

nitric acid until perfectly white. The copper nitrate is very easily soluble in the nitric acid, while the silver nitrate is almost wholly insoluble. Any trace of silver dissolved by the nitric acid can be recovered by treating with salt. This is by far the simplest method proposed for obtaining pure silver salts from coin or plate, and deserves trial in our laboratories.

H. TRYLLER describes in the *Berichte* a new turbine for laboratory use, which lays claim to the advantages of steadiness, noiselessness and economy of water. To the axle is attached a circular piece of wire gauze, rotating in a thin cylindrical space. The jet of water strikes the edge of the gauze at a tangent and escapes by a pipe in the center opposite the end of the axle. A speed of four thousand revolutions is easily attained. The turbine is to be manufactured by M. Koehler and Martini, of Berlin.

J. L. H.

#### SCIENTIFIC NOTES AND NEWS.

THE meeting of the British Association at Toronto has proceeded in accordance with the program. The members in attendance, about 1,200 in all, have been received with great hospitality, and many important papers have been given before the sections. The meeting is still in progress as we go to press, and we shall defer an account of the proceedings until next week.

THE British Medical Association will meet in Edinburgh in 1898, under the presidency of Professor T. Grainger Stewart.

ACCORDING to the latest lists about 5,000 members had expressed their intention of attending the 12th International Medical Congress meeting this month in Moscow; about half of the number are Russians, 800 are from Germany, 600 from Austria, 500 from France, 250 from England and from Italy, and 100 from America.

THE sixty-ninth meeting of German Men of Science and Physicians will, as we have already noted, be held at Brunswick from the

20th to the 25th of September. The social arrangements begin on the preceding day with a reception, a banquet and an exhibition of sports. The first general meeting opens on the 20th with the reports of officers, followed by two addresses, one by Professor Richard Meyer, of Brunswick, on the relations between chemical research and technical chemistry; the other by Professor Waldeyer, of Berlin, on fertilization and inheritance. At the second general session Professor Orth, of Göttingen, will speak on medical instruction and the practice of medicine, and Dr. Hermann Meyer, of Leipzig, on central Brazil. Several joint meetings of the sections have been arranged, one of special interest being a discussion of scientific photography in its applications to the natural sciences and to medicine.

THE Scientific Society of Argentina, says *Nature*, is organizing a Congreso Científico Latino Americano, to be held at Buenos Ayres in April next, in commemoration of the twenty-fifth anniversary of its foundation. The Congress will be under the patronage of the President of the Argentine Republic and the Ministers of Justice, Foreign Affairs, and Public Instruction. There will be seven sections, dealing respectively with exact sciences (pure and applied mathematics, astronomy, geodesy and topography), engineering, physics and chemistry, natural science, medical sciences (including hygiene and climatology), anthropology and sociology.

WE noticed sometime since the appointment of a committee to investigate the condition of the Coast and Geodetic Survey. This committee has now presented a report which will not be made public. The *Washington Star*, however, states that it is practically decided that a successor to the present Director of the Survey will be appointed, and that the selection will be made without reference to political considerations and on the grounds of scientific standing.

PROFESSOR C. B. HOWES, writing Dr. Thurston to inform him of the condition of the work of the Huxley Memorial Committee, states that the statue is now in progress, in the hands of Mr. Ford, the sculptor, and promises to be most excellent. It is to be a seated figure in a gown,

to be placed at the bottom of the steps in the Hall of the Natural History Museum leading up to the statue of Darwin. It is in white marble. The design for a medal for the Royal College of Science is thought admirable, and the medal is in preparation. It is further possible, if subscriptions continue, that a medal may be instituted, open to the world of biologists, and awarded by the Royal Society. The Messrs. Macmillan, as a memorial, also, are publishing a fine edition of Huxley's scientific papers; the first volume being now well in hand. There are on the list many subscriptions from America and it is not too late for others to be sent.

THE monument to Darwin to which we have several times referred was unveiled on August 10th. It is in his native town of Shrewsbury and in front of the school which for nine years he attended. The monument, the work of Mr. Horace Montford, represents Darwin seated in a chair holding some manuscripts from which his face is turned as if deep in thought, while at the foot are a number of volumes representing his finished works.

