first week a system of two hundred and sixty sectional, fifty departmental, seven divisional, three congressional addresses which belong internally together, and are merely parts of the one great thought which the world needs, the unity of knowledge.—Professor Hugo Münsterburg in the *Atlantic Monthly.*

SCIENTIFIC NOTES AND NEWS.

During the week beginning June first, Professor J. J. Thomson, F.R.S., Cavendish professor of experimental physics in the University of Cambridge, will give a course of lectures in the Physical Laboratory of the Johns Hopkins University on 'A Theory of the Arc and Spark Discharges.'

Professor Klement Arkadijevic Timirjazev, professor of botany at Moscow, gave the Croonian lecture before the Royal Society on April 30, his subject being 'The Cosmical Function of the Green Plant.'

The University of Glasgow has conferred the degree of Doctor of Laws on Sir Norman Lockyer, director of the Solar Physics Observatory, South Kensington, and editor of *Nature;* Dr. Thomas Oliver, professor of physiology in the University of Durham, and Mr. Philip Watts, director of naval construction at the Admiralty.

The University of Dublin has conferred the degree of Doctor of Science on Sir William Abney, F.R.S., assistant secretary of the British Board of Education, known for his work on photography and color vision.

We learn from *Nature* that M. Lippmann is to succeed M. Poincaré as president of the French Astronomical Society this month. M. Janssen has been elected *president d'honneur.* The society's prize has been awarded to M. Charlois for the discovery of a large number of minor planets, and the Janssen prize to M. Giacobini for the discovery of seven comets.

Professor Ralph W. Tower, of Brown University, associate professor of chemical physiology, has been elected head of the department of physiology and curator of the books and publications in the American Museum of Natural History in New York City.

Mr. Sidney D. Townley has been placed in charge of the International Latitude Observatory at Ukiah, Cal.

Mr. Hugh H. Bennett, assistant in the Chemical Laboratory, University of North Carolina, has accepted the position of assistant in the Chemical Laboratory, Division of Soils, U. S. Department of Agriculture.

Dr. Capitan has been made a member of the committee on historic and scientific works of the French ministry of public instruction, in room of the late M. Bertrand.

Mr. F. A. Delano, general manager of the C. B. and Q. R. R., gave an address before the engineering students of Purdue University upon 'The Comparative Development of American and European Railways,' on April 13.

Drs. William H. Welch and William Osler gave a dinner at the Maryland Club, April 18, to Dr. Robert Fletcher, of Washington, editor of the 'Index Medicus,' to celebrate the revival of its publication.

Mr. H. F. Perkins, of the University of Vermont, has been given a research assistantship by the Carnegie Institution for study of special organs and structure of jelly-fish which affect their distribution.

Professor Charles S. Sargent, director of the Arnold Aboretum, Harvard University, will spend next year abroad, devoting a part of the time to studying the trees of Siberia.

Dr. W. A. Setchell, professor of botany in the University of California, has been given a year's leave of absence which he will spend in Europe.

M. E. Jaffa, assistant professor of agriculture in the University of California, who has for the present year been carrying on studies in nutrition in conjunction with Professor W. O. Atwater, has gone to Europe to visit the centers where similar work is in progress.

The National Geographic Society has appointed Mr. William J. Peters, of the U. S. Geological Survey, as its representative on the Arctic expedition to be sent by Mr. William Ziegler. Mr. Peters will be second in com-

mand of the expedition, as well as director of the scientific observations.

THE Russian Geographical Society will send a scientific expedition into Mesopotamia during the year. The expedition will be under the leadership of M. Kaznakoff, and will include among its members M. Alferaki, the zoologist, and M. Tolmatcheff, the geologist.

M. LACROIX, sent by the Paris Academy of Sciences to Martinique, has returned to Paris, after six months spent in studying the conditions on the island.

MR. JONATHAN HUTCHINSON has returned from India, where he has been investigating the cause of leprosy.

A WINDOW in honor of Horace Wells, the discoverer of anesthesia, has been placed in the First Congregational Church at Hartford, Conn., by his son, Mr. Charles T. Wells. The cartoon was designed by Mr. Frederick Wilson and executed by the Tiffany Company, New York City.

PAUL BELLONI DU CHAILLU, the explorer and author, died at St. Petersburg on April 29. He was born in New Orleans in 1838, and in 1855 he went from New York to the west coast of Africa, where he made the well-known expedition described in his 'Explorations and Adventures in Equatorial Africa.'

The death is announced of M. E. Duporcq, secretary of the French Mathematical Society, at the age of thirty-one years.

