

UNITED STATES DEPARTMENT OF COMMERCE

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NATIONAL BUREAU OF STANDARDS

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STANDARDIZATION ACTIVITIES IN THE UNITED STATES

A DESCRIPTIVE DIRECTORY

Sherman F. Booth



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FOREWORD

This volume provides a descriptive inventory of the work of about 350 American organizations involved in standardization activities. It is significant that standards and good measurement practices are disseminated in this country through the work of these many organizations. This Nation's achievement in technology—particularly in mass production and automation—is due in no small measure to such activities.

The National Bureau of Standards is proud of its cooperative association with these organizations. This cooperative roll stems from one of the Bureau's important functions as set forth by the Congress: "Cooperation with other Government agencies and with private organizations in the establishment of standard practices, incorporated in codes and specifications". Through such cooperation the Bureau's effort to develop new and better physical standards serves these organizations in their important task of developing effective industrial standards of practice.

The present volume grew out of the Bureau's interest in furthering these cooperative activities. It describes the organization and functions of the societies and Government agencies that are closely identified with standards activities. It should be of value to manufacturers, engineers, purchasing agents, and writers of standards and specifications.

A. V. ASTIN, *Director*.

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Standardization Activities in the United States

A Descriptive Directory

Sherman F. Booth

I. Introduction

The national technical societies of the United States of America are the very backbone of its standardization achievements. This fact sets our country apart from others wherein the results of standardization stem from a mandatory rather than a voluntary basis. In this country, there is a standardization society for most all widely known product areas, such as textiles, paper, leather, ceramics, plastics, electrical equipment, rubber, cement, etc. These completely autonomous societies operate from paid memberships and without Government interference. The membership of a society usually consists of persons whose daily activities are concerned with the product area covered by the society, and of representatives of firms doing business in that commodity area. They also attract students, young technologists, and others who seek to enhance their professional stature by being abreast and a part of the standardization work in the area of their choosing. Meetings are held regularly and subjects for proposed standards are accepted for assignment to committees for consideration. Within a committee there is a free and thorough exchange of ideas, experiences, data, and other information which is educational and broadening to the participants. Thus each person has the benefit of the knowledge of his colleagues.

Approved standards provide a reservoir of readily available information for immediate use in connection with the evaluation of a product, the purchase or acquisition of a product, the method by which an evaluation is undertaken, or as the subject of a challenge to improve the product or the technique of evaluation. This wealth of available scientific and technical information is also used in the universities and other schools of learning; it provides a line of communication between academic and practical knowledge.

Standardization does not alone treat with the quality of products although this is frequently of prime importance. It also extends to other fields where it is intended to pursue or adopt a uniform material, method, technique, size, nomenclature, service, etc. Anything or any practice, abstract or concrete, concerning which it is expected to limit, regulate, specify, control—to the degree that it is intended to be habitually compounded, performed, mentioned, observed in an orthodox manner—is a standard even though it may not be documented. This definition suggests the enormous breadth and scope of standardization and the limitless fields in which it may be practiced or undertaken.

Standards are not static. As the rudiments of technological aspects of problems become commonplace, as greater knowledge of the chemical and physical characteristics of products are more widely known and accepted, a committee may again be activated to reconsider and

modernize or improve a previously issued standard. Such improvements are regular, frequent, almost routine. There are relatively few documented standards that have never been revised. Thus, standardization agencies find themselves engrossed in the problems of revising standards as well as developing new standards, and to about the same degree. Standardization is dynamic. It must necessarily follow closely upon the heels of science, research, invention, and creation if it is to serve its intended purpose.

Standardization activities of the members of the technical societies are carried forward on an extracurricular basis. Each of the persons in a society who contributes to the development of standards is usually a scientist or technician who is otherwise employed full time. His contributions are frequently made at the expense of his leisure. Accordingly, under this voluntary system, standards development and production are not as great or speedy as one might expect.

However, the overall effort is represented by over 350 organizations which undertake standardization in nearly as many commodity or product areas. The resultant effect is a steady flow, in the world market, of revised and newly created standards. Since most all commodity or product areas are represented by organizations which, in many cases, deal in such products, the total accomplishment has the effect of keeping each particular house in order. Manufacturing and marketing is reduced to standard expressions, values, ratings, etc., such that make competitive products more easily compared and evaluated. This situation is very helpful to the consumer, while at the same time strengthening the competitive system.

Federal Standardization Agencies

While the standards issued by the standardization societies are substantial in number, and especially important in a voluntary and democratic system, they are slow in development. Thus, for its purposes in striving to maintain or achieve technologic supremacy among nations, the Federal Government has a very important stake in standardization. In the total operation of all Government departments, nothing is more important to it. Accordingly, the Federal Government is a very large contributor to the national standardization picture. Even so, there are comparatively few Federal Government standards that are made mandatory by the force of law. And, for the most part, these are standards which affect health or welfare and are desired by the people.

The large bulk of Federal standards are principally matters which affect only the operations of the Federal Government itself, its house-keeping and its defense program. Of these standards there are many thousands. Some 30,000 to 40,000 of these are documented and unclassified as to national security. How many others there are of a classified nature is unpublished. Suffice it to say that in these times of rapid progress, the standardization problem is an enormous one and one that is being done well. Just in the commodity areas of common items that the Government buys and uses frequently, there are about 3,500 standards of purchasing of various types. These standards limit Government purchasing to particular types, grades, qualities. They are known as Federal Specifications. Then, for the more specialized requirements of the Department of Defense, there are many, many more. So that, in the overall national standardization

picture, one finds that the Government is actually making the larger contribution. However, its standards are mandatory upon no one but itself, excepting in the few isolated instances previously mentioned. However, of the thousands of standards which the Government has adopted to regulate itself and its operations, this effort may not be considered as having benefits which accrue only to the good of the Government. Its standardization activities are in large measure related to manufacturing. In this manner, Government standards and standardization are introduced to manufacturers, large and small, and in this way their advantages are entered into routine production line practices and directly felt by the citizenry in their purchases of consumer goods. Thus the effect of Government standardization, which is mandatory upon itself, becomes desirable although permissive by American industry, and the advantages gained are for each to share. Out of these activities have come the framework and basis for mass production of the many things which might not otherwise be available.

Due to experiences during World War I, when standard purchase specifications were not available, standardization at a lower level (commodity standards) began to take shape. Technical societies as well as Government agencies became more interested in the problem, and between the two, a sizable collection of standards and specifications was developed. As time went by, the standards movement grew and grew and the products thereof multiplied until, at this writing, there are more standards and more standardization agencies in this country than ever before. The effort devoted to standardization in the United States far surpasses that of any other country. Moreover, the fruits of American standardization activities are not alone enjoyed by Americans. Evidences of this work are seen throughout the world and in the space beyond.

National Bureau of Standards

Standards of physical measurements are basic to Commerce, Industry, and learning. In one form or another, they are probably the oldest of all types of standards. The establishment and maintenance of such standards is widely accepted as being a logical function of Government. In this way they are shrouded in the authority and prestige which they deserve, and which reinforces their sole use and total acceptance. This fact is extremely important since most all facets of manufacturing and marketing stem from one or more basic standards of physical measurement.

In earlier years, basic standards consisted essentially of measurements, of length, weight, area, and volume. However, with growing technology, new manufactures, and more modern methods, many new basic standards were devised. Whereas, there was principal interest in standards for the foot and pound—progress and growth dictated the need for other standards, such as the volt and ohm, and the creation or revision of other units with which to measure light, temperature, color, time, electrical energy, radioactivity, sound, and many others. Since so much importance is attached to this work, it is significant to note that the Constitution of the United States gives the power to the Congress, to “fix the Standard of Weights and Measures.” In turn, the Congress has entrusted the responsibility for the standards, to the National Bureau of Standards.

In so very few instances do basic standards remain static or ade-

quate. With greater competence in research and broader fields of technology, the need for greater precision and refinement becomes necessary on a continuing basis. This need was felt nearly 60 years ago when the Congress authorized the establishment of a national standardizing laboratory. Out of this action the National Bureau of Standards was inaugurated. Its principal function was to develop and maintain the standards for physical measurement together with the development of calibration techniques for effective utilization. The Bureau was also authorized to determine fundamental physical constants and properties of materials in accordance with the needs of scientific and manufacturing interests.

Because of the wide latitude in the overall responsibility which the Congress has entrusted to the Bureau, its daily work encompasses many scientific fields. Some of its activities are suggested by the organizational area into which its work is divided: Electricity and Electronics, Optics and Metrology, Heat, Atomic and Radiation Physics, Chemistry, Mechanics, Organic and Fibrous Materials, Metallurgy, Mineral Products, Building Technology, Applied Mathematics, Data Processing Systems, and Radio Propagation.

Thus, the major portion of the Bureau's work in standards is quite different from the standardization work of the many organizations hereinafter described. Of two general categories, the Bureau's work is with basic scientific standards of physical measurement. The standardization work of the following standards organizations deals directly with commodities or matters appertaining thereto.

II. Standardizing Agencies, Nongovernmental

On the pages that follow, it has been the intention of the author to present alphabetically by name, associations, institutes, societies, organizations, or agencies that undertake some substantial degree of creative standardization and in conjunction with each one, to present an outline of its standardization area and accomplishments. In many instances, the name of a group gives or suggests the commodity area of greatest or singular interest. When it becomes necessary to identify a group which has a particular commodity interest, the index in the closing pages may be consulted by subject.

ABRASIVE GRAIN ASSOCIATION, Thomas Associates, Managers, 2130 Keith Building, Cleveland 15, Ohio

Standardization and simplification activities of this Association are carried on by its Technical Committee. One phase of the committee's work has been the development of a Simplified Practice Recommendation R118-50, Abrasive Grain Sizes, which was developed under the auspices of, and promulgated by the Office of Technical Services, Commodity Standards Division, U.S. Department of Commerce. The Technical Committee has developed standard procedures for the measurement of capillarity of electrically fused aluminum oxide abrasives for polishing use and a test procedure for the measurement of bulk density of artificial abrasive material. The current activities of this committee are directed toward more uniform application of the Simplified Practice Recommendation throughout the industry and the development of additional recommended test procedures for the measurement of physical properties of the material.

**AGRICULTURAL AMMONIA INSTITUTE, Jack F. Criswell,
Executive Vice President, Room 304, Hotel Claridge, Memphis,
Tennessee**

The Institute has developed "Standards for the Storage and Handling of Anhydrous Ammonia." These standards were prepared by the Engineering Standards and Standardization Committee. They treat with such subjects as Basic Rules, Cylinder Systems, Truck-Mounted Tanks, and Refrigerated Storage wherein the following matters are involved: Approval, Tests, Marking, Valves and Accessories, Pipe, Tube and Fittings, Safety Devices, Filling Densities, Gaging Devices, and other matters.

**AIR-CONDITIONING AND REFRIGERATION INSTITUTE,
George S. Jones, Jr., Managing Director, 1346 Connecticut Avenue
NW., Washington 6, D.C.**

The Air-Conditioning and Refrigeration Institute is a manufacturers' trade association that is recognized as representing the entire air-conditioning and refrigeration industry. The Air-Conditioning and Refrigeration Institute was formed in May 1953, by the merging of the Refrigeration Equipment Manufacturers Association (REMA) and the Air Conditioning and Refrigerating Machinery Association (ACRMA). The standardization activities of ARI fall into the following general classifications:

Equipment Standards—Standards pertaining to the physical characteristics of items and equipment.

Testing Standards—Standards containing instructions for testing a piece of equipment in order to determine its performance characteristics.

Rating Standards—Standards which contain provisions for converting data into general statements of capacity and performance which can be applied to a series of production items.

Application Standards—Standards which describe and specify acceptable installation criteria, including the initial selection of the equipment.

Safety Standards—Standards which contain provisions intended to safeguard life, health, and property.

At the present time, ARI has issued standards covering the following types of equipment and components in the industry: Room Air-Conditioners, Unitary Air-Conditioning Equipment, Unitary Heat Pump Equipment, Unitary Heat-Operated Air-Conditioning Equipment, Condensing Units, Condensers, Receivers, Water and Brine Coolers, Air-Cooling Coils, Free-Delivery Air Coolers for Refrigeration, Remote-Type Air-Handling Units, Fan-Coil Units, Compressors, Liquid-Chilling Packages, Liquid-Line Driers, Refrigeration Flare Fittings, Automatic Self-Contained Ice-Makers, Water Cooling Towers, Self-Contained Mechanically-Refrigerated Drinking-Water Coolers, Solenoid Valves, and Refrigerants in Disposable Containers.

In addition to equipment standards, ARI has published a number of application standards, including cooling load estimate forms for various applications, and has issued two technical booklets covering refrigerant properties and equipment corrosion.

ARI also maintains certification programs for certain types of

equipment, and these programs involve the use of an ARI seal of approval for equipment manufactured and rated in accordance with the applicable ARI standards.

ARI maintains representation on 10 sectional committees functioning under the procedure of the American Standards Association, in addition to being represented on the ASA Mechanical Standards Board, Standards Council, and Board of Directors. ARI also works closely with other industry groups in connection with proposed standards affecting products falling within the scope of the Institute.

AEROSPACE INDUSTRIES ASSOCIATION, I. C. Peterson, Director, Technical Service, 610 Shoreham Building, Washington 5, D.C.

The standardization activities of this association are carried on by three committees as follows:

NATIONAL AIRCRAFT STANDARDS COMMITTEE (airframe and missiles)—This is the working technical committee for the aircraft and guided-missile manufacturers in the field of standardization. Committee membership, currently 33, is limited to member companies and their divisions engaged in the design and manufacture of complete aircraft, helicopters, or missiles.

NASC concentrates upon the study and resolution of industry standardization problems associated with parts, components, materials and processes, and as applied to related standards and specifications. The findings of such study are implemented by the development and adoption of appropriate industry NAS standards, by the promotion of such standards consistent with improved design, and by participation in programs of the Department of Defense, other Government agencies, and related activities in the field of standardization.

For 18 years the NASC has worked intensively in the field of standardization for the aeronautical industry. Over 1,000 National Aircraft Standards have been developed, issued, and revised as required to reflect industry needs.

Of particular interest is the extensive participation by NASC in the increasing effort by the Government and military services to develop standards. The committee serves, on a voluntary basis, to evaluate Government proposals for standardization related to the aeronautical industry. Industry's vast experience and knowledge are brought to bear on many specification or standardization problems for the benefit of government agencies. This "industry coordination" by NASC includes the review of proposed military aeronautical specifications, directives, regulations, and policies regarding standardization and the furnishing of appropriate industry recommendations.

A more formal activity of the NASC is its participation as a member of the Council for Military Aircraft Standards (CMAS). This Council consists of representatives of the Aeronautical Standards Group, Air Force and Navy, and the officers of NASC, with consideration currently being given to the possibility of representation by other military agencies. The principal function of the Council is to foster standardization, making recommendations to the services for the standardization of specifications, drawings, bulletins, and similar documents related to airframe parts, materials, and processes.

PROPULSION TECHNICAL COMMITTEE (engines and propellers)—

Engine and propeller standard utility parts are intended to reflect the existing stage of technical development based on sound, established engineering practices in the engine and propeller industries. The criteria in effect is that two or more users consider the product to be suitable for production use, as demonstrated by actual aircraft engine or propeller tests.

Detail development of engine and propeller standard utility parts is assigned to an SAE committee (E-25) by the Engine and Propeller Committees of the AIA Propulsion Technical Committee. Standards thus developed are then approved by the AIA committees and transmitted to the Government for adoption and publication.

ELECTRONIC EQUIPMENT TECHNICAL COMMITTEE (electronic components)—This committee is a working Technical Committee for manufacturers of Electronic Equipment and Systems for Aircraft and Missiles in the field of standardization.

This Committee has developed and issued 20 procurement documents for electronic parts not covered by military specifications. However, the Committee's main emphasis is toward assisting the Military to develop an adequate Military overall electronics parts program.

The Committee prepares AIA Electronic Segment's position on component parts requirements, and represents AIA Electronic Segment in coordination meetings with the Military on subjects within its scope.

It defines to parts manufacturers the areas and parts believed most urgently in need of improvement and promotes development through the Military of these new and improved parts for application by industry, in design of critical Military equipments.

It also urges earlier development and issuance of specifications and standards for electronic components so as to reduce the interval between parts development and the procurement specifications therefor.

AIR DISTRIBUTION INSTITUTE, Thomas Associates, Inc., Commissioners, 2130 Keith Building, Cleveland 15, Ohio

The standardization and simplification activities of this association are carried on by the Simplification and Standardization Committee. The work of this committee has been confined to simplification matters. It initiated and has continued a program of simplification of sizes of pipes, ducts, and fittings for warm-air heating and air-conditioning systems. Their work has resulted in the establishment of Simplified Practice Recommendation R207-56, which is promulgated and published by the Commodity Standards Division of the U.S. Department of Commerce.

AIR MOVING AND CONDITIONING ASSOCIATION, INC., Marshall F. Allen, Executive Vice [President, 2159 Guardian Building, Detroit 26, Michigan

A nonprofit trade association representing a group of about 60 competitive manufacturers of air moving and conditioning devices in the United States and Canada. Member companies manufacture products falling within one or more of the association's major product divisions; centrifugal fans, industrial axial and propeller fans, central station air-conditioning units, power roof ventilators, unit heaters,

residential fans, and heating and cooling coils. The research programs of AMCA are conducted by its Engineering and its Standards Committees and are directed toward improvement of products and methods of utilization for the above-mentioned products. Technical information and statistical sales data are compiled.

AMCA collects and publicizes information on air moving and conditioning devices through its publications and meetings. The association maintains an active program on the development and promulgation of product standards and test codes for air moving and conditioning devices. To date, standards have been adopted for centrifugal, axial and propeller fans, steam and hot water unit heaters, dehumidifying air washers, central station air-conditioning units, power roof ventilators, and residential (attic, window, etc.) type fan products. Other standards are in the process of adoption. Many AMCA standards and test codes have been developed in collaboration with groups such as the American Society of Heating and Air-Conditioning Engineers.

In the interest of both industry and the public, AMCA has adopted a Standard Test Code and Laboratory Standards which now provide a uniform procedure for determining performance ratings of fan products. To identify products which have been tested and rated in accordance with these uniform testing requirements, the association has adopted a seal—"AMCA Certified Rating." This seal is a symbol saying that the manufacturer has qualified his product to meet all obligations of the AMCA Test Code and Laboratory Standards within the terms of a license agreement, is the property of the association, and its use authorized only to qualified manufacturers licensed for its use. The licensee may use it on the product in advertising and literature, provided it is unmistakably identified only with approved products.

ALUMINUM SMELTERS RESEARCH INSTITUTE (formerly Aluminum Research Institute), Carl H. Burton, Secretary, 20 North Wacker Drive, Chicago 6, Illinois

This organization's technical work in matters relating to standardization is carried on by its Chemists' Committee, consisting of the chief chemists of the secondary aluminum manufacturers that compose the Institute's membership. This Committee's activities include cooperation with similar committees of technical bodies.

One of the projects developed by the committee which has been adopted by the Institute and is being widely used in the industry concerns the standardization of methods of sampling and analyzing aluminum and certain aluminum alloys.

AMATEUR ATHLETIC UNION OF THE UNITED STATES, James F. Simms, Secretary, 233 Broadway, New York 7, N.Y.

Among the several objects of this organization are the establishment and maintenance throughout the United States of a uniform test of amateur standing, and uniform rules for the government of all athletic sports within its jurisdiction; the institution, regulation, and awarding of the amateur athletic championships of the United States; and the institution of a bureau of records covering all branches of amateur sport in the United States.

This union recognizes all amateur sports and claims jurisdiction over basketball, boxing, gymnastics, handball; running, including hurdle, obstacle racing, and steeplechasing; walking, jumping, pole vaulting; putting shot and throwing hammer, weights, javelin, and discus; swimming, water polo, tug-of-war, catch-as-catch-can wrestling, Greco-Roman wrestling, weight lifting, volley ball, indoor baseball, squash ball, code ball, field handball, bob-sleighbing and coasting, horseshoe pitching, Judo, baton twirling, skindiving, and ice hockey. The Union conducts the championships of the United States in all these sports, and its 48 district associations, covering the entire United States, annually hold the district championships.

The establishment of standard definitions of rules for the government of athletic sports are formulated by the board of governors, which is elected each year and is representative of the active and allied member associations of the union. Besides the adoption of standard contest rules for the various sports under its jurisdiction, the union also fixes standards on dimensions, weights, material, and shapes of the various implements, balls, etc., entering into athletic contests.

**AMERICAN ARBITRATION ASSOCIATION, Joseph S. Murphy,
Vice President, 477 Madison Avenue, New York 22, N.Y.**

This Association is a national organization established in 1926 to advance the knowledge and use of voluntary arbitration. As such, it is an integral part of the self-regulating system of American free enterprise. The Association is a membership corporation, chartered under the laws of New York State. It is a privately organized and financed institution of a scientific and educational nature. It is nonpartisan, nonpolitical, and nonproftmaking.

In addition to its vast educational program, the Association administers a number of arbitration tribunals of which the most important are: Commercial, Labor, Accident Claims, International, and Inter-American. Each tribunal is administered by rules and standards of procedure which govern the conduct of parties, arbitrators and the Association as the administrative agency. Arbitrations thus administered under the Association's Rules, the Code of Ethics and standards of procedure result in proper arbitration enforceable under law. In addition, under the ethical standards established, parties involved in disputes are enabled on many an occasion to continue relationships with each other without resentment and friction that may result from haphazard resolution of disputes.

**AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF
SCIENCE, Dael Wolfe, Executive Officer, 1515 Massachusetts
Avenue NW., Washington 5, D.C.**

This association is represented on the Advisory Board of the Office of Critical Tables of the National Academy of Sciences. It cooperates with other organizations, under the procedure of the American Standards Association, through representation on the American Standards Association's Sectional Committee on Letter Symbols and Abbreviations for Science and Engineering, and it is represented on the U.S. Committee, of ISO Technical Committee 37—Terminology.

**AMERICAN ASSOCIATION OF CEREAL CHEMISTS, INC.,
Clinton L. Brooke, President, c/o Merck & Company, Rahway,
New Jersey**

Among the stated objectives of this Association is the encouragement of scientific and technical research on cereal grains and their products, the study of development and standardization of analytical methods used in cereal chemistry, and the promotion of the spirit of scientific cooperation among all workers in the field of cereal chemistry. A number of technical committees are appointed by the Association to carry on the collaborative studies and to organize work around definite cereal problems of interest and usefulness. These committees are engaged in subjects dealing with methods of analysis; standardization of laboratory baking; testing methods for cake flours, cookie flours, cracker flours, and prepared baking mixes; and standardization of Farinograph methods and equipment, flour specifications, sanitation methods, and experimental milling procedures.

In addition, the Association maintains a technical policy committee that supervises and coordinates the work of the technical committees, fosters cooperation with other scientific societies having common problems and interests, and supervises operations of a standing committee on revision of Cereal Laboratory Methods. This book is now in its sixth revised edition and is devoted to a description of methods for the chemical analysis of wheat and flour, physical properties of doughs, bread staling, prepared mix ingredients, amylase activity, etc., and includes a concise chapter on statistical principles and over 80 pages of reference tables.

**AMERICAN ASSOCIATION OF NURSERYMEN, Richard P.
White, Executive Vice President, 635 Southern Building, Wash-
ington 5, D.C.**

Through its Standardization Committee, this Association has adopted uniform grading standards covering height measurements and tolerance of deciduous trees and shrubs; standard types of vines; commercial grades of evergreens; grades of various roses; grades of large and small fruit trees; bulbs, corms, and tubers; designation of lining-out stock, and trees for forest planting. It has also issued recommended specifications for balling and burlapping, giving minimum sizes of balls, ball depths, and weight equivalent to ball sizes.

The Association served as sponsor for "American Standard for Nursery Stock," Z60.1.

**AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS,
A. E. Johnson, Executive Secretary, 917 National Press Building,
Washington 4, D.C.**

In accord with the bylaws of the Association there is a Standing Committee on Standards composed of the chairman of the several operating committees subsidiary thereto. This committee through these various operating committees shall investigate, study, and report on all engineering activities, including all phases of road and bridge design, construction, maintenance, traffic requirements, roadside development, tests and investigation of materials, and all phases of highway research. More specifically, these operating committees will promote and develop the intimate contacts that are essential in

(1) keeping their respective specifications, manuals, and standards representative of the best current practice; (2) encouraging their adoption and use; and (3) promoting engineering research in their respective fields to obtain factual data and improvements in materials and practices, and in addition will have the following specific primary purposes: (a) Planning and Design Policies: To investigate available data, pursue studies and recommend policies for the development of planning and design standards, which will advance to a maximum degree the utility and safety of highways in rural and urban areas. (Membership on this Committee is regional and by appointment of the President of the Association, with the approval of the Executive Committee.) Other operating committees are (b) Traffic; (c) Design (Geology); (d) Bridges and Structures; (e) Materials; (f) Construction; (g) Maintenance and Equipment; (h) Roadside Development; (i) Research Activities; and (j) Design, Construction and Maintenance of Secondary Roads.

Additional committees are as follows: Under the Standing Committee on Administration the following subcommittees have been created: (a) Administrative Practices; (b) Highway Finance; (c) Highway Transport; (d) Legal Affairs; (e) Right-of-Way; (f) Uniform Accounting; (g) Public Information; (h) Factual Surveys; (i) Electronics (Radio).

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, George P. Paine, Executive Secretary, AATCC National Headquarters, Box 28, Lowell, Massachusetts

This Association was organized in 1921 for the purpose of promoting the increase of knowledge of the application of dyes and chemicals in the textile industry, and of encouraging in any practical way research work on chemical processes and materials of importance to the textile industry.

The membership of the Association of approximately 7,000 includes most of the leading textile chemists and colorists of the country, as well as members from Canada and 47 different foreign countries.

Since the inception of the Association, the work of the Research Committees has been one of its most important activities. These Committees meet frequently and are so organized as to include about 400 of the more prominent textile chemists and colorists of the country. There are 79 subcommittees, each engaged in some specific phase of the work. These subcommittees have been so organized as to represent as far as possible not only the diversified interests of the textile and color application industries but also distributing and consuming groups.

In the early years of the Association the Research Committees concentrated their efforts upon the establishment of fastness standards for dyed textile materials; developing laboratory methods for classifying degrees of fastness and then selecting certain dyes, which, when properly applied, would represent each class.

Standard test methods were thus established for fastness of dyed cotton, rayon, wool and silk to light, mill washing or laundering, fulling, bleaching and stoving; also fastness to rubbing or crocking, perspiration, acids, alkalies, carbonization and sea water. Standard dyeings on cotton, wool, and silk have been prepared representing the various degrees of fastness to light, to mill washing and laundering, and to rubbing or crocking.

The growing interest of consumers in merchandise quality has emphasized the importance of the work on standard test methods in which the Association has been engaged since its very beginning. Many of the standard test methods worked out by this Association are being adopted by the Federal Government and such groups as the American Society for Testing Materials, American Standards Association, and manufacturers of dyestuffs.

Standard methods for determining the fastness of dyestuffs on the fiber have been devised by the Association through its research committees in order to make possible the specification of the fastness of colored textiles or dyestuffs as they are used on textiles, to the various color destroying agencies.

It has also developed standard methods applicable to specific fibers for determination of shrinkage in washable woven cotton fabrics, methods of fiber identification and quantitative separation, tests for transference of color, method of testing for mothproofing, fastness to atmospheric gases of dyes on cellulose acetate rayon, determination of degree of mercerization of cotton, and determination of weighting in silk.

**AMERICAN AUTOMOBILE ASSOCIATION, Russell E. Singer,
Executive Vice President, 1712 G Street NW., Washington 6, D.C.**

The Association has developed independently or, in cooperation with other organizations, numerous standards and models for motor vehicle legislation in the States and cities, designed to promote the safe and efficient movement of traffic. It developed a Model Safety Responsibility Bill and cooperated actively in the development of the Uniform Vehicle Code and the Model Traffic Ordinance.

It developed a guide as to standards for State legislation on roadside development and control.

The Association participated in the development of standards for traffic signs, signals, markings, and islands set forth in a Manual on Uniform Traffic Control Devices.

The Association has formulated a model ordinance for municipal regulation of offstreet parking facilities.

The Association has developed proposed standards of various types relating to increasing the safety and convenience of pedestrians in traffic.

It has developed detailed methods and various proposed standards for training new drivers. For several years it has been studying methods of examination of applicants for drivers' licenses with the idea of improving standards therefor.

The Association cooperates from time to time with the National Bureau of Standards, in connection with brake testing and headlight testing, and has prepared charts for the standardization of testing headlight adjustment without special machinery.

The AAA is represented with other organizations on sectional committees of the American Standards Association dealing with standards for proper maintenance of motor vehicles and specifications and methods of test for safety glass, brakes, headlights, etc.

The Association has developed, in cooperation with other organizations, standards for the operation of School Safety Patrols.

The Association cooperates with other organizations in the field of traffic law enforcement, traffic training procedures, etc. It is a mem-

ber of the Committee on Uniform Accident Statistics, the object of which is to develop, improve, and promote standard forms, definitions, and practices for the collection and summarization of traffic accident information and to promote increased use of such information.

AMERICAN BLEACHED SHELLAC MANUFACTURERS ASSOCIATION, INC., Henry E. Blanchford, Secretary, 51 Pine Street, New York 5, N.Y.

With the approval and endorsement of the United States Shellac Importer's Association, the American Bleached Shellac Manufacturers Association published "Official Methods of Analysis, Standards, Specifications and General Information on Shellac and Bleached Shellac." This publication, first edition of which was issued in 1923, was revised and reissued in 1957, and it continues to be of help to those who are familiar with the properties of shellac and shellac varnishes.

AMERICAN BOILER MANUFACTURERS ASSOCIATION AND AFFILIATED INDUSTRIES, A. C. Baker, Secretary, 4062 Mayfield Road, Cleveland 21, Ohio; AMERICAN BOILER AND AFFILIATED INDUSTRIES—STANDARDS COMMITTEE—H. E. Aldrich, Manager, 15 Park Row, New York 38, N.Y.

This Association, established in 1888, represents the boiler manufacturing industry engaged in the production of all types of steel steam boilers for stationary and marine use (except steel heating boilers as defined in section IV of the ASME Boiler and Pressure Vessel Code, Scotch-type boilers for stationary use, vertical fire-tube boilers, horizontal fire-box boilers, tubeless boilers, oil country boilers, miniature boilers, and boilers for locomotives); mechanical stokers with a capacity of over 1,200 lb coal per hour; pulverized fuel equipment; superheaters; air heaters and economizers.

The standardization work of this Association is carried on by the Standards Committee under which Subcommittees function representing the various branches of the Industry and several technical Subcommittees, the titles of which are indicative of the duties performed.

The Committee on Performance prepares recommended contract forms which are made available to manufacturers, engineers specifying the products, and users. One problem in connection with the operation of steam generating equipment pertains to feed water. A Subgroup of the Committee on Performance prepared standards on feed water conditions which are recommended for use in connection with guarantees of steam purity.

The Performance Forms Committee likewise prepares recommended performance forms which give the proper methods by which to state predicted or guaranteed performance. This Committee was also responsible for the development of a complete Lexicon giving definitions of words and terms used in connection with steam generating equipment.

The Stoker and Pulverizer Technical Committees are responsible for similar activities in application to the respective products.

The various standards resulting from these activities are published in a Manual of Industry Standards and Engineering Information, the first edition of which was produced in 1939 and the fifth edition was issued in 1958. Outside of the previous mentioned forms for

use in contracts, the Lexicon, and other technical data, it includes a section on "Coal Analyses" which lists tests on "grindability," a factor controlling the performance of pulverizers. This publication is limited in distribution, but is made available to the manufacturers, engineers who write specifications for the various products, and purchasers.