DR. VICTOR MEYER, professor of chemistry at the University of Heidelberg, died at Heidelberg of apoplexy on August 8th, aged 49 years. Meyer filled chairs of chemistry at Stuttgart, Zurich and Göttingen and finally succeeded Bunsen at Heidelberg in 1889. His work was in organic chemistry, more especially relating to the nitro-compounds and the vapor density of volatile compounds.

WE regret also to record the deaths of M. Quantin, assistant in the taxidermic laboratory of the Paris Museum of Natural History, and of Dr. W. Petzold, a writer on geography and astronomy.

WE learn from *Cosmos* that the new buildings of the Paris Museum of Natural History have not been completed as soon as was expected, the work of construction having been stopped for three months owing to the delay in voting funds for its completion. Work has, however, now been resumed and it is hoped that the galleries will be open to the public by the beginning of next year. The lower floor contains the collections of comparative anatomy which are being arranged under the direction of MM. Filhol and

Jarvis. The collections of anthropology and paleontology are being put in order on the upper floor. The collections have hitherto been badly arranged in crowded quarters, but will now be exhibited to great advantage. New catalogues giving full details are also being prepared.

AN exhibition has been opened in the zoological galleries of the Paris Museum of Natural History containing the collections in natural history made by M. Chaffanjon on his expedition to Siberia and Central Asia.

AN exhibition of navigation instruments was opened in London on August 5th, intended especially to illustrate the progress that has been made in the art of navigation during the Queen's reign. There are in all about two hundred exhibits including a sextant by Bird, said to have been used by Captain Cook, lent by the Royal Astronomical Society, Lord Kelvin's deflector for adjusting the compass, his sounding machine and other instruments of historical or scientific interest.

WE learn from *Die Natur* that the committee for the introduction of the produce of German colonies held its general meeting in Hamburg, recently. The committee has founded a journal called *Der Tropenpflanzer*, and has established in Berlin a permanent exhibition of colonial imports. The committee offers prizes for the development in the African colonies of new resources, such as the making of wine, the cultivation of coca and quinine, the production of gum arabic, etc.

THE Hungarian government has completed the necessary arrangements for the construction, without delay, of a subway beneath the Danube at Budapest on the same principle as that of the new Blackwall tunnel under the Thames in London.

A TELEGRAM from San Francisco states that Commissioner-General Herman, of the United States Land office, has arrived there for the purpose of conferring with Professor Hilgard and other members of the State Forestry Commission upon the subject of the forest reserves, of which about 6,000,000 acres are located in California.

THERE has been established in Switzerland a weather bureau. A dispatch is sent each evening from Zurich giving the weather probabilities for the next twenty-four hours. The predictions are based on data received from the principal meteorological stations of Europe combined with experience of local conditions. The dispatch is further distributed by telephone to those communes prepared to subscribe 10 frs. per month for the service.

THE Royal 'Institut für Pflanzen Physiologie und Pflanzen Schutz,' in Berlin, offers to give, without charge, information and advice regarding diseases and injuries of cultivated plants. It is also prepared to send agents to examine the plants without charge beyond the railway ticket which, in certain cases, will also be paid by the Institute.

AN International Conference of Legal Medicine convened at Brussels on August 2d. It was welcomed by the Belgian Minister of Justice, and Dr. Veletinckx, the Honorary President of Committee of Organization, gave an account of preceding conferences. A number of topics were discussed concerning the relations of medicine and law—among them the treatment of insane criminals, regarding which a series of recommendations was passed by the Congress.

THE Eighth Annual Congress of French-speaking Neurologists met at Toulouse on August 2d. Addresses were made by Dr. Ritti and Dr. Labéda, on Esquirol, who was born at Toulouse, and Pinel, who was born near by, as the inauguration of memorials to be erected in their memory. Pinel and Esquirol, as is well known, were leaders in the reforms in the treatment of the insane. Before their time it was usual to treat the insane as intermediate between criminals and wild animals. They first showed that insanity is a disease, and in many cases a curable disease.

