| 5. | Logarithms | 25 |
|----|---------------------|----|
| 6. | Spherical astronomy | 20 |

Further information regarding these positions and blanks for applications may be obtained from the U.S. Civil Service Commission, Washington, D. C.

SCIENTIFIC NOTES AND NEWS.

THE National Academy of Sciences will hold its stated annual meeting, beginning on Tuesday, April 18th.

At the annual meeting of the Astronomical Society of the Pacific on March 25th the second award of its Bruce Gold Medal was annual. It was conferred upon Dr. Arthur Auwers, of Berlin.

SIR WILLIAM TURNER, professor of anatomy in the University of Edinburgh, has been elected President of the British Association for the Bradford meeting of 1900.

It is announced that Mr. Llewellyn W. Longstaff, a member of the Royal Geographical Society of London, has contributed \$125,000 towards the fund for the British Antarctic expedition.

Dr. L. L. Hubbard has resigned the position of State Geologist of Michigan. The *American Geologist* states that he has taken this action owing to the delay of the State Board of Auditors in authorizing the publication of the Reports of the Survey.

DR. E. V. WILLCOX has resigned his position as zoologist and entomologist in the Montana Agricultural College and Station to accept a position in the office of Experiment Stations in the place of Dr. F. C. Kenyon, resigned. Dr. Willcox will have charge of the departments of zoology, entomology and veterinary science of the Experiment Station Record.

Mr. LE Grand Powers, of Minnesota, has been appointed Chief Statistician in charge of agricultural statistics, and Mr. William C. Hunt, of Massachusetts, has been given charge of the statistics of population in the twelfth census. Mr. Hunt held the same position in the census of 1890. Mr. Powers is Chief of the Minnesota Bureau of Labor.

M. Filhol has been elected an associate of the Paris Academy of Medicine in the place of the late Dr. Worms. M. Filhol is a member of the Paris Academy of Sciences, and has published important memoirs in anatomy, zoology and paleontology.

Professor Luigi Cremona, professor of mathematics at the University of Rome, and Professor Alexander Karpinski, St. Petersburg, Director of the Russian Geological Survey, have been elected foreign members of the Belgian Academy of Sciences.

Dr. T. Grigor Brodie, lecturer on physiology at St. Thomas's Hospital Medical School, has been nominated by the Laboratories Committee of the Royal Colleges of Physicians and Surgeons to be Director of the Research Laboratories on the Thames Embankment.

Mr. E. E. Green, the well-known Ceylon entomologist, has been appointed Government Entomologist on the staff of the Agricultural Department of that island, with residence at the Royal Botanic Gardens, Peradeniya. He is about to visit England, and will return to Ceylon to take up his work about September. For many years Mr. Green has been doing admirable work on the insects of Ceylon, with especial regard to injurious species, and a better selection could not have been made for the new position.

DR. WALTER R. HARPER, of Sydney, New South Wales, starts this month on a trip in the New Hebrides to investigate the somatology and folk-lore of that group. We are informed by him that the museums of Australia, although new, have already secured some remarkable collections representative of Australian eth-The museum at Sydney, under the curatorship of R. Etheridge, and the one at Adelaide in charge of Dr. Stirling, are especially good owing to the interest of their curators in ethnology. Lately the Western government sent a collecting party into the interior under the leadership of Mr. Alex. Morton, Curator of the Tasmanian Museum. This expedition was successful and secured among other things a series of carved bull-roarers, which are sacred objects there. Lack of funds hampers the work in Australia as elsewhere, and the field is vet largely unknown. Much valuable material remains to be investigated even in the Eastern

colonies, while Northwest Queensland is especially rich.

MR. HJALMAR LUNDBOHM, of the Geological Survey of Sweden, is now in the United States, with a view to studying the deposits of iron ore.

Dr. Benjamin M. Duggar, instructor in botany (plant physiology) at Cornell University and Assistant Cryptogamic Botanist of the Experiment Station, sailed on March 22d from New York for Europe. He will spend the year abroad in study, principally with Dr. Pfeffer in the laboratories for plant physiology at Leipzig, and with Dr. George Klebs. He will attend the meeting of the British Association for the Advancement of Science during September. Mr. Duggar received the degree of Doctor of Philosophy at Cornell University last June. He will return in a year to resume his work at Cornell.

A MARBLE bust of the late I. H. Lapham, the geologist, was, as we learn from the American Geologist, unveiled in the public museum of Milwaukee on March 7th. It was presented by Mr. John Marr. Several addresses were made, including one on the life and work of Lapham by Mr. John Johnston.