The Technical Committee for the Packaged Steam Generator Branch developed standards such as "Recommended Number of Access and Inspection Openings," "Recommended Controls and Standard Burner Sequence for Automatically Operated Package Steam Generators," and a Test Code for these units.

This Association cooperates with the Uniform Boiler and Pressure Vessel Laws Society and the National Board of Boiler and Pressure Vessel Inspectors in connection with the promotion of Uniform Boiler Laws and Regulations and their uniform administration thereof. It is officially represented on American Standards Association Sectional Committees dealing with subject matters of interest, on the committee of the National Fire Protection Association which developed the Code for the Installation and Operation of Pulverized Coal Systems, and with other organizations which develop standards involving safety or operational standards for products used in connection with steam generating equipment.

**AMERICAN BOTTLERS OF CARBONATED BEVERAGES,
John J. Riley, Secretary, 1128 16th Street NW., Washington 6, D.C.**

In order to eliminate many of the difficulties arising in connection with sugar, a Standard for "Bottlers" sugar has been established. Also, a standard has been recommended concerning the composition of solutions used for washing beverage bottles. Standard methods of control covering water, sugar, carbon dioxide, bottle washing solutions, and sanitation are suggested.

Special service for checking these items is given through the activities of the laboratory maintained by the Association at its Headquarters office.

**AMERICAN BRUSH MANUFACTURERS ASSOCIATION,
Robert C. Fernley, Secretary, 1900 Arch Street, Philadelphia 3,
Pennsylvania**

Simplification and the establishment of standard sizes of various types of brushes have been carried on very actively by this Association. Under the auspices of the National Bureau of Standards, it initiated movements which resulted in the establishment of Simplified Practice Recommendations: R43-28 for paint and varnish brushes, R88-37 for sweeps, R121-31 for block sizes for calcimine brushes, and R167-37 for counter, window, and radiator brushes. These Recommendations have been promulgated and published by the National Bureau of Standards.

**AMERICAN BUREAU OF SHIPPING, Harold M. Wick, Assistant
Vice President, 45 Broad Street, New York 4, N.Y.**

The work of this Bureau may be briefly summarized as follows: (1) The preparation of rules for the construction of hulls and machinery, including material specifications, and detail regulations for periodic surveys, etc. These rules are modified yearly in order to keep

pace with developments in shipbuilding and marine engineering; they are the standards by which the eligibility of vessels submitted for classification is determined; (2) the carrying out, when specifically requested by owners and builders, of such other work as relates to structural design, construction, and maintenance of merchant ships, and also such important matters as relate to subdivision, etc.; (3) the investigation by the technical staff of details in connection with the preparation of new rules and the analysis of the Surveyors' reports of surveys made on vessels in operation with a view to determining what amendments in the existing rules experience has shown to be desirable; (4) the yearly publication in the Record, a ship register, of the essential particulars of the hulls and machinery Classed with the Bureau, the Classification assigned to each particular vessel, and the dates when the various surveys were made. Particulars of American vessels not Classed with the Bureau and also the larger foreign vessels which regularly visit United States ports are also given in the Record for the information of the subscribers; (5) the issuance of certificates of character for merchant ships, their machinery and equipment, i.e., classification certificates, seaworthy certificates, etc., based on surveyors' reports; (6) the carrying out of load line surveys in accordance with the Coast Guard regulations, and the granting of load line certificates after the freeboard markings on the vessel's sides have been duly verified and found to be in accordance with the freeboard.

The operations of the Bureau are worldwide in scope. Offices are maintained in the principal seaports and shipbuilding centers of the world. These offices are staffed with experienced ship surveyors.

In addition to maintaining many Technical Committees in the United States for the purpose of keeping up to date its "Rules for the Building and Classing of Steel Vessels," Advisory Technical Committees are maintained in Belgium, Holland, Italy, the Netherlands, and the United Kingdom.

Another function of the Bureau outside of the sphere of the Classification of ships is the testing by its surveyors of cargo-handling gear on board ship. This is done at the request of ship owners and safety certificates are issued which are recognized by the United States Coast Guard.

In accordance with the provisions of Appendix A of Regulations of the National Fire Protection Association governing marine fire hazards adopted in 1930, all chemists who test ships' compartments, tanks, etc., as to gas content are required to be certified as to qualifications by the American Bureau of Shipping. In order to obtain such certification, each chemist must submit his qualifications as to education, experience, and character through the American Bureau of Shipping for approval by the technologist of the American Petroleum Institute; each such certification of the chemist is valid for a period of 5 years. In conformity with this procedure the American Bureau of Shipping has certified chemists in most of the maritime States of the United States and in Canada and the West Indies, all of whom are required to report regularly to the Bureau regarding all activities related to gas-free certification carried out under their jurisdiction.

The Bureau cooperates to the fullest extent with other organizations associated with merchant marine activities. Members of its staff are represented on committees dealing with a wide variety of subjects, such as standing committees of the American Society for Testing Materials, American Welding Society, the Welding Research

Council of the Engineering Foundation, American Standards Association, American Institute of Electrical Engineers, National Fire Protection, National Safety Council (Marine Section), and technical committees of the American Merchant Marine Institute and the Shipbuilders Council of America. The technical staff carried out considerable investigation work in preparation for the International Conference for the Safety of Life at Sea held in 1929 and 1948; and for the International Load Line Convention held in London in 1930; the Bureau was directly represented on the United States delegation attending these international conventions.

AMERICAN BUTTER INSTITUTE, Russell Fifer, Executive Secretary, 110 North Franklin Street, Chicago 6, Illinois

The Institute, founded in 1908, is the only national trade association for butter manufacturers and distributors. One of its principal association activities is the standardization of laboratory techniques and materials or supplies used in the butter industry. It is striving to standardize butter cartons from 150 sizes down to 3. It is also promoting standardized marking on bulk butter boxes to facilitate handling.

During recent years, standardized procedures and tests for checking the quality of cream and butter have been adopted. These tests were standardized in cooperation with the U.S. Food and Drug Administration.

AMERICAN CERAMIC SOCIETY, Charles S. Pearce, General Secretary, 4055 North High Street, Columbus 14, Ohio

The American Ceramic Society does not, of itself, carry on any standardization activity but acts through the interest of members on the various committees of other organizations.

The American Ceramic Society maintains committee relationship with the American Society for Testing Materials and the American Standards Association covering ceramic products.

These products consist of abrasives, cement, lime, gypsum, enamels, glass, refractories, structural clay products, white wares, and newer ceramic products in the electronic field.

AMERICAN CHEMICAL SOCIETY, Alden H. Emery, Executive Secretary, 1155 16th Street NW., Washington 6, D.C.

The development and revision of recommended specifications for analytical reagent chemicals is a continuing project of the Society. It is carried on by the Committee on Analytical Reagents which directs studies and submits recommended standards to the Council of the Society for approval. When approved, these specifications and test methods are edited and reproduced in book form. The work of the ACS Committee on Nomenclature, Spelling, and Pronunciation has been of great importance. Centered in "Chemical Abstracts" since 1911, the work of the committee is reflected in that ACS publication. This committee maintains close contact with the Commissions of the International Union of Pure and Applied Chemistry on which members of the ACS committee frequently serve.

The Society cooperates with other organizations engaged in standardization work. It has a committee on Standardization Relations

charged with responsibility for reviewing invitations to participate, and surveying areas where assistance from members of the chemical profession might be desirable.

**AMERICAN COLLEGE OF SURGEONS, I. S. Ravdin, M.D.,
Chairman, Board of Regents; Paul R. Hawley, M.D., The Director,
40 East Erie Street, Chicago 11, Illinois**

The College is solely responsible at the national level for the standardization and approval of cancer programs in the United States, its territories, Canada and Cuba. The College cooperates with other recognized national medical organizations in the accreditation of hospitals, in the approval of graduate training programs in general surgery and the surgical specialties, in the development of standards for blood transfusions, and in the standardization of certain surgical equipment. Since 1953 the College has been engaged in a cooperative effort to standardize hospital statistical procedures and methods and has developed a method to evaluate the quality of patient care in hospitals.

**AMERICAN CONCRETE INSTITUTE, William A. Maples, Sec-
retary-Treasurer, 22400 West Seven Mile Road, Detroit 19, Michi-
gan**

Since its organization in 1905, this Institute has been devoted to the solution of technical problems related to the design, construction, and maintenance of concrete and reinforced concrete structures and to the dissemination of information in this field.

More than 40 technical committees study specialized problems through evaluation of published information, reports of research, and majority opinion based on field practices leading to the development of committee reports. The eventual aim of committee activity is the evolution of the committee reports into Standards after discussion by the Institute membership and consideration by the Standards Committee and a letter ballot of the members.

Institute standards are confined to specifications and recommended practices related to structures as a whole. Standardization of basic materials and "over the counter" components are deliberately excluded from the scope of its standardization procedures.

Current standards of the Institute are building code requirements for reinforced concrete, manual of standard practice for detailing reinforced-concrete structures, test procedure to determine bond value of reinforcing bars, specifications for concrete chimneys and for concrete pavements and bases, minimum standard requirements for precast concrete floor and roof units, and recommended practices for evaluation of strength test results of field concrete, design of concrete pavements, winter concreting, selecting proportions for concrete, measuring, mixing, and placing concrete, application of portland cement base paint to concrete surfaces, construction of farm silos, and application of mortars by pneumatic pressure. The application of these standards is supplemented by more detailed information in such publications as "ACI Manual of Concrete Inspection" and the "Reinforced Concrete Design Handbook."

Work is in progress on new standards related to curing concrete, hot weather concreting, permissible stresses in unreinforced concrete, prestressed concrete, residential concrete work, proportioning light-

weight aggregate concrete, and specifications for structural concrete and formwork.

The Institute cooperates with other organizations in related standardization work; American Standards Association, American Society for Testing Materials, and the American Welding Society.

AMERICAN CONCRETE PIPE ASSOCIATION, Howard F. Peckworth, Managing Director, 228 North La Salle Street, Chicago 1, Illinois

Specifications for concrete pipe adopted by this Association are those which have been prepared by Committee C13 on Concrete Pipe of the American Society for Testing Materials on which the Association is officially represented. These specifications are for concrete sewer pipe, reinforced concrete culvert, storm drain and sewer pipe, concrete irrigation pipe, reinforced concrete low-head pressure pipe, and concrete drain tile.

The Association has also cooperated with the General Services Administration of the Federal Government in the development and publication of Federal Specifications for concrete sewer pipe and reinforced-concrete sewer pipe.

Recommendations for the design and installation of concrete pipe culverts under high fills have been prepared by the U.S. Bureau of Public Roads with the assistance of this Association. The Association has also assisted the Corps of Engineers, U.S. Army, in the preparation of guide specifications on concrete pipe.

AMERICAN DENTAL TRADE ASSOCIATION, Wilmoth C. Mack, Secretary, 1010 Vermont Avenue NW., Washington 5, D.C.

One of the standardization activities of this organization is a color-shade standardization program on which the color formula and identification have been propounded for the main colors used on dental equipment by manufacturers.

Another program of long standing is the adoption of uniform catalog page size, punching, and paper weight specifications for use by dental supply dealers and manufacturers.

For the past 35 years the Association has maintained a "Standard Manual of Accounting for Dental Dealers" which is revised about every 5 years to keep it up to date with modern accounting practices and procedures.

AMERICAN DRY MILK INSTITUTE, INC., B. W. Fairbanks, Director, 221 North La Salle Street, Chicago 1, Illinois

The Institute, operating through its Standards Committee, is continuously engaged in the establishment and improvement of standards for the grading of dry milk products, including nonfat dry milk, dry buttermilk, and dry whole milk. The standards, grades, and methods of analysis developed by the Institute have also been adopted by various Government agencies. These standards, which are designed to measure general overall product quality, are widely used by both the manufacturers of dry milk products and the users of these products.

Aside from its interest in product standards, the Institute, operating through its Packaging Committee, also tests and approves containers for the bulk packaging of dry milk. Containers, which meet the

requirements established by the Packaging Committee, are recommended to the industry.

**AMERICAN ELECTROPLATERS' SOCIETY, John P. Nichols,
Executive Secretary, 445 Broad Street, Newark 2, New Jersey**

This Society is actively interested in standards pertaining to electroplated coatings. It relies on the work of ASTM Committee B8 on Electrodeposited Metallic Coatings and endorses the standards prepared by Committee B8, whose members are, for the most part, members of the American Electroplaters' Society. Formal representation is also maintained on ASTM Committees A5 on Corrosion of Iron and Steel, D19 on Industrial Water, and B7 on the Anodic Oxidation of Aluminum and Magnesium Alloys, as well as American Standards Association Committees Z74 on Performance of Effluent Air and Gas Cleaning Equipment and Z9 on Safety Codes for Exhaust Systems.

From 1935 to 1941 the American Electroplaters' Society, the American Society for Testing Materials, and the National Bureau of Standards jointly prepared five specifications for electrodeposited metallic coatings and one method of test. In addition, the AES has endorsed two specifications, one method of test, and seven recommended practices prepared by the ASTM.

**AMERICAN FEED MANUFACTURERS' ASSOCIATION, INC.,
W. E. Glennon, President, 53 West Jackson Boulevard, Chicago 4,
Illinois**

This Association cooperates very closely with the Association of American Feed Control Officials, both of which have been in existence for 50 years. The work of this organization has to do with bringing about uniformity as far as possible in all State laws regulating the manufacture, distribution, and sale of commercial feeding stuff. Every State in the Union except one has at the present time enacted legislation concerning regulations and specifications of commercial feeds sold in the States.

This Association cooperates also with the Food and Drug Administration, in its enforcement of the Federal Food, Drug, and Cosmetic Act.

**AMERICAN FOUNDRYMEN'S SOCIETY, W. W. Maloney, Gen-
eral Manager, Golf and Wolf Roads, Des Plaines, Illinois**

With the exception of standards which the Society has developed for the evaluation of foundry sands, standardization has been carried out in cooperation with the American Society for Testing Materials and the American Standards Association by the appointment of representatives to serve on committees of these organizations.

Realizing the need for having industry-developed foundry process codes, it has continued its activities in the field of Safety, Hygiene, and Air Pollution Control. As a result of this program the Society has developed: Engineering Manual for Control of In-Plant Environment in Foundries; Foundry Air Pollution Control Manual; Manual of Safe Practices for the Protection of Workers in Foundries; Safe Practices Manual for Welding, Cutting, and Similar Operations; Symposium on Foundry Safety, Health, and Air Pollution; Health

Protection in Foundry Practice; and the Foundry Noise Control Manual.

As a result of representation on a sizable number of technical committees of the American Society for Testing Materials, it has cooperated in the development of specifications dealing with both cast metallic and nonmetallic materials covering a broad range of commodities.

AMERICAN GAGE DESIGN COMMITTEE, M. L. Fruechtenicht, Chairman, Department of the Army, Ordnance Corps (Frankford Arsenal Gage Laboratory), Philadelphia 37, Pennsylvania; A. S. Best, Secretary, Commodity Standards Division, Office of Technical Services, Department of Commerce, Washington 25, D.C.

This Committee was formed in 1926 for the purpose of consolidating for the benefit of industry at large the independent efforts which were already in progress on the part of a number of large industrial concerns, representatives of the U.S. Government departments, and several of the leading gage manufacturers, to simplify gage construction through the adoption of standard designs for gage blanks and component parts. The designs developed by this committee are now available to everyone and will minimize the necessity for the manufacture of special gages of the simpler types.

In 1929 the activities of the Committee in standardizing the design of limit gages for plain plug, ring, thread plug, and thread ring gages of all sizes from 0.059 to and including 4.5 in in diam were adopted. The standard was published in 1930 as Miscellaneous Publication M100 of the National Bureau of Standards, and subsequently promulgated by the Department of Commerce as Commercial Standard CS8-30, Gage Blanks.

The widespread adoption of this voluntary standard by gage manufacturers and industry led to a demand that the work be extended to include gages of larger sizes and of other types commonly in use. Upon completion of this work in 1933, the standard was revised and published as Commercial Standard CS8-33.

In 1940, the standard was again revised and issued as Commercial Standard CS8-41, Gage Blanks. As compared with the 1933 edition, it contained new standards for thread setting plug gages, taper thread ring gages, dial indicators, and master setting disks.

In 1951 the standard was revised and issued as Commercial Standard CS8-51. The principal additions included spline gages, adjustable plug gages, wire type handles, and taper gages. Modifications in designs of adjustable snap gages and a number of improvements in dial indicators were also embodied in the revised standard.

In 1955 a supplement was issued to be used in conjunction with the CS8-51. The supplement consists mainly of the addition of single end wire-type gage handles, plain plug and thread plug wire type design gage blanks, increase of wire type sizes from 0.510 to 0.760, changes in lengths of thread setting plug gages and widths of spline ring gages.

Currently, the Committee is working toward a new revision which would incorporate the contents of the 1955 supplement and would include new data for single and double end "Baby Trilock" plug gage blanks and pipe thread gage blanks.

The work of the Committee has been given full support and recog-

dition by engineering societies, the American Standards Association, the National Bureau of Standards, the Department of Defense, and the Interdepartmental Screw Thread Committee.

AMERICAN GAS ASSOCIATION, C. S. Stackpole, Managing Director, 420 Lexington Avenue, New York 17, N.Y.; F. E. Hodgden, Director, A.G.A. Laboratories, 1032 East Sixty-second Street, Cleveland, Ohio

This organization sponsors research and standardization activities relating to problems affecting the production, distribution, sale, and utilization of gas.

Problems connected with the development of national standards for gas appliances are entrusted to the association's Approval Requirements Committee. This committee has general supervision over the preparation of all approval requirements for gas-burning appliances, listing requirements for gas appliance accessories, and installation requirements for house piping, appliances, and accessories. It is responsible directly to the Board of Directors of the American Gas Association. Being a sectional committee of the American Standards Association, Inc., it is also responsible to the Board of Directors and Standards Council of ASA when requirements are submitted and approved as American Standard. This group is a standing committee and has operating under it, at the present time, some 33 requirements subcommittees. It makes assignments to these subgroups, has general supervision of their work, and passes on all requirements developed by them. It authorizes the appointment of additional subcommittees from time to time for the development of requirements for additional types of equipment or for other purposes as the necessity arises. The chairman appoints members of all standing and special subcommittees. New or revised requirements which have been developed by a subcommittee, after distribution for industry review and comments, are reviewed and adopted by the Approval Requirements Committee. They are then submitted to the Board of Directors and to the American Standards Association for approval as American Standard.

The Chairman, Secretary, and others of this group are appointed by the President of the American Gas Association. Manufacturer member appointments are made from nominations by the Gas Appliance Manufacturers Association. Two of the gas company representatives on this committee must also be members of the Laboratories Managing Committee. Members representing Government bureaus and trade associations are selected by the organizations they represent on request of the committee chairman. The Director of the Laboratories is a member of this group and is its secretary.

Subcommittees of the ASA Sectional Committee, Project Z21, AGA Approval Requirements Committee, receive assignments from and are responsible to the Approval Requirements Committee. Each subcommittee is usually charged with the detailed development of requirements for one particular class of gas appliance, or gas appliance accessory. When a subcommittee has completed a set of requirements it is submitted to the Approval Requirements Committee for further consideration. The subcommittee's work continues from year to year in the revision of and addition to the requirements. These committees also serve another purpose as they are often called upon by the

American Gas Association Laboratories to interpret certain requirements when a need for clarification arises.

There are four classifications of subcommittees, namely, those instructed to prepare requirements for (1) approval, (2) listing, (3) installation, and (4) standardization.

Approval requirements are prepared for complete self-contained gas-burning appliances or those which consist not only of equipment for burning the gas but also for utilizing the heat or products of combustion therefrom, such as gas ranges or boilers. Listing requirements are drawn up for accessories, such as valves, thermostats, and others which are incorporated as a part of a gas appliance. Requirements for installation of gas appliances are prepared for the guidance of the industry in making correct installations of gas equipment. The function of the Standardization Subcommittee is to assist in standardization of form and phraseology of all requirements.

Approval, listing, and installation requirements have been developed by the American Gas Association and approved as American Standards by the American Standards Association, covering practically all types of domestic gas appliances, many commercial appliances, and gas appliance accessories.

The approval requirements include domestic gas ranges (including free-standing ranges, built-in cooking units and combination ranges); hotel and restaurant deep fat fryers; portable gas baking and roasting ovens; gas counter appliances; space heaters (including radiant heaters; circulator heaters; wall heaters; gas steam, hot water, and warm air radiators; gas logs and imitation coal baskets); water heaters (including storage, circulating tank, instantaneous, etc.); central heating gas appliances (including steam and hot water boilers, central furnaces, vented recessed heaters and floor furnaces); gas unit heaters; hot plates and laundry stoves; clothes dryers; incinerators; hotel and restaurant ranges and refrigerators using gas fuel.

Listing requirements have been published for the following types of accessories: Gas-burner valves; gas conversion burners; draft hoods; domestic gas appliance pressure regulators; relief and automatic gas shutoff valves for use on water heating systems (including temperature and pressure relief valves, vacuum relief valves, and automatic gas shutoff valves); water heater, gas range, and space heater thermostats; automatic pilots; automatic main gas-control valves (including electric gas valves and diaphragm-type valves); semirigid gas appliance tubing and fittings; flexible gas tubing; furnace temperature limiting controls and fan controls.

In addition to the above requirements which involve laboratory testing, the committees have developed the following standards of general interest to the industry which include: Installation of domestic gas conversion burners, and installation of gas piping and gas appliances in buildings.

The approval seal and listing symbol of the American Gas Association are registered by the U.S. Patent Office and may be used on appliances and accessories, in advertising or otherwise, only with the consent of the association's Laboratories. The approval seal and listing symbol are intended to indicate that the equipment to which they are attached has been tested and approved or listed by the American Gas Association Laboratories as complying in detail with all requirements in effect at the time approval or listing was granted. When approval or listing has been granted, it is mandatory that the

official insignia in exact accordance with the association's requirements be prominently displayed on the appliance or accessory. The approval seal or listing symbol may be shown on, or advertised in conjunction with, only such appliances, appurtenances, or accessories currently approved or listed at the time shown or advertised.

The registered Seal of Approval must be permanently attached to all approved gas appliances. As this permanent seal is usually attached to the manufacturer's nameplate and located in a concealed position, an auxiliary approval seal in the form of a cardboard tag of approved design may be affixed, in a conspicuous position, to the front of every approved appliance. Nameplate manufacturers supply the permanent seals while the Laboratories supply tags at cost.

After approval or listing has been granted on an appliance or accessory, the appliance or accessory will be identified in the Directory of Approved Appliances and Listed Accessories. This publication is issued in complete form semiannually as of January and July. Supplements are published as of the first of each intervening month, including all devices approved during that month. This is the official record of approved or listed equipment, and all appliances entitled to bear the approval seal or listing symbol are included therein.

Approval of appliances and listing of accessories are granted for the ensuing calendar year. Approval and listing may be renewed, however, from year to year for a period not to exceed a total of 5 years by means of an annual factory-inspection service. At the expiration of this period the appliance or accessory is required to be resubmitted to the Laboratories and subjected to the requirements then in effect, if further certification is desired. If there has been no change in the requirements or the appliance since it was last tested, no actual test may be needed and extension may be granted by inspection.

AMERICAN GEAR MANUFACTURERS ASSOCIATION, John C. Sears, Executive Director, One Thomas Circle, Washington 5, D.C.

This Association was founded in 1916; its membership includes a majority of the principal manufacturers of gears, speed reducers and increasers in the United States and Canada.

One of the objectives of American Gear Manufacturers Association is the creation and maintenance of gearing standards. These standards are intended to create a common-language bridge between the manufacturer, designer, and user so that they may better understand one another to the end that the gears will fit the users' needs.

These standards cover such areas as: Gear Industry Nomenclature, Gear Specification Drawings, Hobs and Shaper Cutters, Application Classification of Gear Motors and other types of speed reducers, Standards on Tooth Form Geometry, Strength and Durability Formulas, Inspection Methods and Practices, Gear Blank Materials, Lubrication of Open or Enclosed Gearing, Design and Rating of Speed Reducers, Spur, Helical, Herringbone, Worm, Bevel, Fine Pitch, Aircraft, Rocket, and Missile Gears.

Among the best gear engineering brains in the United States and Canada representing manufacturers, designers, and users, as well as teachers of mechanical engineering and the gear art in the major universities have contributed to the creation of this literature.

American Gear Manufacturers Association has always maintained close liaison with American Standards Association, American Society

of Mechanical Engineers, Society of Automotive Engineers, Metal Cutters' Institute, Cooling Tower Institute, American Petroleum Institute, and other such technical societies.

AMERICAN GEM SOCIETY, Alfred L. Woodill, Executive Director, 3142 Wilshire Boulevard, Los Angeles 5, California

This Society has among its committees one known as Nomenclature Committee, the personnel of which consists principally of retail jewelers throughout the United States and Canada, and of advisory groups of diamond importers and jewelry manufacturers. This committee considers recommendations from its members in the various branches of the trade, and makes recommendations regarding definitions, standards, and practices for consideration and adoption by the entire membership of the society at its annual meetings. In carrying forward its work, this committee cooperates with the Jewelers' Vigilance Committee, the National Association of Better Business Bureaus and its affiliated bodies, and the Federal Trade Commission.

AMERICAN GUM IMPORTERS LABORATORIES, INC., R. O. Innes, Secretary, 2 Park Avenue, New York 16, N.Y.

This Association has not issued standards or specifications for imported natural resins. It does, however, issue a National Resins Handbook, which contains much data on the properties and application of natural resins. Most of the data so compiled are the result of the research and development program being carried out by the Laboratories.

AMERICAN HOME LAUNDRY MANUFACTURERS' ASSOCIATION, G. Baumgart, President, 20 North Wacker Drive, Chicago 6, Illinois

This organization has not set up standards for the design or construction of household washers, dryers, or ironers. It does maintain an Engineering and Research Committee which collaborates with the Underwriters' Laboratories and with other organizations in formulating certain safety standards and specifications covering fire hazards. The Association does have a recommended Standard Soil Removal Test Procedure the results of which are not generally published but which are used in examining critically and in a scientific way various machine designs, detergent performance, and the like. The Association has defined several home laundry appliances and has under preparation a set of several hundred definitions of home laundering terms. These when complete will be recommended for use in advertising, instruction books, and the like.

AMERICAN HOSPITAL ASSOCIATION, Edwin L. Crosby, M.D., Executive Director, 18 East Division Street, Chicago 10, Illinois

For more than 35 years this Association has actively concerned itself with simplification and standardization of hospital supplies and equipment. Through the effort of its Committee on Purchasing, Simplification and Standardization and in cooperation with the U.S. Department of Commerce and its agencies, the National Bureau of Standards and the Office of Technical Services, over 20 Simplified Practice Recommendations and 15 Commercial Standards have been developed relative to hospital supplies and equipment.

Early in this program standards were developed for rubber sheeting, surgeon's latex gloves, surgeon's rubber gloves, mattresses for hospitals, and blankets for hospitals. More recently, Commercial Standards have been prepared on Gowns for Hospital Patients and Latex Foam Mattresses for Hospitals.

Recent Simplified Practice Recommendations include Plastic Tableware, Surgical Sutures, Clinical Utensils, and Medical and Surgical Hypodermic Needles.

Many of the Commercial Standards and Simplified Practice Recommendations have been kept current by revision. These include Clinical Thermometers, Surgical Dressings, Color Markings for Anesthetic Gas Cylinders, Surgical Gauze, and Hospital and Institutional Cotton Textiles.

In cooperation with the Commodity Standards Division, standards are being developed on casters, wheels, and glides for hospital equipment. Revisions are being studied in the standards for hospital beds, gowns for hospital patients, and hospital rubber sheeting.

New projects which are under consideration for development by the committee are the simplification of color identification methods for syringes, needles, gloves, and other hospital supplies; standards for bumpers on wheeled equipment; and a recommendation on needle sizes for disposable hypodermic needles.

In addition to the standardization and simplification activities in cooperation with governmental agencies, the American Hospital Association has been actively cooperating with the American Standards Association, International Organization for Standardization, and American Society for Testing Materials in the preparation of standards in over 30 areas of interest to hospitals.

AMERICAN HOT DIP GALVANIZERS ASSOCIATION, INC.,
Stuart J. Swensson, Secretary, 1806 First National Bank Building,
Pittsburgh 22, Pennsylvania

This Association has prepared and issued tentative standard specifications for hot-dipped zinc-coated (galvanized) products.

The purposes of this Association are: To collect, assemble, prepare, and analyze statistical and other information and data concerning business operations, trade practices, trade market and business conditions, and other related subjects in or concerning the galvanizing industry; to furnish such information and data and expert and technical advice to participants in said industry; to improve public relations in said industry through publicity and other proper and lawful means; to encourage and promote technical research and development; and to acquire, hold, and dispose of such real and personal property as may be necessary or desirable in the transaction of its business.

This Association has adopted an official insignia in the form of tags and stickers. The use of this insignia is controlled by the Association, and its members are permitted to use it so long as they continue to be members of the Association and the quality of their products conforms to the specifications adopted by the Association.

AMERICAN HOTEL ASSOCIATION OF THE UNITED STATES
AND CANADA, Charles A. Horrworth, Executive Vice President,
221 West 57th Street, New York 19, N.Y.

Activities of this association in the field of standardization are carried on both in cooperation with other organizations and entirely by the association.

Prior to 1950 activities included collaboration with the Vitrified China Manufacturers Association in establishing standard sizes of hotel chinaware as set forth in Simplified Practice Recommendation R5, promulgated and published by the National Bureau of Standards. It also cooperated in the formulation of Simplified Practice Recommendation R113 relative to standard sizes of restaurant guest checks. Under the procedure of the American Standards Association, it cooperated, through representation on sectional committees, in the development of American standard safety code for elevators, dumb-waiters, and escalators; and American recommended practice for the inspection of elevators. It is also represented on ASA sectional committees on standards and specifications for refrigerators; and on minimum requirements for plumbing and standardization of plumbing equipment.

The association is cooperating with the Food Service Equipment Industry in the establishment of simplified practice recommendations for standardized sizes, dimensions, and details of construction of numerous food service articles under the auspices of the Office of Technical Services. It is also cooperating with the American Hospital Association in developing specifications for bedsheets under the procedure of the American Standards Association.

Between 1950 and April 1958 the Association sponsored a project under the auspices of the American Standards Association to develop minimum performance requirements for institutional textiles, which resulted in the establishment of American Standard L24 Minimum Performance Requirements for Institutional Textiles. It sponsored a project under American Standards Association auspices to develop minimum performance requirements for cleaning and maintenance materials which is being carried on under the designation of Sectional Committee K63. It cooperated with the National Restaurant Association in efforts to develop standards for the size of pots and pans under the procedure of the American Standards Association.

The Association developed minimum performance standards for mattresses and box springs for the hotel industry as well as standards for interior paints and a wide variety of cleaning and maintenance supplies used by the industry.

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION, George D. Clayton, Executive Secretary, 14125 Prevoist Street, Detroit 27, Michigan

The Association was established in 1939 by leading industrial hygienists as a result of need for an association devoted exclusively to industrial hygiene.

The objectives of the Association are: (1) To increase the knowledge of industrial hygiene through interchange and dissemination of information; (2) to promote the study and control of environmental factors affecting the health and well-being of industrial workers; (3) to correlate such activities as are conducted by individuals and agencies throughout industrial, educational, and governmental groups; and (4) to bring together persons interested in the various phases of industrial hygiene.

The Association speaks or acts for industrial hygienists in matters of general interest, e.g., dissemination of information on the fundamen-

tals of industrial hygiene; definition of the scope of industrial hygiene; development of nomenclature in industrial hygiene; improvement of the education, training, and status of industrial hygienists; solutions of problems of industrial hygiene in national and other emergencies, in part by encouraging the optimum use of available industrial hygienists and the training of new ones; cooperation with various organizations as the American Standards Association and governmental agencies in the preparation of various codes and approval schedules; and presentation of awards to members of the Association for outstanding service in the field of industrial hygiene.