WE noted last week the loss, in the shipwreck of the *City of Mexico*, of the collections and apparatus of the zoological expedition sent by Columbia University to Alaska. Word has just been received by mail that the party lost all the results of their season's work. They left Sitka in the *City of Mexico*, of the Alaska S. S. Co.,

on August 4th, taking the outside passage. At 4:20 a. m. on the 5th, in a heavy fog, the vessel attempted to enter Queen Charlotte Sound, through Dixon's Channel, and ran upon a reef known as Devil's Rock, sinking in two hours. The crew and passengers were transferred to life boats and after seventeen hours of exposure reached the Indian village at 11 p. m., where they were hospitably cared for until the arrival of the *City of Topeka*, three days later. The Columbia party lost all their collections, drawings, notes and apparatus, excepting three microscopes. They will reestablish the old station at Port Townsend, Puget Sound, for the remainder of the season.

M. ROBERT WURTZ, professor at the Paris School of Medicine, one of the leading French bacteriologists, has been chosen for a mission in Abyssinia. He will go to Adis Abeba, where, after having organized a department of vaccination, he will study the rinderpest and similar infectious maladies.

THE steamer *Belgica*, with the Gerlache Antarctic expedition on board, sailed from Brussels on August 16th. The Belgian Chamber of Representatives has made an additional appropriation of 60,000 frs. for the expedition.

A MESSAGE has been received from Turnavick, on the coast of Labrador, dated July 28th, stating that the steamer Hope, with Lieutenant R. E. Peary's expedition abroad, had touched there that day and sailed again on its way to Greenland. All on board were well.

A SERIOUS epidemic of small-pox is feared at Montreal. The city has been divided into twenty-four districts, and there will be a house-to-house vaccination.

DR. MARTEN, chief of Dr. Roux's laboratory of the Pasteur Institute, has been awarded an honorary gold medal by the French government for his work in epidemiology.

SEÑOR CANOVAS, by his will, has left to the National Library, at Madrid, a collection of 30,000 books, many of which are very rare.

A BUILDING for a free library and historical society, to cost \$20,000, has been given by Mr. Spalding, of Chicago, to Athens, Pa., his native town.

AN explosion occurred recently in a laboratory at Saint Michael-de-Maurienne, where carbide of calcium was being manufactured. The building was destroyed and one workman was killed and three others were seriously injured.

THE unpublished journals of the great naturalist Audubon, written in French, are being translated for publication in English by his granddaughter, Miss Maria Audubon.

GINN & Co. announce that they will publish at once 'Stories of Insect Life,' by Professor Clarence M. Weed, of the New Hampshire College of Agriculture and Mechanical Arts. The book is designed to give information to the child regarding the lives of the insects, and to stimulate pupils to fuller observation of insects out-of-doors.

THE trustees of the Boston Public Library have authorized the publication, in their bulletins, of an exhaustive 'Bibliography on the Anthropology and Ethnology of Europe,' prepared by Professor William Z. Ripley, of the Massachusetts Institute of Technology, lecturer in anthropo-geography at Columbia University. This list of references will include about 1,500 titles, taken in every instance from the original sources. It embodies the raw materials of the papers on the Racial Geography of Europe now appearing in successive numbers of the *Popular Science Monthly*, afterward to be published in book form. Every precaution has been taken to insure completeness and accuracy; most of the living authorities will have corrected and supplemented the lists of their own works in proof. The bibliographical systems of Minot and Wilson will be employed, with a complete subject index. A special feature will be the reference to original maps, whether linguistic, somatological or ethnographical. It is worthy of note that practically all of the titles in this recent field of investigation are upon the shelves of the Boston Library, proof positive of the possibilities for research from original sources which are now afforded by our great American collections.

WE are glad to welcome a new edition of the 'Dynamic Sociology,' of Professor Lester F. Ward, published by the Appletons. The first edition, issued in 1883, was very fully reviewed

in four articles included in the second volume of this JOURNAL, and no material changes have been made in the present edition. There is much to be said for not attempting to recast a work that represents a given epoch in the history of a new science. The further development of the author's views on psychology have been given expression in a separate volume (the 'Psychic Factors of Civilization,' 1893), and this is a better plan than re-writing a standard book. An interesting preface to this edition of the 'Dynamic Sociology' notes that fourteen years ago, when the work was first published, the word *sociology* was used but rarely; there were but few books on the science, no journals, and no university chairs. Now all is changed; the word is on the lips of everyone, and the science, if given as wide a range as Professor Ward's book, bids fair, as he says, to become the leading science of the twentieth century. The preface gives some account of the suppression of the Russian translation of the book, which was widely commented on in the daily papers several years ago. The suggestion is made that the title suggested socialism and dynamite to the Council of Ministers, a very dangerous combination from their point of view. A Polish translation appears also to have been suppressed, but four Russian translations of the 'Psychic Factors of Civilization' have been made.

