definitive units since the largest possible number of international units are retained.

7. Conversion of existing results into definitive units is made simple by the use of Table I. The table may be extended so as to include English units and the algebraical as well as the arithmetical relations between units. A grounding in the definitive units is sufficient for every one; familiarity with the CGS units or with the historical rôle which they played as progenitors of definitive units is not essential. Results expressed in the older units are readily reduced to definitive units by the mechanical use of the table.
8. Definitive units do not artificially exalt any four units as being preeminently the basic primary units for all purposes. Any choice may be made which will simplify a particular problem under discussion. Among the first twelve units of Table I, four dimensionally independent units may be chosen in 299 different ways.
9. The ten fundamental relations of Table I, Footnote 2, hold also for Heaviside's units. Since the only present use for Heaviside's units is to obtain these relations and others based upon them, his specific units may be abolished, thereby materially simplifying the connection between theoretical electromagnetism and practical measurements.
10. Complete, homogeneous, physical equations (which are best adapted for theoretical physics) are naturally employed with definitive units, since no dimensional constant of nature has by advance agreement any specific numerical value such as unity or 4π. Some of the more important dimensional constants, expressed in definitive units, are included in Table II. The choice of units need introduce no changes in the use of convenient ratios, such as permeability and dielectric constant.

CONCLUSIONS

The definitive system of units makes it perfectly feasible to employ a single system much more generally than has ever been the case in the past; the natural ultimate goal is the universal use of these units for all purposes. In the attempt to extend the application of metric units in the United States the meter-stere-kilogram, rather than the meter-liter-gram, should form the basis for legislation, in order to give definitive units their proper legalized status and to secure to the full the advantages of a comprehensive system consistently interrelated with the legalized international electrical units. The gradual discarding of CGS and other redundant units would inevitably follow. Even in the absence of official recognition of definitive units, individuals may advantageously employ the system. This would cause confusion neither to authors nor readers, since these units, in the main, have already acquired vital existence through world-wide, daily use under familiar, well-established names.

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THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

ASSOCIATED ORGANIZATIONS

A VERY large proportion of the American organizations devoted to the advancement of the sciences and of science in general are officially associated with the American Association for the Advancement of Science (see SCIENCE for February 6, page 166). This feature of the organization of the association is very important and it is continually becoming more so. For the general cooperation of American men and women of science and of American friends of scientific advance the association furnishes convenient arrangements, which are being continually improved, and this is also and specially true with respect to the cooperation of the many special scientific societies of America, in the work of emphasizing the broad unity of science in general and furthering its advancement and its appreciation by the public.

It will be recalled that associated organizations are of two kinds, those that are simply *associated* and those that are *associated* and *affiliated*. Simply associated societies have the general official approval of the association and the latter aids their work wherever possible. Affiliated societies have the same relation to the association and they also have representation in the association council and generally in the respective section committees, thus being in a way constituent units in the larger organization. Furthermore, members of each affiliated society who are not already enrolled in the association have the privilege of becoming so enrolled without paying the usual five-dollar entrance fee, if they join before the second October 1st following the affiliation of the society or before the second October 1st following their election to the society. Official association and affiliation are arranged by application to and election by the association council. No financial or other serious obligations are attached to the arrangements of association and of affiliation but affiliated organizations are generally expected to supply the association annually with lists of their new members, whom the association invites to join it under the special conditions just mentioned. A list of all associated organizations, of both kinds, is published

by the association from time to time. Affiliated societies are generally the larger ones and those that deal with scientific research, while smaller societies and those not dealing mainly with research, but nevertheless operating for the advancement of science, are generally simply associated. Societies sometimes become associated first and are subsequently elected to affiliation. The association depends on the scientific societies to make application for official association or combined association and affiliation and each application should generally be accompanied by a copy of the society constitution and a list of its members. Affiliated societies each have one representative in the association council and they have an additional representative if their membership includes one hundred or more fellows of the association.

There are a few American scientific societies that, although obviously eligible to official association in the American Association, have not as yet become so, and there are a few associated societies that surely should be affiliated but have not yet made application. For readers who are interested in seeing all high-grade and extensive American scientific organizations united in this somewhat loose but truly effective way through the American Association, this brief statement has been prepared. It would have been included in the special American Association issue of SCIENCE for February 6 had there been available space.

It should be clearly and distinctly stated that official association of either sort does not imply any chance for loss of autonomy on the part of the associated organizations. As a large society of individual members, the American Association virtually surrenders its own autonomy to some degree by admitting the affiliated societies to participation in its control, but there is absolutely no corresponding tendency in the other direction. The associated organizations are asked to cooperate for the advancement of science as a whole but they clearly can not be bound by any action of the larger association. It is not expected that all associated societies should meet with the larger organization at its annual conventions in convocation week, but the association undertakes to care as well as possible for all scientific organizations that desire to meet with it on those occasions. Some of the societies generally meet with the association, some occasionally do so and some never do so. This applies to both classes of associated societies.

In the same general connection, the well-known relation of the programs of the association sections to those of the societies meeting with them may need clear statement from time to time. No section is allowed to arrange a program for the annual meeting that will in any way rival or compete with the programs of any of the societies of that section which are holding their meetings simultaneously with it and at the same place. It is expected that each section program will adequately represent the broader and more general aspects of its field of science, in a manner that is calculated to be of use to all members of all the societies belonging with the section. Section programs are generally joint programs with the societies, and they are generally of invited papers. When the societies of a section do not meet with it the section is expected to arrange a more extensive program, but in those cases also the section programs are generally confined to invited papers. In short, the desideratum should be that each field of science is to be well represented by sessions at each annual meeting, those sessions being mainly in the hands of the societies when they are present. The section is to do only those things for the advancement of science that are not done by its societies. There must be no rivalry between section and society.