A MONUMENT to Pasteur will be unveiled and a Pasteur Institute opened at Lille on April 9th.

A MONUMENT will be erected in October to Charles Marc Sauria, said to be the original inventer of lucifer matches, at St. Lothair, a small village in the Jura, where he spent his life as a country physician.

Dr. Angelo Knorr, docent in the Veterinary School of Munich, died on February 22d, from acute glanders contracted in the course of an experimental research on mallein.

MISS ELIZABETH BROWN, of Cirencester, England, who made valuable contributions to astronomy, died on March 6th. She observed the total eclipses of the sun in 1887, 1889 and 1896, and had published both scientific and popular accounts of the solar phenomena.

WE regret also to record the deaths of Dr. Wilhelm v. Müller, professor in the Institute of Technology and member of the Academy of Sciences of Munich; of Dr. Friedrich v. Lüh-

mann, the mathematician, at Stralsund; of Dr. Charles Fortuun, the mineralogist, in London, and of P. v. Alfr. Feuilleaubois, known for his researches on fungi, at Fontainbleau.

A REUTER dispatch, dated March 16th, states that the steamer 'Southern Cross' has ar rived at Port Chalmers from Victoria Land, where she landed M. Borchgrevink and the other members of the Antarctic expedition. The explorers are 11 in number.

Mr. A. W. Anthony and his party, who have been making collections for the Smithsonian Institution, have been wrecked off the coast of Lower California. No lives were lost, but the collections could not be saved.

THE Union Pacific Railway offers to transport geologists and paleontologists without charge from Chicago or San Francisco to Wyoming, for the purpose of making explorations during the coming summer.

An expedition under Lieutenant Koslow is being sent by the Russian Geographical Society to make explorations in Central Asia. It will cross the Nanschu Mountains and explore the upper waters of the Yellow River.

M. H. R. DUMONT has left to the Paris Society of Geography a travelling fund that will yield 1,000 fr. per annum.

A RADIOGRAPHIC institute has been opened at Madrid under the direction of Dr. Mezquita. It is said to have cost \$400,000.

THE French Congress of Learned Societies met at Toulouse on April 4th under the presidency of M. Levasseur.

At the March meeting of the French Astronomical Society M. Cornu made an address on the applications of physics to astronomy. M. Flammarion, the Secretary, reported that a number of astronomers had written saying that they had seen the phases of Venus with the naked eye, the possibility of which has been denied. The air throughout Europe has been unusually clear for a long time.

The first international congress of physicians connected with life insurance companies will be held at Brussels from the 25th to the 30th of next September. All Europe and the United States will be represented at this congress,

which proposes to establish universal formulas for the examination of persons desiring to be insured.

On March 18th the Austrian Society of Engineers celebrated its jubilee in the Municipal Council Chamber, Vienna, under the presidency of Mr. F. Berger. Nature says that there was a large attendance of members, and representatives of sixty six kindred societies presented addresses. Congratulatory speeches were delivered by the Austrian Minister of Railways; the Minister of Commerce; the Governor of Lower Austria; the Secretary of the Iron and Steel Institute, London; the Secretary of the French Society of Civil Engineers, Paris. and the Secretary of the Society of German Engineers, Berlin. A paper was then read by Mr. A. Rücker on the part taken by the Austrian Society of Engineers in the technical progress of the past fifty years. The Austrian Society is a very influential one. At its foundation in 1848 it numbered seventy-nine members; at the present time there are 2,388.

The inaugural course of the Charles F. Deems lectureship foundation will be given by Professor James Iverach, D.D., of Aberdeen, on Mondays and Wednesdays at 10:30 a.m., beginning on April 3d at University Building, Washington Square. The endowment of \$15,000 given by the American Institute of Christian Philosophy to the New York University provides for lectures on science and philosophy in their relation to religion.

MR. RITCHIE, President of the British Board of Trade, received at the House of Commons on March 22d a deputation of representatives from the Decimal Association, chambers of commerce, educational institutions and trade unions, who urged upon the government the compulsory adoption of the metric system of weights and measures on January 1, 1901. The importance of this measure was urged by Sir Samuel Montague, Sir Henry Roscoe, Sir E. S. Hill and others. Mr. Ritchie in reply said that the government had done much by making the metric system legal and by introducing it in the schools, but did not think that public opinion warranted its compulsory adoption. The resolutions passed by the associated chambers of commerce was as

follows: "That, in view of the time wasted in teaching a system of weights and measures which, according to the First Lord of the Treasury, is 'arbitrary, perverse and utterly irrational,' and in the opinion of Her Majesty's Consuls is responsible for great injury to British trade, this association urges Her Majesty's government to introduce into and endeavor to carry through Parliament as speedily as possible a bill providing that the use of the metric system of weights and measures shall be compulsory in this country within two years from the passing of the bill, and suggests that meanwhile the system should be adopted in all specifications for government contracts."