PROFESSOR BAILEY'S 'Principles of Fruit Growing' (The Macmillan Co.) is both practical and scientific. As all that the author writes—and it is not little—the book is worth reading, both by the practical gardener and by the student. After an introduction covering the kinds of fruits, the geography of fruit growing and its methods, chapters are devoted to location and climate, the tillage of fruit lands, their fertilization, their planting and their care, followed by chapters on disease and insects, and on harvesting and marketing. Professor Bailey makes many acute remarks, as when he calls spraying 'insurance' and gives as one of its uses 'waking up the horticulturist.' This volume is the fifth in this 'Rural Science Series,' edited by the author of this volume, which has fulfilled the promise of the publishers to be 'readable, simple, clear-cut, practical, up-to-date, and thoroughly scientific and reliable.'

WE have received from W. B. Saunders, Philadelphia, a bulky volume by Drs. George M. Gould and Walter L. Pyle, entitled "Anomalies and Curiosities of Medicine: Being an encyclopedic collection of rare and extraordinary cases, and of the most striking instances of abnormality in all branches of medicine and surgery, derived from an exhaustive research of medical literature from its origin to the present day, abstracted, classified, annotated and indexed." We should scarcely suppose that the compilation of this volume would repay the labors of the compilers and the costs of publication. A miscellany like this can scarcely be regarded as a contribution, such as Geoffroy Saint-Hilaire made, toward an explanation of the formation of monstrosities in its relation to zoological theory. Still the study of variations is of the utmost importance for zoology, and extreme cases of human abnormality may prove useful to the student of the theory of evolution. The cases given in the work are treated critically, full references being given and a fairly conservative attitude being adopted. But one modern instance is worth more than many old saws, and it is rather a contribution to folk-lore than to medicine to relate stories, qualified as incredible, such as that of Countess Margaret and her 365 infants.

THE fifty-eighth anniversary meeting of the Fellows of the Royal Botanic Society was held on August 10th, in the Society's gardens at Regent's Park, Mr. C. Brinsley Marlay presiding. According to the report in the *London Times* six new Fellows were elected and eleven candidates were nominated for election at the next meeting after the vacation. The annual report of the Council to the Fellows stated, among other things, that tentative arrangements had recently been made for taking visitors round the gardens by members of the staff to point out objects of special interest. Free tickets had been granted during the year to about 800 students. About 50,000 specimens of plants had been given for educational purposes. The Council had decided to open a school of practical gardening and to hold examinations and grant certificates for gardeners.

The new school had already been officially recognized by the Technical Education Board, which was sending pupils to attend its classes and had voted an annual grant of £100 to the Botanic Society in aid of the scheme. The number of Fellows on the books had risen from 1,700 in 1887 to 2,000 in 1897. The report having been presented, a discussion followed in which Sir Blundell Maple, M. P., proposed that the Society should build in the gardens a club-house to which the Fellows could have access. He volunteered to lend the Society a sum of £3,000 for this purpose, the money to be repaid by easy instalments. He anticipated that such a club would be a large source of income to the Society, and he added that if it should eventually prove to be a loss the loss should be his. Eventually the report was adopted unanimously. The chairman announced that the promise of a new lease of the gardens, to commence on the termination of the present one, had been definitely given by her Majesty's Commissioners of Woods and Forests for a fresh term of 31 years, and that the Society's outlook was now most promising.

THE research scholars of the British Medical Association (the scholarships being of the value of \$750 each) have handed in their reports. Dr. J. B. Leathes has been engaged in a research into the nature of mucin-like proteids contained in ovarian cysts. Dr. J. S. R. Russell has been studying the tracts of the medulla oblongata and the cervical nerves. Dr. Swale Vincent has been studying the physiology of the suprarenal capsules.

