quired to be tested. It is certain that many unfavorable observations on dysentery serum in Germany have been due largely to the use of defective serums, and that results would be improved by a standard titration approved by the state public health service. Investigations of the antitoxin test on rabbits and mice are still being carried on.

The largest subcommittee, under the chairmanship of Bordet and Wassermann, discussed the serodiagnosis of syphilis, and several reports were read on comparisons between the original method of complement fixation, and the flocculation or precipitation methods of Sachs-Georgi, Meinicke and Dreyer. These investigations are to be continued in certain definite directions by one laboratory of each of the several countries. In Germany there have been many complaints of evils arising from the serodiagnosis of syphilis, and, in consequence, an attempt was begun last year to prevent as far as possible the injuries and untoward effects that may arise from the improper application of this delicate and practically important procedure, by adopting an officially recognized and uniform method of application of the Wassermann test. This regulation has encountered considerable opposition, especially from directors of laboratories, and it is hoped that the investigations of the health committee of the League of Nations will be of great value in preparing a revision of existing regulations, which will be necessary before long.

Two other subcommittees are engaged in investigation of the antipneumococcus and the antimeningococcus serums, respectively. With regard to the former, the subcommittee expressed the opinion that an opinion as to their efficacy would at this time be premature; however, we possess reliable methods of titration, and if antipneumococcus serums of high value according to these standards are tested in pneumonia cases which are not too far advanced, we may expect, within a reasonable time, a final and reliable judgment on the value of this form of serotherapy.

With the antimeningococcus serums, serotherapy is likewise much complicated by the fact that there are several different types of causative agent, and corresponding variations in antibodies. In Germany the state has already established standards for meningococcus serum. These standards, however, give no consideration to the different serologic types, and there is therefore need for revision. Cultures and serums of the various types of organisms are being exchanged by the laboratories conducting the investigation, and the question as to what antibodies (bacteriotropins, antiendotoxins, agglutinins, antibodies causing complement fixation) shall be used to establish the titer of a given serum is being studied according to definite standards set up by the committee. We should await the results of these investigations before we revise the official standards in Germany. This is an exceedingly important, practical question; for, in the opinion of Professor Neufeld, the antimeningococcus serum is possibly the most effective therapeutic serum yet used in the treatment of human diseases.

THE STANDARDIZATION OF SCIENTIFIC SYMBOLS AND ABBREVIATIONS

A RECENT conference held in New York City under the auspices of the American Engineering Standards Committee revealed a sentiment among engineers, scientists, government officials, business paper editors and industrial executives, emphatically in favor of the unification of technical and scientific abbreviations and symbols.

It was agreed on all sides that the standardization of abbreviations and symbols would result in inestimable mental economies. The present situation with respect to the use of abbreviations and symbols in engineering, scientific and other technical fields is comparable to a language which has degenerated into a multiplicity of dialects, each of which has to be translated for the users of the others. Abbreviations and symbols constitute an ever-growing and important part of the language of engineers, scientists, industrial editors and other technical men. The use of one symbol or abbreviation for several different terms and the use of several different symbols or abbreviations for one meaning are, however, at present causing a great deal of confusion, misunderstanding and often serious errors.

The conference was called upon requests from the American Institute of Electrical Engineers, the American Society of Mechanical Engineers and the Association of Edison Illuminating

Companies, to consider abbreviations and symbols, but after some discussion of the subject it was thought desirable to include as a part of the project the graphical symbols which are used in engineering drawings, diagrams and the like, for representing instruments and apparatus and components of them.

It was agreed that the cooperation of foreign standardizing bodies should be sought in the development of the work. The importance of international uniformity in symbols is great on account of the international character of much engineering and scientific work, and the importance of reference books and periodicals in foreign languages.

The work will go forward under a committee organization developed in accordance with the rules and procedure of the American Engineering Standards Committee.

The appended list of those who attended the conference and the organizations by which they were designated will show the diversity of interest involved in the project.

Henry Norris Russell, American Association for the Advancement of Science.

Sullivan W. Jones, American Institute of Architects.

Edward J. Cheney, American Institute of Electrical Engineers.

George W. Metcalfe, American Institute of Electrical Engineers.

C. H. Sharp, American Institute of Electrical Engineers.

Edward K. Judd, American Institute of Mining and Metallurgical Engineers.

Edward V. Huntington, American Mathematical Society.

Albert P. Wills, American Physical Society.

Henry A. Ruger, American Psychological Association.

G. A. Newrath, American Railway Association —Signal Section.

C. L. Warwick, American Society for Testing Materials.

Stanley F. Morse, American Society of Agricultural Engineers.

C. B. LePage, American Society of Mechanical Engineers.

Sanford A. Moss, American Society of Mechanical Engineers.

C. M. Sames, American Society of Mechanical Engineers.

R. R. Leonard, American Society of Refrigerating Engineers.

R. D. Parker, American Telephone and Telegraph Company.

C. H. Sharp, Association of Edison Illuminating Companies.

H. Stuart Acheson, Combustion Publishing Corporation.

H. G. Knoderer, Electrical Manufacturers Council.

A. M. MacCutcheon, Electrical Manufacturers Council.

L. A. Hazeltine, Institute of Radio Engineers.

Howard Richards, Metric Association.

Kenneth H. Condit, National Conference of Business Paper Editors.

Alexander Maxwell, National Electric Light Association.

Charles E. Neil, National Electric Light Association.

W. Spraragen, National Research Council.

Sullivan W. Jones, National Research Council Engineering Division.

John T. Faig, Society for the Promotion of Engineering Education.

Sanford A. Moss, Society for the Promotion of Engineering Education.

John M. Lloyd, Society of Automotive Engineers.

W. W. Smith, Society of Naval Architects and Marine Engineers.

J. Franklin Meyer, United States Bureau of Standards.

Ray M. Hudson, United States Department of Commerce.

A. W. Whitney, chairman, American Engineering Standards Committee.

P. G. Agnew, secretary, F. J. Schlink, assistant secretary, American Engineering Standards Committee.

BOARD OF SURVEYS AND MAPS

A REPORT of the Board of Surveys and Maps of the federal government for the calendar years 1921 and 1922, dated March 5, 1923, and signed by William Bowie, chairman, has been submitted to the President of the United States.

The board was created by executive order dated December 30, 1919, and was designed to furnish the means of coordinating the activities of bureaus and independent organizations of the federal government engaged on surveying and mapping, to avoid duplication of effort by these organizations and to make the results of the greatest usefulness to the map using public. The report gives the list of the eighteen government organizations having representa-