tion that the latter should share the expense of the cruise. Accordingly, on June 3, Mr. Clayton sailed from Boston for the Mediterranean on board the White Star steamer *Romanic,* equipped for raising self-recording instruments with kites, as was first done in 1901 by Messrs. Rotch and Sweetland, whose experiments on a voyage from Boston to Liverpool are described in SCIENCE, Vol. XIV., pp. 896–897. A despatch from Mr. Clayton, at Gibraltar, announced that flights had been made on six days and a mean height of 3,000 feet attained. The results of aerial soundings in the region of permanent high pressure around the Azores, and near the northern limit of the northeast trades, are expected to prove of special interest. At Gibraltar, Mr. Clayton is to embark on the *Otaria,* a yacht of 350 tons and capable of steaming eleven knots, which its owner has already employed for kite-flying in European inland waters. The boat will proceed south, touching at Madeira, Canary and Cape Verde Islands, and perhaps go as far as St. Paul, near the equator, returning by a more westerly course to the Azores, the whole voyage occupying about six weeks. On this route the northeast trade-winds and doldrums are traversed and the southeast trades entered. Should there be too little wind, either at the surface or higher up, the speed of the vessel will enable the kites to rise, and, should the wind at any time be too strong, by steaming with it the pull of the kites can be moderated. By this method it is hoped that all the strata up to a height of 15,000 feet or more will be penetrated, so that their condition as regards temperature, moisture and wind may be investigated. Besides determining the depth of the northeast trade-wind, the supposed southwest, or return trade, which has only been observed on the Peak of Teneriffe, will be sought and its height above the ocean in different latitudes measured, but in case the kites do not reach a sufficient altitude, it is proposed to liberate small balloons from Madeira and observe their change of direction as they rise. Professor Hergesell, on board the Prince of Monaco's yacht, executed last summer a series of kite-flights in the region between Spain, the Canaries and the Azores, without encountering the upper anti-trade, as was mentioned in SCIENCE, Vol. XXI., p. 464. The present expedition expects to make similar soundings in these and lower latitudes and will attempt to extend them to greater heights.

REGULATIONS GOVERNING THE SIXTH INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

THE sixth International Congress of Applied Chemistry, under the patronage of His Majesty the King of Italy, will be held at Rome in the spring of 1906. The president of the committee of organization is Professor Emanuele Paterno, Via Panisperna, Rome, and the secretary, Professor Vittorio Villavecchia, Central Customs Laboratory, Rome. All who are interested in promoting the applications of chemistry are eligible for membership in the congress. Active members are those who signify their desire to be such to the general secretary either before the opening of the congress or during its session, and who send the subscription fee, twenty francs. Donating members comprise those persons or societies who contribute the sum of at least one hundred francs or lire. Those who give a thousand lire or more belong to the list of patrons.

The congress is divided into the following sections and subsections:

1. Analytical chemistry, apparatus and instruments—president, Pietro Spica, professor of pharmaceutical chemistry in the University of Padua.

2. Inorganic chemistry and industries related thereto—president, Luigi Gabba, professor of technical chemistry in the Higher Technical School, Milan.

3. Metallurgy and mining, explosives; (*a*) metallurgy and mining—president, Ettore Mattirolo, Geological Survey, Rome; (*b*) explosives—president, Cav. Guiseppe Ninci, colonel of artillery, superintendent of powder of Fontana Liri.

4. Organic chemistry and industries related thereto; (*a*) industry of the organic products —president, Giacomo Ciamician, professor of general chemistry in the University of Bo-

logna; (*b*) coloring matters and their uses—president, Professor Guglielmo Koerner, director of the Higher School of Agriculture, Milan.

5. Technology and chemistry of sugar—president, Professor Vittorio Villavecchia, director of the Customs Laboratory, Rome.

6. Fermentation and starch; (*a*) fermentation, with special regard to enology—president, Mario Zecchini, director of the experiment station at Turin; (*b*) industry of starch and its derivatives—president, Professor Giglioli Italo, director of the experiment station of Rome.

7. Agricultural chemistry—president, Angelo Menozzi, professor of general chemistry in the Royal School of Agriculture, Milan.

8. Hygiene; (*a*) hygiene and medical chemistry—president, Icilio Guareschi, professor of pharmaceutical chemistry in the University of Turin; (*b*) pharmaceutical chemistry—president, Luigi Balbiano, professor of pharmaceutical chemistry in the University of Rome; (*c*) bromatology—president, Arnaldo Piutti, professor of pharmaceutical chemistry in the University of Naples.

9. Photochemistry, photography—president, Colonel Giuseppe Pizzighelli, president of the Italian Photography Society, Florence.

10. Electro-chemistry, physico-chemistry—president, Raffaello Nasini, professor of general chemistry in the University of Padua.

11. Laws, political economy and legislation in relation to industrial chemistry—president, G. B. Pirelli, Ponte Seveso 16, Milan.

