

diamonds. Some of these crystals are more than half a millimeter in diameter.

J. L. H.

#### ASTRONOMICAL NOTES.

THE *Astronomische Nachrichten* of October 5 contains an extended article by Dr. Paul Harzer upon the influence of gravity on the circles of astronomical instruments. This subject, which was treated by Bessel in the last paper he ever wrote, seems to possess theoretical rather than practical interest.

THE Academy of Sciences of St. Petersburg has published a careful investigation of the errors of a micrometric apparatus constructed for the Academy by the Messrs. Repsold. The apparatus is intended for the accurate measurement of astronomical photographs, and its investigation has been carried out at the Poulcova observatory by Messrs. Renz and Kostinsky.

THE Washburn Observatory has issued Vol. X., Part I of its publications. It contains Prof. Comstock's observations of double stars made between the years 1892 and 1896.

H. J.

#### SCIENTIFIC NOTES AND NEWS.

THE great physiologist, Dr. Moritz Schiff, professor at Geneva, died on October 6th.

DR. M. W. DROBISCH, professor of philosophy in the University of Leipzig, died on September 30th, at the advanced age of 94 years. Drobisch was one of the most eminent of Herbart's followers, and had made contributions to mathematics as well as to philosophy.

FRANÇOIS FELIX TISSERAND, director of the Paris Observatory, professor of astronomy in the Paris faculty of sciences, and member of the Institute, died from apoplexy at Paris on October 20th. Tisserand was born January 15, 1845. He was assistant in the Paris Observatory and was appointed director of the Observatory of Toulouse and professor in the faculty of sciences in that city in 1873. He was appointed first professor of mechanics at Paris, and later

professor of astronomy. He was made director of the Paris Observatory in 1892, in the place of the late Admiral Monchez.

THE Australian geologist, Baron Heinrich Freiherr von Foullon-Norbeeck, was killed on August 10th by natives on the island of Guadalcanara, one of the Solomon group. He had landed with a party from the German warship *Albatross*, to explore the mountains of the island, when the party was attacked and Foullon-Norbeeck, as well as three sailors and a guide, were killed. He was born in 1850, and was at the time of his death chief geologist of the geological bureau at Vienna.

DR. THEODORE MARBE, professor of zoology at Buda-Pesth, died on September 5th at the age of 80 years. He was known especially for histological researches on muscles and nerves, but had also made contributions to zoology, and had formed in the University at Buda-Pesth a laboratory of zoology and a museum of comparative anatomy.

BARON SIR FERDINAND VON MÜLLER, the eminent botanist, died at Melbourne on October 9th. From the London *Times* we take the following facts: Müller was born at Rostock in Germany, in June, 1825. He obtained a training in pharmacy and in his leisure time devoted himself to the study of botany and chemistry. In 1846-47 he studied at the University of Kiel, where he took the degree of Ph.D. For several years he investigated the botany of Schleswig and Holstein. In 1847, in order to counteract a hereditary tendency to phthisis, he emigrated to Australia, and at once entered upon those labors for the exploration and development of the continent which have only ceased with his death. From 1848 to 1852 he traveled over 4,000 miles, mainly for botanical purposes. In 1852 he was appointed government botanist to the colony of Victoria. In 1855-56 he accompanied as botanist the expedition under the command of A. C. Gregory for the exploration of north and central Australia, and was one of the four to reach Termination Lake, in central Australia. Some 6,000 miles of previously unknown land was traversed, and abundant collections made of the various forms of vegetation. On Müller's return to Melbourne he was

appointed director of the Botanical Garden of that city. His travels in Australia for botanical purposes, on foot and on horseback, covered some 25,000 miles. He was a voluminous author, and his writings are mostly of a strictly scientific character. The titles of over a hundred papers by Müller are given in the Royal Society's List. His 'Fragmenta Phytographiæ Australiæ' covers a dozen volumes. He co-operated with the late Mr. Bentham in compiling the 'Flora Australiensis,' which extends to several volumes. He is also the author of works on the 'Plants of Victoria,' on eucalyptus and on other botanical subjects.

DR. MAX MÜLLER, son of the great physiologist Johannes Müller, himself an eminent surgeon and the author of important contributions to the science, died at Cologne on September 3d.

DR. C. E. BROWN-SEQUARD, the only son of the late eminent man of science, and himself engaged in scientific work, has died at Atlanta, Ga., at the age of 30 years.

THE Fourteenth Congress of the American Ornithologists' Union will convene in Cambridge, Mass., on Monday, November 9th, at 8 o'clock p. m. The evening session will be devoted to the election of officers and the transaction of other routine business. The meetings open to the public, and devoted to the reading and discussion of scientific papers, will be held in the Nash Lecture-room, University Museum, Oxford St., beginning Tuesday, November 10th, at 10 a. m., and continuing for three days. Information regarding the Congress can be had by addressing the Secretary, Mr. John H. Sage, Portland, Conn.