AMERICAN INSTITUTE OF ARCHITECTS, DEPARTMENT OF EDUCATION AND RESEARCH, Theodore Irving Coe, FAIA, Technical Secretary, 1735 New York Avenue NW., Washington 6, D.C.

Representatives of the Institute not only reflect the opinion of the profession but, by reason of their professional relationship to the building public, also represent the interests of the consumer on a considerable number of the committees dealing with the standardization and simplification of building materials, appliances, and construction techniques.

The Institute serves as sponsor or cosponsor, under the procedure of the American Standards Association, in the development of American Standards for the following: A10 Standards for Safety in the Construction Industry; A17 Safety Code for Elevators; A23 School Lighting; A42 Specifications for Plastering; A62 Coordination of Dimensions of Building Materials and Equipment; A91 Specifications for Building Granite; A97 Development of Methods Covering the Application of Gypsum Wallboard.

It is also represented on 31 additional ASA sectional committees on projects dealing with building materials and construction and household appliances. The Institute is represented on the Construction Standards Board of the American Standards Association.

The Institute takes an active part in the standardization activities of the American Society for Testing Materials and participates in committee activities of the society dealing with developments of standards and test methods covering nonferrous metals and alloys, cement, fire tests of building materials and construction, lime, gypsum, mortars for unit masonry, glass and glass products, manufactured masonry units, natural building stone, and bituminous waterproofing and roofing materials.

The Institute is also represented on many committees of the National Fire Protection Association.

In connection with the establishment of Simplified Practice Recommendations and Commercial Standards for various items relating to building materials, the Institute cooperates with the National Bureau of Standards and with industry in the development of these standards. Through its Technical Secretary and other representation, it is represented on standing committees for 20 Simplified Practice Recommendations and 42 Commercial Standards.

The Institute has issued several standard contract forms and has been instrumental in the formulation of recommendations as to size and character of advertising matter intended for architects, and the development of a standard filing system for trade literature.

**AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS, N. S.
Hibshman, National Secretary, 33 West 39th Street, New York 18,
N.Y.**

All standardization work of the Institute is carried on under the direction of the Standards Committee the 31 members of which are appointed by the president.

The standards of the Institute at the present time comprise about 80 sections on electric machinery and apparatus. These standards are chiefly devoted to defining terms, conditions, and limits which characterize behavior, with special reference to acceptance tests. Many of them are recognized officially as American Standards by the American Standards Association.

The Institute is a member body of the American Standards Association and is represented on the latter's Electrical Standards Board, Acoustical Standards Board, Graphic Standards Board, Mining Standards Board, Nuclear Standards Board, and its Standards Council. It is sponsor or joint sponsor for the following sectional committees, functioning under the procedure of the American Standards Association, on projects relating to: code for protection against lightning; industrial control apparatus; mercury arc rectifiers; railway motors and other rotating electric machinery on rail cars and locomotives; storage batteries; definitions of electrical terms; electric railway control apparatus; capacitors; lightning arresters; sphere gaps; apparatus bushings; letter symbols and abbreviations for science and engineering; and graphical symbols and abbreviations for use on drawings. It is also officially represented on many additional ASA sectional committees covering problems in the electrical field.

The Institute cooperates with other leading technical bodies, notably the National Electrical Manufacturers Association, the Edison Electric Institute, the American Society for Testing Materials, and the National Bureau of Standards, in matters relating to electric machinery, apparatus, and materials.

**AMERICAN INSTITUTE OF LAUNDERING, Albert Johnson,
General Manager, Joliet, Illinois**

This Institute is the national trade association of the family laundry industry and includes Canadian as well as a number of foreign memberships throughout the world.

Although the Institute represents a service industry, it operates a testing program for manufacturers on a fee basis (Certified Washable Seal) for checking the serviceability of launderable textiles, findings, closures, trim, interlining, etc., to repeated laundering.

Launderable items that withstand repeated commercial launderings successfully are awarded, by contract, the Institute's Certified Washable Seal.

Lines of merchandise are checked at suitable intervals and the program is "policed" by the hundreds of Institute members located in practically every community of the United States.

In addition, the Institute maintains research laboratories for the development of better laundering methods. These laboratories are staffed by textile chemists, engineers, and accountants, who prepare, for their members, Service Bulletins and Special Reports of studies that are being made. Trained sales, advertising, and public relations personnel also are a regular part of the Institute's staff.

The Institute also operates an actual commercial laundry and dry-cleaning department on a profit basis. This enables members to visit the Institute and study its daily operations using the most recently produced equipment of the various machinery manufacturers and others. The drycleaning department is operated to serve the needs of 85 to 90 percent of the Institute's members who are in the drycleaning business. AIL, however, does not attempt to compete in any way with the trade association activities of the National Institute of Drycleaning.

The Institute also operates a School of Laundry Management for the training of young men and women for supervisory and managerial work within the industry. Several thousands of its graduates are working within the industry.

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, E. Kirkendall, Secretary, 29, West 39th Street, New York 18, N.Y.

Many of the standards, specifications, and codes that have engaged the attention of this Institute were developed in cooperation with national technical bodies, principally the American Standards Association and the American Society for Testing Materials.

The Institute is officially represented on several ASA sectional committees including those dealing with the following subjects: safety code for cranes, derricks, and hoists; code for pressure piping; classification of tools, fixtures, and gages; deep well vertical pumps; electric and magnetic magnitudes and units; terminology for automatic controls; electrical equipment in coal mines; drainage in coal mines; wire rope for mines; construction and maintenance of ladders and stairs for mines; safety code for coal mine transportation; firefighting equipment in metal mines; electrical equipment in metal mines; graphical symbols and designations; abbreviations; letter symbols; specifications for sieves for testing purposes; performance requirements for protective occupational footwear; fluid permeation.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC., L. A. Post, Executive Vice President, 101 Park Avenue, New York, N.Y.

A national nonprofit service organization representing members which fabricate the structural steel used in buildings, bridges, and other steel structures. It performs for its members certain cooperative group activities, such as engineering investigations, technical research, development of markets, and public relations. The Institute publishes books, standards, and bulletins pertaining to the industry.

The Manual of Steel Construction is the acknowledged standard used by those who design and fabricate structural steel for buildings and bridges. It is universally accepted by local, State, and Federal Government building authorities. Data relating to physical properties of structural shapes, load tables, and detail information are included, as well as the complete texts of the AISC Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings and the Code of Standard Practice for Steel Buildings and Bridges.

AISC engineers assist local and regional authorities in revision and improvement of building codes.

A continuous and extensive structural research program has been

administered since the Institute's founding in 1921. Experimental research currently sponsored is generally carried on jointly with other technical bodies having a common interest in the subject under investigation. Recently this cooperative program has been supplemented by independently sponsored research studies at various engineering colleges.

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, Frank J. Hanrahan, Executive Vice President, 1757 K Street NW., Washington 6, D.C.

The Standards Committee of the Institute has the responsibility of developing and keeping up to date industry standards, including those on design, fabrication, assembly, erection, and industry practices; also, it has the responsibility of conducting research, making technical studies and formulating technical recommendations in the structural and construction fields as warranted. Inspections and investigations activities have been assigned to this committee.

The chief results of the efforts of this committee are the AITC "Timber Construction Standards" and the AITC "Inspection Manual for Structural Glued Laminated Lumber." The Standards Committee is now engaged in the preparation of various parts of a timber construction manual which, it is expected, will be issued in the future.

The AITC's major project, at present, is the formulation of a Quality Control, Inspection, and Certification System. Preliminary drafts have been prepared for proposed commercial standards on "Structural Glued Laminated Lumber," "Fabrication of Structural Timber Frames and Elements," and "Assembly and Erection of Structural Timber Frames and Elements."

AMERICAN IRON AND STEEL INSTITUTE, B. F. Fairless, President, 150 East 42d Street, New York 17, N.Y.

One of the major activities of this Institute is in connection with a project involving the selection and standardization of a group of steels to be known as standard steels. This work is being carried on under the auspices of the Institute by technical committees, the titles of which are indicated by the following subjects with which they deal: Alloy steel, axles, carbon steel bars, cold-rolled strip steel, hot-rolled strip steel, plates, rails, semifinished steel, sheet steel, structural shapes, tin plate, terneplate, and black plate, track accessories, tubular products, wire rods and wire, wrought-steel wheels, and specifications and publications.

Each of these individual technical committees is doing considerable work in classifying and defining the products, and in collecting and compiling manufacturing tolerances, and methods relative to standard methods of inspection for the respective products, and in reviewing existing specifications with a view toward standardizing those which are found to be most common. The work of the respective committees is presented in a series of sections of a "Steel Products Manual." All these committees have and still do, from time to time, cooperate with agencies of the Federal Government, including Department of Defense and Department of Commerce, as well as with technical and trade organizations, in matters relating to technical problems and specifications.

This Institute is officially represented on sectional committees on

mechanical standards and standardization of Methods of Recording and Compiling Accident Statistics, and all standards and specifications for petroleum products and lubricants, and fire tests of materials and construction functioning under the procedure of the American Standards Association.

AMERICAN LEATHER CHEMISTS ASSOCIATION, Miss Velma Becker, Executive Secretary, Principal Office c/o University of Cincinnati, Cincinnati 21, Ohio

This Association is the technical society of the tanning and leather industry. It was organized in 1903. Its membership consists of active and associate members and also subscribers to its Journal.

The Association has a number of technical committees which develop methods of analysis and testing. The final methods are published as the official methods of the Association. The American Leather Chemists Association (ALCA) and the American Society for Testing Materials (ASTM) have a joint committee on the coordination of physical test methods. The ALCA is also a member of the International Union of Leather Chemists Society and it participates in the development of methods of international use.

The methods of ALCA are reviewed and amended when necessary. These methods are incorporated in Industry specifications. ALCA membership includes members from practically every Government agency concerned with leather or leather products, and full cooperation with such agencies is maintained. It is closely affiliated with the Tanners Council of America, the national trade association of the leather industry. The membership of ALCA includes members from the United States, Canada, Mexico, and 34 foreign countries.

AMERICAN LUMBER STANDARDS COMMITTEE, James L. Alexander, Chairman, Vero Beach, Florida; James H. Carr, Jr., Secretary, 2138 P Street NW., Washington 7, D.C.

This Committee is the successor to the Central Committee on Lumber Standards. It consists of 17 representatives of groups of lumber manufacturers, lumber inspection agencies, architects, engineers, contractors, wholesalers, retailers, millwork manufacturers, railroads, and other consumers.

These representatives of all elements of the softwood lumber industry have in charge the maintenance of Simplified Practice Recommendation R16, Lumber, and its revision when necessary. The Committee's suggestions and proposed amendments, following general industry approval, appear in succeeding editions of these basic standards, as published by the National Bureau of Standards.

This Simplified Practice Recommendation sets forth the classifications, nomenclature, grading provisions, sizes, workings, description, measurement, tally, shipping, grade marking, and inspection provisions adopted voluntarily by the softwood lumber industry as the basis for individual grading rules covering the various species of softwood lumber as found in different areas of the United States.

In addition, the standards provide for the approval of inspection agencies and grading rules submitted to the Committee's Board of Review.

The recommendation was published initially in the year 1924 as a result of four general conferences of the industry, held in 1922,

1923, and 1924. In 1925, 1926, and 1928, the simplification program was revised, and amplified. In 1932 the shingles and moldings sections, only, were revised. This revision was published in 1933, as a separate booklet, supplementing Simplified Practice Recommendation R16-29. An edition was also published in 1939.

In 1949 the Committee was reconstituted as the American Lumber Standards Committee who immediately undertook the revision of the standards to their present form.

The latest standard, Simplified Practice Recommendation 16-53, was promulgated January 15, 1953. This edition sets up the purpose, formation, and functions of the Committee and its Board of Review. It provides for Classification of American Standard Lumber, Standards for Grading, Standards for Grademaking, General Recommendations, Size Standards, and has appendices on nomenclature, definitions, and abbreviations. It also contains a brief history of lumber standardization and the then membership of the Committee.

Present and future efforts are largely in the direction of improvements in lumber standardization and administration of the provisions of the standards.

AMERICAN MATERIAL HANDLING SOCIETY, INC., Arthur E. Fryer, Secretary, 3737 Upton Avenue, Toledo 13, Ohio

The Society entered the standards field in the fall of 1954 when it formed its National Standards Committee. The purpose of this committee is to establish the methods and assign the responsibility for the development, presentation, approval, publication, distribution, and revision of material handling standards. The standards developed by the AMHS are submitted to the American Standards Association for approval. The National Standards Committee has recently completed a "Material Handling Equipment Classification" which covers 16 categories of equipment. The categories are defined and subdivided into the various types of equipment falling under each. The "classification" serves as a guide for the assignment of standards projects.

Currently, two standards have been prepared and are being refined for submittal to the ASA. These standards cover "truck docks" and "railroad docks". Additional standards projects are assigned from time to time. Work is progressing on "pallet standards" and "shipping container standards." These will later be incorporated in national standards released by the National Standards Committee.

AMERICAN MINING CONGRESS, Julian D. Conover, Executive Vice President, Ring Building, Washington 6, D.C.

Standardization activities of this organization are currently carried on by its Coal Division, composed of coal-producing companies and manufacturers of mining equipment. Recently a committee has been formed which is making studies on underground drilling in the hard rock mining industry that may lead to standards in this field.

The following standards, sponsored solely, or in cooperation with other groups, by the American Mining Congress, have been approved by the American Standards Association as American Standards: safety code for installing and using electrical equipment in and about coal mines; coal mine tracks, signals, and switches; wire rope for mines; construction and maintenance of ladders and stairs for

mines; safety code for coal mine transportation, and specifications for roof bolting materials in coal mines.

**AMERICAN OIL CHEMISTS' SOCIETY, Mrs. L. R. Hawkins,
Executive Secretary, 35 East Wacker Drive, Chicago 9, Illinois**

This Society is a scientific organization in the field of oilseeds, fats, oils, waxes, soaps, detergents, and related products. It publishes the "Journal of the American Oil Chemists' Society" and develops analytical methods in the above fields through committee organization. These methods are published in looseleaf form and are used throughout the world. A joint Committee with ASTM develops methods for analysis of detergents and soaps. The Society also is affiliated with the Intersociety Color Council.

**AMERICAN PAPER AND PULP ASSOCIATION, Robert E.
O'Connor, Executive Secretary, 122 East 42d Street, New York
17, N.Y.**

Fourteen trade associations representing divisions of the paper industry constitute the membership of this Association.

Because of the numerous paper grades designed for many different uses, the problem of standardization in the paper industry is very complex. However, over a period of years, physical standards, as distinguished from quality standards, have been developed in the case of many paper grades. Through representation on the standing committee for Simplified Practice Recommendation R22 on paper, the Association assisted in the revision of a standard schedule of basic paper sheet sizes for bond and writing papers, ledgers, looseleaf ledgers, machine posting ledgers, book paper (coated and uncoated), index bristol, and cover paper.

In cooperation with the Institute of Paper Chemistry, the association has conducted a series of technical studies relative to the evaluation of existing instruments and the development of new ones for the measurement and testing of paper qualities. This instrumentation program constituted the initial groundwork leading to the grading or standardization of the products of the paper industry.

Although not directly related to standardization proper, the association published the "Dictionary of Paper" which contains more than 3,500 definitions of pulps, other raw materials, papers, paperboards, paper properties, and papermaking terms. The contents of this publication afford considerable guidance in the consideration of problems of paper grades, specifications, or standards.

Working in conjunction with the National Safety Council, the Association also cooperated with the American Standards Association in the formulation of a safety code for pulp and paper mills.

**AMERICAN PETROLEUM INSTITUTE, F. M. Porter, President,
and W. M. Wilson, Secretary, 50 West 50th Street, New York
20, N.Y.**

The principal activities of the American Petroleum Institute are simplification, standardization, and improvement of equipment and methods used by the petroleum industry. The fundamental purpose of this activity is to prepare and maintain standards and methods acceptable both to the industry and to the manufacturers of the

equipment. This purpose is accomplished through participation by and cooperation of users and manufacturers in the development and keeping up to date of such standards and methods.

The Board of Directors is the governing body of the Institute and, as such, has authority to adopt, modify, or reject proposed API standards and recommended practices. Responsibility for the major portion of the Institute's standardization work lies within its Divisions of Production and Refining, which were formed under a plan of organization adopted in 1929, and its Divisions of Transportation and Marketing, and Department of Technical Services, established more recently.

In the Division of Production (William H. Strang, Director, 300 Corrigan Tower Bldg., Dallas 1, Tex.) the authority to act on matters relating to material standards and recommended practices has been delegated by the Board of Directors, via the Division's General Committee, to the Central Committee on Standardization of Oilfield Equipment. Standing committees, subcommittees, and task groups within the organization of and responsible to the Central Committee, have developed and maintain 46 specifications, bulletins, and recommended practices covering the following: Belting, Cable Drilling Tools, Boilers, Rigs and Derricks, Tubular Goods, Valves, Fittings, and Flanges, Rotary Drilling Equipment, Hoisting Tools, Wire Rope, Oil Well Cements, Production Equipment, and Tanks.

The standardization committees of the Division of Production have formal representation or informal liaison with numerous societies and associations, including American Standards Association, American Society for Testing Materials, American Welding Society, Manufacturers Standardization Society of the Valve and Fittings Industry, American Wellhead Equipment Manufacturers Association, Society of the Plastics Industry, American Gas Association, American Association of Oil Well Drilling Contractors, and many others.

The Institute grants to manufacturers, upon application and submission of a statement of qualifications, the right to affix its official monogram on material made in accordance with API standards. This certifies to users that the manufacturers have complied with all of the conditions and specifications set forth in the publication covering material so marked. The Institute reserves the right to revoke authorization to use its monogram, for any reason satisfactory to the Board of Directors.

The Committee on Refinery Equipment of the Division of Refining (W. T. Gunn, Director, 50 West 50th St., New York 20, N.Y.) conducts a program of standardization dealing with various features of refinery equipment. Standards covering, (1) Classification of Areas for Electrical Installations in Petroleum Refineries; (2) Specifications for Flanged and Welding-End Steel Gate and Plug Valves for Refinery Use; (3) Specifications for Centrifugal Pumps for General Refinery Services; (4) Specifications for the Design and Construction of Storage Tanks; and (5) Recommended Practice for the Design and Construction of Pressure-Relieving Systems have been published. Projects underway include: Dimensional Standards for Furnace and Heat Exchanger Tubing, Refinery Piping, Metallic Gaskets, Centrifugal Compressors, Mechanical Drive Turbines, an Electrical Equipment Construction Code, Inspection, Repair and Rating of Unfired Pressure Vessels in Petroleum Refinery Service, and Installation of Refinery Instruments and Control Systems.

The Committee on Disposal of Refinery Wastes has published two collections of standard methods for analysis of, (1) Waste Gases, and (2) Waste Waters.

Transportation equipment used by the petroleum industry is covered generally by Federal and State regulations, but the Division of Transportation (J. E. Moss, Director, 1625 K St., NW., Washington 6, D.C.) cooperates and assists in the preparation of such regulatory standards. In addition, the Division has fostered the development of standard methods in pipeline construction, maintenance, and operation.

Through its appropriate committees, the Marketing Division (A. J. Rumoshosky, Director, 50 West 50th St., New York 20, N.Y.) encourages the development of standards of materials, equipment (and equipment parts), packages, procedures and product applications which will facilitate competitive replacement, reduce unit costs, promote safe operation, and assist consumers in their identification of general classes of products appropriate for their requirements without limiting, however, the general freedom of choice and variety of approach characteristic of the marketing effort.

The Department of Technical Services (E. O. Mattocks, Director, 50 West 50th St., New York 20, N.Y.) through its several committees has developed standards on Measuring, Sampling and Testing Crude Oil; Crude Oil Tank Measurement and Calibration; Recommended Practice for Measuring, Sampling, and Testing Natural Gas and Natural Gasoline and other Liquid Petroleum Hydrocarbons; Calibration of Tank Car Tanks and Measuring, Sampling, and Calculating Tank Car Quantities for Pressure and Nonpressure Tank Cars; the Design and Construction of Liquefied Petroleum Gas Installations at Marine and Pipeline Terminals, Natural Gasoline Plants, Refineries, and Tank Farm; Methods of Measuring Evaporation Loss From Petroleum Tanks and Transportation Equipment; and the Preparation of Precautionary Labels. The Fire and Safety Committees have issued a great number of publications dealing with various phases of petroleum activities.

AMERICAN PUBLIC HEALTH ASSOCIATION, Berwyn F. Mattison, M.D., Executive Secretary, 1790 Broadway, New York 19, N.Y.

This Association's work in the field of standardization is conducted under the auspices of the Committee on Evaluation and Standards, which has been appointed for that purpose. Under this main committee function a number of subcommittees, the names of which indicate the activities in which each is engaged, as follows: Communicable disease control, hygiene of housing, standard methods of diagnostic procedures and reagents, standard methods on examination of water and sewage, standard methods on examination of dairy products, standard methods on analyzing frozen desserts, methods for the examination of shellfish, bathing places, laboratory methods for the examination of air, microbiological examination of foods, lead poisoning, and laboratory animals. Many of the reports published deal with laboratory procedures.

Projects which have been completed by these committees relating to standards and published by the Association include standard methods for the examination of water and sewage, standard methods for the examination of dairy products, reports on the control of

communicable diseases, report on bathing places, diagnostic procedures and reagents, and standard methods for the examination of frozen desserts. Also, standards for healthful housing, construction and equipment of dwelling units, planning neighborhoods, and internal arrangements of homes, a proposed housing ordinance, and basic principles of healthful housing.

The Association cooperates with the American Standards Association by representation on sectional committees on recommended practice of school lighting, building code requirements for light and ventilation, safety code for exhaust systems, letter symbols and abbreviations for science and engineering, allowable concentrations of dusts and gases, sterilization of bedding and upholstery, safety code for industrial sanitation in manufacturing establishments, ventilation code, and nuclear standards. It is joint sponsor of the plumbing code committee.

AMERICAN PUBLIC WORKS ASSOCIATION, Robert D. Bugher, Executive Director, 1313 East 60th Street, Chicago 37, Illinois

In 1937, the American Society of Municipal Engineers and the International Association of Public Works Officials were merged to form this Association. Standardization and simplification activities of this organization are carried on by various committees dealing with bituminous and concrete pavements, sewers, sidewalks and curbs, and subgrades and foundations. These committees are responsible for the preparation of standard specifications covering materials and construction methods which are adopted and published by the Association. Committees of this Association cooperate with similar committees of other technical organizations in the development of standards and specifications.

It is represented on committees of the American Society for Testing Materials covering specifications for road and paving materials. In addition, it cooperates with the Commodity Standards Division of the Department of Commerce on simplification matters and is a member of the Highway Research Board of the National Research Council.

AMERICAN RAILWAY ENGINEERING ASSOCIATION, N. D. Howard, Executive Secretary, 59 East Van Buren Street, Chicago 5, Illinois

For administrative reasons, this organization functions as the Construction and Maintenance Section of the Association of American Railroads. Through its numerous committees, it maintains and keeps up to date the "Manual of Recommended Practices" with respect to railway engineering and maintenance-of-way and structures. These committees are constantly engaged in developing standards, specifications, test methods, and recommended practices on the following main subjects which comprise the several sections or chapters of the Manual: Definition of terms; roadway; ballast; ties; rail; track; buildings; wood bridges and trestles; masonry; highways; engineering and valuation records; water, oil, and sanitation services; yards and terminals; iron and steel structures; economics of railway location and operation; wood preservation; contract forms; waterways and

harbors; maintenance-of-way work equipment; clearances; and waterproofing.

This Association, on behalf of the AAR, maintains representation on the committees of a large number of national technical societies, associations, and other organizations, considering subjects of interest to it, as well as with several Government agencies. With respect to the American Standards Association, it has representation on the sectional committees of that association dealing with the following projects: Specifications for portland cement; specifications for cast iron pipe and special casting; standardization and unification of screw threads; pipe flanges and fittings; bolt, nut, screw, and rivet proportions; plain and lock washers; safety code for cranes, derricks, and hoists; standardization of dimensions and materials of wrought iron and wrought steel pipe and tubing; specifications for zinc coating of iron and steel; standards for drawings and drafting room practice; standards for graphic presentation; graphical symbols and abbreviations for use on drawings; minimum design loads in buildings and other structures; oxychloride cement flooring; screw threads for hose couplings; highway grade crossing protection; loading platforms at freight terminals and warehouses; industrial maintenance and supply materials; cross and switch ties; methods of testing wood; and safety code for industrial sanitation.

Within the American Society for Testing Materials it is represented on technical committees engaged in the development of standard specifications and methods of test covering the following subjects: steel; corrosion of iron and steel; copper and copper alloys, cast and wrought; cements; clay pipe; concrete and concrete aggregates; mortars for unit masonry; concrete pipe; timber; bituminous waterproofing and roofing materials; water for industrial uses; and soils for engineering purposes. It is also represented on the Society's Joint Committee on Standard Specifications for Concrete and Reinforced Concrete.

Other organizations with which the AREA collaborates through representation in specific aspects of their work include the American Society of Civil Engineers, American Society of Mechanical Engineers, American Lumber Standards Committee, American Welding Society, American Iron and Steel Institute, American Concrete Institute, Column Research Council, Forest Products Research Society, National Lumber Manufacturers' Association, National Association of Corrosion Engineers, Reinforced Concrete Research Council, Engineering Foundation, and Steel Structures Painting Council.

AMERICAN ROAD BUILDERS' ASSOCIATION, Louis W. Prentiss, Maj. Gen., USA (Ret.), Executive Vice President, 600 World Center Building, Washington 6, D.C.

The Association has, as its major objective, the fostering and encouraging of the full utilization of scientific and educational measures toward the accomplishment of an integrated national highway and airport system adequate to accommodate the growth and advancement of highway and air transportation necessary for the civil economy and the national defense. It also acts through affiliation with the International Road Federation to assist in the disseminating of educational and scientific methods and procedures in highway activity over the entire world, with particular emphasis on the Pan American countries.

Membership in the American Road Builders' Association, working through eight operating divisions, includes Federal, State, county, and city highway engineers and administrators as well as consulting engineers. It includes also highway contractors, producers of highway materials, manufacturers and distributors of highway machinery, banking and financing institutions, and educators in the several colleges and universities.

Group and general committees study problems relating to highway legislation, finance, design, construction, maintenance, equipment, and operation. In addition, a committee operates from the industry side in the matter of uniform traffic control and safety devices. All efforts are constantly directed toward development of improved standards to bring about utilization of new developments and new materials and eliminate waste and improper methods, thereby accomplishing greater economy in the overall highway and airport field.

Every effort is made to avoid duplication in areas of activity of other associations. The Association has cooperated and will continue to cooperate with other associations in joint activities. It has published several bulletins dealing with the practical application of technical and semitechnical developments.

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS, J. L. Butt, Executive Secretary, St. Joseph, Michigan.

This Society has adopted standards, recommendations, codes, and data in its primary technical division fields of farm power and machinery, farm structures, electric power and processing, and soil and water. In power and machinery these deal with tractor and implement power application factors including hydraulic controls, power takeoffs, belt speeds and pulley widths, hitches, tool bars, splines, wheels and tires, test codes, safety lighting, wheel mounting elements, rim contours, mountings, volumetric capacities, baling wire, link chain, bolts, pins, specifications for marking soil working shapes, and crop machine use data. Farm structures items include engineering data on grain storage, effects of thermal environment on livestock, hay drying, dairy housing terminology, friction coefficients of chopped forages, and adobe brick construction. Electric power and processing standards relate to a method of determining modulus of uniformity and modulus of fineness of ground feed and to installation of electric infrared brooding equipment. Soil and water items apply to mosquito control in irrigation, tile drains, concrete irrigation pipe systems, sprinkler irrigation equipment, and interrelated highway and agricultural drainage.

In areas of mutual interest in standards, the Society cooperates with the American Standards Association, American Society for Testing Materials, Society of Automotive Engineers, and other organizations.

AMERICAN SOCIETY OF BAKERY ENGINEERS, Victor E. Marx, Secretary, Room 1354, La Salle Wacker Building, 121 West Wacker Drive, Chicago 1, Illinois

Standards adopted by this Society for bakery equipment are the result of the work of its Standardization Committee. The Society has adopted standards for high-speed dough mixers, flour-handling units, sifters, bolting reels, and flour hoppers which were approved

by the Bakery Equipment Manufacturers Association. Its Standardization Committee made specific recommendations on the standardizing of live or active belt capacities of belt proofers for various loaf sizes which were concurred in by equipment manufacturers. It also made certain recommendations on heights of cake depositor hoppers and the standard rating of mixers by weight of dough, rather than by gallon and by barrel capacity, which have been approved by the equipment manufacturers.

The Standardization Committee, working in cooperation with manufacturers of air-conditioning equipment, formulated certain standards relating to humidifier practice in baking plants. It also formulated and adopted a standard for sponge trough sizes which has been accepted and adopted by manufacturers of dough troughs and the Society. The American Standards Association Safety Code for Bakery Equipment (Z50-1947) was sponsored by the Society. The Society is an active participant in the Baking Industry Sanitation Standards Committee which has published to date 12 standards for sanitation of bakery equipment and has many more in process of formulation.

AMERICAN SOCIETY OF CIVIL ENGINEERS, William H. Wisely, Executive Secretary, 33 West 39th Street, New York 18, N.Y.

The full effort of ASCE in the field of standardization is channeled through the American Standards Association. Through representation on nearly 40 ASA committees, ASCE joins with other societies in the creation of "American Standards." Such activities within ASCE are coordinated by an Administrative Committee on Standards.

AMERICAN SOCIETY FOR ENGINEERING EDUCATION, W. Leighton Collins, Secretary, University of Illinois, Urbana, Illinois

Standardization activities are cooperative projects with other organizations under the procedures of the American Standards Association. The particular committees are: Abbreviations; Letter Symbols for Heat and Thermodynamics; Drawing and Drafting Room Practice; Graphic Presentation, Graphic Symbols, and Drawings; Coordination of Dimensions of Building Materials and Equipment; and Electric and Magnetic Magnitudes and Units.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, Robert C. Cross, Executive Secretary, 234 Fifth Avenue, New York 1, N.Y.

This Society represents a recent merger of the American Society of Heating and Air Conditioning Engineers and the American Society of Refrigerating Engineers.

SOCIETY OF HEATING AND AIR-CONDITIONING ENGINEERS

The Society has taken a keen interest in the development of codes and standards pertaining to heating, ventilating, air-conditioning, and cooling. It has adopted standards relating to the design, testing, or rating of equipment for the heating, ventilating, and air-conditioning of buildings. Some of these standards pertain to: comfort air-conditioning; sorption-type dehumidifiers; determination of

thermal conductivity of materials; testing and rating heavy-duty furnaces and direct fired unit heaters; minimum requirements for heating and ventilating garages; testing and rating steam unit heaters and unit ventilators; testing and rating return line low vacuum pumps.

The Society has cooperated with other organizations in the development of standards and codes which it has either endorsed or approved. Some of these refer to air-conditioning equipment performance and sound output, refrigerant compressors, evaporative condensers, water-cooled refrigerant condensers, mechanical condensing units, forced circulation and natural convection, air-coolers for refrigeration, water and brine coolers, and centrifugal and axial fans.