The languages used in the discussion are Italian, French, German and English. The minutes of the proceedings of the session will be in Italian.

Those who intend to present papers and communications to the congress should send them to the general secretary at least two weeks before the opening of the congress. They should be written in one of the official languages of the congress, and as far as possible should be brief and succinct.

The congress shall consist of general meetings and meetings of the separate sections. There shall be at least two general meetings, of which the dates will be fixed by the committee. The sections may hold any number of meetings, and will work independently of each other.

The first general session shall be presided over by the chairman of the organizing committee. At this meeting the officers shall be elected, and shall include: an honorary president, and acting president, acting vice-president and honorary vice-presidents, a general secretary and assistant secretaries. In the last meeting of the congress at large shall be fixed the date and the place for the seventh congress of applied chemistry.

A president chosen by the nominating committee shall preside over the first meetings of the sections and subsections. In that meeting shall be elected a president, one or more vice-presidents, a secretary and one or more assistant secretaries. At the end of each meeting the president of the succeeding meeting shall be elected by vote. The president chosen by the nominating committee shall be a member of the board of the section in all its meetings.

The sections can modify their order from day to day. Actions shall be determined by a majority vote—in case of a tie the vote of the president shall decide.

The presentation of a topic shall not last more than twenty minutes, and during the discussion, speakers shall not occupy the floor for more than five minutes, nor speak more than twice on the same question, without special permission from the chair.

The minutes of a meeting shall include: (*a*) a summary of the papers presented, in the order in which they were given, the names of the speakers, and a summary of the ensuing discussion; (*b*) the decisions adopted in each meeting.

To make possible the accurate reproduction of the transactions of each meeting, the members who have spoken will send to the secretary of the section, at the latest, half an hour after the close of the meeting, a brief summary of the arguments of their papers. This summary shall be written in one of the four official languages. The secretary shall arrange the transactions, and transmit them, together with a list of the members present,

before twenty hours, to the general secretary of the congress.

Decisions of importance and international character adopted by the congress will be communicated to the governments participating in the International Committee of the Congress of Applied Chemistry, established at Paris in 1900.

After the close of the congress, a report will be printed containing the papers presented and the decisions adopted by the congress. This report will be sent free of charge to members.

All questions not provided for in this list of regulations shall be decided by the president, who shall continue in authority without cessation on matters pertaining to the present congress. Before he retires he shall place the conduct of affairs in the hands of an organizing committee for the next congress.

Dr. H. W. Wiley, at the request of the committee on organization, undertook the organization of an American committee, which is composed of members selected by President F. P. Venable on the part of the American Chemical Society, President R. W. Moore on the part of the New York section of the Society of Chemical Industry, and President H. S. Carhart on the part of the American Electro-Chemical Society.

Intending congressists may send their names and dues directly to the secretary of the congress, together with titles of papers to be presented at the meeting, or if preferred, to the chairman of the American committee, who will undertake to forward names, dues and papers to Rome. In case the dues are sent first to Washington for transmission to Rome, a check for $4.00 should be sent to cover dues, exchange and postage.

LIST OF MEMBERS OF THE AMERICAN COMMITTEE. SIXTH INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

Nominated by the Society of Chemical Industry (New York Section) and the American Chemical Society.

Dr. Charles Baskerville, chemist, College of the City of New York, New York.

Dr. Edward Hart, professor of chemistry, Lafayette College, Easton, Pa.

Dr. W. D. Horne, chemist, The New York Refinery, Long Island City, N. Y.

Dr. Leo Baekeland, research chemist, Snug Rock, Harmony Park, Yonkers, N. Y.

C. F. Chandler, professor of chemistry, Columbia University, New York, N. Y.

Nominated by the Electrochemical Society and the American Chemical Society.

W. D. Bancroft, professor of physical chemistry, Cornell University, Ithaca, N. Y.

C. F. Burgess, Madison, Wis.

Nominated by the Society of Chemical Industry (New York Section) and the American Electrochemical Society.

Dr. W. H. Walker, 93 Broad Street, Boston, Mass.

Nominated by the American Chemical Society.

Wm. A. Noyes, chemist, National Bureau of Standards, Washington, D. C.

J. D. Pennock, chief chemist, Solvay Process Co. and Senet-Solvay Co., Syracuse, N. Y.

Dr. Chas. E. Munroe, professor of chemistry, George Washington University, Washington, D. C.

Francis C. Phillips, professor of chemistry, Western University, Allegheny, Pa.

William McMurtrie, consulting chemist, Royal Baking Powder Co., New York, N. Y.

Dr. J. Merritt Matthews, Philadelphia Textile School, Philadelphia, Pa.

Mr. Clifford Richardson, director, New York Testing Laboratory, Long Island City, N. Y.

Dr. Samuel P. Sadtler, consulting chemist, Franklin Institute of Philadelphia, Philadelphia, Pa.

Dr. F. G. Wiechmann, consulting chemist, American Sugar Refining Co., Box 79, Station W, Brooklyn, N. Y.