THE German Botanical Society met at Frankfurt-on-Main on September 22d. The French Association of Surgeons met at Paris on October 19th.

ACCORDING to *Nature* Dr. H. O. Forbes, in an inaugural address delivered before the Biological Society of Liverpool on Friday last, urged the amalgamation of all the local societies interested in biological science. He suggested that such a conjoint society meeting in some central place and to be called, perhaps, the Biological Institute of Liverpool, or the Liverpool Institute of

Natural Science, or if all the scientific societies could be induced to unite, the Royal Society of Liverpool, as was the suggestion, some ten years ago, of Prof. Herdman, might be instituted on the model of the New Zealand Institute. Such a combined society in Liverpool would command wider recognition, and contribute more to the advancement of science, than is at present possible with disjointed forces. Dr. Forbes also expressed the hope that two other scientific institutions of the highest educational value, urgently required in a city like Liverpool—a zoological garden and a resuscitated botanical garden under a trained botanist, both conducted in a thoroughly scientific manner—might be accomplished facts before the end of this century.

M. HENRI MOISSAN gave, on the evening of October 27th, at the College of Physicians and Surgeons, New York, a lecture, with experiments, on his researches with the electric furnace, by invitation of the New York Academy of Sciences, the New York Section of the American Chemical Society, the American Institute of Electrical Engineers, the College of Pharmacy of the City of New York, and the New York Section of the Society of Chemical Industry. On the evening of October 28th a banquet was given in New York in honor of M. Moissan.

DR. HEINRICH KAYSER, professor of physics in the University of Bonn, has just returned to Germany, after having spent six weeks in America, making studies in astrophysics and spectroscopy.

HON. BERTRAND RUSSELL, fellow of Trinity College, Cambridge, has arrived in America, and will deliver a course of lectures on *Non-Euclidean Geometry*, at Bryn Mawr College and at Johns Hopkins University.

MR. CHARLES D. WALCOTT, director of the United States Geological Survey, is at present on the Pacific coast, where he is making an inspection of the work accomplished during the summer and arranging for the future conduct of the surveys.

PROF. PHILLIPS, of the mathematical department of Yale University, will revise the series of mathematical text-books of the late Prof. Loomis.

DR. E. R. L. GOULD, professor of statistics in the University of Chicago, has prepared, at the request of Mayor Strong, a plan for a bureau of statistics for Greater New York. The commission will be asked to include it in the new city charter.

DR. HERBERT S. JENNINGS has been appointed to the Smithsonian Table at the Naples Zoological Station for three months. Prof. Francis H. Herrick will occupy the table during the month of November.

At the recent meeting of the British Association Mr. R. T. Glazebrook read the report of the Committee on Electrical Standards, which has had under consideration a thermal unit. The Committee in question issued circulars to authorities on the measurement of heat in other countries, and received many written opinions on the matter. Most of the writers wish to see some multiple of the erg adopted as the theoretical unit, but there are differences of opinion as to the multiple to be chosen. There is a fairly general agreement that as a practical unit the heat required to raise one gramme of water 1 deg. Centigrade must be taken, but views differ as to the initial temperature of the water. The weight of opinion is also in favor of the hydrogen thermometer being used for temperature measurements. The committee learn that a committee of the French Physical Society have the question at present under consideration, and suggest an international discussion on the subject.

THE German Hygienic Association offers a prize of \$1,200 for a research essay on the efficiency of electric heaters.

THE Bender Hygienic Laboratory, of the Albany Medical College, was dedicated on October 27th. The building was formally presented to the Board of Trustees by Mr. H. H. Bender in the name of the donor, Mr. Matthew W. Bender, and addresses were made by Dr. George E. Gorham and Prof. A. Jacobi.

THE Baltimore Naturalists' Field Club, which is composed of instructors and advanced students of the biological department of Johns Hopkins University, has elected Dr. C. P. Sigler as President. Dr. F. S. Conant is chairman of the zoological section, Dr. J. E. Hum-

phrey of the botanical section, and Dr. R. M. Bagg of the geological section. The Club holds field excursions on Tuesday afternoons during the autumn and spring.

THE proposed mathematical club at the University of Pennsylvania has now been organized. Prof. Doolittle has been elected President; Prof. Goodspeed, Vice-President, and Prof. Crawley, Secretary. The club will meet once a month.

THE Yerkes Observatory is now nearing completion, and about half of the faculty of the astronomical department of the University of Chicago will hereafter be in residence there.