THE American Medical Association is meeting this week at New Orleans under the presidency of Dr. Frank Billings.

THE American Social Science Association meets in Boston on May 14, 15 and 16. Sessions are to be devoted to the discussion of public health and education in physiology and hygiene, the speakers including Professor W. T. Sedgwick, Dr. W. T. Councilman and Dr. E. M. Hartwell.

The Medical Record and *The Medical News* publish cable reports of the fourteenth international Medical Congress, which met at Madrid last week. On the first day five thousand delegates were registered, proportioned as follows: Germany and Austria, 1,000; France, 825; Great Britain, 235; Russia, 290; Italy, 335; other European countries, 327; United States, 193; South America, 136. The Moscow prize for original research, established by the city of Moscow, in honor of the meeting of the Congress in that city in 1897, was awarded to Professor Metchnikoff, and that of Paris to Professor Grassi. It is expected that the next congress will be at Buda Pesth. No discoveries of an epoch-making character appear to have been presented to the congress, though the programs are said to contain the titles of many papers of importance.

THE Boston *Transcript* states that a bill has been favorably reported to the Connecticut General Assembly providing for the establishment of a geological and natural history survey of the State. The work is to be conducted under a commission composed of the governor, the presidents of Yale and Wesleyan Universities, of Trinity College and of the Connecticut Agricultural College. The commission is to serve without compensation except for necessary expenses. It is directed to appoint as superintendent of the survey a scientist of established reputation and such assistants as may be deemed necessary. The bill carries an appropriation of $3,000. The objects of the survey as explained in the bill are as follows: First, an examination of the geological formations of the State with special reference to their economic products, namely, building stones, clays, ores and other mineral substances; second, an examination of the animal and plant life of the State with special reference to its economic and educational value; third, the preparation of special maps to illustrate the resources of the State; and fourth, the preparation of special reports, with necessary illustrations and maps, which shall embrace both a general and a detailed description of the geology and natural history of the State. It is expected that the bill will pass without opposition.

Nature states that the French Physical Society has held its annual exhibition of apparatus in Paris. The entrance hall and vestibule were lighted with 'heliophone' lamps of the French Incandescent Gas Company, the stair-

case and ground floor by the French Oxyhydrogen Company, and the entrance hall of the first floor by Nernst lamps. Conferences were held in the Physics Theatre of the Faculty of Sciences on April 16, 17 and 18, at which the following papers were read:—'On Anomalous Propagation of the Form of Vibrations in the Neighborhood of a Focus,' by M. G. Sagnac; 'Recent Researches in Radioactivity,' by M. P. Curie; 'Experiments on Electric Convection,' by MM. Crémieu and Pender; and 'Further Experiments on Electric Convection,' by M. Vasilesco Karpen.

Reuter's Agency states that Sir Alfred Jones, chairman of the Liverpool School of Tropical Medicine, has received the following communication from the expedition sent by the school to the Gambia and Senegambia to investigate the newly-discovered parasite of trypanasoma. The report is dated March 18, and comes from McCarthy Island, 150 miles in the interior of the Gambia. The communication says: "We have just returned from a trip, taking nearly two weeks, to Maka, the chief town of the French 'Cercle de Niani-Ouli.' While there we stayed with M. Porthes, the French Commandant of that district, who was very kind to us in every way. Maka is situated about sixteen miles from the head of Kunchau creek, and about twice that distance from the main river. Our object in going there was to examine the natives living in the interior and away from large collections of water. Although we found the parasite in none of the natives examined, we did find a trypanasome in each of two horses belonging to the Commandant, which he believes to have become infected while in the district far up the river beyond the British possessions. We are hoping that there is something in this, and intend to experiment at St. Louis (French territory), as many horses there are said to suffer from a species of 'malaria,' and die from it. We hope to be able to show that it is trypanasoma, the symptoms, as far as we can see at present, being the same as those developed in the two horses seen at Maka. This will be of great importance to the French government in Senegal if correct. If it is at all possible, Dr. Todd intends leaving for this district within the next two days. At present we intend to leave the Gambia by the *Benin*, which is due at Bathurst on the 7th of next month. From Dakar we shall go straight to St. Louis, where, unless something important turns up, we shall only stay for a fortnight before returning to Dakar to catch the steamer for Conakry. We recently infected a horse with the human trypanasome. Only two days ago we found numerous trypanasomes in its blood, and in the stomach of a species of horn fly (which is rather troublesome here) which had fed on this horse we found interesting forms of the parasites suggesting conjugation."