THE Eclipse Expedition to Japan under Professor Todd, two years ago, founded at Esashi a public library, in return for courtesies shown the expedition. Professor Todd is now sending to this library, through the legation at Washington, a collection of books part of which have been given by a number of representative American publishers.

The original manuscripts of surveys of Van Diemen's Land, made between 1821 and 1836, were sold recently at the rooms of Messrs. Hodgson, London, for \$250.

THE Companie Générale Transatlantique is establishing a service of carrier pigeons, which it is believed will announce the arrival of steamships twelve hours earlier than is at present possible.

Nature states that a dinner which took place at the Fishmongers' Hall on March 14th possesses especial interest on account of the fact that it was given in honor of science, and that the guests included a great number of scientific men, among them being the Presidents of the following societies and scientific bodies: Royal, Royal Horticultural, Royal College of Physicians, Royal Geographical, Dermatological, Royal Microscopical, Victoria Institute, Royal Statistical, Royal College of Surgeons, Royal Astronomical, Zoological, Linnean, Chemical, Entomological, Philological and Clinical. toast of the evening was 'Science,' and was proposed in an eloquent speech by the Prime Warden, Mr. J. A. Travers, who pointed out the great advance science had made in the last twelve years; he recommended, further, the special study of preventive medicine, to ensure for Great Britain a safer footing in foreign climates. Lord Lister responded to the toast, and urged City Companies to support pure science; he referred also to the help they had rendered the Jenner Institute. Sir William MacCormac then proposed the health of the Prime Warden.

The Railway and Engineering Journal reports that the War Department is arranging to make a test of the Marconi system of wireless telegraphy. The two experimental stations selected are the roof of the State, War and Navy Building and Fort Myer, across the Potomac, the distance being six miles. The government has purchased the necessary instruments and experiments will be conducted by Col. James Allen and Lieut. George D. Squire.

AT a recent meeting of the Royal Geographical Society a paper on 'Exploration in the Canadian Rockies: A Search for Mount Hooker and Mount Brown 'was read by Professor Norman Collie, F.R.S. According to the London Times Professor Collie's paper dealt with two journeys taken during 1897 and 1898 through that part of the Canadian Rockies that lies between the Kicking Horse Pass on the south and the source of the Athabasca River on the north. The most interesting problem connected with the first journey which presented itself to Professor Collie and his party was whether a lofty mountain-probably 14,000 ft. to 15,000 ft.seen from the slopes of Mount Freshfield, from which it lay distant about 30 miles in a northwesterly direction, might be Mount Brown or Mount Hooker, which were supposed to be 16,000 ft. and 15,000 ft. high respectively. Professor Coleman, in 1893, starting from Morley, had arrived at the true Athabasca Pass, found the historic Committee's Punch-bowl, and his brother had climbed the highest peak on the north, presumably Mount Brown. This peak he found to be only 9,000 ft. The question presented itself: Could he have been mistaken or was it possible that there existed two Athabasca Passes? Professor Collie and his companion returned to their camp on the Saskatchewan Pass without having solved the question of either

Mounts Brown or Hooker, or the Committee's Punch-bowl. It was finally settled on the return to England by reference to the journal of David Douglas, the naturalist, dealing with his journey over the Athabasca Pass. From the authentic account of the two mountains there given it was seen that the credit of having settled with accuracy the real height of the peaks belonged to Professor Coleman. nearly 70 years they had been masquerading in every map as the highest peaks in the Rocky Mountains. No doubt now remained as to where Brown and Hooker and the Punch. bowl were. That Douglas climbed a peak 17,000 ft. high in an afternoon (as narrated in his account) was impossible; the Mount Brown of Professor Coleman, 9,000 ft. high, was much more likely. There was only one Athabasca Pass, and on each side of its summit might be found a peak-Mount Brown, 1,000 ft. high, on the north—the higher of the two-and Mount Hooker on the south. Between them lay a small tarn, 20 ft, in diameter -the Committee's Punch-bowl. The peaks to the south, amongst which the party wandered last August, were, therefore, new, and they probably constituted the highest point of the Canadian Rocky Mountain system.