The Society is represented on committees functioning under the procedure of American Standards Association for a number of projects including: Identification of piping systems; building code requirements for light and ventilation; coordination of dimensions of building materials and equipment; standards for pressure piping, pipe threads, and fittings; safety for mechanical refrigeration; standard refrigeration nomenclature; industrial cooling towers; abbreviations, letter symbols, graphical symbols; drawings and drafting room practice; safety for exhaust systems; acoustics, vibration, and mechanical shock; uniform industrial hygiene standards; fundamentals of performance of effluent air and gas cleaning equipment.

ASTM Committees concerned with standards on which the Society is represented include thermal insulating materials, acoustical materials, gaseous fuels, methods of atmospheric sampling, and analysis. The Society is also represented on NFPA Committees that prepare standards for hospital operating rooms, garages, aircraft hangars, air-conditioning and blower systems.

SOCIETY OF REFRIGERATING ENGINEERS

An important part of the work of this Society is the development and promulgation of testing standards covering refrigeration and air-conditioning equipment. These standards are developed by project committees consisting of industry experts operating under the jurisdiction of the Standards Committee.

Currently effective standards cover the following areas: mechanical condensing units; air-conditioners; drinking water coolers; evaporative condensers; water-cooled refrigerant condensers; refrigerant compressors; liquid coolers; air-coolers; capillary tubes; icemakers; bottled beverage coolers; designation of refrigerants; desiccants for refrigerant drying; high-side liquid line driers; cooling towers.

A certain number of standards developed by ASRE are considered to be of interest to other industries. Such standards are processed through the American Standards Association procedures and become American Standards. Those currently in effect cover the following areas: Safety Code for Mechanical Refrigeration; household electric refrigerators; homefreezers; refrigeration installations on shipboard; refrigerant expansion valves.

Joint standards are also developed with other engineering groups working in the same areas. Most recent of these is the joint ASRE-ASHAE standard covering air-heating and air-cooling coils.

New standards are always being developed as the need arises. At the present time proposed standards are being written to cover the following subjects: Remote air-cooled condensers; solenoid valves; mechanically refrigerated dehumidifiers; comfort air-conditioning;

terms and definitions; packaged chillers; equipment sound testing; unitary air-conditioning equipment; heat pumps.

At the present time ASRE has representatives on standards committees of the following organizations: American Standards Association (21 committees); American Society for Testing Materials (5 committees); American Society of Mechanical Engineers (2 committees); American Society of Heating and Air-Conditioning Engineers (3 committees); American Institute of Electrical Engineers (1 committee); Building Research Advisory Board (2 committees); National Association of Corrosion Engineers (1 committee); National Electrical Manufacturers Association (1 committee).

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, O. B. Schier II, Secretary, 29 West 39th Street, New York 18, N.Y.

The ASME is a professional society organized to promote the art and science of mechanical engineering and the allied arts and sciences; to encourage original research; to foster engineering education; to advance the standards of engineering; to promote the intercourse of engineers among themselves and with allied technologists; and in co-operation with other engineering and technical societies to broaden the usefulness of the engineering profession.

The Society has 24 professional divisions the titles of which are indicated by the following subjects covered by them: Applied Mechanics, Aviation, Fuels, Gas Turbine Power, Heat Transfer, Hydraulics, Instruments and Regulators, Lubrication, Machine Design, Maintenance and Plant Engineering, Management, Materials Handling, Metals Engineering, Nuclear Engineering, Oil and Gas Power, Petroleum, Power, Process Industries, Production Engineering, Railroad, Rubber and Plastics, Safety, Textile Engineering, and Wood Industries.

The Society publishes "Mechanical Engineering" monthly and the "Mechanical Catalog" annually. The "Transactions of the ASME" is published in four quarterlies, viz: Journal of Applied Mechanics, Journal of Basic Engineering, Journal of Industry Technology, and Journal of Power Technology.

The standardization activities of the Society have grown very rapidly during the past twenty-five years, until now about 3,000 engineers and others are serving on more than 400 committees for which the Society is sponsor or joint sponsor. In this work approximately 300 organizations cooperate.

The Society was one of the founders of the American Standards Association and its predecessor group, and has placed nearly all of its dimensional, graphical, and safety projects under the ASA Procedure. The Society is sponsor or joint sponsor for 37 committees on standards for screw threads and screw thread gaging; pipe threads and pipe thread gaging; cylindrical limits and fits; wire and sheet metal gages; fire hose couplings; hose coupling threads; bolts, nuts, and rivets; small tools and machine tool elements; gears; pipe; pipe fittings; washers; surface quality; transmission chains; V-belts and V-belt drives; pallets; identification of piping; automatic control terminology; plumbing equipment; gas cleaning equipment; plastic pipe; cooling towers; nuclear terminology; mechanical shock and vibration; abbreviations; letter symbols, graphical symbols; drawing practice; graphic presentation; pressure and vacuum gages; small sawmills; plant lay-

out; therbligs; steam turbine lubrication; large piston rings; and work standardization. In addition, it serves as sponsor or joint sponsor for 10 more committees dealing with the establishment of safety codes for elevators, dumbwaiters, escalators, and passenger conveyors; manlifts; parking garage equipment; power transmission machinery; compressed air equipment; conveyors; derricks, cranes, and hoists; industrial power trucks; aerial passenger tramways; and nuclear reactors. It also maintains representation on 78 other committees engaged in work on engineering standards.

One of the Society's most notable technical committee accomplishments is the development of the ASME Boiler and Pressure Vessel Code, the last edition of which was issued in 1956. This code, which is divided into eight sections, contains rules for the construction of power boilers to be used in stationary service, boilers of locomotives, miniature boilers, heating boilers, and unfired pressure vessels, as well as the care of power boilers in service and rules for welding qualification. One section contains the specifications for the materials to be used in code constructions. The Society also issues interpretations of these rules, including their application to nuclear power constructions.

The detailed specifications, formulas, tables of dimensions, diagrams and sketches in the code cover plates, tubes, piping, riveted and welded joints, domes, dished and flat heads, braced and stayed surfaces, stays, headers, access and nozzle openings, safety valves, gages, fittings and appliances, welding, and welding qualification procedure.

Other recommendations apply to efficiency of joints, method for certifying safety-valve capacity, fusible plugs, standard practice for making hydrostatic tests on a boiler pressure part, rules for existing installations, and for the approval of new materials under the code. Sample manufacturers' data report forms, and tables of standard dimensions are also included.

The Society had formerly issued a code for unfired pressure vessels for petroleum liquids and gases. This was prepared by a joint committee composed of representatives of the American Petroleum Institute and the American Society of Mechanical Engineers. By joint agreement of these two groups, this Code was discontinued at the end of 1956, the intent being that Section VIII of the ASME Code which covers Unfired Pressure Vessels would replace it.

There have also been prepared and issued by the Society 28 power test codes, 2 supplementary codes, and 32 auxiliary sections of information on instruments and apparatus. These codes give standard directions for conducting acceptance tests, and for determining the performance of power generating and using equipment.

**AMERICAN SOCIETY FOR METALS, W. H. Eisenman, Secretary,
7301 Euclid Avenue, Cleveland 3, Ohio**

This Society publishes the ASM Metals Handbook, which contains over 300 articles or reports on the application, manufacture, fabrication, treatment, and testing of metals and alloys, both ferrous and nonferrous. These articles and reports have been prepared by individual authors and technical committees. In a large measure they point up practices which are standard, or are likely to become standards, or they summarize data that will be of value to other groups working on standardization. The society maintains representation on the

Intersociety Corrosion Committee of the National Association of Corrosion Engineers, and on the Joint Committee on Definitions of Heat-Treatment Terms. This committee reports jointly to American Foundrymen's Association, American Society for Metals, American Society for Testing Materials, and Society of Automotive Engineers. The ASM does not issue specifications or standards.

AMERICAN SOCIETY OF PHOTOGRAMMETRY, C. E. Palmer, Secretary-Treasurer, 1515 Massachusetts Avenue NW., Washington 5, D.C.

The Society publishes a Manual of Photogrammetry. This manual presents a comprehensive collection of practical operating instructions and engineering fundamentals of photogrammetry. It includes references to important applications of the science as currently practiced in the United States. Of primary importance is the fact that it provides, for the use of professional workers in photogrammetry, the standard or current American practices for the construction of maps including large-scale engineering-type plans, standard topographic quadrangles, and small-scale reconnaissance and planning charts.

The official journal of the Society is entitled, "Photogrammetric Engineering." It contains technical articles and information on research, methods, equipment, specifications, costs, etc., for mapping, highway work, geologic investigations, forestry, agriculture, soils and other uses.

AMERICAN SOCIETY OF SANITARY ENGINEERING, Mike Mercury, Secretary-Treasurer, 4328 South Western Avenue, Chicago 9, Illinois

Standardization is carried on by this Society mainly through co-operation with other bodies engaged in a similar type of work. This organization, as early as 1906, initiated the movement for development of a plumbing code which was finally adopted under the auspices of the U.S. Department of Commerce. It has carried on cooperative work with the National Bureau of Standards in conducting tests of plumbing equipment for use in tall buildings. The Society cooperated with other organizations, under the procedure of the American Standards Association, in the establishment of the American Standard for pipe threads. It was also represented on committees dealing with projects relating to the development of a ventilation code, safety code for mechanical refrigeration, and graphical symbols and abbreviations for use on drawings. The Society has carried on research of new appliances and fixtures that enter into the plumbing industry and it is concerned with the modernizing of plumbing codes. Water Supply, Water Conservation, Water Pollution, Sewage Disposal, Septic Tanks and other methods of waste disposal are subjects of interest.

AMERICAN SOCIETY FOR TESTING MATERIALS, R. J. Painter, Executive Secretary and Treasurer, 1916 Race Street, Philadelphia 3, Pennsylvania

This is a national technical society of over 9,300 members, formally incorporated in 1902 for the purpose of "the promotion of knowledge of the materials of engineering and the standardization of specifications and the methods of testing." From 1898 there had been an American Section of the International Association for Testing Mate-

rials, but it was soon realized that an independent American organization was desirable, particularly to effect needed standardization work.

The Society's work, then, concerns specifically standardization and research in materials. It is, and has been for 60 years, specifically interested in the quality and tests of materials and only indirectly does it become involved in design problems, dimensional standards, and related matters.

As of March 1958, 2,423 standard specifications, methods of tests, and definitions were in effect and hundreds of research projects were under way involving the work of several thousand of the country's leading technical engineers and scientists. All of this work is of tremendous import to American industry, municipal, State, and the Federal governments and other bodies and nations.

Membership. Of the 9,360 regular members of the Society, about 2,050 are corporate memberships and the balance are individual members or Federal, State, and municipal departments, universities and technical schools, or technical societies and libraries. Not included in this field are upward of 1,000 student members at leading technical schools. Over 400 companies support the Society through sustaining memberships by contributing dues which are higher than for the regular type of company membership.

In addition to members of the Society, there are about 5,300 other individuals who are active in the Society's committee work, representing various companies which are members of the Society. Thus, all told, there are about 16,500 members, committee members and students.

Purpose and Work. In both phases of the work, standardization and research, the ASTM standing technical committees occupy a most important position. It has been rightly said that these committees are the heart of ASTM. An understanding of their organization and how they function in relation to the parent society is essential.

At the outset it should be stated that the work is of a cooperative nature, and all members of the committees serve voluntarily. The committees function under definite regulations, governing the personnel and methods of procedure. Each committee is made up of three main classes of membership—producers, consumers, and general interests. This latter class comprises independent authorities who have expert knowledge of the materials to be studied, but who are not concerned directly with either their production or use. The "producer" group may not predominate in any committee. It is recognized that no specification covering the quality and methods of testing a material or product will come into wide usage unless it is satisfactory to both the consumer and producer. The ASTM setup is thus fundamental in its standardization procedure, whereby the producers and consumers of material are brought together on an equal footing.

Standardization Procedure. Proposed standards or revisions of existing standards originate in the committee having jurisdiction in that particular field. After detailed study and work involving methods of determining properties of materials, nomenclature, etc., a proposed standard is evolved which is submitted at a meeting of the committee. Actions affecting the proposed standard are subject to a two-thirds vote at the meeting which must be subsequently

confirmed by a two-thirds letter ballot vote of the entire committee. Most of the proposed standards are published in the committee reports which are presented at the next annual meeting of the Society. If accepted at this meeting, the specification or test method is published as tentative for a year or more to elicit criticism and comments of which due cognizance is taken before the committee recommends that the tentative document be adopted by the Society as standard. Each standard before adoption is submitted to letter ballot vote of the entire Society membership and a two-thirds favorable vote of those voting is necessary before adoption.

New tentative standards may also be submitted in the interval between annual meetings. Tentative standards so submitted are reviewed by the Administrative Committee on Standards and if that committee is satisfied that a consensus has been reached in the technical committee concerned in respect to the standard and that it has been developed according to the regulations governing the adoption of standards, the tentative standard may be accepted for publication. This committee can also accept revisions in tentative standards and approve revisions of standards for publication as tentative.

Each standard is kept up to date by constant surveillance on the part of the respective committees responsible.

Statistics on Standards. Some idea of the intensive growth in ASTM standardization work is given below showing the number of standards and tentative standards in effect for 5-year intervals beginning in 1905:

Year	Number of standards	Year	Number of standards
1905.....	18	1935.....	794
1910.....	28	1940.....	885
1915.....	110	1945.....	1356
1920.....	227	1950.....	1724
1925.....	449	1955.....	2153
1930.....	582	1958.....	2423

The following is a classification by the general grouping of the Society's committees, showing, respectively, the number of standards in these fields:

Committees	Number of standards
A. Ferrous metals—steel, cast iron, wrought iron, alloys, etc.....	298
B. Nonferrous metals—copper, zinc, lead, aluminum alloys, etc.....	240
C. Cement, lime, gypsum, concrete, and clay products.....	366
D. Paints, petroleum products, paper, textiles, rubber, soap, etc.....	1, 280
E. Miscellaneous subjects, testing, etc.....	170
F. Materials for specific applications.....	69
Total.....	2, 423

Research, Knowledge of Materials. Obviously, research and standardization go hand in hand. C. B. Dudley, the Society's first president, and a pioneer in the development of specifications, after enumerating certain requirements of a workable specification for material, states that "above all it should embody within itself the results of the

latest and best studies of the properties of the materials which it covers." Early recognition of this fact and its continued recognition through the years undoubtedly have contributed more basically than any other factor to the wide use and established authority of the Society's standards.

Painstaking investigation and study of experience accumulated over years of service are often required before an adequate specification can be prepared. Agreement must be reached on the properties of materials to be specified and methods of testing them. Due cognizance of manufacturing details, methods of inspection, and marking, should be given.

The Society sponsors research work in different ways, but primarily through the extensive activities of its many standing and research committees. These are correlated by a Committee on Research. This group also has charge of the Research Fund from which contributions are made as the need arises to further worthy research projects. At the present time there are several hundred distinct projects under way, with large numbers of engineers and organizations cooperating.

An important factor also is the opportunity afforded technical and research investigators to give results of their work in papers at ASTM meetings. Each year many such contributions containing important data and information on the properties of materials and their testing are published.

Cooperation With Other Groups and the Federal Government. The Society recognizes the value and importance of cooperating with other organizations both in standardization work and in research activities wherever a common interest exists. Accordingly, the Society has joined with other national bodies in a great many investigative movements. These frequently take the form of joint committees. A phase of cooperative work which the ASTM believes is most important in advancing the knowledge of engineering materials is the joint sponsorship with other groups of symposiums held on important engineering topics. The Society has cooperated with such bodies as the American Society of Mechanical Engineers, American Foundrymen's Association, branches of the American Welding Society, Society of Automotive Engineers, and others in this important work.

Among other societies and activities in which the Society is officially represented are the following: National Research Council (Division of Engineering and Industrial Research); Alloys of Iron Research, Engineering Foundation; American Society of Civil Engineers; Structural Division, American Society for Metals; American Ceramic Society; Intersociety Color Council, and others.

The Society, one of the five originators of the American Standards Association, a clearing house for standardization activities, is the sole or joint sponsor of many ASA projects and more than a third of the standards approved by the ASA were developed and published by the Society.

Numerous divisions of the Federal Government cooperate closely with the Society and its technical committees, and the assistance rendered by the Federal Government and by various branches of the State governments, in particular, highway departments, is invaluable. Particular mention should be made of the cooperation of the National Bureau of Standards and its personnel. The latter is a relatively large group of scientists and engineers of broad training and experience concerned especially with developing factual information on many

problems related to materials, and as such bring to the large number of ASTM technical committees on which they are active, an invaluable background. The Bureau personnel is the largest "general interest" group in the Society.

The Bureau has undertaken much important research work for ASTM and the reports and technical papers from the Bureau, which have been published by the Society are no inconsiderable portion of this great mass of technical data.

The Bureau of Mines, Public Roads Administration, Forest Products Laboratory, branches of the U.S. Department of Agriculture, Bureau of Reclamation, Department of Defense, and other Federal departments have rendered much service. All of these groups, of course, receive benefits from this work—many ASTM standards are used by the Federal Government; the Society by publishing various technical contributions from the Federal Government helps disseminate knowledge.

Service branches of the Federal Government are active in ASTM work, the Army, Navy, and Air Force, being represented on committees; they help with various research projects and are vitally concerned with the requirements in ASTM specifications and tests.

It is of interest to note that five of the ASTM past presidents have been associated with the Federal Government, a former director of the National Bureau of Standards; the chief of the Technologic Branch, U.S. Bureau of Mines; a brigadier general, U.S. Army Engineers Corps; a former chief of the Chemistry Division, National Bureau of Standards; and the Assistant Director, U.S. Forest Products Research Laboratory.

Marking Requirements in ASTM Standards. Many of the ASTM specifications require that the products covered shall be marked or identified as to name or brand of the manufacturer, kind of material (in case of different grades or classes), certain testing information (hydrostatic test pressure, in case of pipe), and the ASTM serial designation indentifying the specific standard.

Means of Encouraging and Facilitating the Use of Standards. Obviously, with all the work and time and money expended in developing standards for materials, some thought has to be devoted to the application and use of the material. To an ever-increasing extent, particularly notable in the past 25 years, the ASTM specifications are applied in industry. In the steel, cement, brick, petroleum and many other fields, the quality of a high percentage of the products is covered by the Society's standards—usually incorporated in a purchase order merely by the number of the serial designation, such as C150-56 which covers Portland cement, the standard having been adopted in its latest form in 1956.

It should be kept in mind that over 10,000 men who are affiliated with the Society as members or committee members form a great bloc of influence in promoting the use of standards of quality. Also the tremendously increased interest in the whole standards movement has accelerated this use.

Publications. The methods of publishing standards and the very widespread distribution of these publications aid greatly in facilitating their use. For ease of reference the standards are published in collective form and each is also issued in separate pamphlet form. Of predominant interest is the Book of Standards published triennially with supplements in the two intervening years. For example, the

1955 Book of Standards and its 1956 and 1957 Supplements give all of the society's specifications and tests for this period; the book includes tentative standards as well as those formally adopted. It is issued in seven parts: Part 1 on Ferrous Metals; Part 2 on Nonferrous Metals; Part 3 on Cement, Concrete, Ceramics, Thermal Insulation, Road Materials, Waterproofing, and Soils; Part 4 on Paint, Naval Stores, Wood, Cellulose, Wax Polishes, Sandwich and Building Constructions, Fire Tests; Part 5 on Fuels, Petroleum, Aromatic Hydrocarbons, and Engine Antifreezes; Part 6 on Plastics, Electrical Insulation, Rubber, Electronics; Part 7 on Textiles, Soap, Water, Paper, Adhesives, Shipping Containers, Atmospheric Analysis. Each part has a separate supplement; also each has a subject index with a list of the specifications and tests in the order of their serial designations.

In 1958 the Book of Standards will be expanded to ten parts divided by subject as follows: Part 1 on Ferrous Metals (except test methods); Part 2 on Nonferrous Metals (except test methods), Electronics Materials; Part 3 on Methods of Testing Metals (excluding Chemical Analysis); Part 4 on Cement, Concrete, Mortars, Road Materials, Waterproofing, Soils; Part 5 on Masonry Products, Ceramics, Thermal Insulation, Sandwich and Building Constructions, Fire Tests; Part 6 on Wood, Paper Adhesives, Shipping Containers, Cellulose, Casein, Leather; Part 7 on Petroleum Products, Lubricants, Tank Measurements Engine Tests; Part 8 on Paint, Naval Stores, Hydrocarbons, Coal and Coke, Gaseous Fuels, Engine Antifreezes; Part 9 on Plastics, Electrical Insulation, Rubber, Carbon Black; Part 10 on Textiles, Soap, Water, Atmospheric Analysis, Wax Polishes, Sorptive Mineral Materials.

Special compilations of standards are also issued providing all ASTM specifications and tests in special fields such as petroleum; textiles; coal and coke; electrical insulating materials; cement; rubber products; paint, varnish, lacquer, and related materials; refractories; chemical analysis of metals, plastics, steel pipe, and many others. Many thousands of copies of these compilations are distributed and a great many industries look on them with favor because of their compactness in giving in a somewhat more convenient form than the Book of Standards the specifications and tests with which the industry is primarily concerned.

The availability of each ASTM standard in separate pamphlet form provides a ready means of use and many thousands of copies of these are distributed annually.

A yearly index to ASTM standards, including tentative standards, is published and distributed without charge. This publication covering some 250 pages gives under appropriate key words the titles of the standards together with the page and full reference to the ASTM publications in which they appear. Twenty-eight thousand copies of the index were published in December 1957.

A great many of the Society's standards are reprinted by industrial companies and are used in text books and reference publications. Permission to reprint was frequently given; however the Society has recently, for various reasons, invoked a modest charge for the right to reprint the standards when the published material is used for commercial purposes.

Especially notable has been the widespread use of ASTM standards in various building codes such as those recommended by the U.S.

Department of Commerce, National Board of Fire Underwriters, Pacific Coast Building Officials Conference, the codes issued by New York City, Chicago, Boston, and others. The Materials Section of the Boiler Code Committee of the American Society of Mechanical Engineers is based on ASTM specifications. There are numerous other related ways in which ASTM specifications are used.

The Society's Bulletin, published eight times per year, is effective in promoting the knowledge of the Society's work and stimulating the use of its specifications and tests. Through numerous meetings, the annual and spring meetings of the Society and various local meetings, the importance of standardization work is stressed. Mention should be made of the close cooperation of a great many technical and business journals who with knowledge of the essential nature of the Society's work include technical articles and news accounts of the progress in the field of engineering materials where ASTM functions.

**AMERICAN SPECIFICATION INSTITUTE, Gerald L. Palmer,
Executive Secretary, 134 North La Salle Street, Chicago, Illinois**

The prime purpose of this organization, whose members comprise writers of engineering and architectural specifications, is the collection of specifications, information, and ideas from other organizations and sources; the study, discussion, and arrangement of these in standard form; and the distribution of these specifications and information to the members in the form of bulletins and the Institute's "Specification Record". This latter publication contains specifications, in full or in outline form, from which the specification writer may construct a specification for a particular structure or equipment. Some of the more important subjects covered by these specifications include structural iron and steel, clay and clay products, masonry, electrical devices, heating systems, kitchen and bakery equipment, plumbing fixtures, and other items entering into building construction.

**AMERICAN SPICE TRADE ASSOCIATION, Stewart P. Wands,
Secretary, 82 Wall Street, New York 5, N.Y.**

This Association maintains a Standards Committee whose function is to adopt standards of qualities of whole spices, seeds, and herbs imported at American ports of entry. Through the Spice Grinders and Processors Section, the Association sponsored the movement for a simplified schedule of stock sizes of tin and silver spice containers which led to the establishment of the Simplified Practice Recommendation R170-38, promulgated and published by the National Bureau of Standards.

**AMERICAN STANDARDS ASSOCIATION, Admiral G. F. Hussey,
Jr. (Ret.), Managing Director, 10 East 40th Street, New York 17,
N.Y.**

This is a federation of national organizations—technical societies, trade associations, consumer groups, and the like. It is incorporated under the laws of the State of New York as a membership corporation.

Organized as the American Engineering Standards Committee (AESC) in 1918 by five engineering societies, the American Institute of Electrical Engineers, American Society of Mechanical Engineers, American Society of Civil Engineers, American Society of Mining and Metallurgical Engineers, and American Society for Testing

Materials, its initial purpose was to provide means for coordinating the standards issued by its founders, eliminating confusion and duplication among those standards. Its first act was to invite three Government departments to join on an equal footing with the founder societies. The War Department, the Navy Department, and the Department of Commerce accepted the invitation and the three representatives from each of these eight groups developed the principles and procedures which basically apply to the work of the American Standards Association today. Enlarged in 1920 by the addition of trade associations, as well as more technical and professional societies, the AESC in 1928 was reorganized as the American Standards Association in order to provide a more workable structure. Without significant structural change the Association became the American Standards Association, Inc., in 1948. The act of incorporation, however, involved the loss of the Member-Bodies from the Federal Government which then numbered 10.

The ASA serves as the national clearinghouse for standards and provides the machinery for developing and approving standards which are supported by a national consensus. The loose term "consensus" was chosen advisedly in order that in reviewing standards presented for approval the votes for and against may be both counted and weighed. There have been occasions when a single negative vote—supported by strong reasons—has been sufficient to send a standard back to its originators for further work while in other cases a number of negative votes—with relatively trivial reasons in support—have been noted for future consideration, and the standard has received ASA approval.

The basic principles which apply to all aspects of standardization work under ASA procedures are: First, standardization is voluntary; second, a committee formed to develop standards must be so balanced among producers, consumers, and general interests as well as regulatory bodies, if they be involved, that no one group may have a preponderance. Thus, no single group can, on the one hand, force a standard through over substantial objections nor can it, on the other, block a standard which is desired by others. The test for acceptability of a proposal to initiate work, a standard resulting from such work, or a standard submitted by an organization (whether or not a member of the ASA) is in each case: Is there a national consensus of those substantially concerned with the proposed project or standard in support of the proposal?

Technical societies, trade associations, consumer groups, and the like, make up the Member-Bodies and Associate Members of the ASA. The Member-Bodies through representation on the Standards Council, where no Member-Body may have more than three representatives, control the technical policies of the ASA and through subordinate organizations supervise the actual standardization activities. The Council delegates to standards boards—each authoritative in its own field—decision as to initiation of projects, scopes of projects, designation of sponsors (organizations to take the leadership for each project), and recommendations as to approval of standards. Final action on approval of standards is taken by a six-man Board of Review elected by the Council from its own membership. Standards boards are also required to survey standardization activities in their own fields and to take steps toward the initiation of projects if such seem to be required.

Member-Bodies are also represented selectively by 15 of the 23 members of the Board of Directors. The remaining members are three directors-at-large nominated by the Board and the officers and immediate past officers of the Association and the Standards Council. The Board is responsible for administration, fiscal, and general policy matters.

The staff of the ASA which has no direct part in the development of standards provides secretarial services to the standards boards and to the Council and acts to assist the sponsors of projects in the solution of organizational and procedural questions.

As of August 1, 1959, there were 1,849 American Standards on the ASA's books. Of these, approximately one-third have resulted from submittals by competent organizations of standards which they have developed through their own procedures, together with evidence as to the existence of a consensus in support of such standards. The balance have come through the work of sectional committees organized as described above. A few—mostly simple standards—have been approved after acceptance by a General Conference. Many of the standards on the current list have been revised a number of times. Under the procedures, each standard is required to be considered every 5 years to determine whether it is still valid in which case it is reaffirmed or revised where necessary. Revision may be undertaken at any time. Organizations submitting standards for approval may be assigned proprietary responsibility for their revision. Standards approved by the ASA are given the title "American Standard." Those developed by other organizations have "American Standard" added to their title. Such standards retain their originator's designation and are given in addition the designation assigned by the ASA.

The ASA is the United States member of the International Organization for Standardization (ISO), which now consists of the national standards bodies of 41 countries. The United States' viewpoints to be presented in the technical work of the ISO are developed either through the interested sectional committee or through a competent committee of another organization or, if there be none of these available, through a committee specially organized as a USA Advisory Committee for ISO Technical Committee. The work of the ISO technical committees results eventually in ISO Recommendations which may be embodied in the national standards of the ISO's Member-Bodies. A small number of ISO Recommendations have so far been embodied in American Standards. For international standardization in the electrical field, the ASA provides services to the United States National Committee of the International Electrotechnical Commission. This latter autonomous organization which had its inception in 1904 serves as the electrical branch of the ISO and devotes its activities solely to the electrical field.

Financial support of the ASA comes from the dues paid by the Member-Bodies and Associate Members and by some 2,000 Company Members, many of which join through group memberships provided by their trade associations. An additional source of income is the sale of American Standards. Headquarters of the ASA are at 10 East 40th St., New York 16, N.Y., with a branch office at the National Bureau of Standards in Washington, D.C.

The ASA maintains a library which currently includes about 70,000 standards received through the ASA's exchange system with the na-

tional standards bodies of all countries where such exist. The library is open to the public.

In addition to American Standards and the annual list thereof, the ASA publishes monthly the "Magazine of Standards" devoted to discussions of principles, practice, and application of standardization and to news on ASA and international standardization activities. The ASA holds annually a National Conference on Standards. This usually lasts for 3 days and includes presentation of papers and discussions of standards problems at the international, national, industry, and company levels. The Proceedings of the National Conferences are published and are available for sale. The "Magazine of Standards" is a part of the membership service for all members, but it is also available on a subscription basis to individuals not having company affiliation, as well as to institutions, libraries, schools, and the like.

AMERICAN SUGAR CANE LEAGUE, Gilbert J. Durbin, General Manager, 414 Whitney Building, New Orleans 12, Louisiana

Several committees of this organization carry on work leading to the development of methods and standards for products coming within its jurisdiction. The Molasses Committee undertakes to safeguard the standards of molasses in the case of Federal Classification to avoid conflicts with the industry. The Contact Committee cooperates with the United States Department of Agriculture for the purpose of furthering research and other scientific work, both in the field and factory spheres. This work embraces the whole matter of plant disease control, development of standards for various cane varieties, and cultivation methods.

AMERICAN TRANSIT ASSOCIATION, Arthur W. Baker, General Secretary, 292 Madison Avenue, New York 17, N.Y.

Standardization work of this Association is lessening due to the transition in the transit industry from predominantly streetcar operation to predominantly bus operation. Many former standards and recommendations have been withdrawn from the Association's Engineering Manual, and no entirely new sections have been added for several years. Although the Manual is still maintained, most of the remaining sections relate to practices which are unchanged since 1941.

The Association's Engineering Manual currently comprises 62 standards and recommendations under three general divisions—Power, Rolling Stock and Way, and Structures.

Cooperation, through representation, is maintained with committees of the American Standards Association, National Fire Protection Association, National Safety Council, American Society for Testing Materials, Society of Automotive Engineers and Illuminating Engineering Society.

One of the current activities of the Association is the development of statements of "Objectives" in the design of motor coaches and trolley coaches. These statements cover in detail desirable features that should be incorporated or provided for in the design, construction and equipment of transit vehicles by the vehicle builders, to encourage constant improvement in design and in some cases to obtain uniformity in the interests of safety, ease of operation, simplification and economy.

**AMERICAN VENEER PACKAGE ASSOCIATION, Alvin A. Voges,
Secretary-Manager, 1225½ North Orange Avenue, Orlando, Florida**

The majority of products represented by this Association are subject to the U.S. Container Acts of 1916 and 1928 as to size and shape. Accordingly, specification limitations have been developed in co-operation with the National Container Committee, AAR.

The Association maintains a standing committee on Standards and cooperates with organizations and Government bodies concerning matters relating to standardization of containers, particularly to fruit and vegetable baskets, hampers, and crates.

