Mr. Milton P. Higgins, president of the organization committee, will introduce Dr. Henry S. Pritchett, president of the Massachusetts Institute of Technology, who will preside, and the following speakers will address the meeting:

Mr. Frank A. Vanderlip, vice-president of the National City Bank, 'Competition of the United States in the Markets of the World.'

Mr. Frederick P. Fish, president of the American Telephone and Telegraph Company, 'Industrial Education as a Means of Developing the Industries of the United States.'

Miss Jane Addams, Hull House, Chicago, 'The Importance of Industrial Education from the Social Standpoint.'

Dr. Nicholas Murray Butler, president of Columbia University, 'The Place of Industrial Education in the American System of Education.'

Mr. Frank P. Sargent, U. S. Commissioner-General of Immigration, formerly chief of Brotherhood of Locomotive Firemen, 'The Importance of Industrial Education to the Workingman.'

An address will also be made by Mr. Alfred Mosely, of London, and a letter from President Roosevelt upon the subject of the meeting will be read.

A meeting for the purpose of effecting a permanent organization will be held in room 19, Cooper Union, at 4 P.M., on the same day. All interested in the purposes of the organization are invited to attend this meeting as well as the evening meeting.

SCIENTIFIC NOTES AND NEWS.

Advantage will be taken of the twentieth anniversary of the isolation of fluorine to present a gold medal to M. Moissan.

In acknowledgment of his work in metallurgical research, Professor Henry M. Howe, of Columbia University, has received from the Russian emperor the order of the Knighthood of St. Stanislas. The honor was conferred by Baron Rosen, who gave the patent of knighthood, together with the star and cross of the order.

President Roosevelt has reappointed Dr. Robert M. O'Reilly to serve a second term of four years as Surgeon-General of the United States Army.

A farewell banquet was given recently in honor of Sir David Gill, the astronomer royal at the Cape, who left for England on October 3.

The University of Durham has conferred the degree of D.Sc. on Sir William White, lately director of naval construction and assistant controller of the royal navy; on Professor G. A. L. Lebour, professor of geology and vice-principal of Armstrong College, Newcastle-on-Tyne; on Mr. Charles A. Harrison, engineer to the Northeastern Railway Company, and on Mr. G. B. Hunter, shipbuilder.

Captain Amundsen, who has recently returned from navigating the northwest passage, is at present in this country. He has been entertained recently by the Geographical Society of Chicago.

Dr. Henry S. Pritchett, president of the Carnegie Foundation for the Advancement of Teaching, will give the address at the decennial founder's day exercises of the Thomas S. Clarkson Memorial School of Technology, Potsdam, N. Y.

A new wing of the Acland Home, Oxford, containing operating, sterilizing and anesthetic rooms, with open-air balconies, was opened by Professor Osler on October 13.

Dr. Ch. Wardell Stiles, of the Public Health and Marine Hospital Service, has been withdrawn from the commission which has been appointed to make a new commercial treaty with Germany.

M. Henri de Rothschild has given 20,000 fr. to Professor Poirier for the study of cancer.

Professor W. Somerville (M.A. Cant.), Sibthorpian professor of agriculture at Oxford University, has been elected to a fellowship at St. John's College.

The Gedge prize, Cambridge University, has been awarded to Mr. P. P. Laidlaw, for an essay entitled 'Some Observations on Blood Pigments.'

Dr. M. I. Pupin, professor of electromechanics at Columbia University, was a can-

didate for the Connecticut General Assembly from Norfolk, but was defeated.

PROFESSOR T. C. BEILSTEIN, professor of chemistry in the St. Petersburg Technological Institute, well known for his work in organic chemistry, especially for his work on the aromatic series, died on October 19, at the age of sixty-eight years.

THERE will be a civil service examination on November 14 for laboratory assistant, qualified in optics, in the Bureau of Standards at a salary of $1,000, and on November 27 and 28 for the position of assistant chemist in the Bureau of Chemistry, Department of Agriculture, at a salary of $1,800.

A FIRE in the power room of the Carnegie Institute, Pittsburg, on November 4, damaged the building, according to the daily papers, to the extent of $10,000.

IN view of the devastation caused by the sleeping sickness among the natives of certain districts of the Congo Free State, as well as among Europeans residing there, the king of Belgium has offered a prize of 200,000 francs to any person of any nationality who shall discover a cure for the said sickness, and also an additional sum of 300,000 francs for the purpose of making researches and experiments toward exterminating the plague.

