unpleasant odors. Such rooms as those referred to are generally overheated; the bodies of the occupants, and, at night, the usual means of illumination, contributing to this result.

The results of this investigation, taken in connection with the results of other recent researches summarized in this report, indicate that some of the theories upon which modern systems of ventilation are based are either without foundation or doubtful, and that the problem of securing comfort and health in inhabited rooms requires the consideration of the best methods of preventing or disposing of dusts of various kinds, of properly regulating temperature and moisture, and of preventing the entrance of poisonous gases like carbonic oxide, derived from heating and lighting apparatus, rather than upon simply diluting the air to a certain standard of proportion of carbonic acid present. It would be very unwise to conclude, from the facts given in this report, that the standards of air supply for the ventilation of inhabited rooms, which standards are now generally accepted by sanitarians as the result of the work of Pettenkofer, De Chaumont and others, are much too large under any circumstances, or that the differences in health and vigor between those who spend the greater part of their lives in the open air of the country hills and those who live in the city slums do not depend in any way upon the differences between the atmospheres of the two localities except as regards the number and character of microörganisms.

The cause of the unpleasant, musty odor which is perceptible to most persons on passing from the outer air into a crowded, unventilated room is unknown. It may in part be due to volatile products of decomposition contained in the expired air of persons having decayed teeth, foul mouths, or certain disorders of the digestive apparatus, and it is due in part to volatile fatty acids produced from the excretions of the skin and from clothing soiled with such excretions. It may produce nausea and other disagreeable sensations in specially susceptible persons, but most men soon become accustomed to it and cease to notice it, as they will do with regard to the odor of a smoking car or of a soap factory after they have been for some time in the place. The direct and indirect effects of odors of various kinds upon the comfort, and, perhaps also, upon the health of men are more considerable than would be indicated by any tests now known for determining the nature and quantity of the matters which give rise to them.

The remarks of Renk upon this point merit consideration.

Cases of fainting in crowded rooms usually occur in women, and are connected with defective respiratory action due to tight lacing or other causes.

Other causes of discomfort in rooms heated by furnaces or by steam are excessive dryness of the air and the presence of small quantities of carbonic oxide, of illuminating gas, and, possibly, of arsenic, derived from the coal used for heating.

AMERICAN METROLOGICAL SOCIETY.

This Society held its annual meeting at Columbia College, on April 22d, at 3 P. M.

The President, B. A. Gould, of Cambridge, Mass., presided. There were present, Wolcott Gibbs, of Newport, R. I.; A. A. Michelson, of the University of Chicago; T. Egleston and J. H. Van Amringe, of Columbia College; T. R. Pynchon, of Trinity College; T. C. Mendenhall, of Worcester, Mass.; George Eastbourn, of Philadelphia; J. M. McKinlay and J. K. Rees, of New York City.

President Gould made an informal ad-

dress, and called attention to the rapid progress of the zone standard-time system throughout the world. This system the society did important work in introducing. Allusion was made to the report that Turkey had made the Metric System obligatory. The principal countries that do not use the Metric System are England, the United States and Russia. Through the action of the New Decimal Association of England, and of the American Metrological Society, it was hoped that some steps might be taken in the two countries named which would bring about a larger use of the Metric System. It was stated that Utah proposed to adopt the Metric System as the standard when she was admitted to statehood.

The society appointed an important committee on Metric Gauges. This committee consists of the President, B. A. Gould, Wolcott Gibbs, T. C. Mendenhall, A. A. Michelson, and T. Egleston as chairman.

Reports were made by various officers and the following officers were elected for the year 1895–96: President, B. A. Gould, Cambridge, Mass. Vice Presidents, Wolcott Gibbs, Newport, R. I.; T. R. Pynchon, Hartford, Conn.; Sandford Fleming, Ottawa, Canada; T. C. Mendenhall, Worcester, Mass.; T. Egleston, New York City; J. H. Van Amringe, New York City. Treasurer, John K. Rees, New York City. Recording Secretary, John K. Rees, New York City. Corresponding Secretary, O. H. Tittmann, Washington, D. C. Members of the Council, H. A. Newton, New Haven, Conn.; Cleveland Abbe, Washington, D. C.; R. H. Thurston, Ithaca, N. Y.; A. M. Mayer, Hoboken, N. J.; Henry Holt, New York City; W. F. Allen, New York City; Simon Newcomb, Washington, D. C.; S. P. Langley, Washington, D. C.; F. H. Smith, University of Virginia; George Eastbourn, Philadelphia, Penn.