David L. Davoll, Jr., chief chemist, Peninsular Sugar Refining Co., Caro, Mich.

Mr. G. L. Spencer, Bureau of Chemistry, Washington, D. C.

Dr. Max Henius, director, American Brewing Academy and the Scientific Station for Chicago, Chicago, Ill.

Charles E. Pellew, adjunct professor of chemistry, Columbia University, New York, N. Y.

Dr. Alfred Springer, chemist, 312 E. 2d Street, Cincinnati, Ohio.

Mr. B. W. Kilgore, director, North Carolina Agricultural Experiment Station, and state chemist, Raleigh, N. C.

Dr. Henry Adam Weber, professor agricultural chemistry, Ohio State University, Columbus, Ohio.

Chas. D. Woods, professor of agriculture, Uni-

versity of Maine, and director of Maine Agricultural Experiment Station, Orono, Me.

B. B. Ross, professor of chemistry, Alabama Polytechnic Institute, Auburn, Ala.

M. E. Jaffa, professor of chemistry, University of California, Berkeley, Cal.

Edward Kremers, professor of pharmaceutical chemistry, University of Wisconsin, Madison, Wis.

John Marshall, professor of chemistry, University of Pennsylvania, Philadelphia, Pa.

W. P. Mason, professor of chemistry, Rensselaer Polytechnic Institute, Troy, N. Y.

Dr. Chas. E. Doremus, assistant professor of chemistry, College of the City of New York, N. Y.

Edgar F. Smith, professor of chemistry, University of Pennsylvania, Philadelphia, Pa.

Dr. J. W. Mallet, professor of chemistry, University of Virginia, Charlottesville, Va.

Chas. B. Dudley, chief chemist, Pennsylvania R. R. Co., Altoona, Pa.

Mr. A. M. Todd, manufacturing chemist and distiller of essential oils, Kalamazoo, Mich.

Dr. Hugo Schweitzer, 40 Stone Street, New York, N. Y.

Mr. Maximilian Toch, 468 West Broadway, New York, N. Y.

Mr. Geo. C. Stone, chief engineer, New Jersey Zinc Co., 11 Broadway, New York, N. Y.

Dr. Theodore B. Wagner, The Rookery, Chicago, Ill.

Dr. William H. Parker, Office of the Appraiser, Boston, Mass.

E. F. Roeber, 114 Liberty Street, New York, N. Y.

Dr. J. W. Richards, Lehigh University, Bethlehem, Pa.

Mr. Hugh Rodman, 52–56 St. Clair Street, Cleveland, O.

Mr. W. McA. Johnson, care St. Nicholas Club, 7 West 44 St., New York, N. Y.

Mr. Henry Noel Potter, 510 West 23d Street, New York, N. Y.

Professor S. P. Sharples, Broad Street, Boston, Mass.

Dr. John A. Mandel, Bellevue Medical College, New York, N. Y.

ARTHUR WOODBURY EDSON.

ON Friday, June 23, Mr. Arthur Woodbury Edson, of the Bureau of Plant Industry, United States Department of Agriculture, died suddenly at Waco, Texas. The news of Mr. Edson's death came as a complete surprise and shock to his colleagues and friends in the department. The members of the Bureau of Plant Industry who had been closely associated with him held an informal meeting on Saturday afternoon, June 24, and passed resolutions of condolence and sympathy for his bereaved wife and parents. Dr. Erwin F. Smith, Dr. H. J. Webber and others gave expression to their regard for the man and their admiration of his scientific work.

Mr. Edson received his training in botany and in agricultural science at the University of Vermont, studying under Professor L. R. Jones and receiving the degrees of bachelor and master of science. Professor Jones early discovered his great promise, as he showed from the first great aptitude and enthusiasm for scientific work. While at Vermont he devoted a great deal of attention to the problems connected with the sap flow of the sugar maple. The bulletin upon that subject published a year ago by the Vermont Agricultural Experiment Station is based largely upon Mr. Edson's studies and experiments.

On July 1, 1901, Mr. Edson was appointed a scientific aid in the Bureau of Plant Industry, Department of Agriculture, entering at once upon plant breeding work, and assisting Dr. H. J. Webber in the breeding of long-staple upland cottons in South Carolina. Subsequently, Mr. Edson was promoted to the position of assistant physiologist, and was given charge of the plant breeding work upon cotton in Texas and adjacent states. When the plant breeding laboratory was called upon to cooperate with other organizations in the department in the cotton boll weevil investigations, Mr. Edson was entrusted with the direction of that part of the work. At the time of his death he had made great progress in producing not only earlier maturing varieties of cotton which escape the worst ravages of the pest, but varieties adapted to conditions in Texas having other desirable characters, such as greater yield, longer staple, larger bolls and easier picking qualities. Much as he had already accomplished along this line, he gave promise of even greater achievements, had not his untimely death cut short his work.

In view of Mr. Edson's many valuable qualities as an earnest and capable investigator, as