THE Boston *Transcript* states that the Princeton archeological expedition to Syria has presented to the imperial Ottoman museum in Constantinople a mosaic pavement which was discovered by the expedition when it was in Jerusalem two years ago. Professor Howard Crosby Butler, who with Professor W. K. Prentice, Dr. Enno Littman and Frederick A. Norris composed the expedition sent out by Princeton, has returned from Constantinople, where during the past summer he superintended the laying of the mosaic in a position of honor in the new wing of the imperial museum.

ACCORDING to the *Journal of the American Medical Association* it is said that the Carnegie Institution is considering the discontinuance of the *Index Medicus* on account of lack of financial support.

A NUMBER of specimens of U. S. government standard teas, together with illustrations of the plant and descriptions of the process of tea-making, have recently been acquired by the Botanical Museum of Harvard University. A collection of prehistoric grains, with several specimens of fruits and bread, which were completely charred in the conflagrations by which the lake dwellings of the stone and bronze ages were destroyed, are also on exhibition. Seventy illustrations of a few wild flowers from the eastern United States, painted by Mrs. C. D. Murdoch, and specimens of 'Silver Sword' collected from the brink of the volcano Holeakala, Mani, Hawaiian Islands, have also been acquired.

THE trustees of the British Museum have just issued the fifth edition of the 'List of casts of fossils reproduced chiefly from specimens in the department of geology,' and a copy can be obtained on application to the director of the British Museum (Natural History). Compared with the fourth edition this list has nearly double the number of pages and gives particulars of no less than 800 plaster casts, which can now be procured by purchase or exchange. Most of these are of fossil vertebrates, among which we notice several of the highly interesting mammals recently discovered in the Fayum by Dr. C. W. Andrews. A model of the skull of *Phororhacos longissimus* has been added to the birds, while among the reptiles are some of the South African forms described by Seeley. Among invertebrates are casts of many of Sowerby's types of ammonites, and the type-specimens of many echinoderms. The list also offers for £5 a colored model of the Greenland Right Whale (*Balaena mysticetus*), scale one inch to one foot, made under the superintendence of Captain David Gray, S. S. *Eclipse*, 1885.

THE first meeting of the new session of the Royal Geographical Society takes place on November 12, when a paper on northeastern Rhodesia by Mr. L. A. Wallace will be read. According to the London *Times* this will be followed on November 19 by a paper on the Seychelles Islands by Mr. Stanley Gardiner, who spent some time in the islands during his

cruise in the Indian Ocean last year. On December 10 Major H. Beacom, the American military attaché, will give an account of the changes that have been effected by irrigation in the United States. At a meeting during the course of the session, probably in the spring, an authoritative account will be given of the results of the Duke of the Abruzzi's expedition to the Ruwenzori Mountains. Among other papers that are expected during the session will be one by Dr. Fridtjof Nansen, in which he will discuss the polar problems that still remain to be solved. This, it is hoped, will be the first of a series of papers on the unknown and little-known parts of the world, the object being to take stock of what we now know of the geography of the globe, with a view to showing what remains to be done before our knowledge is complete. Lieutenant Boyd Alexander, who is expected shortly to arrive in England, will give an account of his expedition through Central Africa from the West Coast to the Nile. Colonel A. W. S. Wingate will give an account of the results which have been achieved during his nine years' directorship of the survey work in Northern China and Mongolia. Major C. D. Bruce will give a paper on his journeys through Central Asia to Northern China; and the following are among other papers that are expected during the session: 'The North Magnetic Pole and the Northwest Passage,' by Captain Amundsen; 'Aboriginal India,' by Colonel Sir T. H. Holdich; 'A Journey from Yunnan to Assam,' by Mr. E. C. Young; 'The Story of London Maps,' by Mr. Laurence Gomme; 'The Evolution of the Map of Africa,' by Mr. Edward Heawood; 'Inland Waterways,' by Mr. G. G. Chisholm; 'The Taupo Volcanic Region, New Zealand,' by Mr. J. Mackintosh Bell, the director of the New Zealand survey. Other subjects will be brought before the research department of the society for discussion; and it is hoped that a decided step will be taken in the inquiry, which was instituted some time ago, into the changes which have taken place on the North Sea coast of England during the historical period.