**AMERICAN VETERINARY MEDICAL ASSOCIATION, H. E.
Kingman, Jr., Executive Secretary, 600 South Michigan Avenue,
Chicago 5, Illinois**

The standardization activities of this Association are vested primarily in the Council on Biological and Therapeutic Agents. The duties of the Council are: (1) Study the prophylactic and therapeutic merits of the various biological products employed in the practice of veterinary medicine; (2) study the merits of proprietary pharmaceutical preparations employed in the practice of veterinary medicine; (3) cooperate with the Food and Drug Administration of the Federal Department of Health, Education, and Welfare, and the Agricultural Research Service of the U.S. Department of Agriculture in removing undesirable products from the drug and food markets; and (4) cooperate with other groups in the medical profession engaged in similar activities.

**AMERICAN WALNUT MANUFACTURERS ASSOCIATION,
George C. Romeiser, Secretary-Manager, 666 North Lake Shore
Drive, Chicago 11, Illinois**

This Association cooperates in the development of rules for grading American walnut lumber which are published by the National Hardwood Lumber Association in its rules for the measurement and inspection of hardwood lumber, cypress, veneers, thin lumber and plywood. These grading rules are in general use, not only in the United States but also in foreign countries. The Association has also adopted rules for grading American walnut logs.

**AMERICAN WAREHOUSEMEN'S ASSOCIATION, William Dal-
ton, General Secretary, 1210 Tower Building, Washington 5, D.C.**

This organization sponsored the movement that resulted in the establishment by the industry of standard warehouse forms promulgated in Simplified Practice Recommendation R34, issued by the National Bureau of Standards. As a supplement to that project and with the cooperation of the Department of Commerce and other interested parties, the Association formulated the standard contract terms and conditions for general merchandise and refrigerated warehouses.

The National Association of Refrigerated Warehouses (a division of AWA) cooperated with the American Standards Association in the development of the Standard safety code for mechanical refrigeration, which was approved as American standard B9-1933 by the ASA.

The American Warehousemen's Association, Merchandise Division, and the National Association of Refrigerated Warehouses—the two

Divisions constituting the AWA—have evolved cost formulas and other suggested accounting practices relating to the branches of the warehousing business for which they respectively function.

Both AWA Divisions are also represented on the General Storage Committee of the National Fire Protection Association which develops fire protection standards for warehouse structures.

**AMERICAN WATER WORKS ASSOCIATION, Harry E. Jordan,
Secretary, 2 Park Avenue, New York 16, N.Y.**

The Committee on Water Works Practice is in responsible charge and control of all technical activities of the Association. This committee appoints such subcommittees as it may deem necessary to properly carry on its work, including the development of standards. Fully organized committees are at the present time engaged in projects relating to development of standards for the construction and testing of deep wells, as well as purchase requirements for, and method of testing deep well pumps; methods of safe handling of chemicals used in water purification; steel plate pipe and coatings; laying of cast-iron pipe; valves, sluice gates, and fire hydrants; and other miscellaneous items in the water works field.

Other committees in the Water Purification Division of the Association are actively engaged in the preparation of specifications and tests for water purification chemicals; activated carbon research; specifications for and methods of testing zeolites; methods of determining fluorides; methods of water treatment and laboratory control; standards for purification plant operation; and specifications for filtering material.

In carrying forward its work in the field of simplification and standardization, the Association maintains representation on numerous committees of certain technical organizations. It is officially represented on sectional committees functioning under the procedure of the American Standards Association in the development of standards for the following projects: Specifications for cast-iron pipe and special castings, manhole frames and covers, standardization of plumbing equipment, pipe threads, pipe flanges and fittings, code for pressure piping, standardization of dimensions and materials of wrought-iron and wrought-steel pipe and tubing, national electrical code, specifications for zinc coating of iron and steel, specifications for sieves for testing purposes, and standardization of graphical symbols for use on drawings.

It cooperates with committees of the National Fire Protection Association on electrical code; hydrants, valves, and pipe fittings; public water supplies for private fire protection, including the uniform marking of fire hydrants; and on tanks.

In cooperation with a committee of the American Public Health Association, a committee of this Association assists in the preparation and revision of the publication, Standard Methods for Examination of Water and Sewage, which is now in its ninth edition.

The Association has cooperated with the Municipal Finance Officers Association in the production of a Manual of Water Works Accounting. A standing committee of the two associations is charged with the duty of revising the text whenever changes in accounting practices indicate the advisability.

**AMERICAN WAX IMPORTERS AND REFINERS ASSOCIATION,
R. Strayer, President, 36 West 44th Street, New York 18, N.Y.**

The Association was formed for the purpose of establishing and maintaining a cordial and friendly relationship among the members and by united and cooperative effort to develop, promote and protect the interest of the industry.

It has established color standards, sampling and test methods together with specifications for Carnauba Wax. It is also in the process of developing specifications for Candelilla Wax and Ouricury Wax. The ultimate aim is to have accepted specifications for all natural vegetable waxes.

**AMERICAN ZINC INSTITUTE, John L. Kimberley, Executive Vice
President and Secretary, 60 East 42d Street, New York 17, N.Y.**

The activities of this Institute in the field of standardization are confined to specifications and standards in connection with the finished products of the zinc industry. In this respect, the Institute is a member of the American Society for Testing Materials, and cooperates with committees of the latter organization dealing with corrosion of iron and steel, on specifications for nonferrous metals and alloys, and on corrosion of nonferrous metals and alloys. It has cooperated in the preparation of ASTM specifications covering slab zinc (spelter), rolled zinc, and zinc base alloy die castings. In addition, it concerns itself in all ASTM specifications relating to zinc-coated steel and iron articles such as, for example, fencing, wire, sheets, pipe, hardware, etc., as well as methods of test in connection therewith.

It cooperates also with the Standardization Division, Federal Supply Service, G.S.A., in the preparation and revision of Federal specifications covering slab zinc (spelter); zinc plates, sheets and strip; zinc anodes for cathodic protection; zinc base alloys for die castings; and zinc dust-zinc oxide primer paint (for galvanized (zinc-coated) or zinc surfaces). In conjunction with the promotion activities of the Institute and its efforts to improve the quality of zinc-coated (galvanized) roofing sheets, the Institute licenses steel manufacturers without charge to stamp the American Zinc Institute's Seal of Quality mark on all galvanized sheets, which conform to rigid specifications as to quality and which carry a full 2-ounce zinc coating.

**APPALACHIAN HARDWOOD MANUFACTURERS, INC.,
H. D. Bennett, Secretary-Manager, 414 Walnut Street, Cincinnati 2,
Ohio**

This organization has a Trade Extension Committee which functions regularly in matters relating to standardization. Under the supervision of this committee, there was designed and placed on the market Appalachian standardized and packaged hardwood paneling, which is being manufactured in accordance with Commerical Standard CS74-39, promulgated by the National Bureau of Standards.

The committee operates with the National Hardwood lumber Association and the various regional hardwood associations in formulating and adopting the national standards covering the manufacture of standardized and packaged hardwood paneling.

APPLE GROWERS ASSOCIATION, J. E. Klahre, General Manager, Hood River, Oregon

This Association handles fresh fruits such as apples, pears and cherries, the grades and standards of which are fixed by the State and Federal Departments of Agriculture. It also handles canned pears, apples, apple juice, apple sauce, vinegar, and cherries, the standards of which are fixed by the Food and Drug Administration, and the U.S. Department of Agriculture. Changes in standards are first worked through Standards Committees of Northwest Cannery and Freezers Association, and the National Cannery Association.

This Association cooperated with the National Bureau of Standards and the apple wraps industry in the development of a quality standard for dry and oiled paper apple wraps. This resulted in the establishment of Commercial Standard CS44-32, which was promulgated and published by the National Bureau of Standards.

ARCHITECTURAL TERRA COTTA INSTITUTE, Harry C. Plummer, Director, Engineering and Technology, 1520 18th Street NW., Washington 6, D.C.

The Institute is an organization of the manufacturers of architectural terra cotta and ceramic veneer in the United States. Since architectural terra cotta is a custom product, sizes, shapes and colors are not standardized; however, the Institute has developed standard specifications for setting architectural terra cotta and ceramic veneer and, currently in cooperation with the Structural Clay Products Research Foundation, is conducting research to determine measures of durability suitable for inclusion in standard specifications for the product.

ARCHITECTURAL WOODWORK INSTITUTE, John L. Rose, Executive Secretary, 332 South Michigan Avenue, Chicago 4, Illinois

The Millwork Cost Bureau was merged with the Architectural Woodwork Institute and is now operated as its Millwork Cost Bureau Division in carrying on a sustained program of standardization in the fields of cost accounting and detailing practices for all forms of exterior and interior architectural woodwork, sometimes known as special millwork, detail millwork, or contract millwork.

The Millwork Cost Bureau was established in Chicago in 1914, and has published Cost Book "A" uninterruptedly to the present day. The book is furnished to subscribers throughout the United States and Canada, and is necessarily subject to constant revision, in order that it may be in accord with recent market practices and trends. Cost Book "A" presents a complete, standardized system of determining costs to millwork estimators, with keys to adjust cost differentials according to the prices of labor and materials in the particular area under study. The formulas in the book have been subject to constant scrutiny and have been proving themselves for years.

The Millwork Cost Bureau also maintains a correspondence school for subscribers for the training of estimators, detailers and billers. The courses in detailing provide a means for the promulgation of good, sound, standard practices for the detailing and fabrication of special millwork.

ASPHALT INSTITUTE, J. E. Buchanan, President, and A. S. Wellborn, Secretary and Chief Engineer, The Asphalt Institute, University of Maryland, College Park, Maryland

The Institute has a technical committee structure consisting of: (1) Engineering and Development Committees in each of the five geographical Divisions of the Institute and one for Canada composed of asphalt technologists of member companies operating within the Division; (2) Project Committees composed of one representative from each Division, including Canada, concerned with research and development on specific problems relating to asphalt use and technology; and (3) Steering Committee composed of the Engineering and Development Committee Chairman; this Committee coordinates technical committee activities of the Institute.

In addition, the Institute maintains a Research Department including well-equipped laboratories, at its headquarters building.

The technical committees and the Research Department, as well as other Institute engineers, participate in a wide variety of technical society activities concerned with standardization of test procedures and material specifications related to asphaltic products and their use. The Institute has published construction specifications for a wide variety of asphalt applications in highway and airfield construction, uses of asphalt in hydraulic structures, asphalt protective coatings for pipe lines, uses of asphalt in recreational areas, and others. It cooperates with the American Society for Testing Materials, the American Association of State Highway Officials and with state and federal agencies in laboratory and committee work related to standardization activities.

ASPHALT ROOFING INDUSTRY BUREAU, J. S. Bryant, Managing Director, 50 East Forty-second Street, New York 17, N.Y.

The Technical Committee of this Bureau cooperates actively in the formulation, and improvement of standards and specifications covering asphalt roofing products, which are formulated by the Federal Government, the American Society for Testing Materials, and the Underwriters' Laboratories. Through its simplification committee, this bureau made studies and analyses designed to show the multiplicity of items produced in the industry and their relative importance from a sales volume standpoint. The purpose of these studies was to enable manufacturers to intelligently accomplish such individual simplification and standardization of their own lines as circumstances seemed to warrant. This organization maintains a research associate at the National Bureau of Standards conducting research work on durability of asphalt roofing.

ASSOCIATED BUSINESS PUBLICATIONS, Lawrence Steinberg, Assistant Director of Information Services, 205 East 42d Street, New York 17, N.Y.

The association has developed "Suggested Standards of Procedure for Business-Paper Publishers." These are designed to provide greater uniformity and understanding of publishing practices, which leads to increased operating efficiencies and improved customer relations. ABP's Committee on Uniform Practices, together with the cooperation of member publishers was the initiating force in most of these standardizations.

The Standards Binder contains over 50 pages covering such important topics as: Zinc engravings; standard second colors; contract acknowledgment forms; recommended wordings for 17 areas of publishing policy stated on rate cards, SRDS listings, etc.; examples of invoices that cover most business situations; suggested wording for policy statements on space, copy and mechanical regulations. The widespread acceptance of these recommendations has resulted in better understanding of publishing policies and terms between advertisers, advertising agencies and publishers.

ASSOCIATED COOPERAGE INDUSTRIES OF AMERICA, INC.,
Albert H. Knabb, Executive Director, 408 Olive Street, St. Louis,
Missouri

This organization carries on its standardization work through several committees appointed especially for that purpose. The Committee on Grade Rules and Specifications for Slack Cooperage Material has developed standard specifications covering slack barrel staves, coiled elm hoops and slack barrel heading. The Association also assisted in the promulgation of Congressional Acts to fix the standard barrel for fruits, vegetables and other dry commodities, and to standardize lime barrels; also in establishing rules and regulations promulgated under authority of the Federal Standard Barrel Law, which are set forth in Circular C71 issued by the National Bureau of Standards.

The Committee on Grade Rules and Specifications for Tight Cooperage Material formulates specifications for tight barrel staves; tight barrel heading, circled and square. These rules and specifications for cooperage material are used throughout the United States as standard.

The Committee on ICC Specifications for Slack Barrels considers and recommends specifications for slack barrels for the transportation of explosives and other dangerous commodities. In carrying forward this work it cooperates with the Interstate Commerce Commission, the Bureau of Explosives of the Association of American Railroads, the Manufacturing Chemists' Association, and other interested bodies. This committee also cooperates with the Freight Container Bureau of the Association of American Railroads in developing standards for slack barrels for fruits and vegetables. The Cooperage Association also established Federal Specifications for Slack Wooden Kegs and Barrels, NN-K-231b and PPP-B-41, for use of all Federal Agencies.

The Committee on ICC Specifications for Tight Barrels cooperates with various organizations in developing proper standards and specifications for tight barrels for the transportation of explosives and other dangerous articles. The Association assisted the Board of Trade of the city of Chicago in the development of standard specifications for pork barrels, lard tierces, and tierces for pickled meats. It also cooperated in the establishment of Federal Specifications for Tight Wooden Barrels, PPP-B-112a, for use of all Federal Agencies.

The members of this Association are constantly cooperating with container users in the development of barrels suitable for their products. These barrels are all made from material produced in accordance with the Association's standard grades and specifications.

ASSOCIATED GENERAL CONTRACTORS OF AMERICA, INC.,
James D. Marshall, Executive Director, 20th and E Streets NW.,
Washington 6, D.C.

Standardization and simplification constitute important activities in the conduct of affairs of this organization. The work is carried on by various committees and the national staff which, either on their own initiative or in cooperation with committees of other organizations have developed standards and specifications approved by the AGC for the guidance and use of the members of the industry.

Through its Accident Prevention Committee, the association has published and kept under constant revision the "Manual of Accident Prevention in Construction."

The Joint Conference on Standard Construction Contracts, composed of representatives of the association and those of the principal public and private associations and societies in the construction industry, formulated standard contract forms for building, engineering, and standard forms for the qualification of bidders on public and private work, which have been adopted by the AGC.

Several special committees of the association have developed miscellaneous standard forms for construction, including prequalification of bidders, cost of owning construction equipment, etc.

It is a member of the National Safety Council and is actively engaged in promoting interest in accident prevention in construction as well as considering other matters relating to construction safety under development by the National Safety Council.

The Mixer Manufacturers Bureau, composed of mixer and paver manufacturers in the United States, affiliated with the Associated General Contractors of America, has developed standard sizes and capacities for concrete mixers and pavers. Similarly, the Contractors Pump Bureau, also affiliated with the AGC, has adopted standard sizes and capacities for contractor's pumps. Both of these standards are in full effect and the principal manufacturers representing the great preponderance of production in the industry are guided by them.

The association cooperates also with the Central Committee on Lumber Standards in the establishment of American lumber standards dealing with lumber sizes and use classifications of commercial softwoods; and with the Commodity Standards Division, Department of Commerce in the formulation of Simplified Practice Recommendations relating to construction materials and supplies.

The association maintains official representation on 23 sectional committees, functioning under the procedure of the American Standards Association, in developing standards and safety codes covering various projects in the construction and building industries. It is also represented on technical committees of the American Society for Testing Materials engaged in the preparation of standard specifications for cement and for road and paving materials.

In cooperation with national labor unions it has developed standards for the training of apprentices in carpentry, bricklaying and cement masonry.

It is one of the four sponsoring organizations of the Modular Building Standards Association.

ASSOCIATION OF AMERICAN BATTERY MANUFACTURERS, INC., B. F. Morris, Executive Secretary, 19 North Harrison, Street, East Orange, New Jersey

This Association was formed in 1924 as the National Battery Manufacturers Association and changed to its present name in 1940. The Association maintains a technical committee consisting of outstanding battery engineers who recommend standards to the board of directors covering such subjects as capacity standards, life expectancy, materials composition, etc. In addition this committee keeps abreast of the activities of the National Bureau of Standards, the Society of Automotive Engineers and the American Standards Association to the extent that they may be of interest to the battery manufacturing industry.

ASSOCIATION OF AMERICAN FEED CONTROL OFFICIALS, INC., Leslie E. Bopst, Secretary, College Park, Maryland

The primary objective of this Association is to promote uniformity in legislation, definitions, rulings, and the enforcement of laws relating to the manufacture, sale, and distribution of feeding stuffs and livestock remedies on the continent of North America.

The Association has officially adopted definitions and standards of feeding stuffs for classes of products including the following: Alfalfa, animal, barley; brewers' and distillers'; corn, cottonseed, linseed and flax, marine, milk, mineral, oat, peanut, rice, rye, screenings, soybean, vitamin, wheat, yeast, additives used for growth promotion and therapeutic purposes, and others. In carrying forward its work the Association has adopted the methods of analysis of the Association of Official Agricultural Chemists.

Committees of this Association cooperate with committees of the American Feed Manufacturers Association, National Cottonseed Products Association, National Mineral Feeds Association, National Soybean Processors Association, American Meat Institute, American Dehydrators Association, and the National Fisheries Institute in attaining high standards of feed production for the betterment and benefit of the feed industry as a whole. The Association also collaborates with the United States Food and Drug Administration in the enforcement of regulations under the Federal Food, Drug, and Cosmetic Act.

It has adopted uniform types of labels for all classes of feeds. Manufacturers or jobbers are required to place labels on all packages of feeds, and the registration of brands and guarantees must be filed with each State-control agency. A guarantee and label for a brand having been registered may not be subsequently so modified as to permit the lowering of the quality of the feed, unless it can be clearly shown that the modification sought to be made is consistent with the interest of the feeder. The control organization may cancel the registration of any feed when it has been found that the brand name is misleading in any respect, or that the feed contains an injurious ingredient, or packages are incorrectly labeled with regard to ingredients, or there is evidence of misbranding or adulteration, or when labels on packages contain any statement, design, or device which tends to deceive the purchaser.

ASSOCIATION OF AMERICAN RAILROADS, OPERATING-TRANSPORTATION DIVISION, 59 East Van Buren Street, Chicago 5, Illinois

FIRE PROTECTION AND INSURANCE SECTION, W. E. Todd, Secretary

This Section, composed of representatives of member lines actively employed in the work of fire protection and its allied subjects, including insurance, was formed in 1939. This group formerly functioned independently as the Railway Fire Protection Association.

This Section has for its objectives the improvement of methods of fire protection and prevention, the establishment of safeguards against loss of property and life by fire, and the standardization of practices through the interchange of ideas and experiences.

MEDICAL AND SURGICAL SECTION, F. J. Parker, Secretary

This Section handles matters relating to the health of railroad employees and patrons. It cooperates with State health bodies, and with the United States Department of Public Health, insofar as sanitation and similar matters concern employees and passengers. It has adopted recommended physical standards for railroad employees, by classes, as well as standard forms for conducting such physical examinations, making surgeon's report of injuries, etc.

OPERATING SECTION, F. J. Parker, Secretary

The functions of this Section have to do with the development of rules and practices with respect to operating phases of railroading. It publishes and keeps up-to-date by periodic revisions; (a) the Standard Code of Operating Rules, Block Signal Rules and Interlocking Rules, present wording adopted in March 1949 and includes authorized revisions up to October 1, 1953; (b) the Standard Form for Detour Agreement, last revised September 3, 1957; (c) the Standard Form of Rental Agreement Covering Wrecking Cranes and Outfits, adopted by the Association in June 1939. The Section also issues rules and recommended practices for handling of interline baggage between carriers.

PROTECTIVE SECTION, F. J. Parker, Secretary

The functions of this Section relate to the police protection of shipments and passengers, and particularly to the prevention of thefts. The Section is a clearing house for all railroad police or special service departments throughout the United States and Canada. It prepares and distributes a monthly "News Letter" and Depredations Report both of which contain items of particular interest to railroad and other law enforcement officers. This Section maintains a close relationship with federal, state and municipal police authorities throughout this country and Canada.

The Protective Section in cosponsorship with the Safety Section of this Association distributes material to children of grade school age which deals with the hazards of trespassing on railroad property.

SAFETY SECTION, F. J. Parker, Secretary

Through educational channels, the activities of this Section are primarily devoted to the prevention of accidents to employees and the public. It prepares and issues monthly posters relative to employee safety; also a monthly "News Bulletin," dealing with everyday safety problems. This Section also prepares and distributes a monthly

statistical report covering employee casualty ratios. Codes of safety rules covering major departments of the railroad industry are also available through the section.

The Safety Section in cosponsorship with the Protective Section of this Association distributes material to children of grade school age which deals with the hazards of trespassing on railroad property.

FREIGHT LOADING AND CONTAINER BUREAU, FREIGHT LOSS AND DAMAGE PREVENTION SECTION, A. P. Kivlin, Chief Engineer

In all of its work leading to the formation and adoption of recommended methods or practices for packing, boxing, and crating, engineers of this Bureau cooperated with the officials of the industrial organizations representing manufacturers of these commodities to which attention is being given; and with the container and accessory manufacturers and their associations.

It is the practice of the Bureau to submit all recommendations to a special committee appointed by the industry to pass on the recommendations before they are approved for printing and distribution. In several cases the Bureau has carried on work leading to the preparation of recommended containers and packing methods at the direct request of a trade association, which has approved and adopted the recommendations as standard for its members. The Bureau's engineers make shipping and laboratory tests and spend much time at the shippers' plants, at freight stations, and in consignees' receiving rooms, gathering information as to what are the causes for loss and damage to assist in determining how these causes may be eliminated. A considerable portion of the time of those engineers who are working on fresh fruits and vegetables is spent in the producing territories for the purpose of acquainting the shippers with the recommended containers and standard practices for loading and bracing.

The Bureau cooperates very closely with national and local trade and traffic associations and with various Federal and State agencies. Over 200 standards relating to various types of containers for packing and shipping of various commodities have been formulated and covered by illustrated pamphlets which have had a wide distribution.

OPERATIONS AND MAINTENANCE DEPARTMENT, ELECTRICAL SECTION, Carl C. Elber, Secretary, 59 East Van Buren Street, Chicago 5, Illinois

This Section, through the activities of its various committees and through investigations and research carried out under their direction, as well as collaborating with committees in the American Institute of Electrical Engineers, American Standards Association, American Society for Testing Materials, Edison Electric Institute, Illuminating Engineering Society, National Electrical Safety Code, and the Union International des Chemins De Fer, has prepared and adopted standards and recommended practices which are incorporated in the AAR Electrical Section Manual. This Manual, portions of which are revised and supplemented annually, covers electrical apparatus on rolling stock, including air-conditioning, heating facilities, refrigeration, generators, motors, traction motor testing and overhaul, wire, cable and insulating materials, standard wiring diagrams and markings, trainline communication, intratrain telephone systems, radio and

communication apparatus, illumination, storage batteries and hand lanterns. Also included in the Manual are welding and cutting processes and equipment, brazing with alloys, testing and qualifying welding operators, arrangement of shop space required for handling electric and diesel-electric locomotives, repair shop requirements, railway electrification, railway electrification clearances for pantograph and catenary construction from adjacent wayside structures, clearances for third-rail, crossings of electrical supply lines and facilities of steam and electrified railroads, electric heaters for track switches, rail bonds, corrosive protection, transformers for standby lighting and air-conditioning, plugs and receptacles, power supply for shops and standby service, illumination of yards and stations, and recommended practice for prevention of fire from electric sparks when handling flammable liquids and gases. The various committees of this Section are continuing their studies of the electrical problems of the railroads.

OPERATIONS AND MAINTENANCE DEPARTMENT, TRAIN OPERATION, CONTROL AND SIGNALS, GRADE CROSSING PROTECTION, Pierre D'Auga, Secretary, Transportation Building, Washington 6, D.C.

This Section investigates various types of railroad-highway grade crossing protective devices with reference to the application of the best methods to the several classes of crossings, and recommends standards and practices for the purpose. It cooperates with Federal, State and other public authorities, and keeps them informed with respect to these recommended standards and practices with a view to the establishment of uniformity in aspect and operation of grade crossing protective apparatus. In this connection, the Unit publishes a bulletin of recommended standards and practices for railroad-highway grade crossing protection, which is widely distributed to railroads, governmental bodies, and to other interested parties and organizations. This publication has been approved as American Standard by the American Standards Association.

OPERATIONS AND MAINTENANCE DEPARTMENT, FREIGHT CLAIM DIVISION, R. E. O'Donnell, Secretary, 59 East Van Buren Street, Chicago 5, Illinois

This Division publishes a so-called Freight Claim Rule Book, or manual of practices, in which are set forth (1) rules and standards prescribed for the investigation, adjustment, and interline apportionment of claims paid; (2) lists of freight claim and prevention officers of carriers; (3) uniform blanks; (4) recommended practices in loss and damage prevention work, and (5) other information for use in the freight claim offices of carriers. There are also published and distributed annually, in printed form, interpretations of freight claim rules as handed down by the committees of the Division, as the result of arbitration procedure.

BUREAU OF EXPLOSIVES, H. A. Campbell, Director and Chief Inspector, 30 Vesey Street, New York 7, N.Y.

This Bureau which functions as an agency for cooperation between shippers, carriers, and the Interstate Commerce Commission, maintains a chemical laboratory for the study of explosives and other

dangerous articles and containers therefor, and a force of traveling inspectors to insure compliance with the requirements of the regulations and specifications of the Interstate Commerce Commission dealing with the transportation of explosives and other dangerous articles.

**ENGINEERING DIVISION, SIGNAL SECTION, R. H. C. Balliet,
Secretary, 59 East Van Buren Street, Chicago 5, Illinois**

This Section harmonizes and coordinates the principles and practices of American railroads, and revises and keeps up-to-date the drawings, specifications, requisites and other miscellaneous information contained in its Manual of Recommended Practice covering design, construction, maintenance and operation of railway signaling devices. The committees of this Section investigate the development of new devices, improvement of existing equipment, and new methods of installation, maintenance, and operation pertinent to the art of signaling, under the following subject titles: Economics of railway signaling; controlled signaling and interlockings; signal shop practice; automatic block signaling; contracts and instructions; designs; materials research; highway grade crossing protection; wire and cable; signaling practice; electronics, and circuit design. Reports on their assignments are published in the Section's Annual Meeting Advance Notices and Minutes as information or for inclusion in the Manual of Recommended Practice.

It has also prepared a series of educational chapters on American Railway Signaling Principles and Practices covering the various phases of signaling. They now have under preparation a visual aid training program.

The Section is represented on a technical committee of the American Society for Testing Materials on the subject of rubber insulating materials; on U.S. National Committee, International Commission on Illumination, on standardization of signal light colors, and on sectional committees under the American Standards Association dealing with the following subjects: Standardization and unification of screw threads; plain and lock washers; standardization of wire and sheet metal gages; National Electrical Safety Code; insulated wires and cables; dry cells and batteries; insulators for electric power lines; definitions of electrical terms; electrical insulating materials in general; lightning arresters; preferred voltages—100 volts and under, and graphical symbols and designations.

**PURCHASES AND STORES DIVISION, J. H. Bean, Executive
Vice-Chairman, Transportation Building, 17th and H Streets
NW., Washington 6, D.C.**

Committees of this Division are actively engaged in preparing recommended standards, specifications, and rules and practices in order to bring about the highest efficiency and economy in the purchasing, handling and distribution of materials and supplies in the railway industry.

A Purchasing and Stores Department Manual, containing recommended rules and practices, a Standard Material Classification, a Standard Scrap Classification, Simplified Standard Material List (Recommended Sizes), a Reclamation Manual and a Material Handling Manual have been prepared.

The committees of this Division have been setting up recommenda-

tions of standards for machine accounting, methods for more economical preparation of scrap, new methods in reclamation practices, conservation of forest products, forests and reforestation, diesel lubrication and fuel oils, procedures used in purchasing, office supplies and equipment, material handling methods, common purpose box car, rail and fastenings, special steel sections for freight car construction, methods of disposing of surplus material and methods for improving inventory control.

These subjects together with others will be pursued by this Division with the ultimate in mind of furthering more efficient practices in the purchasing, handling, storing and distribution of materials and supplies.

OPERATIONS AND MAINTENANCE DEPARTMENT, MECHANICAL DIVISION, Fred Peronto, Executive Vice Chairman; F. H. Stremmel, Secretary, 59 East Van Buren Street, Chicago 5, Illinois

Through the activities of its different committees and the investigations and research carried out under their direction, this Division has adopted standards and recommended practices covering materials for cars and locomotives which are incorporated in a manual. This manual, which is revised and supplemented annually, includes material specifications for steel axles, wheels, forgings, tires, steel springs, boilers and fireboxes, iron and steel castings, pipe and pipe fittings, bearings, rubber hose, gaskets, and miscellaneous materials. In addition, it publishes a supplement to the manual which contains drawings for cars and trucks. The Division also issues periodic revisions of manuals relating to wheels and axles, lubricating oils, greases and devices, and locomotive tires.

The Division through its Committee on Loading Rules and Special Committee on Forest Products Loading publishes mandatory rules covering standard methods to govern loading of commodities on open top cars. These methods are formulated in cooperation with the shippers of such commodities, and are carefully tested before adoption. Thousands of test loads are annually followed through to destination. These rules are in the interest of safety to employees, the general public, and lading and equipment. The Division is also represented on the Standards Council and Mechanical Standards Committee of the American Standards Association.

The various committees of the Division are at present continuing their investigations and research for the purpose of keeping the standards and recommended practices revised and up-to-date, and leading to the adoption of additional practices for the improvement of railroad rolling stock and motive power.

The Committee on Brakes and Brake Equipment, in cooperation with the manufacturers of power brake equipment, is continuing its research in connection with best means for controlling the speed and stopping of trains.

The Committee on Couplers and Draft Gears is continuing its investigation of couplers and draft gears in cooperation with the manufacturers. The committee will continue additional tests of approved draft gears at the draft gear testing laboratory of the Association located at AAR Research Center, 3140 South Federal St., Chicago, Ill., to assure that draft gears, as sold, conform to the gears upon which certificate of approval was granted.

The Committee on Car Construction, in cooperation with the Design Committee of the American Railway Car Institute, continues its work in connection with improving the designs of standard cars.

The Committee on Specifications for Materials, in cooperation with other committees of the Division and manufacturers, is conducting studies and review of the material specifications of the Division to insure the specifications shall represent the best materials obtainable. This committee is also cooperating with the Committee on Car Construction in testing new designs of cast steel side frames and bolsters and with the mechanical engineer in tests of axles.

The Committee on Wheels, in cooperation with the technical committees of the manufacturers representing the various types of wheels, is carrying on investigation and research in connection with the specifications, designs, and service of the various kinds of wheels.

The Committee on Tank Cars is cooperating with the builders, owners, and users of tank cars in connection with designs and service of tank cars and tank-car appliances and devices. The committee keeps in close touch with the service rendered by the experimental tank cars constructed under authority granted by the Interstate Commerce Commission. Revised specifications of the ICC for tanks to be mounted upon, or to form a part of a car, have been approved and adopted. The committee has reviewed and revised AAR requirements for tank cars to be consistent therewith. The revised specifications are published by the Division.

The Committee on Locomotive Construction, in cooperation with a committee of engineers representing the locomotive builders, is conducting an investigation and research for the purpose of improving the design and service of locomotives, and in increasing the degree of standardization of fundamental parts of locomotive design.