THE Dominion government is making a thorough survey of the currents in the Gulf of St. Lawrence. During the present season the steamship *Lansdowne*, of the marine department, has been engaged in studying the eastern arm of the gulf from Anticosti to Belle Isle, and in the almanacs of the present year tide-tables are given from the records obtained.

MR. LUCAS reports the capture of a specimen of the Ribbon Seal, *Histiophoca equestris*, in Bering sea. The individual, a young female, was taken by one of the sealing schooners about 84 miles due west of St. Paul Island, a very southern locality for this species, especially in August, when the capture was made.

PROF. L. H. BAILEY has prepared a report for the Commissioner of Agriculture regarding the State appropriation, amounting to \$32,000, for extending university instruction in horticulture. The work consists of the issue of bulletins for the benefit of farmers, of experiments on model farms, intended for imitation in the district, and the holding of district schools. Prof. Bailey wishes to extend further the work so that nature study may be taught in all normal schools and introduced in district schools. He recommends the establishment of a State bureau for correspondence and instruction, and wishes the teachers in the schools to cooperate with the farmers in the study and improvement of agricultural methods.

DR. WOODHEAD read a paper at the Liverpool meeting of the British Association on the 'Organization of Bacteriological Research in Connection with Public Health,' which was re-

garded as of special interest. He said that while continental laboratories were supported by the State, in England they received practically no government support, and very little from the community, usually depending on the generosity of single individuals. As a result they were undermanned, and a large amount of public health work from which the community would profit remained undone. Each municipality should endow a laboratory, in which, besides original research, work required by the medical officer of health and the sanitary authorities could be done. The scheme he submitted presented very few difficulties. In the discussion that followed Prof. Haycraft mentioned that a commencement had already been made in South Wales. Dr. Hope thought it might soon be in operation in Liverpool, and Prof. Delepine described the arrangements already in existence in Manchester.

A PRIZE of £50, to be called the *Welby Prize*, is offered for the best treatise upon the following subject: The causes of the present obscurity and confusion in psychological and philosophical terminology, and the directions in which we may hope for an efficient practical remedy. Competition is open to those who, previously to October 1, 1896, have passed the examinations qualifying for a degree at some European or American university. The donor of the prize desires that general regard be had to the classification of the various modes in which a word or other sign may be said to possess 'meaning,' and to corresponding differences in the conveyance or interpretation of 'meaning.' The Committee of Award will consider the practical utility of the work submitted to them as of primary importance. The essays, which may be written in English, French or German, must be typewritten and extend at least to 25,000 words. They should be headed by a motto and accompanied by a sealed envelope containing the name of the writer. Manuscript from America should be sent to Prof. E. B. Titchener, Cornell University, Ithaca, N. Y., and must reach him not later than October 1, 1897. Other members of the committee are Prof. James Sully, London; Mr. G. F. Stout, Aberdeen, and Prof. O. Külpe, Würzburg.

#### UNIVERSITY AND EDUCATIONAL NEWS.

A DESPATCH from San Francisco says that the University of California is to be made richer by \$4,000,000 by donations from various persons, chief among whom is Mrs. Phoebe Hearst, widow of Senator Hearst, of California. This amount is not to be given all at one time, but will be paid as soon as the State is prepared to make proper use of the money. The State must spend \$500,000 on buildings, and when this is done the gifts will be paid. These facts became known at the meeting of the Board of Regents of the University when Mrs. Hearst sent a note to the board donating \$15,000 to be used in securing plans for new buildings. Mrs. Hearst stated that she would erect two buildings at her own expense, one of which would be a memorial to her late husband. The names of others who will give funds are withheld.

FROM notices in the daily papers it appears that the registration at several universities is as follows: Yale, 2,515, an increase of 100 over last year; Columbia, 1,760, an increase of 130; Cornell, 1,720, an increase of 109; Chicago, 1,126, an increase of 17; Massachusetts Institute of Technology, 1,184, an increase of 12.

THE corner stone of Brinckerhoff Hall and Millbank Hall, of Barnard College, were laid on October 24th. The corner stone of Brinckerhoff Hall was laid by the Dean of the College, representing Mrs. Van Wyck Brinckerhoff, and the corner stone of Millbank Hall was laid by Miss Eleanor Millbank Anderson. Addresses were made by President Low, of Columbia University; by Mr. Silas B. Brownell and by Bishop Potter.

THE corner stone of the Hall of History of the American University, at Washington, was laid on October 21st. An address was made by Bishop John F. Hurst, Chancellor, and by other prominent leaders in the Methodist Church. The building is to be built of white marble in Ionic style, and is the first of the six buildings that have been planned.

THE board of directors of the Catholic University at Washington have chosen as nominees for the office of rector of the University, Rev. Father T. J. Conaty, rector of the Sacred Heart parish of Worcester, Mass.; Rev. Father Dan-