THE new laboratory of physical and electro-chemistry, which has been presented to Liverpool University by Mr. E. K. Muspratt, president of the council, was opened on October 13 by Sir William Ramsay, F.R.S. The London *Times* states that the new laboratory makes an addition of high importance and value to the university's equipment, and also confers upon Liverpool the distinction of being the only city in the United Kingdom to possess a special and completely-equipped laboratory for the study of physical and electro-chemistry. The cost of the laboratory, which provides accommodation for forty-three persons, is over £15,000. The laboratory will not be in readiness for the commencement of its work until some time in November, the formal opening being arranged for October 13 with the object of securing the attendance of a number of foreign scientists. In the absence of Lord Derby, chancellor of the university, Vice-Chancellor Dale presided over a large and distinguished gathering, amongst others present being Professors W. Ostwald (Leipzig), R. Abegg (Breslau), Ruhemann (Cambridge), H. Goldschmidt (Christiania), E. Cohen (Utrecht) and Lash Miller (Toronto). Sir William Ramsay, in opening the laboratory, remarked that the chief duty of a chair of physical chemistry was to teach men to think for themselves. He advised that the students of that fascinating subject should be induced by example, precept, sympathy, exhortation, and by all means whereby young human minds could be influenced to extend the bounds of their subject. Physical chemistry was important, not only from a scientific, but also from an industrial point of view, and the erection of that laboratory might be viewed as a monument to the services rendered by physical chemistry to manufacture in the past as well as a tribute to its donor's belief in future benefits which would accrue from its study. In the history of man there had never been an age like ours for scientific progress. As was the Elizabethan era for poetry and literature, so was the present for scientific achievement. Within twenty-five years they had seen a new chemistry develop—the chemistry

of the ion—and they were now eagerly and anxiously following the growth of the chemistry of the electron.

The British Medical Journal says: "M. Clemenceau, the new prime minister of France, has created a ministry of labor; this has involved the readjustment of certain public offices, for to the new minister of labor has been assigned not only labor and insurance and providence funds formerly under the control of the minister of commerce and mines formerly belonging to the department of the minister for public works, but also poor relief and public sanitation departments hitherto directed by the minister of the interior. M. Clemenceau has gained more fame as a politician and political writer than as a physician, but he was at one time in practise in Paris, so that he must be well acquainted with the needs of the public health service, and it is rather surprising to find him sactioning an arrangement which assigns to a minister of labor, who will have so many other interests committed to his care, the incongruous duty of presiding over the public health administration."

THE London *Times,* usually very correct in its scientific news, contains the following remarkable announcement: "Professor Josef Nowack, the Austrian scientific authority, arrived at Plymouth yesterday by the North German Lloyd steamship Barbarossa, bringing with him 26 cases of the rare plant *Abrus precatorius nobilis,* which is said to have extraordinary properties in the prediction of atmospheric and seismic disturbances. The total number of specimens which the professor has collected in Mexico and Cuba is 1,400, and they were sent to London, where they are to be exhibited. Professor Nowack intends to establish an institute in England for the prediction of weather conditions and the forecasting of storms, earthquakes, volcanic eruptions and accumulations of fire damp in mines. His system, he explained, is primarily based upon the discovery of the weather plant, 'also upon *data* obtained from studies of sun-spots, statistics of natural phenomena throughout the world, and upon general studies in physics, geology, chemistry and the physiology of plants.' The weather plant, he explained, had been found peculiarly sensitive to magnetic influences, and when changes occur in the electric and magnetic forces of the atmosphere, its twigs and leaves perform peculiar and abnormal movements, each movement having a definite significance. By its aid earthquakes and other influences can be predicted 26 days in advance. One thousand of the plants have been placed in the Botanical Gardens, New York, and those now brought to England are to remain here. There are to be bureaux in Bombay, Tokio and San Francisco, and one institution already exists in Vienna. Professor Nowack says that he can issue daily forecasts showing from two to seven days in advance the lists of rainy, foggy, or fine weather. One station, he says, will be sufficient for an area of 3,000 square miles, covering the whole of Europe, North Africa and the North Atlantic Ocean. Much interest is taken in the professor's researches in Austria, where he has the support of the emperor and the government."