The Mechanical Division assigns various projects on mechanical matters to the AAR Research Department for investigation and then collaborates in their development. Details concerning research, testing, and certification are mostly involved. Many improvements and new developments for cars and locomotives are handled through this collaboration and cooperation.

ASSOCIATION OF AMERICAN WOOD PULP IMPORTERS, William B. McGoldrick, 60 East 42d Street, New York 17, N.Y.

This Association is officially represented, with the American Paper and Pulp Association and the Technical Association of the Pulp and Paper Industry, on a joint committee to approve and govern the actions of commercial chemists engaged in the testing of wood pulp for the paper industry in the United States. Official rules relating to the weighing, sampling, and testing of wood pulp for moisture have been formally approved and adopted by this Association. It maintains a Traffic Committee which cooperates with railroads, steamship companies, and storage warehouses in the establishment of a standard set of storage and rail freight rates.

ASSOCIATION OF CASUALTY AND SURETY COMPANIES, ACCIDENT PREVENTION DEPARTMENT, Thomas N. Boate, Manager, 60 John Street, New York 38, N.Y.

Practically all of its standardization work is carried on in cooperation with committees of technical organizations and agencies of the

Federal Government, including: The American Standards Association, National Fire Protection Association, National Safety Council, Underwriters' Laboratories, United States Department of Labor, and United States Department of Commerce.

The Department is represented on 83 sectional committees of the American Standards Association and serves as sponsor or cosponsor of the following projects: Safety Code for Manlifts, Safety Code for Mechanical Power Transmission Apparatus, Safety Code for Conveyors and Conveying Machinery, Inspection Requirements for Motor Vehicles, Safety Code for Woodworking Machinery, Safety Glazing Materials for Glazing Motor Vehicles, and Performance Requirements for Protective Occupational Footwear. The Department is also represented on 8 of the ASA governing boards, namely: Standards Council, Safety Standards Board, Chemical Industry Advisory Board, Mining Standards Board, Nuclear Standards Board, Highway Traffic Standards Board, Construction Standards Board, and Acoustical Standards Board. It is also represented on 20 standards developing committees of the National Fire Protection Association, namely: Transit Operations, Static Electricity, Explosion Venting, Air-Conditioning, Fire Doors and Windows, Chemicals and Explosives, Hospital Operating Rooms, Flammable Liquids, Garages, Aircraft Maintenance and Storage, Aviation and Aircraft Fire Protection, Truck Transportation, Gases, Tanks, Ovens and Furnaces, Spontaneous Heating and Ignition, Trailers and Trailer Camps, Magnesium, Flame Proofing and Preservative Treatments, Finishing Processes.

ASSOCIATION OF EDISON ILLUMINATING COMPANIES, Robert Gale, Secretary, 51 East 42d Street, New York 17, N.Y.

Much of the work in standardization as relates to this Association is carried on in cooperation with technical organizations, notably, the American Standards Association. It served as joint sponsor for two sectional committees, functioning under the procedure of the American Standards Association, as follows: Insulated Wires and Cables for Other Than Telephone and Telegraph Use (with nine other organizations); and in the development of the Code of Electricity Meters (with the National Bureau of Standards and the National Electric Light Association, now the Edison Electric Institute). It also participated in the preparation of specifications for dry cells and batteries and the National Electrical Safety Code, both of which were approved by the American Standards Association.

It is officially represented on 18 ASA sectional committees dealing with the following projects: Code for pressure piping; insulated wires and cables; insulators for electric power lines; mercury arc rectifiers; power switchgear; National Electrical Safety Code; specifications for wood poles; pipe flanges and fittings; standardization of dimensions and materials of wrought iron and wrought steel pipe and tubing; identification of piping systems; revision of code for electricity meters; revision of American Standard for shaft couplings, integrally forged flanged type, for hydro-electric units, National Electrical Code, bare electrical conductors, rotating electrical machinery, capacitors, apparatus bushing standardization, and graphical symbols.

In consultation with the Insulated Power Cable Engineers Association, the Cable Engineering Section of the Committee on Power Distribution of this association prepared specifications for impregnated paper insulated cable—solid, low-pressure gas-filled and oil-

filled types (all lead-covered) and a high-pressure pipe type; and specifications for neoprene protective coverings for the lead-covered cables. All were printed by the Association. Through its Committee on Electric Switching and Switchgear, there were prepared specifications for oil circuit breakers and power circuit breaker controls which were also printed by the Association.

ASSOCIATION OF IRON AND STEEL ENGINEERS, T. J. Ess, Managing Director, 1010 Empire Building, Pittsburgh 22, Pennsylvania

This Association was founded in 1907 as a means of fostering an exchange of ideas toward the advancement of the iron and steel producing industry. The scope of the AISE now embraces all the various divisions of steel plant engineering and operations. Engineering divisions include electrical, mechanical, welding, combustion, operating practice, lubrication, safety, rolling mill, standardization and research. District sections are scattered at steel producing centers throughout the country.

The Association has developed standards for the steel industry which include such items as motors, surface finish, cranes, wiring, brakes, bearings, etc. In some cases these are detailed standards, in other cases they are recommended practices. A list of current standards are as follows: "D-C Mill Motor Standards," "Standards for Machined Surface Finishes," "Sling and Crane Chain Standards," "Standards for Wiring Diagrams," "Specifications for Electric Overhead Traveling Cranes for Steel Mill Service," "Specifications for Design of Ladle Hooks," "Crane Wiring Standards," "Standards for Design of Hot Metal Ladles," "Carbon Brush Size and Shunt Standards," "D-C Mill Motor Brake Standard," "Plain Bearing Recommended Practice."

The AISE also sponsors research activities at research institutions for the purpose of developing data for future standards and for improvement of steel mill operating practice.

ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS, William Horwitz, Secretary-Treasurer, Box 540, Benjamin Franklin Station, Washington 4, D.C.

The Association is a professional organization of State and Federal chemists devoted to developing, testing, and sponsoring improved methods for the analysis of fertilizers, soils, foods, feeds, pesticides, drugs, cosmetics, caustic poisons, and other materials related to agricultural pursuits. It was organized in 1884 by the State and Federal chemists who were in charge of enforcement of State fertilizer laws, or who, as members of agricultural experiment stations or the U.S. Department of Agriculture, were interested in practical and scientific applications of fertilizers to crops. The form of organization is one in which voting is restricted to official chemists, but discussion is open to all chemists. Four meetings prior to 1884 had failed to produce a cohesive and stable organization of both official and commercial chemists. This final organizational form was settled upon with the full cooperation and even insistence of commercial chemists. They agreed on the principle that since it was the official chemists who had the responsibility for the enforcement of the laws, they also had the responsibility for the choice of valid methods of analysis for this purpose.

As the regulatory control of other commodities such as foods, feeds, drugs, cosmetics, caustic poisons, and pesticides became a recognized governmental function, the work of the Association expanded. It has accepted the responsibility of providing the regulatory scientist with accurate and reproducible methods of analysis that are required for the enforcement of laws and regulations. This is accomplished through adherence to a fundamental constitutional requirement that methods approved by the Association be subjected to collaborative study. In this, a number of representative chemists analyze the same samples by the proposed method to demonstrate its accuracy and reproducibility in their hands. At the present time about 250 chemists, designated as "Associate Referees," are studying methods of analysis grouped in about 50 general categories from "Agricultural Liming Materials" to "Waters." Not all of them are official chemists; many are industry chemists, who because of their specialized knowledge and experience, also participate in the development and testing of methods of analysis. The results of the studies of these Associate Referees form the basis for the actions of the Association in its approval or disapproval of methods.

All State chemists including those of universities and experiment stations are members of the Association. Federal organizations represented in the Association are: Food and Drug Administration, Public Health Service, Department of Agriculture, Department of Defense, Internal Revenue Service, and National Bureau of Standards.

The laws enforced by the AOAC members require objective, scientific evidence for their successful application. The AOAC attempts to provide for both industry and government a common meeting ground for discussion, at a scientific level, of methods of analysis that will be used to obtain this evidence. That this has been successful is indicated by the facts that some State laws specify the use of AOAC methods, where applicable; the Federal Definitions and Standards of Identity for many foods incorporate AOAC methods into their requirements; many Federal specifications and private contracts utilize AOAC methods; and AOAC methods have been quite generally accorded a preferred status in court testimony. Most important of all, the general recognition of AOAC methods removes from the realm of controversy the scientific question of relative validity and adds prestige to the Association. This is settled by the scientists themselves on the basis of the facts developed during their collaborative studies.

Results of 73 years of work by the members of the Association are embodied in its primary publication "Official Methods of Analysis of the Association of Official Agricultural Chemists," now in its eighth edition (1955). This publication is a 1,000-page laboratory manual which includes 41 chapters, 90 pages of tables, and 45 pages of index. It is an authoritative source of methods of analysis for the regulatory chemist and the agricultural scientist throughout the world. It is supplemented by the quarterly Journal which publishes the transactions of the Association, including the annual changes in methods adopted by the Association, the reports of the Referees, and contributed papers containing new methods, new applications, and authentic or interpretive data.

The Association deals only with methods of analysis. Matters involving legislation, definition, administrative policy, and interpretation of laws are dealt with in related Official organizations: The As-

sociation of Food and Drug Officials of the United States, Association of American Fertilizer Control Officials, Association of American Feed Control Officials, and Association of American Pesticide Control Officials. The AOAC maintains formal and informal cooperative arrangements with other scientific societies dealing with methods of analysis to maintain uniformity. Among these are the American Public Health Association (Standard Methods for the Examination of Dairy Products), American Oil Chemists' Society (Nitrogen, Fats and Oils), American Society of Brewing Chemists (Malt Beverages), Joint Committee on Uniformity of Methods of Water Examination (Waters), and American Society of Enologists (Wines).

ASSOCIATION OF OFFICIAL SEED ANALYSTS, L. C. Shenberger, Secretary-Treasurer, Biochemistry Department, Purdue University, Lafayette, Indiana

The activities of this Association in the field of standardization of methods of seed testing are carried out primarily by the following standing committees: (a) Research, (b) Rules, (c) Referee, and (d) Standardized Tests. The principal objective in this field is to develop reliable procedures for testing seeds that will permit duplication of results when the same sample is tested by different stations. Quality factors for which tests are made include: purity of sample, percentage germination, rate of occurrence of noxious weed seeds, and varietal purity. The Research Committee conducts research and reviews literature to make technical information available to the Rules Committee which prepares a new draft revision of the rules about every fifth year for approval or rejection by the entire association. The Referee Committee circulates samples among the member stations to determine whether stations are testing in accordance with the rules and to point up any weaknesses in the rules. The Standardized Tests Committee, composed of representatives of the association, the United States Department of Agriculture, the Canada Department of Agriculture and the Society of Commercial Seed Technologists interpret questionable and disputed points of the Rules for Testing Seeds.

The Association works closely with other associations and government agencies, such as the International Seed Testing Association, United States Department of Agriculture and the Canada Department of Agriculture, in an effort to closely coordinate the rules for testing seeds used by each. Membership in the AOSA consists of Federal and State laboratories in the United States and Canada. The Governments of the United States and Canada hold membership in the International Seed Testing Association.

ASSOCIATION OF PETROLEUM RE-REFINERS, V. T. Worthington, Executive Director, 1500 North Quincy Street, Arlington 7, Virginia

In April 1955, this Association adopted minimum standards for re-refined lubricating oil. This action was taken to give the public a minimum standard for buying re-refined oil.

In 1957, it adopted an Association Emblem to be used in connection with its minimum standard so the public could readily determine oils meeting this minimum standard.

ASSOCIATION OF ROLLER AND SILENT CHAIN MANUFACTURERS, A. L. Taylor, Executive Secretary, 3343 Central Avenue, Indianapolis 5, Indiana

This organization is interested in standardization of dimensions of roller and silent chains and sprockets for the purpose of securing interchangeability, and also in standard recommendations for power capacity and speed of these chains. Subcommittees of engineers are appointed from time to time to deal with specified subjects, and their work is reviewed and approved by the entire association. The association, itself, does not publish standards, preferring to sponsor standards for adoption through the procedure of the American Standards Association. It cooperates with the American Society of Mechanical Engineers, Society of Automotive Engineers, American Petroleum Institute, and the American Gear Manufacturers Association in standardization matters of mutual interest. In cooperation with some of these organizations, the Association has secured the adoption by the American Standards Association of the following standards: B29.1—1957; B29.2—1957; B29.3—1954; B29.4—1954, and B29.5—1954.

ATOMIC INDUSTRIAL FORUM, Saul J. Harris, Secretary, Committee on Standards, 3 East 54th Street, New York 22, N.Y.

The Forum is a nonprofit membership association of more than 500 United States and foreign organizations engaged in the development and utilization of nuclear energy for peaceful purposes. It has among its 12 committees a Committee on Standards. This group is made up of 37 individuals representing 31 organization members. Consistent with its objectives to identify problems peculiar to atomic energy and promote the dissemination of information relating to atomic energy the Forum has taken a leading part in the development of nuclear standards (in cooperation with other interested organizations). It has sought to achieve generally accepted standards through the traditional medium of the American Standards Association. The Committee on Standards serves as the focal point for Forum activities with the American Standards Association.

The Forum is a member body of ASA and is represented on the ASA Board of Directors, Standards Council and the Nuclear Standards Board. It sponsors ASA Sectional Committee N-2, cosponsors ASA Sectional Committee N-7 with the National Safety Council, and is represented on all other nuclear sectional committees of ASA. The Forum is represented on the ASA Z-54 X-ray and radium sectional committee and subcommittees.

The Forum is represented on the National Committee on Radiation Protection and Measurement. Its Committee on Standards sponsors a meeting on "Utilization of Nuclear Standards by State Governments" and has arranged sessions on atomic energy standards for the ASA and other organizations.

AUTOMOBILE MANUFACTURERS ASSOCIATION, Harry A. Williams, Managing Director, New Center Building, Detroit, Michigan

Practically all standardization work arising in the industry represented by this organization is conducted through the Society of Automotive Engineers financed in substantial part by grant from the

Association. The Association cooperated with the National Conference on Street and Highway Safety in the preparation and promulgation of State and city traffic ordinances.

With the American Petroleum Institute and the Society of Automotive Engineers, the motor vehicle industry has made a substantial contribution to standardization through the Coordinating Research Council in the fields of fuels and lubricants. One of its recent accomplishments is a new formula for expressing antiknock ratings of motor fuels above 100 octane number. It has been active in studying the composition of exhaust gases from automotive vehicles including techniques used. A study of applications of gas chromatography to analysis of exhaust gas—at the U.S. Bureau of Mines, was supported by this group.

This Association works closely with the American Standards Association in connection with standards for inspection of motor vehicles, safety glazing materials for motor vehicles, antifriction bearings, pallets, highway traffic standards—including method of measuring and recording motor transportation accidents, standards for graphic presentation and petroleum products and lubricants.

BIOLOGICAL STAIN COMMISSION, INC., Victor M. Emmel, M.D., Secretary, Research and Assay Laboratories, University of Rochester Medical Center, Rochester 20, N.Y.

The Commission was incorporated in 1944 and supersedes the Commission on Standardization of Biological Stains. Its powers are vested in a Board of (eleven) Trustees, four of whom are officers. Membership in the Commission is by invitation and includes approximately 100 members.

The objectives of the Commission are the establishment of standard specifications for the identification, purity, performance and labeling of the more important biological stains, in order that they may be relied upon as standard tools in biological research. The Commission has the active cooperation of the scientific societies whose interests lie in this field, as well as that of the manufacturers and distributors of biological stains. Its specifications for a number of stains have been adopted by the U.S. Pharmacopoeia, the National Formulary, and in the Standard Methods of the American Public Health Association.

The Commission exerts its influence to the above ends through a program of stain Certification. Manufacturers and distributors voluntarily submit samples for examination. If a sample meets the Commission's specifications, the Commission then approves it for marketing as a Certified Biological Stain, and issues Certification Labels to be affixed to the containers in which it is sold. Certification is on a batch basis, the labels issued by the Commission bearing distinctive Certification Numbers identifying the specific batches with which they are to be used. No other batch can be sold under the same Certification Number except by such a breach of confidence on the part of the manufacturer as to risk losing the good will of the Commission. A sample of the original material from each batch is kept on permanent file in the Commission Laboratories. The Commission will also investigate complaints of any unsatisfactory results obtained with a certified stain. Fifty-six stains are currently certified by the Commission.

**BRASS AND BRONZE INGOT INSTITUTE, I. Glueck, Secretary,
308 West Washington Street, Chicago 6, Illinois**

This Institute's technical program relative to the development of standards and specifications covering ingot brass and bronze is directed by its Metallurgists' Advisory Committee, which is composed of the chief metallurgists of all member companies. In carrying forward this work, the Institute cooperates with the American Society for Testing Materials through representation on the latter's technical committee dealing with the development of specifications for copper base alloys in ingot form.

In order to assist those interested in nonferrous foundry alloys to utilize quality copper base alloys in ingot form with maximum economy and efficiency, this Institute has prepared and published a manual entitled, "Ingot Brass and Bronze." This manual contains specifications issued by the Institute and those which have been approved and adopted by various organized technical societies and governmental agencies.

For the past 15 years, the Institute maintains a continuing research program at Battelle Memorial Institute, Columbus, Ohio, for the purpose of establishing authoritative values of physical properties, temperature effects, and creep data.

**BRITISH-AMERICAN CHAMBER OF COMMERCE, L. J. N.
Blyde, Secretary, 677 Fifth Avenue, New York 22, N.Y.**

This is one of the 10 centers in the United States where complete sets of British Standards are held for reference purposes. British Standards, like American Standards, are issued for voluntary adoption by manufactures and users and being the result of wide consultation and agreement, provide a guide to accepted industrial practice in the United Kingdom. The main categories of British Standards are: Dimensional standards, performance and quality standards, standard methods of test, standard technical terms and symbols and standard codes of practice. There are now about 3,500 British Standards which are indexed and summarized in the British Standards Yearbook (also available for reference). They contain valuable information both for United States firms wishing to sell in the United Kingdom and for those interested in placing contracts there. Other centers where sets of British Standards may be consulted are: American Standards Association, New York, N.Y. (copies also available for sale); British Embassy, Washington, D.C.; National Bureau of Standards, Washington, D.C.; American Society for Testing Materials, Philadelphia, Pa.; Purdue Univ., LaFayette, Ind.; Cleveland Public Library, Cleveland, Ohio; Linda Hall Library, Kansas City, Mo.; Milwaukee Public Library, Milwaukee, Wis.; Wayne Univ., Detroit, Mich.

**BUILDING OFFICIALS CONFERENCE OF AMERICA, INC.,
Paul E. Baseler, Executive Secretary, 1525 East 53d Street, Chicago
15, Illinois**

This is the recognized professional organization serving government officials who administer, enforce or formulate laws, ordinances or regulations relating to buildings, housing, city planning and zoning. The organization is controlled solely by public officials. Its policies are directed by an Executive Committee of 5 officers, 2 past presidents

and 8 directors selected from all parts of the United States and Canada. Its program and activities are carried on by a staff under the direction of an Executive Secretary selected by the Executive Committee.

It sponsors and maintains building codes providing for the safety of the public through minimum regulations free from commercial influences, permitting the use of materials and methods of construction on their own merits without favor or prejudice. These codes are available for adoption by local governments without obligation and are maintained up-to-date with new developments as a public service. Through national, regional and local meetings and consultation and advisory services, assistance is provided local communities in improving administrative techniques and services.

Except for its building codes, the organization does not establish standards of materials, construction or practice. It recognizes all such standards that produce performance meeting the requirements of its codes and through official representation, it cooperates with other organizations in developing standards under the procedures of the American Society for Testing Materials, the National Fire Protection Association, and the American Standards Association.

The organization serves as cosponsor with other organizations on ASA Sectional Committees for Administrative Requirements for Building Codes; Building Code Requirements for Reinforced Gypsum Concrete; Safety Code for Grandstands, Tents and Places of Assembly; and the National Plumbing Code. It is officially represented on the ASA Construction Standards Board and 18 Sectional Committees dealing with construction materials and safety regulations. It is also represented on 3 committees of the National Fire Protection Association and 2 committees of the American Society for Testing Materials.

**CALCIUM CHLORIDE INSTITUTE, George H. Kimber, President,
Ring Building, 1200 18th Street, N.W., Washington 6, D.C.**

The primary object of the Institute is to sponsor research, and distribute information relative to the uses of calcium chloride. The Institute also maintains an engineering staff for field service to all users. Although it does not itself prepare standards, the Institute has adopted for the use of its members the standard specifications for calcium chloride which are released by the American Society for Testing Materials, the American Association of State Highway Officials, and other organizations. The Technical Panel of the Institute assists in the development, revision, use of specifications, and procedures for calcium chloride users.

The Institute maintains a research associate at the National Bureau of Standards in connection with studies of concrete. Through other research fellowships it is sponsoring work at Cornell University, University of Minnesota, University of Michigan, and Ohio State University. These studies are based on establishing the effects of calcium chloride on soil, establishing the merit of using calcium chloride-salt mixtures for winter maintenance work (including storage as well as applications of calcium chloride). As a result of this work, the Institute establishes standards for recommending the uses of calcium chloride to various industries including concrete, highways, minerals and refrigeration. Minor uses of calcium chloride include its use as liquid ballast, dustproofing, fire protection, freezeproofing, ice melting, air drying and moisture retention.

The Institute also makes available free on request any literature pertaining to recommended practices for using the product. Non-profit in nature, the Calcium Chloride Institute's purpose is to supply such information for all calcium chloride users which will enable them to achieve best results with the product.

**CALIFORNIA FRUIT EXCHANGE, F. W. Reed, General Manager,
P.O. Box 2038, Blue Anchor Building, Sacramento, California**

This Exchange is a growers cooperative marketing organization, which markets the fruit of some 3,000 grower members, who are organized into approximately 50 local associations and large contract shippers. It has developed grade specifications for fruits and grapes, together with approved and recommended methods of packing. Fruits which meet the standard grades of the exchange are permitted to carry the trademark label on each individual container.

For approximately 25 years this organization has maintained a Committee on Standardization, which cooperates with the field department in the development of grades and standards for marketing fresh deciduous-tree fruits, and grapes.

CALIFORNIA OLIVE ASSOCIATION, Miss Erline Hevel, Secretary, 461 Market Street, San Francisco 5, California

This organization has developed a number of olive size grades under which canned ripe olives are packed, shipped and sold. These grades are based on the California Ripe Olive Standardization Act, revised to 1957, which provides certain standards of quality, fill of container, and requirements for marking of olives packed in tin or glass containers.

CALIFORNIA REDWOOD ASSOCIATION, Philip T. Farnsworth, Executive Vice President and General Manager, 576 Sacramento Street, San Francisco 11, California

An important function of this Association is the standardization of grades, sizes, patterns, and grade marks for redwood lumber. This work is carried on by the Grading Committee and the Pattern Book Committee, which serve as advisory committees to the Association.

This Association has adopted standard specifications for grades of California redwood lumber and standard patterns of worked redwood lumber. It has also adopted official grade marks which appear on lumber signifying that it has been graded in accordance with the standard specifications of the Association. These marks are applied by graders of member companies or licensees whose grading is supervised and approved by the Redwood Inspection Service of this Association or by Association inspectors.

This Association cooperates with other lumber organizations and with the American Lumber Standards Committee in keeping current the American Lumber Standards set forth in Simplified Practice Recommendation R16. The Association's grading rules for redwood lumber are in accordance with these standards.

CANNERS LEAGUE OF CALIFORNIA, M. A. Clevenger, Executive Vice President, 215 Market Street, San Francisco 5, California

The League, a trade association of fruit and vegetable canners, was established in 1905.

It maintains a Standards Committee whose function it is to keep the League's standards current and to cooperate in the formulation and revision of specifications for canned fruits issued by various agencies of the Federal Government.

The League has published the tenth edition of specifications for the grades of California canned fruits which include apricots, cherries, figs, fruit cocktail, fruits for salad, peaches, pears, and plums, and the eleventh edition incorporating minor changes will be published sometime in 1958.

CANNING MACHINERY AND SUPPLIES ASSOCIATION, W. D. Lewis, Secretary-Treasurer, 4630 Montgomery Avenue, Washington 14, D.C. (Bethesda 14, Maryland)

The standardization activities of this organization are carried on in cooperation with associations dealing with the establishment of standards for materials used in canning purposes. It has cooperated with the National Cannery Association and the Can Manufacturers Institute in the standardization of sizes of tin cans and with the Glass Container Association of America in developing standard sizes of glass containers.

CASTER AND FLOOR TRUCK MANUFACTURERS' ASSOCIATION, Harry P. Dolan, Executive Secretary, 27 East Monroe Street, Chicago 3, Illinois

Manufacturers in this trade association produce casters, wheels, and manual materials handling equipment such as platform trucks, trailers, two wheel hand trucks, and skids.

This Association conducts a complete standardization and simplification program for each product of the industry. Individual product task committees are under the supervision of a Standards Coordinating Committee which includes a representative from each product category.

Each product standard includes standard nomenclature; classification and description of the product; recommended capacities; recommended applications; and standard test procedures. This Association has already completed standards for Molded-on Industrial Wheels; Metal Industrial Wheels; Plastic Industrial Wheels; All-Rubber Wheels; Semipneumatic Wheels; Industrial Casters; Platform Trucks; Trailers; Dead Skid Platforms; Two Wheel Hand Trucks and Tow-Line Trucks.

The Caster and Floor Truck Manufacturers' Association, in its standards work, cooperates with the Government and with appropriate Technical Societies and Trade Association, including: The Commodity Standards Division of the Department of Commerce; Rubber Manufacturers' Association; Tire and Rim Association; Materials Handling Institute; Society of Industrial Packaging and Materials Handling Engineers; American Society of Materials Handling Engineers; American Society of Mechanical Engineers; and the Regular Common Carrier Conference.

CAST IRON PIPE RESEARCH ASSOCIATION, Thomas F. Wolfe, Managing Director, Suite 3440 Prudential Plaza, Chicago 1, Illinois

This organization is cooperating with sectional committees of the American Standards Association in developing standard specifications

for cast iron pipe and fittings; preparation of a code for pressure piping; and development of flange standards. At its own test sites it carries on corrosion tests on various pipe materials and on pipe coatings.

This Association has adopted a symbol—a letter “Q” with a check—which is stenciled on each length of pipe produced by the members of the Association. Its purpose is to identify the pipe as cast iron pipe. The Association states that the reason for the adoption of the symbol is the fact that it desires to advertise cast iron pipe to the public, even though it is not purchased directly by it except through taxes. It is felt that in the absence of an identification mark the public would have no way of knowing whether the pipe being installed in their streets was cast iron pipe or some other type of pipe.

CEMENTED CARBIDE PRODUCERS ASSOCIATION, Thomas Associates, Inc., Commissioners, 2130 Keith Building, Cleveland 15, Ohio

The standardization activities of this Association are carried on by two committees—Standards Committee and Technical Committee. The work of the Standards Committee has been confined to the establishment of dimensional standards for products manufactured by association members. Currently they have developed three proposed standards which are: Proposed American Standard Carbide Blanks and Cutting Tools, Standard Sizes, Styles and Designations of solid Sintered Carbide Inserts and their Holders, Throw-Away Type; Proposed American Standard Carbide Blanks and Cutting Tools, Single Point, Carbide Tipped, Roller Turner Type; and Proposed American Standard Carbide Blank Specifications for Carbide Tipped Twist Drills, Reamers, Masonry Drills and Gun Drills. These and others that are currently being developed are submitted to the American Standards Association for promulgation as ASA standards. The organization is also actively engaged in the development of a Simplified Practice Recommendation for products of the industry.

The Technical Committee concerns itself with the development of recommended test procedures to be utilized for the measuring of physical properties of cemented tungsten carbide. Ten such procedures have thus far been developed, all of which are printed in the format used by the American Society for Testing Materials and are submitted to that agency with a request for promulgation. The Association is represented on the ASA Sectional Committee B5, Small Tools and Machine Tool Elements, and is a member of the Mechanical Standards Board.

CERTIFIED MILK PRODUCERS ASSOCIATION OF AMERICA, Charles Speaks, Secretary, 405 Lexington Avenue, New York 17, N.Y.

Standardized methods for the production and distribution of “Certified Milk,” as formulated by the American Association of Medical Milk Commissions, have been adopted by this organization.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, INC., H. W. Hamilton, Secretary, 50 East 41st Street, New York 17, N.Y.

Founded in 1914, the Association now has a membership of approximately 395 companies.

Its work in standardization is divided among six Divisions, viz. Aerosol; Automotive, Disinfectant and Sanitizers; Insecticides; Soaps, Detergents and Sanitary Chemical Products; Waxes and Floor Finishes.

The Automotive Division does not cover products used in the combustion chambers of motors; the Insecticide Division deals with household and industrial products; the Soap, Detergents and Sanitary Chemical Products Division concerns itself with industrial materials.

The CSMA has developed and offers: an Official Test Insecticide (for use in the Peet-Grady Test); an Official Test Aerosol (insecticidal); Brake Fluid Corrosion Test Metal Coupons; Antifreeze Corrosion Test Metal Coupons; floor linoleum, asphalt tiles (Official Test Linoleum, Official Test Asphalt Tile) for the comparative testing of floor waxes; charts for use in slip testing machines; standardized rubber cups for testing brake fluids by SAE Methods. Other materials for standardized testing are being developed.

Has assisted in the development of Commercial Standards for: Liquid Hypochlorite Disinfectant, Deodorant, and Germicide CS68-38; Pine Oil Disinfectant CS69-38; Phenolic Disinfectant (Emulsifying Type) CS70-41; Phenolic Disinfectant (Soluble Type) CS71-41; Household Insecticide (Liquid Space Spray Type for Flying Insects) CS72-54.

The Association publishes methods of analysis developed by Scientific Committees of the organization.

CHLORINE INSTITUTE, INC., Robert T. Baldwin, Secretary, 342 Madison Avenue, New York 17, N.Y.

All standardization work of this organization is carried on by its Committee on Container Specifications and Safety. The function of this committee is to develop and to keep under constant revision specifications covering certain items used in the chlorine industry.

The Institute has developed and adopted specifications for safety valves, angle valves, excess flow valves and manway covers, for chlorine tank cars and tank barges, as well as valves and fusible plugs for chlorine cylinders and ton containers.

The Committee has also developed recommended methods for the unloading of chlorine tank cars, maintenance of tank car valves, analysis of chlorine for impurities and design of stationary storage tanks.

The Institute cooperates actively with the Compressed Gas Association, Inc., in matters relating to general interest in the safe transportation of compressed gases and with the Association of American Railroads in the development of tank car specifications and approval of tank car designs.

CLAY PRODUCTS ASSOCIATION, Robert G. Scott, Vice President and General Manager, P.O. Box 172, Barrington, Illinois

This is a nonprofit organization, formed in 1917, to advance and promote the use of clay products by means of field engineering promotion, research, advertising, publicity, and to aid in preparation of national specifications and codes in cooperation with the Government and engineering organizations. The members of the Clay Products Association are chiefly located in the middle west. Vitrified clay sewer pipe is the principal product. The Association prepares and publishes engineering handbooks, educational movies, and brochures to aid engineers and city officials in methods of financing and preparing data for bond elections for municipal improvement.

The members of the Clay Products Association cooperate in the national research program carried out by the National Clay Pipe Manufacturers Research Laboratory in Crystal Lake, Ill.

The publications of the association are: "Clay Pipe Engineering Manual," "Handbook of Pipe Laying and Inspection," "Planning for New Sewers," "Tentative Standards," "Handbook of Perimeter Heating," "Sewer Facts," "Clay Pipe News."

The Clay Products Association cooperates with the ASCE, ASTM, Federal Government, AASHTO, and other specification and code making bodies in the development of standards and specifications covering the products manufactured by its members.