Edward Atkinson, of Boston, was elected a member of the society.

In this connection it may be of interest to state the objects of this society:

1. To improve existing systems of weights, measures and moneys, and to bring them into relations of simple commensurability with each other.

2. To secure universal adoption of common units of measure for quantities in physical observation or investigation, for which ordinary systems of metrology do not provide; such as divisions of barometer, thermometer, and densimeter; amount of work done by machines; amount of mechanical energy, active or potential, of bodies, as dependent on their motion or position; quantities of heat present in bodies of given temperatures, or generated by combustion or otherwise; quantity and intensity of electro-dynamic currents; aggregate and efficient power of prime movers; accelerative force of gravity; pressure of steam and atmosphere; and other matters analogous to these.

3. To secure uniform usage as to standard *points of reference*, or physical conditions to which observations must be reduced for purposes of comparison, especially temperature and pressure to which are referred specific gravities of bodies, and the zero of longitude on the earth.

4. To secure the use of the decimal system for denominations of weight, measure, and money derived from unit-bases, not necessarily excluding for practical purposes binary or other convenient divisions, but maintained along with such other methods, on account of facilities for calculation, reductions, and comparison of values, afforded by a system conforming to our numerical notation.

MODES OF OPERATION.

1. THE society will endeavor to carry out its objects, by appeals to Congress, State Legislatures, boards of education, higher institutions of learning, and to directors and

teachers of schools of every grade throughout the country, urging adoption of measures in their several spheres for diffusing information as to the present state of the world's metrology and recent progress in its reform, and specially for instructing the rising generation in these matters, to the end that our people may be early and fully prepared to act intelligently on the important questions connected with weights and measures.

2. By invoking the aid and coöperation of bodies organized to consider questions of scientific or social interest, boards of trade, chambers of commerce, societies of engineers, industrial associations, professions and trades, in this country and elsewhere.

3. By specially urging scientific bodies to open communications with similar bodies in other countries, with a view to general agreement on values to be henceforth uniformly given to units of measure and points of reference which particularly concern them. *i. e.*, to the so-called constants of science.

4. By memorializing Congress in favor of laws requiring the use, in certain departments of the public service, of metric weights and measures, wherever such legislation may tend to relieve commerce of some of its burdens, to facilitate international communication, to promote international jurisprudence, and to familiarize our own people with the benefits of that system of metrology, with the least interference with their ordinary habits of thought or daily business.

5. By direct appeals to the people through the public press, and by circulating, so far as means allow, books and documents informing the public of the defects of the common system of weights and measures, the means most proper for its amendment, and the great advantages which the acceptance of a universal system would insure to all mankind. J. K. R.

THE INTERNATIONAL MATHEMATICAL CONGRESS.

Professor A. Vasiliev, President of the Physico-mathematical Society of Kasan, Russia, has sent me a document prepared by him for the Minister of Public Instruction, with a request that I translate such part of it from the Russian as bears on the founding of an International Mathematical Congress, and make it known in America.

This is in substance as follows:

After recapitulating the action of the French Association for the Advancement of Science at Caen (August 14, 1894) [already translated by me and published on pp. 21–22 of the Bulletin of the American Mathematical Society, October, 1894], he gives the resolution offered by me that very same day, August 14, 1894, for their signatures to all the members of the American Mathematical Society present at the Brooklyn meeting, and signed unanimously, which was as follows: "The undersigned members of the American Mathematical Society present at its summer meeting, 1894, take this method of expressing their cordial approval of a series of International Congresses of Mathematicians to take place from time to time, as suggested by A. Vasiliev and C. A. Laisant." The names of the signers may be found on page 290 of Vol. I., of the American Mathematical Monthly. I explained the plan as contemplating a *réunion préparatoire* at Kasan in 1896, a *congrès constituant* in Belgium or Switzerland in 1897, which perhaps might fix the First International Congress at Paris in 1900.

Professor Vasiliev then goes on to state the decisive step taken by the *deutsche Mathematiker-Vereinigung* in a reunion at Vienna, September, 1894. It was there unanimously resolved to take part in the organizing Congress. The action was as follows:

"Concerning future International Congresses, the Mathematiker-Vereinigung decides in principle to participate, and charges