

for the discovery of helium and his share in the investigation of argon.

THE last Proceedings of the Chemical Society contain a further study in spectrographic analysis by W. N. Hartley and H. Ramage. The alums are found to contain *all* the alkalies as well as copper, silver, gallium, thallium, nickel and manganese. Of these the thallium comes from the pyrites, but the other elements from the aluminous minerals, bauxite and shale. The Stassfurt minerals were found to contain no rubidium, cesium, gallium or thallium, and only barest traces of elements other than the principal ones composing the minerals. Steel (from Middlesborough) contained the alkali metals, calcium, copper, silver, gallium, manganese and lead. It is pointed out that this method of spectrographic analysis might lead to results of practical importance in the study of railroad steels, as copper, (?) silver, gallium and lead have not been considered in dealing with commercial irons, and their influence upon the physical properties is unknown.

THE *Gazzetta Chimica Italiana* contains an article by U. Antony and T. Benelli on the action of water of various degrees of purity on lead pipes. The greatest solvent action was in the case of distilled water, especially when saturated with air. Aeration with carbon dioxid retarded the action one-half. Water containing calcium sulfate or sodium sulfate possesses about one-half the solvent power of pure water, and the action here also was much retarded by aeration with carbon dioxid. Bicarbonate of lime had only about one-fourth the solvent power of pure water, but when aerated by carbon dioxid its action was nearly doubled. Common salt had little action except in the presence of carbon dioxid, and seemed to often slightly diminish the solvent powers of other salts. These results are rather at variance with the generally accepted ideas

and seem to show that waters with permanent hardness would be seriously contaminated by passage through lead pipes and ordinary hard waters only somewhat less so. The maximum amount of lead dissolved was 130 parts per million, for five days contact of 150 ccm. ordinary distilled water with 285 sq. cm. lead; the minimum 6.8 parts per million for water containing sodium chlorid and aerated with air.

IN the same number of the *Gazzetta* Professors Antony and A. Lucchesi describe the reaction of an excess of mercurous chlorid on auric chlorid with the production of the characteristic color of purple of Cassius. Similar results are obtained with cuprous chlorid and the chlorid of gold. When barium sulfate and mercurous chlorid are suspended in water and auric chlorid added, the barium sulfate takes up the gold and becomes the color of the purple of Cassius. From these experiments the authors conclude that the true purple of Cassius is not a definite compound, but merely stannic acid mechanically colored with metallic gold. J. L. H.

SCIENTIFIC NOTES AND NEWS.

THE THREATENED LEGISLATION AGAINST SCIENCE AND EDUCATION.

THE Ways and Means Committee of the House, either convinced by argument or coerced by the force of public opinion, has retracted the duty on scientific apparatus and books imported for institutions in cases in which the apparatus and books are not manufactured in the United States. It is satisfactory to find that the committee is willing to reconsider its ill-advised action, even though it has but partially corrected its blunders. The provision imposing a duty on instruments and books also manufactured in the United States is ambiguous and will cause endless confusion. If the *Encyclopædia Britannica* is pirated in America will that prevent its importation for a library? If a microscope is manufactured in America will that prevent the importation of all instruments

called microscopes? Mr. Dingley has stated for publication that his objection to exceptions in the tariff is the trouble they cause custom house officials, but he appears now to propose exceptions that can only be defined by the Courts.

We asked the leading makers of scientific instruments in the United States whether they regarded a tax on instruments imported for educational institutions as likely to be beneficial or harmful to them. The answers were about equally divided. One maker writes: "We know that putting these on the free list ruined our business in that line." Consequently his business must have been ruined in the eighteenth century. Half of those who favor the duty had not heard of its proposal, and it thus seems that it was not planned in consultation with those interested. If Mr. Dingley had consulted makers of instruments he would have found opposition to his plan. Thus Messrs. Warner and Swasey write us: "We believe that all institutions of learning should be able to purchase their instrumental equipment in the cheapest market, and that thereby the good of all will best be secured. We would, therefore, be loathe to have any duty imposed that would interfere with the best results of our schools and colleges, as we fear would be the case should the proposed duty come into effect." Mr. John A. Brashear states that he is making more instruments for foreign than for home universities.

We feel sure that our legislators at Washington wish to do the best they can for the country and for themselves. If it be brought to their attention that books and instruments are the raw materials of science, education and civilization they will not wish to tax these. When they see that the leading Republican papers, such as the *New York Tribune*, the *Boston Transcript* and the *New York Independent*, oppose such legislation, they will not wish to carry its burden through the elections of 1898 and 1900.