ACCORDING to the *British Medical Journal* the new State Institute for researches with Röntgen rays, or 'actinography' (as the new term runs) has been opened under the direction of Professor Grunmach. It is close to the Charité Hospital and its clinical institutions, and has every convenience for the transport of severe cases. Needless to say, the Institute is furnished with all the newest appliances; it contains a laboratory, a lecture theatre, photographic rooms, and a room where the patients are examined according to the usual methods before being subjected to the X-rays. In the first week after the opening of the new Institute,

two of the rare cases of inversion of the viscera were sent from the Charité, actinography revealing the inverted displacement of the organs, their size and motions, with the greatest distinctness.

PROFESSOR GOTCH, Waynflete professor of physiology at Oxford, in his annual report states that the following research work has been in progress during the present year: (1) The Professor and Mr. G. J. Burch. Upon the Electromotive properties of *Malapterurus electricus*, being a continuation of previous work on the subject. (2) The Professor. On the Tendon Effect and on the Influence of Temperature upon Excitability and Conductivity. (3) The Regius Professor of Medicine. On Muscular Contraction. (4) Dr. J. S. Haldane and Professor Lorrain Smith. On the Oxygen Tension of Arterial Blood, the Detection of Carbonic Oxide in Air and Blood, the Action of Nitrites upon Blood, etc. (5) Dr. Mann. On the Changes in Nerve Cells Associated with their Activity. (6) Mr. W. H. Vernon. On the Respiratory changes of Cold-blooded Animals. (7) Miss Huie. On the Changes in the Cells of *Drosera*. (8) Professor Sherrington and Mr. J. S. Macdonald. On the Neuro-muscular Mechanism of Respiration. (9) Mr. Buddicom. On the Effect of Ether and other Gases upon Nerve Excitability, etc. (10) Mr. W. E. Stainer. On the peptic properties of Pitcher-plant liquid.

#### UNIVERSITY AND EDUCATIONAL NEWS.

THE University of Berlin has set an example in maintaining academic freedom by electing as Rector for the coming year Professor Gustav Schmoller, who is supposed to have incurred the enmity of the Emperor by the character of his lectures on political economy.

THE Paris correspondent of the *London Times* states that under the law of July 10, 1896, decrees have been issued for the government of universities. Each university is to have a council consisting of the rector, the heads of faculties, and two delegates of each faculty elected triennially by the professors. The council, subject in certain cases to the approval of the supreme education council, will have control over the teaching, discipline, and property of the university. It will, however,

have merely a consultative voice on the finances, and on the creation, abolition or transformation of professorships, for the State will continue to pay the stipends. The maintenance of buildings, on the other hand, will fall on the university, and must be defrayed from students' fees or from endowments. The State takes the fees for examinations and State diplomas, but all other fees go to the university treasury. It will, therefore, be to the interest of each university to attract as many students as possible. The receipts of Paris University are estimated at 600,000f. and of Lyons at 130,000f., but Besançon and Clermont have at present only 700f. or 800f., and will obviously have to solicit subsidies either from the State or from local bodies. Failing this, the smaller universities are likely to succumb. One of the features of the new system is that a student will, as in Germany, be able to migrate from one university to another without lengthening his studies or delaying his degree.

THE Swiss government has for several years offered *courses de vacance* or university extension courses at Lausanne and Geneva, which have been attended by numbers of American, English and other foreign students. The Department of Public Instruction has now decided to supplement the courses given by the Faculty of Letters by adding to the program scientific and historical excursions, with lectures given gratuitously by university professors.

AT the meeting of the London County Council on July 20th the Technical Educational Board presented their report for the preceding quarter. It stated that arrangements had been made with King's College and University College for evening courses of instruction, to be given to persons who are engaged during the day, in civil engineering, mechanical engineering, architecture, natural philosophy, pure mathematics, electrical engineering, magnetic and electric currents, the strength of materials, the principles of practical physiology, experimental physics, and the teaching of mathematics. Arrangements had also been made for a Saturday morning course to teachers to be held at Bedford College. In the teachers' courses the aim would be to explain the best educational methods of teaching the respective