CLAY SEWER PIPE ASSOCIATION, INC., A. G. Cochran, President, Sherwood Borland, Chief Engineer, 5 East Long Street, Room 311, Columbus 15, Ohio

This Association is a regional nonprofit organization incorporated in 1939. The Association members are vitrified clay pipe manufacturers in the northeastern part of the United States. The objectives of the organization are to advance the merits and use of vitrified clay sewer pipe and kindred products.

Regionally located fieldmen are assigned throughout the area covered by the Association. Overall supervision as well as compilation of data is handled from the Columbus office by the President, Chief Engineer and Secretarial Staff.

Research is conducted in two programs: (1) by individual manufacturers in their own laboratories in the many phases of ceramic pipe bodies and jointing; and (2) by contributions, which along with those from the other 3 regional Associations, allow the National Clay Pipe Manufacturers, Inc., to maintain and operate the NCPMI Laboratory located at Crystal Lake, Ill. Research programs are likewise occasionally conducted at various independent research laboratories and universities.

The Association conducts research programs on the improvement of ceramic pipe bodies, and improvement of pipe joints and jointing materials.

It publishes "Clay," a quarterly magazine containing a variety of both technical and promotional data, which is sent to engineers, city and state officials, architects, plumbers, contractors and suppliers. Also, "Engineering Handbook," containing design data for sanitary and storm sewers, and "Technical Bulletins," are also issued on various subjects pertaining to vitrified clay pipe and kindred products.

The Association makes available colored 35 mm slides which show the details of clay pipe manufacturing, construction data, and accompanying sewer appurtenances. Two color-sound motion pictures are available to help promote sewer construction programs, and improve construction practices. Several pamphlets on the need of sanitary waste handling and treatment are offered to assist municipal agencies.

The Clay Sewer Pipe Association, Inc., is active in the work of the American Society for Testing Materials, the American Standards Association, and the American Association of State Highway Officials. It also assists in the development of Federal Specifications.

COLOR ASSOCIATION OF THE UNITED STATES (Formerly Textile Color Card Association of the U.S.), Midge Wilson, Executive Director, 200 Madison Avenue, New York 16, N.Y.

This Association was established in 1915 as a color service organization. Scope has been enlarged to include market research and color consultation service. International membership includes all fields where color is a significant factor—fabrics, paints, wallpaper, floor coverings, plastics, automotive, china, chemicals, dyestuffs, etc.

Seasonal color cards are issued twice a year with special coordinated cards for millinery, hosiery and gloves. This Association created the Standard Color Card of America. The 9th Edition contains 216 standard colors, each identified by name and cable number. Certain Government and most industrial color requirements are specified by referring to the Standard 9th Edition Colors. Also issued the armed services, Thread and Tape Color Standards in cooperation with the Quartermaster Corps. Scientific data on the Standard 9th Edition Colors and the armed services colors are given in the National Bureau of Standards Research Paper RP1700. Cooperated with the Superintendent of the U.S. Air Force Academy in issuing its official colors and is working on the compilation of the official flag color standards of the United Nations and other countries, as well as different State flag colors and colors for colleges and universities.

COMPRESSED GAS ASSOCIATION, INC., F. R. Fetherston, Secretary-Treasurer, 11 West 42d Street, New York 36, N.Y.

This Association concerns itself only with technical matters relating to safety in the transportation, storage, handling, and to some extent, in the use of the compressed gases. It publishes a series of pamphlets relating to the gases and to matters pertinent to their storage and handling. It has developed a number of industry standards, some of which have been processed through the American Standards Association and endorsed as American Standards. This Association cooperates with similar technical societies in related industries, including the American Standards Association, the National Fire Protection Association, the American Society for Testing Materials, and others.

CONCRETE REINFORCING STEEL INSTITUTE, H. C. Delzell, Managing Director, 38 South Dearborn Street, Chicago 3, Illinois

The primary objects of this organization are to foster and increase the use of reinforced concrete construction; to carry on research work, publish and disseminate information as to the safe and proper materials to be used in reinforced concrete construction, and the proper methods of their use; to aid and promote the standardization of materials and nomenclature, the standardization of specifications and building codes, and the standardization of engineering practice methods of fabrication, forms of proposal, and contracts.

This Institute maintains two committees which deal with work in standardization and simplification, these being the Committee on Engineering Practice, and the Committee on Standards Practice. The former committee, through its Subcommittee on Research and Tests, conducts studies and tests on steel used for concrete reinforcement. It completed behavior studies of the various types of high-yield-point steels when used as tension reinforcement in concrete beams; and also bond tests using reinforcing bars with varying degrees

of rust. These tests were conducted by the Fritz Engineering Laboratory, Lehigh University, under the direction of the Institute.

The Committee on Standards Practice completed a standardization of 11 sizes, weights, and areas for plain and deformed reinforcing bars, which were developed into Simplified Practice Recommendation R26, promulgated by the Department of Commerce. This committee also formulated a "Manual of Standard Practice" covering specifications for and the use of reinforcing materials. All specifications published in this manual are the current standards of the American Society for Testing Materials, the American Concrete Institute, the Portland Cement Association, the Metal Lath Manufacturers Association, and this Institute.

Acting as joint sponsor with the National Bureau of Standards, the Institute was responsible for the establishment of American Standard A38-1933 for steel-reinforcing spirals, under procedure of the American Standards Association. It initiated the movement under the auspices of the National Bureau of Standards which resulted in the establishment of Simplified Practice Recommendation R87 for forms for concrete-joist-construction floors.

The Institute maintains membership and actively participates in committee work of such national organizations as the American Society for Testing Materials, American Concrete Institute, and other technical bodies. It also cooperates with various agencies of the Federal Government in connection with standardization work affecting the reinforcing steel industry.

The Institute has adopted a "Quality Mark" which enables the specifier, or his representative in the field, to determine readily that reinforcing bars bearing this mark are rolled from new billet steel of American manufacture, in compliance with the standard specifications of the American Society for Testing Materials. The mill mark determines at a glance the manufacturer of the bars bearing the mark. The appearance of the "Quality Mark" and mill mark on reinforcing bars gives assurance that the material is of the best commercial quality obtainable.

CONSTRUCTION SPECIFICATIONS INSTITUTE, George F. Lamb, Executive Secretary, 632 Dupont Circle Building, Washington 6, D.C.

The purpose of the Institute and its chapters is to foster and promote the interests of persons, firms, groups, associations, corporations, and others engaged in any phase of the business of writing, preparing, compiling, or in any way utilizing specifications in the construction and allied industries; to promote improved specification practices in the construction and allied industries; to gather, compile, and analyze statistics and information relating to or useful in the conduct of such activities; to engage in research and study of any and all problems and aspects of specification writing; to establish and maintain the Institute as a clearinghouse of unbiased technical information on specifications for the fabrication and installation of construction materials and equipment; to promote closer relations and cooperation among its members and chapters.

The membership consists of architects, professional engineers, teachers, and research workers in architectural and engineering fields, representatives of architects and engineers who are supervising con-

struction projects, building maintenance engineers, technical representatives of nonprofit organizations of the construction industry, and others.

The Institute does not prepare or issue standards. It feels that standard construction specifications as we know them today are not practicable and those attempting to use such standards have developed confusion. The Institute feels that its proposed Recommended Practices can do more good toward standardizing of specification methods than anything yet developed. The official release of Recommended Practices appears in the issues of "The Construction Specifier," a monthly publication of the Institute.

The work of the Institute is not confined to building specifications. Rather, it is concerned with specifications for all types of construction.

Technical committees in various parts of the country are given assignments on specific specifications subjects. When the committee feels that it has developed a complete specification, copies of the work are forwarded to all associations interested in it. Comments from the several associations are sent back to the original committee to include in the report as the committee deems best. The reports are then published as tentative Recommended Practices, at which time further comment is requested from any and all members as individuals or as chapters or committees.

It is presumed that ultimately dissemination of Institute publications will tend toward standardization of specification methods, building codes, trade practices, and to some extent construction practices.

In 1959, the Institute had a membership of 3,200 and more than 35 chapters.

CONTRACTING PLASTERERS' AND LATHERS' INTERNATIONAL ASSOCIATION, Joe M. Baker, Jr., Executive Secretary, 622 Sheraton Building, 711 14th Street NW., Washington 5, D.C.

Standard Specifications for lathing and plastering which may be incorporated into architects' construction specifications, or serve as a guide in writing lathing and plastering specifications, have been formulated and adopted by this Association. These specifications have been revised and updated as of late 1957 and the revisions have been approved by the Association's Board of Directors. Included in the specifications are recommended practices for various types of lath, plastering, and stucco, with requirements for materials, or the citing of standard specifications for materials.

The Association has established a joint committee with the OP and CMIA (Operative Plasterers and Cement Masons International Association) and with the WW and MLIU (Wood, Wire, and Metal Lathers International Union) to establish standards of apprenticeship for plastering and lathing. The Association has also established a joint industry committee with the Portland Cement Association and Government agencies to improve and increase the use of stucco in the construction trade.

The Association is officially represented on committees C-7 (Lime), C-11 (Gypsum), and C-20 (Acoustical Materials) of the American Society for Testing Materials.

The Association has also established internally a research committee to look into and report on new materials in the industry, al-

though the committee has no power to approve or disapprove any materials.

**CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION,
R. C. Sollenberger, Executive Vice President, One Thomas Circle,
Washington 5, D.C.**

The Association publishes Book No. 101, entitled "Conveyor Terms and Definitions." It defines more than 1,400 conveyor types, parts, and related equipment. Preferred terms are accompanied by definitions. The contents of this book were developed by a technical committee of the association.

**COOLING TOWER INSTITUTE, Raymond C. Kelly, Executive
Manager, 420 Emerson Street, Palo Alto, California**

The Institute, organized in 1950, is the national association of the major manufacturers of industrial water-cooling towers. Its standards program is planned around the development of a series of individual standards which taken together constitute a specification for a CTI Code Tower. CTI Code Tower Standard Specifications which have been published are: Bulletin STD-103, Redwood Lumber Specifications: Recommended grades, grading rules, and allowable design stresses for redwood lumber; Bulletin ATP-105, Acceptance Test Procedure: Methods and instrumentation for determining water-cooling capability of mechanical draft towers; Bulletin NCL-109, Nomenclature: Terms and definitions describing cooling towers and their performance.

Standards in preparation by CTI committees include gear speed reducers, propeller-type fans, and preservative treatment of lumber.

CTI is a cosponsor of the American Standards Association Sectional Committee B76 on Cooling Towers, which drafted plans for a comprehensive set of American Standards.

**COPPER AND BRASS RESEARCH ASSOCIATION, T. E. Veltfort,
Managing Director, 420 Lexington Avenue, New York 17, N.Y.**

Standardization work of this organization is carried on by its Standards Committee whose function it is to deal with all phases of standards in the industry and their relationship to pertinent standards and specifications of other groups both private and governmental.

Standards developed by the Committee and approved by the Association for the industry cover dimensional tolerances, physical and chemical properties, and other characteristics of the products of the industry.

The brass mill industry, which the Copper and Brass Research Association represents, produces wrought products of copper, brass, bronze, nickel-silver, cupro-nickel, and other copper base alloys in the form of sheet, strip, plate, rod, wire, pipe, tube, and shapes (but not wire and cable of copper and copper alloy for electrical transmission).

The Standards Committee continuously reviews and revises where necessary the industry standards in order that they reflect improved methods, customer requirements, and changes in trade practices. It also regularly considers the development of additional standards applicable to the industry where required.

The Association sponsored a number of Simplified Practice Recommendations and Commercial Standards applicable to industry products established under the auspices of the Department of Commerce.

The Association is a member body of the American Standards Association and is represented on the Standards Council of ASA. It is also officially represented on ASA sectional committees engaged in the development of standards relating to plumbing and plumbing equipment, pipe threads, plumbing fittings, boiler and pressure codes, wire and sheet metal gages, and designation and classification of surface qualities.

The Association is a member of the American Society for Testing Materials and is represented on its committees covering wrought copper and copper base alloys. Close liaison is maintained with the various governmental agencies promulgating standards and specifications applicable to products of the industry. This permits the prompt interchange of data to help keep Government specifications abreast of current practice. The standards and specifications of such groups as the Society of Automotive Engineers and the American Society of Mechanical Engineers are also reviewed by the Standards Committee, and, wherever required, assistance is given municipal and State code writing bodies to provide them with up-to-date information on industry products.

The Association has from time to time carried on research projects to develop basic information necessary in its standardization activities.

COPPER AND BRASS WAREHOUSE ASSOCIATION, Thomas A. Fernley, Jr., Executive Secretary, 1900 Arch Street, Philadelphia 3, Pennsylvania

Standardization work of this organization is carried on by its Standards Committee, whose function it is to consider standards pertaining to the warehouse distribution of brass mill products and their relationship to pertinent standards and specifications of other groups, both private and governmental.

Standards developed by the Committee and approved by the Association cover stencil identification of alloy, of rod and bar at the mill level, and the use of decimal description instead of gages to describe metal thickness. The Association has under consideration the establishment of uniform nomenclature.

The brass mill distribution industry which the Copper and Brass Warehouse Association represents handles wrought products of copper, brass, bronze, nickel-silver, cupro-nickel, and other copper-base alloys in the form of sheet, strip, plate, rod, bus bar, wire, pipe, tube, and shapes (not wire and cable of copper and copper alloy for electricity transmission).

The Standards Committee reviews and recommends standards to reflect improved methods, customer requirements, and changes in trade practices. It also regularly considers the development of additional standards applicable to the industry where required.

The Association cooperates with the Copper and Brass Research Association in a Joint Committee to review and revise standard sizes for commercial copper and copper-base alloy seamless tube that will be mutually acceptable to both Associations.

CORDAGE INSTITUTE, Dewitt C. Schieck, Secretary, 350 Madison Avenue, New York 17, N.Y.

Several committees of this organization have cooperated with similar committees of the American Petroleum Institute in the preparation of standards for cordage used in oil well production, and with the American Society for Testing Materials in the standardization of methods of tensile-strength testing and nomenclature of all hard-fiber products.

This organization cooperated in the formulation and revision of Simplified Practice Recommendation R92 relating to hard-fiber twine and lath yarn (ply and yarn goods), which was established in cooperation with the National Paper Trade Association under the auspices of the National Bureau of Standards. It developed a standard method of testing for hard-fiber wrapping twine, which was approved and adopted.

This organization has also cooperated with the State of New York, city of New York, and with numerous other quasi-public or private corporations in the development of specifications for hard-fiber cordage and twine.

CORK INSTITUTE OF AMERICA, Arthur L. Faubel, Director, 342 Madison Avenue, New York 17, N.Y.

This Institute includes two divisions—the Cork Insulation Division and the Cork Composition Division. It also includes an informal group of cork tile manufacturers concerned with specifications for cork tile.

The Institute has published no specifications of its own. However, a proposed cork tile industry specification is pending. The Institute cooperates with Federal Government agencies in the preparation of Federal specifications for cork products. It also represents the American cork products industry with the American Standards Association, and from time to time it has collaborated with Government departments in connection with regulations concerning cork life preservers and cork ring buoys. The Institute also acts as a liaison between the American cork industry and the U.S. Department of Commerce in connection with the Department's interest in raw cork and manufactured cork products.

CORN INDUSTRIES RESEARCH FOUNDATION, Floyd J. Hosking, Executive Vice President, 1001 Connecticut Avenue NW., Washington 6, D.C.

The Foundation is a national, nonprofit organization representing the 11 firms which comprise the corn refining industry. Governed by a Board of Trustees, 1 from each of the 11 corporate members, the Foundation conducts industrywide programs of research, technical, service and public information. Its varied activities include the establishment of standards or the development of standardized procedures, terminology, instrumentation, methods of measurement, and the like on behalf of industry members and the consumers of industry products.

The formulation of standardized analytical methods for use within the industry is a continuing mission of the Foundation's Technical Advisory Committee. A TAC subcommittee compiled a reference volume, Critical Data Tables, available from the Foundation at cost.

Another group, the Technical Service Committee, gives attention to the standardization of procedures for handling broad technical-service problems. It recently prepared standard definitions for starch hydrolyzates and has supervised the compilation of data in such semitechnical booklets as Corn Starch, Corn Sirups and Sugars, and Corn Oil, obtainable from the Foundation without charge.

Task groups of the Foundation's Plant Management Committee prepared standardized recommendations for bulk corn sirup storage and distribution systems in food-processing plants, also recommendations for corn sirup tank cars; both of these reports are available in printed form. Through the Foundation, industry technicians also participate with allied industry groups in the development of standards for storing and handling food products.

COTTON DUCK ASSOCIATION, James Edw. Hooper, Chairman, Specifications Committee, care of William E. Hooper and Sons Company, Woodberry, Baltimore 11, Maryland.

This Association has a Committee on Specifications whose function it is to cooperate with the various departments of the Federal Government in the development of Federal and other specifications covering cotton ducks and fabrics. This committee has been incorporated into the Industry Advisory Committee to the Quartermaster General on the weaving and finishing of cotton duck; and it also works with various State or private agencies along the same lines.

CRAYON, WATER COLOR, AND CRAFT INSTITUTE, Elizabeth Clarkson, Executive Secretary, 420 Lexington Avenue, New York 17, N.Y.

To assure the purchasing of public materials of satisfactory quality, and to give the seller a definite set of specifications upon which to base his quotation, the Institute has prepared and published a set of recommended minimum quality standards. These standards should protect the public against the purchase of materials of inferior quality. The Institute has also established a certified products label, the use of which is dependent upon actual certification, after chemical test, of merchandise which meets the minimum health standards set up by the Institute. This test particularly relates to the lead and arsenic content of crayons, chalk, watercolors, and tempera colors so as to insure that such products are noninjurious to human health.

DAIRY INDUSTRIES SUPPLY ASSOCIATION, Roberts Everett, 1145 19th Street NW., Washington 6, D.C.

The Technical Committee of this Association is one of three major participants in the joint development of 3-A Sanitation Standards for the dairy industry. 3-A Sanitation Standards are voluntary standards which establish sanitation criteria for dairy processing equipment. Approximately 20 sanitation standards have been published to date and nearly that many new standards are pending. Standards published include those for fittings, pumps, storage tanks, transportation tanks, heat exchangers, et al.

Participating jointly in this standards program are representatives from U.S. Public Health Service, International Association of Milk and Food Sanitarians, and The Dairy Industry Committee.

DIAMOND WALNUT GROWERS, INC., James H. Bryce, General Manager, 1050 South Diamond Street, Stockton, California

Following investigation and report by its Standardization Committee, this association, through its Board of Directors, adopted specifications covering all the different packs of walnuts sold, both shelled and unshelled. These specifications are closely similar to those established under the Federal Walnut Marketing Agreement in effect under the Agricultural Adjustment Administration, and are also similar to standards for United States grades for both shelled and unshelled walnuts.

DIESEL ENGINE MANUFACTURERS ASSOCIATION, Robert L. Stanley, Executive Secretary, 2000 K Street NW., Washington 6, D.C.

This Association has prepared and issued a book on standard practices dealing with stationary engine installations, definitions, equipment, and performance of diesel, dual fuel, and gas engines. It has also issued another publication on marine diesel engine standards, which also covers definitions, equipment, installation, and performance. These publications cover in detail the application of diesel, dual fuel, and gas engines in stationary service, and diesel engines in marine service, the kind of fuel used, lubricating and cooling water systems, and other items relating to engine construction and performance.

The purpose of the books is to be of service to the diesel and gas engine users, prospective buyers, and consulting engineers. The material in these books represents a consensus of practices developed by engine builders, parts and accessory companies, oil companies, and representatives of other associations and societies having an interest in internal combustion engine power plants of the types under consideration.

DISTILLED SPIRITS INSTITUTE, Howard T. Jones, Executive Secretary, 1132 Pennsylvania Building, Washington 4, D.C.

The development of standards of identity and quality constitutes an important activity of this Institute. Through its various committees, composed of qualified technicians of member companies, and through its Washington staff, the Institute carries on continuous studies of appropriate standards of identity for distilled spirits and cooperates with the Alcohol and Tobacco Tax Division of the Internal Revenue Service in the adoption of official standards.

Through its Technical Committee, the Institute engages in studies and experiments designed to formulate standard analytical methods. Through the Distillers Feed Research Council, a continuing effort is made in the field of standardization of production methods and controls of distillers dried grains, as well as in the standardization of the end product.

DROP FORGING ASSOCIATION, Dwight M. Allgood, Executive Vice President, 1121 Illuminating Building, Cleveland 13, Ohio

This Association sponsors technical committees of forging industry executives and by this means prepares recommended schedules of standards and tolerances for forged components. The Association

also functions as a cosponsor with the National Safety Council in the development of the American Standard Safety Code for Forging and Hot Metal Stamping, published by the American Standards Association.

EDISON ELECTRIC INSTITUTE, H. E. Kent, Director of Engineering, 750 Third Avenue, New York 17, N.Y.

This Institute is the trade association of the investor-owned electric light and power companies. The major part of its standardization activities is carried out through representation on some 100 sectional committees of the American Standards Association. Most of these are concerned with standards for electric utility equipment and customers' appliances and also codes involving industry practices, such as the National Electrical Safety Code. The Institute also carries on a certain amount of standardization relative to electric utility equipment with other industry associations such as the National Electrical Manufacturers Association. Institute representatives are likewise active in standardizing activities of the American Society for Testing Materials and the National Fire Protection Association.

Certain committees of the Institute issue a series known as "Suggestions for Specifications," intended particularly for use of the member companies as an aid in preparing their own specifications for purchase of material. The Transmission and Distribution Committee has issued some 50 of these, covering various items of line hardware, insulators, and street lighting equipment. Other committees have issued several relating to watt-hour and demand meters and safety equipment. The titles of these various specifications are shown in the "EEI Price List of Publications," available from the Institute.

ELASTIC FABRIC MANUFACTURERS' INSTITUTE, INC., E. B. Pomeroy, Managing Director, Box 710, New London, Connecticut

This organization, after 5½ years developing test data for its basis, published Minimum Performance Standard U-1 for an elastic webbing for men's underwear shorts. Since revised to include webbing for boys' underwear shorts, it now covers elastic webbing 1 in., 1¼ in., and 1½ in. in width. The standard covers three measures of performance of underwear elastic webbing and sets forth test methods and equipment for use in testing. It also specifies methods of sampling and provides for an identification statement for elastic webbing that meets the U-1 requirements.

ELECTRIC OVERHEAD CRANE INSTITUTE, INC., Joe H. Peritz, Executive Secretary, One Thomas Circle, Washington 5, D.C.

This organization has adopted standard specifications for standard industrial service electric overhead traveling cranes. This organization cooperated with the Bureau of Yards and Docks of the Navy Department in the development of standards in connection with electric overhead cranes. The Institute is represented on the American Standards Association's sectional committee dealing with Safety Code for Cranes, Derricks, and Hoists.

ELECTROCHEMICAL SOCIETY, INC., Henry B. Linford, Secretary, 1860 Broadway, New York, N.Y.

The standardization work of this organization is carried on largely by committees appointed to deal with primary and secondary batteries, alkali and chlorine, corrosion, power, electrochemistry of gases, and insulating materials.

Through its several committees, the Society cooperates with the National Electrical Manufacturers Association and the National Bureau of Standards in the formulation of standard tests for dry cells.

It also cooperates with the American Standards Association in the formulation of American standard specifications for dry cells and batteries, and on the following work: Definitions of electrical terms; standard scientific and engineering symbols and abbreviations; and graphical symbols and abbreviations used on drawings. The Society's cooperative work is also being carried on with the American Society for Testing Materials in determining the resistances to corrosion of various metals and alloys.

ELECTRONIC INDUSTRIES ASSOCIATION, James D. Secrest, Executive Vice President, EIA Building, 1721 De Sales Street NW., Washington 6, D.C.

All technical standardization of this Association (formerly RETMA, RTMA, RMA), is conducted by the Engineering Department, Virgil M. Graham, Associate Director, 11 West 42d St., New York 36, N.Y.

Approximately 250 Engineering Committees, covering areas of Communications, Entertainment Receivers, Military Electronics, Components, and Automation, staffed by industry representatives, develop material for standardization which is then distributed as Standards Proposals to all member companies and many others, currently about 1,200 to 1,5000, for comment and criticism. All replies received are considered by the originating group, and committee efforts are directed to resolving adverse comments either by additional contact with the objector, or by modification of the Standards Proposal. Any changes to the Standards Proposal, other than editorial, require a resubmission to industry.

A complete dossier of the Standards Proposal, including a tabulation of companies responding and disposition of comments, is then submitted to the EIA General Standards Committee. This committee, acting as a judicial body, evaluates the comments and votes on the acceptability of the Proposal as an EIA Standard. Upon acceptance the Standard is published, distributed to member companies, and made available to industry by listing in the index of EIA Standards.

Under a slightly different procedure the Association also issues EIA Specifications for Military Components which differ from Standards by including more information.

Generally all standards are reviewed at least every 5 years and are either reaffirmed or modified using the Standards Proposal procedure.

Those standards having a potentially broader interest are submitted to the appropriate Sectional Committee of the American Standards Association for consideration as American Standards.

There are approximately 150 standards currently available, covering all types of components (capacitors, resistors, transformers, waveguides, printed circuits, sockets, crystals); communications equipment and systems (microwave relay, mobile, airborne, broadcast and tele-

vision); electron devices; sound equipment (speakers, microphones, magnetic recording equipment, records); wire; cables, and transmission lines; preferred numbers and colors for coding, modular dimensions, racks and panels, etc.

In addition, a variety of test charts have been standardized and made available for checking resolution, linearity, and registration of television and facsimile systems.

The Association also cosponsors, with the National Electrical Manufacturers Association (NEMA), the Joint Electron Tube Engineering Council (JETEC), and administers its committee and material for the standardization of items related to electron tubes and semiconductor devices in the manner indicated above. The EIA Engineering Office also administers the JETEC-type designation system, the only centralized activity assigning type numbers to these items in the world, which makes possible the interchangeability of electron tubes and semiconductors from many sources of manufacture (now "JEDEC").

Committees of the Association maintain close liaison and actively cooperate with related groups in other standardizing bodies such as the Institute of Radio Engineers, American Institute of Electrical Engineers, American Standards Association, National Electrical Manufacturers Association, American Society for Testing Materials, National Machine Tool Builders Association, Aircraft Industries Association, and others.

Military standardization efforts include liaison and cooperation with governmental agencies of the Department of Defense and the individual military services, and includes the submission of industry recommendations for new or modified Military Standards and Specifications.

Other governmental standardizing liaison is maintained with the Federal Communications Commission (FCC), Federal Trade Commission (FTC), and the Federal Civil Defense Administration (FCDA).

International Standardization is accomplished by the activity of the EIA International Standards Committee and the Joint Electron Tube Engineering Council working directly with the United States National Committee of the International Electrotechnical Commission (IEC).

ENAMELED UTENSIL MANUFACTURERS COUNCIL, Thomas Associates, Inc., Commissioners, 2130 Keith Building, Cleveland 15, Ohio

The standardization and simplification activities of this Council have been carried on by its Technical Committee. The work of the Technical Committee has been confined to the development of commercial standards for products of the industry. The commercial standards include information concerning enameled utensils. The latest of these is Commercial Standard 100-47, "Porcelain-Enameled Steel Utensils."

ENGINEERING FOUNDATION—WELDING RESEARCH COUNCIL, W. Spraragen, Director, 29 West 39th Street, New York 18, N.Y.

The Welding Research Council was organized in 1935 by Engineering Foundation and is now sponsored by the American Welding Society, American Institute of Electrical Engineers, American Insti-

tute of Mining and Metallurgical Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers, Society of Naval Architects and Marine Engineers, American Society for Metals, and American Society for Testing Materials.

The Welding Research Council is a realistic, flexible mechanism set up by interested engineering societies and trade associations to accomplish certain objectives. These objectives simply stated are: (1) to conduct needed cooperative research in welding and closely allied fields; (2) to disseminate research information; (3) to promote welding research in the universities; and (4) to provide a means for cooperation, interchange of ideas, and information with similar agencies abroad.

The Council disseminates the results of its own research work and that of many other affiliated organizations through its five regular publications, namely: Welding Research, Reports of Progress, Welding Research News, Bulletins, Welding Research Abroad.

In addition to the regular publications of the Council, pamphlets, books, and special reports are issued from time to time. All of these publications, which represent nearly \$2 million worth of research annually, are made available to subscribers and research workers.

The Council is currently administering the following research projects: Interpretive Reports, Weldability, Pressure Vessel Research, Resistance Welding, Structural Steel, Fatigue of Welded Joints, High Alloys, and Welding Procedures.

In addition to the engineering societies, the Council works closely with more than a dozen governmental departments, and such leading trade associations as the American Iron and Steel Institute, American Petroleum Institute, American Institute of Steel Construction, American Gas Association, Steel Plate Fabricators Association, Resistance Welding Manufacturers Association, and others.

FACING TILE INSTITUTE, Harry C. Plummer, Director of Engineering and Technology, 1520 18th Street NW., Washington, D.C.

This organization is an affiliate of the Structural Clay Products Institute. Through its Standards and Specifications Committee, the Facing Tile Institute conducts work in the standardization of shapes and colors. This committee's work has led to the development of standard specifications and grading rules for glazed brick and tile, which have been adopted and published by the Institute.

Representatives of this Institute cooperate with technical committees of the American Society for Testing Materials in formulating specifications for glazed ware. In addition to the above, members of the Institute support the Structural Clay Products Research Foundation which is currently conducting basic research on clays, similar to those used for the production of structural facing tile. It is hoped that results of this research will provide data that will be of material assistance, both in development of specifications and in the standardization of products.

FACTORY MUTUAL ENGINEERING DIVISION, G. F. Wahl, General Manager, 1151 Boston-Providence Turnpike, Norwood, Massachusetts

With district offices in 15 major industrial centers of the United States and Canada, this organization provides property and pro-

duction-loss-prevention engineering service to industrial organizations insured in the eight Associated Factory Mutual Fire Insurance Companies. Standards developed by this organization from loss experience, engineering background, and industrial-scale research tests form the basis for its service. These numerous standards, including such subjects as installing automatic sprinklers, safeguards for flammable liquids, gases, dusts, industrial ovens and dryers, and protection of buildings against wind damage, are available to the public in handbook form.

An important department of the organization is the Factory Mutual Laboratories which, in addition to conducting the test portion of loss-prevention standards development, is an approval agency for equipment and materials concerned with property damage limitation. Items meeting their performance standards are listed in their publication entitled "Approved Equipment for Industrial Protection." Most such items are marked by the manufacturers with a special identifying symbol to show that they are so approved.

Through memberships and committee representations, assistance is given to the standardization activities of other national scope organizations dealing with materials, equipment, and methods for industrial property and production-loss prevention. Included are such organizations as the American Standards Association, National Fire Protection Association, and American Society for Testing Materials.

FARM EQUIPMENT INSTITUTE, Robert A. Jones, Executive Secretary, 608 South Dearborn Street, Chicago 5, Illinois

Among the committees of the Farm Equipment Institute concerned with standardization activities is the Committee on Fasteners, which studies possibilities of effecting economies which may result from standardization of fasteners used by the implement industry. This committee is careful not to duplicate work carried on by other groups.

Another committee interested in standards is the Advisory Engineering Committee which acts in an advisory capacity to the Safety Committee of the Institute. This committee has made recommendations to various technical societies such as the American Society of Automotive Engineers and American Society of Agricultural Engineers relative to tractor power takeoffs; standards for hydraulic remote control for trailing-type implements. It also has a number of subcommittees considering such matters as standards for baling wire, lighting of farm equipment, etc.

The Institute cooperates with the International Standards Organization and the American Standards Association, as well as Government agencies interested in standardization efforts.