GENERAL.

PROFESSOR W. W. HENDRICKSON, head of the department of mathematics at the Naval Academy at Annapolis, has been appointed Superintendent of the American Ephemeris

and Nautical Almanac, in succession to Professor Simon Newcomb. The retirement of Professor Newcomb, on reaching the age limit fixed by the naval authorities, has called forth many notices in appreciation of his great contributions to science.

THE American Mathematical Society will hold its summer meeting at Toronto on Monday and Tuesday, August 16th and 17th. It will thus follow the meeting of the American Association for the Advancement of Science at Detroit, and precede the meeting of the British Association at Toronto.

As we have already announced, the Fourth Triennial Congress of American Physicians and Surgeons will be held at Washington on May 4th, 5th and 6th. The sessions of the societies will be held in various places, the American Physiological Society and the American Anatomists having been assigned rooms in the Columbian University. The President of the Congress, Professor William H. Welch, of Johns Hopkins University, will deliver an address on Wednesday evening, May 5th, at 8.15 o'clock, in the Columbia Theatre. The exercises attending the unveiling of the statue of Professor Gross, under the auspices of the Surgical Association, will be held on Wednesday, May 5th, at 5 o'clock. The Executive Committee has decided that the Congress shall give a dinner on Tuesday evening, May 4th, at the Arlington, to which guests will be invited. On Wednesday evening, at 9.30 o'clock, the President of the Congress will receive the members, the invited guests and the accredited visitors, with the ladies accompanying them, at the Arlington. On Thursday evening the Cosmos Club will give a complimentary 'smoker' to the Congress.

THE Sinking Fund Commissioners of the City of New York upon March 25th unanimously adopted a resolution setting aside the entire southern portion of Bronx Park, comprising 261 acres, for the establishment of a Zoological Park. The tract is directly in the geographical center of the great 'annexed district.' The conditions are that the Society shall raise \$100,000 before entering the tract, and an additional \$150,000 within three years.

from the date that the work of improvement of the land is begun by the Park Department. The Society will contribute the buildings and collections of animals. The city will expend \$125,000 immediately in the preparation of the land, and will during the first year of occupation provide a maintenance fund—not exceeding \$60,000—for the care of the animals and further improvement of the park. In a coming issue of *SCIENCE* a full account of the plans of the Society will be published.

THE Missouri Legislature has made the usual biennial appropriation of \$30,000 for the support of the State Geological Survey. In Iowa the law governing the Survey has been incorporated in the new code, thus assuring the permanence of the work. In both States the bills passed without opposition of note.

THE sixty-ninth meeting of German Men of Science and Physicians will be held at Brunswick from the 20th to the 25th of September of the present year. There will be thirty-three sections as compared with thirty at the Frankfort meeting. The new sections are anthropology and ethnology, which at Frankfort was united with geography, geodesy and cartography and scientific photography.

THE scientific work which is such a prominent part of the manufacturing chemical establishments of Germany is again borne witness to by the fact that the firm of Friedrich Bayer & Co., manufacturers of dye stuffs in Elberfeld, has purchased the library of the late Professor Kekulé, consisting of 18,000 volumes, and said to be the most complete collection of chemical works in existence.

FROM the plans submitted in the competition for a statue of von Helmholtz, those by the sculptors Lessing, Hertert and Janenseh have been selected and exhibited in Berlin. The final selection has not yet been announced. The statue will be placed in the court of the University near the statues of the two Humboldts.

A COMPANY has been organized in Berlin for the establishment of a German colonial museum.

It is reported that Dr. Nansen will lend the *Fram*, the vessel in which he made his Arctic journey, to a private Arctic expedition that

will start during the coming summer. The expedition will be mainly English, and its purpose will be meteorological observations and an examination of the Arctic currents.

MR. CHARLES ELIOT died at Brookline, Mass., on March 25th, at the age of thirty-seven years. Mr. Eliot was the landscape architect of the Boston Metropolitan Park Commission. The admirable park system of Boston and the preservation of public reservations throughout the State are largely due to his influence.

WE regret to note the deaths of Dr. Kolbe, professor of mathematics in the Polytechnic Institute at Vienna, at the age of seventy-one years, and of Dr. Wilhelm Doellen, the astronomer, in Dorpat, aged seventy-seven years.

A PUBLIC meeting to promote the National Jenner Memorial was to have been held in the theatre of the University of London on March 31st. It was expected that the chair would be taken by the Duke of Westminster and that addresses would be made by Lord Herschel, Lord Playfair, Lord Lister and Professor Foster.

