

STANDARDS FOR SCIENTIFIC AND ENGINEERING SYMBOLS AND ABBREVIATIONS

THE decision to undertake the standardization of scientific and engineering symbols and abbreviations as a national enterprise was made at a general conference called by the American Engineering Standards Committee and held in the rooms of the American Society of Mechanical Engineers on February 13, 1923. Three organizations, the American Institute of Electrical Engineers, the Association of Edison Illuminating Companies and the American Society of Mechanical Engineers, made the original recommendations which resulted in the calling of this conference. Official representatives of national organizations attended this conference and after a full discussion they voted unanimously that this project should be undertaken, and that the American Association for the Advancement of Science, the National Research Council, the Society for Promotion of Engineering Education and the U. S. Bureau of Standards should be requested to accept joint sponsorship. Later the American Society of Mechanical Engineers, the American Institute of Electrical Engineers and the American Society of Civil Engineers were invited to become joint sponsors.

The sectional committee on scientific and engineering symbols and abbreviations now consists of thirty members representing thirty-seven national organizations. It has organized nine subcommittees to which have been assigned the following divisions of the subject, (1) Symbols for Mechanics, Structural Engineering and Testing Materials, (2) Symbols for Hydraulics, (3) Symbols for Heat and Thermodynamics, (4) Symbols for Photometry and Illumination, (5) Aeronautical Symbols, (6) Mathematical Symbols, (7) Electrotechnical Symbols including Radio, (8) Navigational and Topographical Symbols, (9) Abbreviations for Scientific and Engineering Terms. The reports of these subcommittees will be prepared and issued separately.

Mathematical Symbols. The proposed standard for Mathematical Symbols was developed by Subcommittee No. 6, of which Mr. Edward V. Huntington, professor of mechanics, Harvard University, is chairman. A draft of this subcommittee report was considered at a meeting of the executive committee of the sectional committee in January, 1927, and was approved, with slight amendments, which subsequently were introduced into the report by the subcommittee. The report was submitted to the members of the sectional committee on April 25, 1927, and received its approval. A few minor suggestions for modification were submitted by individuals, but it has been considered inexpedient by the sectional commit-

tee to reopen the whole matter for consideration of these few individual suggestions.

They are, therefore, included as an "Appendix" to the report, with the recommendation that when the report shall be reconsidered for revision they shall receive due consideration. The proposed standard is now before the five sponsor bodies for their approval and transmission to the American Engineering Standards Committee for approval.

Aeronautical Symbols. Subcommittee No. 5, Professor Joseph S. Ames, the Johns Hopkins University, chairman, has taken advantage of the early work of the National Advisory Committee on Aeronautics. The list of approximately 100 letter symbols which it now proposes for criticism and comment have for the most part been in use by the National Advisory Committee for the past few years.

This report of the subcommittee was approved by the executive committee of the sectional committee, January 22, 1927, subject to possible modification by the executive committee after consideration of conflicts and duplications in symbols. The attached statement of conflicts and duplications in symbols was considered by the subcommittee, after which the original report was reaffirmed on April 19, 1927. The subcommittee report is now issued in tentative form with a request for criticism and suggestion from all concerned. Communications may be directed to Preston S. Miller, secretary of the sectional committee, Eightieth Street and East End Avenue, New York, N. Y.

FLOOD CONTROL BY REFORESTATION IN MISSISSIPPI

AN extensive survey under which will be brought together all available information upon the location and area of forests needed on the Mississippi watershed as a part of flood prevention and control has been started by the Forest Service of the United States Department of Agriculture and will be completed by early fall.

"The survey," says Col. William B. Greeley, chief forester, "will define the main tributaries of the Mississippi to be treated as units, and for each of these tributaries data will be brought together on the acreage, the amount and character of the precipitation, the more essential or more common soil classes, features of physiography, including ruggedness of topography, natural reservoirs, etc., the general character of the vegetative cover, and a rating of the value of the protective cover as a means of flood prevention and control."

The object of the survey is to bring out on this enormous drainage basin the area or watersheds where, on account of rainfall, character of soil, topog-

raphy, etc., forest cover has an important protective value.