CONSUL URBAIN J. LEDOUX reports from Prague that Austrian papers are discussing the introduction of the Kjellin process in the manufacuture of steel by the Poldihütte, at Kladno, Bohemia, in concert with the Oberschlesische Eisenindustrie-Gesellschaft, which process, says the Prague *Tageblatt,* may bring about a complete revolution in the Austrian steel industry. Continuing, the *Tageblatt* says: That such steps may be leading to vastly important results may easily be realized when it is considered that the Kjellin process yields an excellent steel, said to be fully equal to the best crucible steel, while the cost of production is considerably lower than with the mode of production so far in use. The Kjellin product, however, apart from its lower cost, is further praised for its ductility, density, homogeneousness, softness, the possibility of obtaining high degrees of carboniferous quality and, finally, for its excellent magnetic properties. If these surmises—as appears highly probable—should be proved by facts, all undertakings which have at their disposition the primary requisite for the adaptation

of the electric process, viz., cheap electric power by means of sufficiently strong water power, will secure a great advantage over other works. Chief Engineer V. Engelhardt, in his work on the Kjellin process, states that it can compete with the Siemens-Martin method, where the kilowatt hour can be put down at about a half cent.

UNIVERSITY AND EDUCATIONAL NEWS.

At the University of Wooster the addition to the library is nearing completion. The finished building will represent an expenditure of $71,000, all of which has been provided by Mr. Henry C. Frick. At the cost of $80,000, a dormitory is being built which will accommodate ninety young women.

The University of Nebraska plans to build an engineering hall (costing $100,000), a horticultural hall (costing $40,000) and a heating plant for the School of Agriculture ($40,000). Plans have been made to ask the legislature for an increase in the appropriation for the woman's building so as to make it $80,000.

Mr. John Charlton has given $50,000 to Queens University, Kingston, to endow a chair of moral philosophy.

Mr. Andrew Carnegie, lord rector of St. Andrews University, has given £10,000 to build a new university library; he has also given £12,500 to Dundee University College for a physical laboratory.

The University of Pennsylvania is about to begin a number of special courses, practically constituting a new department, by which school teachers, both men and women, will be able to obtain the regular college degree of bachelor of arts or bachelor of science.

At a meeting of the regents of the University of Nebraska, October 23, the grade of 'head professor' was established and the following appointments under this title were made for the subjects named: G. E. Barber (Latin); L. A. Sherman (English literature); C. E. Bessey (botany); J. T. Lees (Greek); H. W. Caldwell (American history); E. H. Barbour (geology); F. M. Fling (European history); E. W. Davis (mathematics); Lawrence Bruner (entomology); Laurence Fossler (German); H. B. Ward (zoology); G. W. A. Luckey (education); W. G. L. Taylor (political economy); C. R. Richards (mechanical engineering); O. V. P. Stout (civil engineering); E. A. Burnett (animal husbandry); A. T. Peters (animal pathology); Samuel Avery (chemistry); Roscoe Pound (law); G. E. Howard (sociology). It was further ordered that these 'head professors' should constitute the 'university senate.'

Dr. Andrew F. West, professor of Latin at Princeton University and dean of the graduate school, has declined the offer of the presidency of the Massachusetts Institute of Technology made to him by the executive committee of the corporation.

The following appointments have been made in the department of philosophy in the University of Michigan: Mr. Roy W. Sellars, A.B. (Mich.), sometime fellow of the University of Wisconsin, to be instructor in philosophy; Mr. John F. Shepard, B.S., Ph.D., to be instructor in psychology; Mr. Frank van Vliet and Mr. L. W. Elder to be George S. Morris memorial fellows in philosophy.

Mr. Samuel W. Collett, fellow in botany, State University of Iowa, has been appointed instructor, *ad interim,* in the State College of Washington.

Dr. G. H. F. Nuttall, M.D., F.R.S., fellow of Christ's College and reader in hygiene in the University of Cambridge, has been elected to the newly-created Quick professorship in biology. His duties are to devote himself to the study of the protozoa, especially such as cause disease. Dr. Nuttall was at one time associate in hygiene at the Johns Hopkins University.

Mr. W. L. H. Duckworth, M.D., Sc.D., fellow of Jesus, has been appointed demonstrator of anatomy in Cambridge University.

At Trinity College Mr. F. J. Dykes, M.A. (Cambridge), late lecturer in mechanics at the Royal Naval College, Portsmouth, has been elected fellow and lecturer.

Mr. J. W. McBain, M.A. (Toronto), has been appointed lecturer in chemistry in University College, Bristol.