The general program of the annual meeting is published by the association and it includes complete programs of all the societies meeting with it, as far as possible. If a society program is not properly presented in the general program the reason is only that the needed manuscript was not received by the permanent secretary's office early enough to be included. By relying on the general program the societies may in many cases avoid the trouble and expense of publishing separate programs, but separate society programs are apparently generally desired, even though their material is included in the larger book of the general program.

All the privileges of the annual meetings are now made free, not only to association members but also to all members of the associated and guest societies, whether these members are enrolled in the association or not.

The complete list of the associated organizations arranged according to the corresponding sections of the association follows, as it stood March 1, 1925:

*The American Meteorological Society.
**The American Physical Society.
The Honor Society of Phi Kappa Phi.

A. MATHEMATICS

**The American Mathematical Society.
**The Mathematical Association of America.

* Affiliated societies are designated by asterisks; a single asterisk denotes one representative in the Council, two asterisks denote two representatives. For the names of the representatives, see the list of Council members, page 132.

B. PHYSICS

**The American Physical Society.
*The American Meteorological Society.
**The Optical Society of America.

C. CHEMISTRY

**The American Chemical Society.
The American Institute of Chemical Engineers.
**The American Electrochemical Society.

D. ASTRONOMY

**The American Astronomical Society.

E. GEOLOGY AND GEOGRAPHY

**The Geological Society of America.
The Paleontological Society of America.
**The Association of American Geographers.
**The Seismological Society of America.
**The American Geographical Society.
The National Council of Geography Teachers.
The American Alpine Club.
*The Mineralogical Society of America.

F. ZOOLOGICAL SCIENCES

**The American Society of Zoologists.
**The Entomological Society of America.
**The American Association of Economic Entomologists.
**The Eugenics Research Association.
**The American Society of Mammalogists.
The Wilson Ornithological Club.

G. BOTANICAL SCIENCES

**The Botanical Society of America.
**The American Phytopathological Society.
*The American Society of Plant Physiologists.
The Botanists of the Central States.
The American Fern Society.
The Sullivant Moss Society.

F-G. ZOOLOGY AND BOTANY

**The American Society of Naturalists.
**The Ecological Society of America.
**The American Genetic Association.
**The American Microscopical Society.
The American Nature-Study Society.

H. ANTHROPOLOGY

**The American Anthropological Association.
The Archeological Institute of America.
The American Folk-Lore Society.

I. PSYCHOLOGY

**The American Psychological Association.
The Southern Society for Philosophy and Psychology.

K. SOCIAL AND ECONOMIC SCIENCES

The American Civic Association.
The American Economic Association.
The Metric Association.
The American Sociological Society.
The American Statistical Association.

M. ENGINEERING

**The American Society of Mechanical Engineers.
**The American Institute of Electrical Engineers.
**The American Institute of Mining and Metallurgical Engineers.
**The American Society of Civil Engineers.
**The Illuminating Engineering Society.
*The American Society for Testing Materials.
The American Society of Heating and Ventilating Engineers.
The American Society of Refrigerating Engineers.
*The American Ceramic Society.

N. MEDICAL SCIENCES

**The American Medical Association.
**The American Association of Anatomists.
The American Physiological Society.
**The Society of American Bacteriologists.
The American Society for Pharmacology and Experimental Therapeutics.
The American Society of Biological Chemists, Inc.
The American Society for Experimental Pathology.
**The American Public Health Association.
The Society of American Microanalysts.

O. AGRICULTURE

**The American Society of Agronomy.
*The Society of American Foresters.
*The American Society for Horticultural Science.
The American Pomological Society.
The American Association of Official Seed Analysts.
The Potato Association of America.
The American Society of Animal Production.
*Canadian Society of Technical Agriculturists.
The American Dairy Science Association.

Q. EDUCATION

**The National Education Association.
**The National Society of College Teachers of Education.
**The National Society for the Study of Education.
**The American Federation of Teachers of the Mathematical and Natural Sciences.
The American Philosophical Association.
The Phi Delta Kappa Fraternity.

SOCIETIES NOT SPECIALLY RELATED TO ANY PARTICULAR SECTION

**The Society of Sigma Xi.
**The American Association of University Professors.
**The Gamma Alpha Graduate Scientific Fraternity.
The Bibliographical Society of America.
The Gamma Sigma Delta Society.
The Honor Society of Phi Kappa Phi.

AFFILIATED ACADEMIES OF SCIENCE

(These are not classed as affiliated societies, but have a special arrangement. Each has a single representative in the Council. For the names of these representatives see the list of Council members, SCIENCE for February 6, page 132. Each affiliated academy receives a financial allowance from the Association each year, to aid in its work.)

The Illinois State Academy of Science.
The Iowa Academy of Science.
The Kansas Academy of Science.
The Kentucky Academy of Science.
The Maryland Academy of Sciences.
The Michigan Academy of Science.
The Nebraska Academy of Science.
The New Orleans Academy of Sciences.
The North Carolina Academy of Science.
The Ohio Academy of Science.
The Oklahoma Academy of Science.
The Wisconsin Academy of Sciences, Arts and Letters.

BURTON E. LIVINGSTON
Permanent Secretary

SCIENTIFIC EVENTS

EXPEDITION OF THE CALIFORNIA ACADEMY OF SCIENCES TO THE REVILLAGIGEDO ISLANDS

AMONG the more important activities of the California Academy of Sciences during the present year