Considering especially character of soil, steepness of slope, and character of precipitation, a rating will be given the protective value of forest cover as an element of the particular watershed. The plan is to eliminate watersheds where on account of these factors the maximum protective influence that a forest might exert would have a comparatively minor effect upon stream and flood conditions, and to locate the areas where, because of soil, topography and precipitation, the effect of forest cover would be important.

A somewhat similar rating of the protective efficiency of the existing forest cover on the Mississippi system's watersheds is proposed. The plan contemplates putting all this data as far as possible on a set of maps for ready consultation in the formulation of comprehensive plans for flood prevention and control in the Mississippi Valley. The data obtained by the Department of Agriculture through the Forest Service will be correlated with that of the War Department and other agencies for the construction of reservoirs and other engineering methods of flood control.

E. A. Sherman, associate forester, has been named the direct the survey.

THE FIELD MUSEUM OF NATURAL HISTORY

EXTENSIVE engineering changes are being made in Field Museum of Natural History. As a result of this work, fourteen large additional halls will be made available for museum exhibits, and the heating of the new Shedd Aquarium, the stadium in Soldier Field and the museum itself will be centralized in the Field Museum's heating plant. For more than a year past the museum has been supplying heat to the stadium, and an arrangement was recently entered into between authorities of the projected Shedd Aquarium and the museum to supply heat to the new institution.

Of the halls gained for public exhibits in the museum by the changes being made, eleven will be devoted to anthropological collections, and three to zoological subjects. The work is being rushed in the hope of completing it by October 1. Shortly after that date, it is expected, operations for installation of collections in the new halls will begin, and as soon as each hall is arranged with its exhibits it will be thrown open to the public. The entire fourteen new halls probably will not be in use until a considerably later date.

The continued development of Field Museum as an institution of world importance, and the constant flow

of accessions of valuable material in all four of its departments—anthropology, botany, geology and zoology—through expeditions sent out by it, and through gifts of its friends, have made more space an absolute necessity.

The halls to be gained are on the ground floor of the building, and will constitute about two thirds of the 245,000 square foot area of this floor. All pipes and other obstructions, which have made this space unavailable for exhibits in the past, are being removed. Steam and water pipes, now running along the ceilings, will be carried through underground trenches and tunnels, increasing the headroom of the halls and bettering their appearance. The pump room on the ground floor will be depressed.

The new halls will enable the museum to have a well-ordered geographical and scientific arrangement of the anthropological collections. Among exhibits planned for these halls are those from Melanesia, the Philippine Islands, Malay Peninsula and Malay Archipelago, Polynesia, Micronesia, Madagascar and East Africa, North, West and South Africa, India, Egypt and Mesopotamia. Their installation in the new halls will make it possible to devote the entire east wing of the main floor exclusively to North, Central and South American archeology and ethnology. One of the new halls will be devoted to exhibits illustrating the progress of prehistoric man, for which Henry Field, assistant curator of physical anthropology, is now collecting in Europe. Another hall will be devoted to physical anthropology.

A special significance is attached to the use the department of zoology will make of the space allotted to it in the new halls, as it will place the lower orders of animals, chiefly denizens of the sea, on this lower floor, while the higher orders of animals will remain on the main floor. A feature of the new halls will be one devoted to large marine mammal habitat groups such as whales, walruses, seals, sea lions, porpoises and so forth. Another hall will hold systematic collections of fishes, and the third will be devoted to marine invertebrates, such as starfish, mollusks and similar creatures.

Removal of these collections from the general zoological collections in the west wing of the main floor will make possible opening there a new hall of Asiatic mammal habitat groups, the nucleus of which will be the collections made by the James Simpson-Roosevelt Asiatic Expedition of the Field Museum, conducted in 1925 under the leadership of Colonel Theodore Roosevelt and Kermit Roosevelt. It is expected that about January 1, 1928, the first two groups will be installed ready for exhibition. These will consist of the famous Ovis Poli sheep, named for the great explorer Marco Polo, and the