The British Medical Journal states that the tenth meeting of the International Congress of Hygiene will be held in Paris in August, 1900. The division of hygiene will comprise seven sections as follows: 1. Microbiology and Parasitology applied to hygiene. M. Laveran is President and M. Netter Secretary of this Section, in which the questions to be discussed are the measurement of the activity of serums; the prophylaxis and preventive treatment of diphtheria; meat poisoning, its causes and the means of its prevention; pathogenic microbes in soil and water (cholera, typhoid fever and other diseases); the part played by water and by vegetables in the etiology of intestinal helminthiasis. 2. Chemical and veterinary sciences applied to hygiene; alimentary hygiene, in which the questions to be discussed are tinned provisions and the means of preventing accidents; unification of international control; the establishment of a general and uniform system of inspection of slaughter houses, etc. 3. Engineering and architecture applied to hygiene, in which the question to be discussed is the protection of water supplies. 4. Personal hygiene, in which the question to be discussed is contagious patients from the hospital point of view. 5. Industrial and professional hygiene. 6. Military, naval and colonial hygiene, in which the question to be discussed is the means of ensuring the purity of water from the point of view of colonial hygiene. 7. General and international hygiene (prophylaxis of communicable diseases; sanitary administration and legislation), in which the questions to be discussed are the prophylaxis of tuberculosis in regard to individuals, families, etc.; the compulsory notification of communicable diseases, its necessary consequences (isolation, disinfection) and its results in different countries; the prophylaxis of syphilis; and the international prophylaxis of vellow fever.

UNIVERSITY AND EDUCATIONAL NEWS.

MR. JOHN D. ROCKEFELLER has offered \$100,000 to Denison University, Granville, O., if the friends of the institution will, within the next year, raise the sum of \$150,000.

MRS. SIMON REID, of Lake Forest, has expressed her intention of giving to Lake Forest University a chapel and a library.

The further sum of £25,000 has been offered for the Birmingham University on condition that £225,000 are obtained within a year. The amount already promised is £135,000.

Professor Louis F. Henderson, professor of botany in the University of Idaho, at Moscow, Idaho, has recently donated to the botanical department of Cornell University a complete set of his duplicates of the phanerogams and ferns of Idaho. Over 900 species were contained in the collection, making it one of the most valuable single local collections that the University has received. Professor Henderson is an alumnus of Cornell University, class of '74.

Professor W. v. Branco, of Hohenheim, has been called to the chair of geology and paleontology in the University of Berlin, as successor to Professor Dames.

CHARLES EDWARD ST. JOHN, PH.D., has been appointed to the professorship of physics and astronomy in Oberlin College.

Mr. Joseph Barcroft has been elected Fellow of King's College, Cambridge. His chief work has been in physiology.

ALEXANDER ANDERSON, professor of natural philosophy in Queen's College, Galway, has been appointed President of the institution.

It is said that the candidates for the chair of physiology at Edinburgh, vacant by the death of Professor Rutherford, include Professor E. A. Schäfer, Dr. William Stirling, Dr. D. N. Paton, Dr. E. Waymouth Reid, Dr. E. W. W. Carlier and Dr. G. N. Stewart.

M. Henri Moissan has published for the Council of the University of Paris a report on its work during the year 1897-8. The increase in the number of students at periods of six years is shown in the accompanying table:

| | 1885-86. | 1891-92. | 1897-08. |
|---------------------|----------|----------|----------|
| Medicine | 3.696 | 4.250 | 4.494 |
| Law | 3.786 | 4.111 | 4.607 |
| Pharmacy | . 1.767 | 1.547 | 1.790 |
| Letters | . 928 | 1.185 | 1.989 |
| Sciences | . 467 | 655 | 1.370 |
| Protestant Theology | . 35 | 36 | 95 |
| Total | .10.679 | 11.784 | 14.346 |

It will be noticed that the growth in the number of students of science is the greatest, and the increase has been more than maintained during the present year, being 127 as compared with 85 in letters. It should be recollected that there are many important institutions for higher education in Paris-The Collège de France, The Museum of Natural History, The School of Mines, the Normal College, The Polytechnic Institute, The School of Fine Arts, The Pasteur Institute, etc.—not included in the University. Paris is thus certainly the world's largest educational center, but the provincial universities are less important than the corresponding institutions in other countries. The gifts to the university during the year, about \$30,000, appear small in comparison with those to American institutions. There are only 202 scholarships, which is also relatively fewer than in America and in Great Britain.