical laboratory of Yale University.

THE late James A. Woolson has left his property in trust for his wife and daughters and their issue, if any, after which it is to go to public purposes. Boston University will ultimately receive \$600,000, Radcliffe College \$300,000 and the Wesleyan Academy at Wilbraham, Mass., \$300,000.

THE University of Michigan has received from Arthur Hill, of Saginaw, eighty acres of land just outside Ann Arbor, to serve as an experiment farm for the Forestry Department. The tract is called 'The Saginaw Forest Farm.' The tract is to serve as an object lesson in forestry and is planned to provide for: (1) An arboretum of all useful forest trees suited to Michigan. (2) Demonstration areas for seed bed and nursery work. (3) Model plantations of forest trees. (4) Special

experiments in forestry, such as the various methods of propagation of special kinds of timber and the raising of particular kinds of forest products, as well as for other practical purposes. The university has also received from Mr. Joseph B. Whittier, of Saginaw, \$4,000 for the Angeline Bradford Whittier fellowship in botany, in honor of Mr. Whittier's mother, and from the Michigan Federation of Women's Clubs, \$3,000 for a scholarship for women. The sum will later be increased to \$5,000.

MR. ALFRED PALMER has written to the principal of University College, Reading, offering to present to the college a site for the proposed new college buildings. The extent of the gift is about five acres, centrally situated.

PRESIDENT IRA REMSEN, of the Johns Hopkins University, will give the commencement address at the Worcester Polytechnic Institute in June next.

THE new medical laboratories of the University of Pennsylvania will be dedicated next June, and the medical department will move into its new quarters during the summer.

THE Northwestern University has established in the College of Liberal Arts one hundred scholarships open to students from any part of the country who may be able to comply with the conditions. The scholarships are to be assigned upon a new basis, which resembles in some respects the Rhodes scholarships. The chief emphasis in the selection of students will be laid upon promise of superior achievement or probable fitness for public usefulness after leaving college.

MORTIMER E. COOLEY, professor of mechanical engineering at the University of Michigan, was appointed dean of the engineering department at the last meeting of the regents. He succeeds the late Charles E. Green, who was dean of the department from its foundation until his death in October last.

AT University College, London, the Derby scholarship in zoology has been awarded to Mr. W. N. F. Woodland.