DR. RUDOLF KOBERT, professor of medicine in the University at Dorpat, has resigned to take charge of the hospital for consumptives in Gorborsdorf, in Silesia. It is said that the Russian authorities do not wish to retain German professors in Dorpat.

THE mortality figures for the four weeks ending March 12th, at Bombay, are as follows, in chronological order: Deaths from all causes, 1,772, 1,525, 1,370, 1,274; deaths from plague, 843, 730, 635, 521. The plague shows a tendency to spread and deaths are reported from many places, including for the week 206 in Karachi.

ACCORDING to the *Bulletin of the American Mathematical Society*, Professor O. Schlömilch, the founder of the *Zeitschrift für Mathematik und Physik*, has withdrawn from the editorship of this journal, which he has conducted for 41 years. Dr. R. Mehmke, professor of mathematics in the Polytechnic School at Stuttgart, takes his place, while Professor M. Cantor, of the University of Heidelberg, will continue to have charge of the 'literarisch historische Abteilung.'

THE students of Stanford University have be-

gun the publication of an *Engineering Journal*, which will be issued semi-annually. The first number opens with an article by F. A. C. Perrine, entitled 'A Practical Index of Engineering Literature,' which is followed by several other articles showing the high character of the work in engineering accomplished in Stanford University.

A MONTHLY journal entitled *Deutscher Tierfreund* has been established in Leipzig under the editorship of Dr. R. Klee.

THE first edition of the New York State botanist's report on 'Poisonous and Edible Fungi' has proved insufficient to supply the demand, so that it will be impossible to fill further orders for the work unless a new edition is printed.

DR. HENRY E. ARMSTRONG has prepared an extended article now being published in successive numbers of *Nature* entitled 'The Need of Organizing Scientific Opinion.' The article is a severe arraignment of the lack of scientific principles and research in British manufactures and of English educational methods as compared with those of Germany. Dr. Armstrong writes of the United States as follows: "America is bound, in fact, to develop, and not only on account of the restless energy of her people; her Government departments have attached to them many active men engaged in initiating or conducting scientific inquiries; and when the various departments are organized *inter se* the country will have in its service a highly-trained body of scientific experts guiding all branches of public work and co-operating to minimize the faults of democracy. And universities are arising all over the country, in which German models are being followed, not English. It is safe to predict that, ere many years are past, the United States will suddenly burst into prominence, and probably into predominance, as a nation promoting scientific inquiries of all kinds, so surely is a foundation being laid. Mistakes will frequently be made, perhaps, but they will soon be recognized and remedied in a country instinct with advance."

THE *Engineering News* states that a textile school has been established in Lowell, Mass. The city appropriated \$25,000 for its support,

and the manufacturing establishments contributed \$50,000 in machinery and other facilities. The equipment is said to compare favorably with that of similar schools in England and on the Continent, where they have been maintained for a number of years and are constantly growing in number. It is stated that the competition of Southern mills in the production of ordinary grades of cotton goods has led the Lowell manufacturers to turn their attention to the finer grades, which have hitherto generally been imported from Europe, where the textile schools have been of great aid in training skilled workmen and designers.

SIR DOUGLAS GALTON has issued an appeal for subscriptions to the Childhood Society, which has recently issued a report on the scientific study of the mental and physical conditions of childhood, giving details of 100,000 children, examined individually. It is estimated that the sum of £1,000 would be needed to examine 50,000 children in twenty-five towns.

UNIVERSITY AND EDUCATIONAL NEWS.

HAVERFORD COLLEGE has now received the title deeds to the real estate of the late Jacob P. Jones, of Philadelphia, who in 1885 made the College his residuary legatee. The estate is valued at \$900,000. Haverford College, which is located near Philadelphia and is conducted under Quaker auspices, is now one of the best endowed of our colleges. The trustees have wisely decided to maintain a strong college and not to attempt the development of a university.

THE long contested Marett will case has been decided by the Supreme Court of Connecticut, giving, among other public bequests, \$18,000 to Yale University.

It is reported in the daily papers that the late Mr. Deury, said to be a multi-millionaire and the largest landowner in the United States, has left his estate to his widow for life and at her death ninety-one hundredths of it for the establishment of a college in Illinois.

BILLS have been reported favorably in the New York Legislature authorizing New York City to spend \$12,500,000 in school buildings.

DR. JULIAN APRICIO has been appointed Director of the Meteorological and Astronomical