At the recent meeting of the Michigan Academy of Science, at Ann Arbor, the two following resolutions were adopted:

(1) Whereas, The contour topographic map of the Ann Arbor quadrangle, recently completed by the United States Geographical Survey in cooperation with the Geological Survey of Michigan, is of a high degree of excellence; and

Whereas, A similar map of the entire area of Michigan, in addition to its direct commercial and educational importance, would be of great assistance in many branches of scientific research:

Resolved, That the request now before the legislature for an addition of $1,000 to the appropriation for the State Geological Survey, to enable it to continue to cooperate with the United States Geological Survey in making a topographical survey and contour topographic map of Michigan, is heartily approved, and the prompt passage of the measure referred to earnestly desired.

(2) Whereas, The sanitary science section of this academy has considered the subject of the proposed establishment of state sanatoria for consumptives, and it has been learned by scientific methods that such sanatoria, in other states and countries are efficient for the education and care of consumptives; therefore,

Resolved, That this academy respectfully petition the legislature of Michigan to establish at least one state sanatorium for the education and care of consumptives, and that an

adequate appropriation be made for that purpose.

Nature states that the Naples Academy of Physical and Mathematical Sciences offers a prize of 1000 lire to the author of the best memoir on the theory of the invariants of the ternary biquadratic form, preferably in connection with the conditions for splitting into lower form. The papers may be written in Italian, Latin or French, and must be sent in on or before June 30, 1904. In addition prizes are offered in connection with the legacy of Professor Luigi Sementini, who in 1847 left the sum of 150 ducats per annum 'to distribute it as a prize for three memoirs on applied chemistry which they shall judge the best, or to award it as a prize to the author of one single memoir containing great utility, or finally to give it as a life pension to the author of a classical discovery useful to sick mankind.' Competitors for this prize are invited to send in their applications, accompanied by manuscript or printed papers, not later than December 31, 1903.

MR. NEVILLE-ROLFE, British consul in Naples, refers in a report abstracted in the London *Times* to the widespread interest now being taken in Italy in the question of re-afforesting the country. In 1877 about four millions of acres were withdrawn from the operation of the old forest laws, as well as about one million acres in Sicily and Sardinia. The consequence was a reckless destruction of forests; and now it is generally admitted that the state must step in to save those that are left and to aid in replanting. The question now being discussed is what trees are to be used for the latter purpose. The Italian oak is of little use except for railway sleepers; there is plenty of chestnut all over the country, and pine-trees would grow luxuriantly and prove most useful. The cork-tree, however, appears to be the one which would prove economically the most valuable, and it has hitherto been almost wholly neglected in Italy. In 1900 the cork exported was valued at only £36,000, and much, no doubt, was used at home. But a few years ago Spain exported wine corks to the value of over a million sterling. In Italy about 80,000 hectares of land are under the cork-tree, chiefly in Sicily and Sardinia; in Portugal, Spain and Algeria the areas respectively are 300,000, 250,000 and 281,000 hectares. The Calabrian cork forests have been almost wholly destroyed, the trees having been burnt for charcoal, and even Sicily now imports corkwood in considerable quantities. Seventy years ago nearly all the cork imported into England went from Italy. But since then most of the Italian forests have been destroyed for charcoal and to produce potash, and those that remain are being devastated for the same purpose; and no one thinks of replanting the ground, which naturally gets washed away owing to the absence of trees. Large forests containing a majority of cork-trees are continually being released from the forests laws, and there is a risk that the production of cork in Italy will soon cease. Nothing can replace cork in its manifold use, and now when vast quantities are used in making linoleum and in shipbuilding an adequate supply of it is of great economical importance.

UNIVERSITY AND EDUCATIONAL NEWS.

THE board of trustees of Stanford University held a meeting on April 25, at which the formal transfer of the property of the university to the trustees was considered. It is understood that the transfer will be made during the present week. Mrs. Stanford will be elected president of the board of trustees.

THE New Hampshire legislature has voted an appropriation of $20,000 a year for two years to Dartmouth College.

AMONG the appropriations made by the state legislature to the University of Missouri there is one of $7,500 for an addition to the new building occupied by botany, entomology and horticulture. The addition will be used for experimental work in botany along physiological, pathological and ecological lines.

MR. ANDREW CARNEGIE has contributed $12,000 toward the amount needed for the erection of Emerson Hall, the new philosophical building of which Harvard University hopes to lay the corner-stone on May 25, the centennial anniversary of Ralph Waldo Emerson's birth.