FEDERATION OF MUTUAL FIRE INSURANCE COMPANIES, Newell R. Johnson, General Manager, 20 North Wacker Drive, Chicago 6, Illinois

All standardization work of this organization is carried on with the National Fire Protection Association of which it is an organization member and is officially represented on the Board of Directors. Since certain NFPA standards are jointly approved by the NFPA

and the American Standards Association, some standardization activity is thus carried on indirectly with ASA.

This Association is officially represented on NFPA technical committees engaged in the development of codes and standards in the following fire prevention and fire protection fields: Fire department organization; fire prevention and cleanup; garages; gases; general storages; lightning protection; pyrotechnics; home fire detection; fire extinguishers; standpipes and outside protection; wearing apparel. In addition, many member company engineers are members of other NFPA technical committees in the name of their company or under a personal membership.

**FEDERATION OF PAINT AND VARNISH PRODUCTION CLUBS,
C. Homer Flynn, Executive Secretary, 121 South Broad Street,
Philadelphia 7, Pennsylvania**

The Federation is the technical society of the decorative and protective coatings industry and allied lines such as printing inks, etc. Members of the Federation are chemists, chemical engineers, and supervisory production personnel of the industry. The Federation is composed of 24 local organizations, 21 of which are in the United States, 2 in Canada, and 1 in England.

The objectives of the Federation are as follows: (1) To develop or provide practical and technical facts, data, and standards, fundamental to the manufacture and use of paints, varnishes, lacquers, related protective coatings, and printing inks; (2) to promote the investigation and interchange of ideas among its members and to promote research and application of the sciences in the manufacture and use of paints, varnishes, lacquers, related protective coatings, and printing inks; (3) to arrange for the collection and dissemination of information pertinent to the industries served by the Federation and for the presentation, discussion, and publication of papers and other contributions; (4) to encourage the establishment of constituent clubs and to coordinate their activities with those of the Federation; (5) to cooperate with the National Paint, Varnish, and Lacquer Association and other organizations in a manner consistent with the provisions of these bylaws; and (6) to perform a public service by the constant improvement of products and elimination of wasteful methods in manufacture.

**FEDERATION OF SEWAGE AND INDUSTRIAL WASTES ASSOCIATIONS, Ralph E. Fuhrman, Executive Secretary-Editor,
4435 Wisconsin Avenue NW., Washington 16, D.C.**

The Federation is interested in the best practices for the design, construction, and operation of sewage and industrial wastes treatment works.

A principal activity of this organization is the publication of the monthly technical journal, "Sewage and Industrial Wastes." This Journal, with 10,000 readers all over the world, is the acknowledged reference for technical information in this field. The Federation is also author of the following publications: "Twenty-Year Index to Sewage Works Journal," "Glossary-Water and Sewage Control Engineering," "Uniform System of Accounts for Sewer Utilities," "Utilization of Sewage Sludge as Fertilizer," "Municipal Sewer Ordinances," "Chlorination of Sewage and Industrial Wastes," and "Air Diffusion in Sewage Works."

FIBRE DRUM MANUFACTURERS ASSOCIATION, Glenn Mather, Managing Director, 271 Madison Avenue, New York 16, N.Y.

The Association is interested in standards affecting the fiber drum industry. It participates with packaging and packing authorities in the determination of safe and appropriate containers and in the methods of evaluating fiber drums. The Association cooperated with the Uniform Freight Classification Committee and developed a means of determining whether a product should be classified as liquid or semiliquid in order that proper containers of adequate strength might be selected. The Association also developed test data and other information for evaluating strength of curved sidewalls of cylindrical fiber drums.

FLAT GLASS JOBBERS ASSOCIATION, Minita Westcott, Executive Secretary, 2217 Tribune Tower, Chicago 11, Illinois

This Association is publishing a new Glazing Manual for wide distribution throughout the United States.

Broadening design concepts, new construction methods, and building material developments have resulted in an increasingly important role for various types of glass.

They have also resulted in the creation of additional special glazing situations which have further emphasized the longstanding need for a glazing manual. To meet these needs the Flat Glass Jobbers Association has retained Southwest Research Institute to prepare a manual which will set forth specifications to insure minimum acceptable quality of installation for flat glass. The Glazing Manual is now being prepared by the architects in the Building Research Section of Southwest Research Institute.

The purpose of the Glazing Manual is to set forth in one volume the recommended basic procedures for glazing. It is arranged in three major sections. The first is a general discussion of glass, glazing materials, surround preparation, and special conditions. The second section includes guide specifications setting forth glazing procedures and material to set different types of glass in various surrounds under varying conditions according to an acceptable sequence and supporting minimum acceptable standards of workmanship. The third section includes a glossary of glazing terms with definitions and a bibliography.

It is the aim of this Manual to be of particular use to the architect in specifying glazing methods, materials and procedure to the contractor in supplying the recommended materials and to the glazier in achieving quality performance.

FORMED STEEL TUBE INSTITUTE, Jehu R. Derrickson, Executive Secretary-Treasurer, 850-52 Hanna Building, Cleveland 15, Ohio

This corporation, not for profit, has functioning under its auspices, among other committees, a Technical Committee (Carbon) and a Technical Committee (Stainless), whose objectives are to advance and encourage engineering knowledge and practices relating to welded steel tubing. To accomplish those objectives, the committees initially prepare the "Handbook of Welded Steel Tubing," which states the physical, chemical, and metallurgical properties of welded steel

tubing; also commercial tolerance limits and extensive engineering data. The last edition of the Handbook is dated January 3, 1956. It serves as a guide and aid to both engineers and laymen.

The Institute cooperates with the American Society for Testing Materials, American Petroleum Engineers, and others.

FRICTION MATERIALS STANDARDS INSTITUTE, INC., H. G. Duschek, Secretary, 370 Lexington Avenue, New York 17, N.Y.

The Technical Committee of this association is responsible for the standardization and simplification of the products of this industry. This committee has cooperated with the National Bureau of Standards in the development of specifications for a brake-lining testing machine which the Bureau constructed for testing purposes. The committee also collaborated with the Federal Government in the formulation and revision of the Federal specifications covering brake lining.

FROZEN FOOD INSTITUTE, Herman W. Dorn, Ph. D., President, 719 South McClellan Avenue, Decatur, Illinois

The standardization projects of the Institute include packaging, deepfreezer construction, construction of vehicles in which frozen foods are transported, harvesting and processing conditions of food to be frozen, homefreezer construction and operation, instrumentation in relation to the proper operation of freezers, defrosting techniques for acid fruits and berries, ranges for largescale restaurant defrosting of frozen foods, the use of antioxidants and antibiotics in frozen foods, and others.

GALVANIZED WARE MANUFACTURERS COUNCIL, Thomas Associates, Inc., Commissioners, 2130 Keith Building, Cleveland 15, Ohio

The standardization and simplification activities of this association are carried on by the Simplification and Standardization Committee. This committee has confined its work to simplification of sizes of standard grade galvanized ware and assistance in the development of Commercial Standard 161-49 covering standard grade, hot-dipped galvanized ware, and Commercial Standard 169-50 covering galvanized ware fabricated from pregalvanized steel sheets. These two Commercial Standards and Simplified Practice Recommendation R226-47 were promulgated and published by the Commodity Standards Division of the U.S. Department of Commerce.

GAS APPLIANCE MANUFACTURERS ASSOCIATION, INC., Harold Massey, Managing Director, 60 East 42d Street, New York 17, N.Y.

This Association represents manufacturers of domestic, commercial, and industrial gas appliances, and their accessories, and also manufacturers of gas production, transmission, and distribution equipment.

This Association works cooperatively with the American Gas Association in promulgating industry safety standards, functioning under the auspices of the American Standards Association Sectional Committee Z21.

GASOLINE PUMP MANUFACTURERS ASSOCIATION, G. Theon Wright, Managing Director, 551 Fifth Avenue, New York 17, N.Y.

The Association, through its Technical Committees and subcommittees, participated generally in efforts to standardize certain features in the equipment produced in this industry which are noncompetitive and of advantage both to the manufacturers and users of gasoline dispensing equipment.

Through these committees representing its entire membership, it has succeeded in standardizing such things as the location of anchor bolt holes on the service station island, the location of suction stubs linking the dispensing equipment to the fuel pipe and storage tanks on the service station, and the location of electrical conduit entrances.

As a result of this work, the American Petroleum Institute has been able to adopt standard specifications for the base layout of gasoline pumps.

Now the Association has interested itself in possible standardization of fill pipes in automobile fuel tanks to facilitate standard hose lengths. In each case, the same basic principle applies: That is, the standardization must be in an area of engineering design which is of common advantage to both manufacturer and user and is essentially noncompetitive.

GRAY IRON FOUNDERS' SOCIETY, INC., Donald H. Workman, Executive Vice President; Charles F. Walton, Technical Director, 930 National City-East 6th Building, Cleveland 14, Ohio

The Society is a trade association in the foundry industry representing producers of gray iron, ductile iron, and white iron castings in the United States and Canada. The Society itself does not establish standards, but provides active support and data to the standards organizations. Main participation is with the American Society for Testing Materials. The GIFS promulgates a summary of established specifications on the industry's products, an approved terms and conditions of sale, and a foundry cost accounting system. The Society's "Gray Iron Castings Handbook," published in 1958, is a complete (620 pages) reference on the subject of gray, ductile, white and alloy iron castings.

GRINDING WHEEL INSTITUTE, Thomas Associates, Inc., Managers, 2130 Keith Building, Cleveland 15, Ohio

The standardization and simplification activities of this Institute are carried on by two committees, Standardization Committee and Safety Committee. The work of the Standardization Committee deals primarily with simplification matters. It initiated the program for simplification of sizes of grinding wheels and these efforts resulted in the establishment of Simplified Practice Recommendation R45-57 which was promulgated by the Commodity Standards Division, Office of Technical Services, U.S. Department of Commerce. This Standardization Committee's activities also include assistance in the development of American Standards covering the products of the industry. As they are finalized, they are submitted to the American Standards Association for approval.

This Institute was joint sponsor with the International Association of Governmental Labor Officials in the development of the American Standard Safety Code for the Use, Care, and Protection of Abrasive

Wheels, which was approved and issued as an American Standard B7.1-1956. The Institute is also represented on three ASA committees—Small Tools and Machine Tool Elements, Safety Code for Exhaust Systems, and the Mechanical Standards Board of the American Standards Association.

GUMMED INDUSTRIES ASSOCIATION, Philip O. Deitsch, Managing Director, 11 West 42d Street, New York 36, N.Y.

Standardization of No. 1 kraft sealing tape was initiated by this Association and led to the acceptance by industry of Simplified Practice Recommendation R114-30 covering standard weights, sizes, and strength of sealing tape.

GYP SUM ASSOCIATION, Lloyd H. Yeager, General Manager, 20 North Wacker Drive, Chicago 6, Illinois

The Gypsum Association's main interest in standardization is concerned with the development of material and application standards suitable for use within the construction industry. Most of this work is done in cooperation with the American Society for Testing Materials and the American Standards Association.

The Gypsum Association is a member of the American Society for Testing Materials and serves as Secretary to Committee C-11 on Gypsum. It is also active on Committee E-5 on Fire Test of Materials and Construction, Committee E-6 on Methods of Testing Building Constructions, and Committee C-20 on Acoustical Materials.

As a member of the American Standards Association, the Gypsum Association is a cosponsor of American Standard A97.1 for Gypsum Wallboard and the Standard A59.1 for Gypsum Concrete. In addition, it is a member of ASA Sectional Committee A42.1 and A42.4 on Gypsum Plastering and Interior Lathing and Furring.

HACK SAW MANUFACTURERS ASSOCIATION OF AMERICA, INC., 1015 Chestnut Street, Philadelphia 7, Pennsylvania

This Association cooperated with the Commodity Standards Division in the establishment of Simplified Practice Recommendation R90-53 relating to standard sizes of tungsten, alloy, and high-speed steel blades. This Association is at the present time accumulating data bearing upon the demand for various sizes by way of testing the sufficiency of the blades set forth in the recommendation, and also in obtaining data for further simplification of unnecessary blades.

HANGAR AND INDUSTRIAL DOOR TECHNICAL COUNCIL, Thomas Associates, Inc., 2130 Keith Building, Cleveland 15, Ohio

The standardization and simplification work of this Council are carried on by the Technical Committee. The work of the Technical Committee has been confined to the development of commercial standards for the various types of aircraft hangar doors manufactured by Council members. One such project has been completed and deals with the Manually Operated Sliding Type Aircraft Hangar Door. This material has been submitted to the Office of Technical Services, Commodity Standards Division, U.S. Department of Commerce, for promulgation and publication by that body. The Technical Committee is very active and is currently developing commercial

standards for aircraft hangar doors of the Individually Power Operated Sliding Type and the Vertical-Lift Canopy Type.

HARDWOOD DIMENSION MANUFACTURERS ASSOCIATION, INC., J. Edgar Kennedy, Managing Director, Wilson-Bates Building, 3813 Hillsboro Road, Nashville 12, Tennessee

Committees of this Association cooperate with all branches of the Federal and State Governments, lumber manufacturing associations for both hardwood and soft wood, and furniture manufacturing and other wood-using industries in bringing about standardization programs on grading rules of hardwood dimension parts. In this connection, the Association requested the cooperation of the National Bureau of Standards in initiating movements which resulted in the establishment of four Commercial Standards covering several types of products. As a result of this effort, the National Bureau of Standards, promulgated and published Commercial Standards CS60-36 (later superseded by CS60-48) covering grading rules for hardwood dimension lumber; CS76-39 which provides two classes of solid hardwood interior trim and molding; and CS89-40 relating to standard grades, sizes, patterns, and species of hardwood stair treads and risers. In order to assure purchasers that the various types of products covered by these Commercial Standards are in accordance with the quality and grade covered by the standards, the producers of this industry may either individually, or in cooperation with the Association, issue guarantee certificates of classification (HDMA Certificate of Origin) for specific shipments, or grade and trademark, of each piece or bundle as conforming to the particular Commercial Standard.

HARDWOOD PLYWOOD INSTITUTE, Clark E. McDonald, Managing Director, 69 Raymond Avenue, McLean, Virginia

Standardization is an important part of the activity of the Institute. It is a national trade association of hardwood plywood manufacturers with temporary headquarters at McLean, Va., and a laboratory for testing hardwood plywoods located in Atlanta, Ga. A new office building and laboratory is being constructed in Arlington, Va.

The HPI helped develop Commercial Standard CS35-56 for Hardwood Plywood. It has grade stamps that its members use to certify that their plywood meets the requirements of this standard.

The Institute is in the process of developing a standard for pre-finished hardwood plywood and it assisted in the development of Federal Specification NN-F-476 covering Flooring; Hardwood, Block.

HEARING AID INDUSTRY CONFERENCE, c/o S. F. Lybarger, Vice President, Radioear Corporation, Radioear Building, Valley Brook Road, Canonsburg, Pennsylvania

The Conference is active in hearing aid standardization through representation on American Standards Association Sectional Committee S-3. A Writing Group of this Committee is currently revising the Z-24.14-1953 American Standard for methods of measurement of characteristics of hearing aids.

In addition to representatives from the National Bureau of Standards and the Veterans' Administration, the Writing Group has a membership of several hearing aid engineers from companies who are members of HAIC. At the present time, it is felt that HAIC can best contribute to the standardization program on hearing aids by direct and indirect cooperation with the American Standards Association. The HAIC has been in operation since 1955 and has the largest representation of hearing aid, hearing aid battery, and hearing aid component manufacturers in its membership than enjoyed by any previous industry association.

HEAT EXCHANGE INSTITUTE, Frank P. Anderson, Secretary-Treasurer, 122 East 42d Street, New York 17, N.Y.

This is the trade organization of the powerhouse-type heat exchanger manufacturing industry. Its membership is comprised of the principal manufacturers of surface, jet, and barometric condensers; steam jet ejectors; deaerators and deaerating heaters.

The work of the Institute is carried on by technical committees which are continuously engaged in developing standards and keeping them up to date. Through this effort, the Institute has published the following: Standards and Typical Specifications for Deaerators and Deaerating Heaters (third edition, 1953); Direct Contact Barometric and Low Level Jet Condenser Standards (fourth edition, 1957); Steam Surface Condenser Standards (fourth edition, 1955); History of the Development, Manufacture, and Calibration of HEI Standard Flow Nozzles (1946); Method and Procedure for the Determination of Dissolved Oxygen (first edition, 1949); Standards for Steam Jet Ejectors (third edition, 1956).

The Institute also carries on a continuous research program on the heat transfer characteristics of condenser tubes of various materials and types.

Currently the Institute is also compiling technical information based on tests of a proposed standard steam jet ejector.

HOIST MANUFACTURERS ASSOCIATION, INC., Joe H. Peritz, Executive Secretary, One Thomas Circle, Washington 5, D.C.

This Association has adopted standard specifications for wire rope electric hoists and hand chain hoists. It is cooperating with the Navy Department in formulating specifications for electric hoists for land and ship duty. This Association is represented on the sectional committee of the American Standards Association dealing with the Safety Code for Cranes, Derricks, and Hoists.

HOROLOGICAL INSTITUTE OF AMERICA, Arthur F. Beck, Executive Secretary, care of P.O. Box 667, Arcade Building, Melbourne, Florida

This Institute was organized in 1921 by the National Research Council as an outgrowth of the scarcity of instrument repairmen of high quality during the World War. It is an independent, self-governing, nongovernmental organization whose purposes are the scientific and educational advancement of the watchmaker.

The Institute's activities are governed by an Advisory Council of

27, composed of representatives of the watchmakers, the horological schools, the time-inspection services of the railroads, the American watch manufacturers, the National Research Council, and the Federal Government. It recommends standards of instruction for horological schools and advises with officials in the establishment of horological courses in schools and colleges, and grants certificates to horological schools based upon their standards of instruction. It gives examinations both in theory and practice to watch repairers and grants certificates to those who pass the examinations. It prepares and publishes material of educational value to watchmakers. It grants honors for outstanding contributions to the science of horology.

HYDRAULIC INSTITUTE, Frank P. Anderson, Secretary-Treasurer, 122 East 42d Street, New York 17, N.Y.

The Institute is the trade organization of the industrial pump manufacturing industry. Its membership is comprised of the principal manufacturers of centrifugal, rotary, and reciprocating pumps.

The Institute is the publisher of two volumes, "The Standards of the Hydraulic Institute," now in its tenth edition, and "The Pipe Friction Manual."

Three of the five sections of the Standards of the HI are devoted to the basic type of pumps. Each of these sections covers such items as classification, nomenclature, application, rating, testing, and similar phases of pump engineering. A fifth section, the Data Section, devotes itself to friction loss of water and viscous liquids in pipes, data on pipe dimensions, etc., together with complete recommendations on materials of construction for pumping various liquids. The first two sections are devoted to general information about the Institute.

The material in the "Pipe Friction Manual" is an extension and rearrangement of pipe friction data contained in an earlier publication. It is probably the most complete volume available on pipe friction calculations. Its many charts, diagrams, and illustrative examples make it an essential companion to the Standards.

The Institute cooperates with the U.S. Department of Commerce, the American Society of Mechanical Engineers, the National Fire Protection Association, the American Standards Association, and with all of the technical organizations of industries having problems in common with the pump industry.

The Institute is cosponsor with the Manufacturing Chemists Association for ASA Sectional Committee B-73, Centrifugal Pumps for Chemical Industry Use. It is also represented on several other sectional committees and maintains watchful interest in many more.

Currently the Institute is engaged in a cooperative research program on the handling of fluid-solids mixtures. This is expected to result in a report which may well be the basis for a standard in this new and growing method of transportation of materials.

ILLUMINATING ENGINEERING SOCIETY, A. D. Hinckley, Executive Secretary; C. L. Crouch, Technical Director, 1860 Broadway, New York 23, N.Y.

Standardization work of this Society is carried on by over 100 technical committees which study and report to the governing Council on lighting of all areas such as: airports and aircraft, farms, industrial plants, institutions, offices, public conveyances, residences,

schools, service stations and parking areas, sports and recreational areas, stores, streets and highways, theaters and television studios. The Society's committees are also concerned with light sources, lighting and air-conditioning, lighting education programs, lighting progress, lighting maintenance, light control and equipment design, nomenclature, quality and quantity of light, searchlighting, and testing procedures for illumination characteristics. Standards, specifications, and reports on the above subjects are published in the monthly journal, "Illuminating Engineering." Many of these reports become American Standards after processing through the channels of the American Standards Association.

Through an active research program the Society is able to feed to the technical committees data which is used in developing reports and standards.

The Society is also active in related matters through representation on 32 committees of other professional organizations, some of which are the International Commission on Illumination, National Research Council, Intersociety Color Council, National Office Management Association, Society of Motion Picture and Television Engineers, American Association for the Advancement of Science, American Standards Association.

INCANDESCENT LAMP MANUFACTURERS' ASSOCIATION, Gustav Herzberg, President, 67 South Munn Avenue, East Orange, New Jersey

This organization has an Engineering Committee which functions under the direction of the Association's Board of Directors. This committee was established for the purpose of setting minimum standards and requirements for materials, equipment, etc., used by its members. As a prime effort in this direction, the Engineering Committee is coordinating its activities with manufacturers so as to bring about standardization of some of the items used in the manufacture of electric incandescent lamps.

INCINERATOR INSTITUTE OF AMERICA, V. P. Gopcevic, Secretary-Treasurer, 420 Lexington Avenue, New York 17, N.Y.

A national Trade Association whose members are individuals, firms, and corporations engaged in the design and manufacture and/or construction of incinerators.

The Incinerator Institute of America has issued Incinerator Standards based on research and recommends that it be taken as the basis for the development of codes in the many municipalities in the United States.

INDUSTRIAL DIAMOND ASSOCIATION OF AMERICA Margaret J. McGinnis, Executive Manager and Secretary, Box 175, Pompton Plains, New Jersey

The Association is closely interested in standards for industrial diamonds. With the American Society of Tool Engineers it cosponsored in the American Standards Association a project known as B-67, Industrial Diamonds and Accessories for Their Use. Out of this project, American Standard B-67.1 for Diamond Dressing Tools was developed, approved, and now available. Through cosponsor-

ship with the Grinding Wheel Institute, the Association also cosponsored project B-74.1, Identification Code for Diamond Wheel Shapes. Other standardization projects are being studied by the various committees with a view to presenting them to the American Standards Association for approval.

**INDUSTRIAL FASTENERS INSTITUTE, F. Masterson,
President, 1517 Terminal Tower, Cleveland 13, Ohio**

Through its Committee on Standards and Technical Practices and subcommittees thereof, this Institute carries on considerable work relating to standardization and simplification of bolts, nuts, and rivets. In carrying forward this work, the Institute cooperates with various departments of the Federal Government, including the Department of Defense, the National Bureau of Standards, and the Interdepartmental Screw Thread Committee; also with the American Society of Mechanical Engineers, the American Society for Testing Materials, the American Standards Association, the Society of Automotive Engineers, and the technical bodies associated with other industries.

Through its Committee on Standards and Technical Practices, the Institute has published "Bolt, Nut, and Rivet Standards," in which are assembled the current adopted standard practices of the industry. The purpose of this book is to provide a means whereby further unification might be carried on progressively so that as far as practicable all commercial practices of the industry may be eventually standardized.

The Institute initiated the movements under the auspices of the National Bureau of Standards for simplification of packaging of machine, carriage and lag bolts; and stock production sizes of machine, carriage, and lag bolts (steel). These activities have resulted in the establishment of several Simplified Practice Recommendations such as R60-55, "Machine, Carriage, and Lag Bolts, and Packaged Nuts (Case Quantity and Gross Weight)"; R169-45, "Bolts and Nuts (Stock Production Sizes)"; R221-46, "Steel Rivets (Stock Production Sizes)"; R23-54, "Plow Bolts (Standard Stock Production Types and Sizes)", which have been promulgated and published by the National Bureau of Standards.

The Institute is officially represented on six sectional committees functioning under the procedure of the American Standards Association on the following projects: building code requirements for iron and steel; standardization and unification of screw threads; allowance and tolerances for cylindrical parts and limit gages; bolt, nut, and rivet proportions; classification and designation of surface qualities; and graphical symbols and abbreviations for use on drawings. It is also represented on committees of the American Society for Testing Materials engaged in standardization problems relating to wrought iron and steel and on Committees of the Society of Automotive Engineers engaging in the standardization of automotive fastener parts.

**INDUSTRIAL MANAGEMENT SOCIETY, E. A. Cyrol, President,
330 South Wells Street, Chicago, Illinois**

Through the Occupational-Rating Research Group, this Society developed an occupational-rating plan for hourly and salaried occupa-

tions, which is a standard devised by the Society for standardizing and evaluating occupations. This standard is being widely used at the present time throughout the country. The use and adoption of the plan as set forth in this standard serve to establish more uniform classifications of grading occupations among various manufacturers concerned. The Society also maintains a rental library of industrial engineering training and work simplification films. These films depict "before" and "after" phases of methods improvements made on actual jobs in some of America's leading companies. All films are award winners from an annual competition sponsored by the Society.

INDUSTRIAL MEDICAL ASSOCIATION, Edward C. Holmblad, M.D., Managing Director, 28 East Jackson Boulevard, Suite 1300, Chicago 4, Illinois

The Association was organized originally as the American Association of Industrial Physicians and Surgeons. There are 3,600 member physicians affiliated.

The objectives of the Association are to foster the study and discussion of the problems peculiar to industrial medicine and surgery; to develop methods adapted to the conservation of health among workers in the industries; to promote a more general understanding of the purposes of the medical care for employees; and to unite into one organization members of the medical profession specializing in industrial medicine and surgery for their mutual advancement in the practice of their profession.

Its Committee on Standards has established minimum standards to be used in evaluating and accrediting medical service programs in industry. These standards embrace the scope, purpose, and functions of occupational health programs and include such factors as: Medical policy of the company, the professional staff, preemployment examinations for proper job placement, periodic examinations for health maintenance, provisions for adequate care of injury and illness, adequacy of medical facilities, control of health hazards, and suitable records properly used. The accreditation function, using these standards, is performed by the Occupational Health Institute, Inc., an educational affiliate of the Association.

INDUSTRIAL MINERAL INSULATION MANUFACTURERS INSTITUTE, J. M. Barnhart, Executive Director, 441 Lexington Avenue, New York 17, N.Y.

The Institute is a nonprofit trade association representing manufacturers of mineral insulation for thermal industrial uses. Its purposes are to cooperate with other industries, technical societies, research organizations, and governmental agencies in all matters that will disseminate accurate information regarding mineral insulation products for industrial uses. The Institute, in cooperation with the U.S. Department of Commerce, promulgated Commercial Standards CS105, CS117 and CS131; it has been called on regularly to counsel in the preparation of Federal Specifications for Cement, Insulation, Thermal, Mineral-Wool; Insulation, Building, Mineral-Wool, Batts, Loose-Fill, and Granular-Fill; Insulation Felt, Thermal, Mineral Wool (for Low Temperatures); Insulation, Thermal, Mineral Wool, Block or Board and Pipe Insulation (Molded Type); Insu-

lation, Mineral-Wool, Blanket, Felt, and Industrial-Batt (for Heated Surfaces); Insulation, Mineral-Wool, Block and Board (for Heated Surfaces); and Insulation Pipe Covering, Thermal, and Insulation Blanket, Thermal, Pipe Covering.

By virtue of participation in the activities of ASTM Committee C-16 on Insulation, the Institute has aided constructively in preparing test methods and product standards pertaining to thermal insulating products. It maintains active participation on the American Society of Heating and Air-Conditioning Engineers and the American Society of Refrigerating Engineers, and cooperates with other organizations that are interested in industrial mineral insulation products.

**INDUSTRIAL SAFETY EQUIPMENT ASSOCIATION, INC.,
V. P. Gopcevic, Secretary-Treasurer, 420 Lexington Avenue,
New York 17, N.Y.**

All of the work of this Association in the field of standardization is carried on in cooperation with the American Standards Association and Federal agencies. It is officially represented on eight ASA sectional committees; safety code for use, care and protection of abrasive wheels; safety code for the protection of the head, eyes, and respiratory organs of industrial workers; acoustic, vibration, and mechanical shock; occupational protective clothing; power press, hand and foot; safety color code; textile safety code; woodworking machinery; welding.

**INDUSTRIAL TRUCK ASSOCIATION, William Van C.
Brandt, Managing Director, 900 F Street NW., Washington 4,
D.C.**

This Association, through its Engineering Committee, is developing a Manual of Recommended Practices in order to advance safety and efficiency in the design, manufacture, and use of industrial trucks.

The Association also cooperates with the American Standards Association in working with the Sectional Committee for Industrial Power Trucks, which is sponsored by the American Society of Mechanical Engineers. This Sectional Committee is engaged in developing a uniform safety code for industrial power trucks.

**INDUSTRIAL WATER CONDITIONING INSTITUTE, John
F. Wantz, Secretary, P.O. Box 560, Rockford, Illinois**

The Institute is comprised of 15 companies whose endeavors are directly connected with the manufacture of industrial water-conditioning equipment.

It was originally founded under the name of Water Softener and Filter Institute. After World War II, it became inactive. Later the organization was reactivated under the new name. At that time, its function was to assist the Government in planning, allocation, and production of essential water treatment equipment.

When hostilities ended in Korea, the Institute members decided to keep the Institute in an active state. It was agreed that the Institute should refrain from becoming a sales promotional organization and should instead devote its energies to standardization of equipment and engineering design. To this end, the work was started in 1955, and while it has not been completed, several sections are in

their final stages for presentation to Institute members for approval.

The Institute does not employ any personnel since all its correspondence and work is done by member companies on a voluntary basis. The Institute does, however, cooperate closely with MAPI in its various functions.

INDUSTRY SERVICE BUREAUS, George P. Byrne, Jr., 53 Park Place, New York 7, N.Y.

AIRCRAFT LOCKNUT MANUFACTURERS ASSOCIATION

This organization works closely with the Military and Civilian Branches of the Government in the development of Aircraft Locknut Specifications, Standards, and methods of cataloging. This Association also cooperates with the American Standards Association and the American Society of Mechanical Engineers.

ELECTRIC FUSE MANUFACTURERS GUILD

This organization develops and submits to the appropriate Government offices suggestions for the improvement of Military and Federal Specifications and Standards covering Electric Fuses. Also, it cooperates with the National Bureau of Standards in matters relating to the performance and specification of different types of Electric Fuses. In addition, this organization cooperates with the Underwriters' Laboratories concerning labels and materials from which electric fuses are made.

MACHINE SCREW NUT BUREAU

Although this Bureau does not publish standards or specifications of its own, its Standards Committee considers dimensional standards of the products of the Industry relating to diameter, length, pitch of thread, type of head, etc. The committee actually does not complete any project, but it develops standards which are satisfactory and efficient both to consumers and manufacturers. These projects are presented to the American Standards Association, who actually complete and promulgate them in the form of recommended American standards.

SERVICE TOOLS INSTITUTE

This organization represents the manufacture of mechanics' hand service tools and works closely with the U.S. Navy Department and other Government departments in matters relating to Hand Service Tools Specifications, Standards, and Cataloging. It also cooperates fully with the American Standards Association and the American Society of Mechanical Engineers in the development of Standards for Hand Service Tools.

SOCKET SCREW PRODUCTS BUREAU

This organization works closely with the Civilian and Military Branches of the Government in matters relating to Socket Screw and Set Screw Cataloging, Specifications, and Standards. It also cooper-

ates with the Society of Automotive Engineers and the American Standards Association in the development of Socket and Set Screw Standards.

TAPPING SCREW SERVICE BUREAU

Through its Standardization Committee, this organization cooperates with the Society of Automotive Engineers and the American Standards Association in the development of suggested dimensional and size standards for Tapping Screws. This Bureau also cooperates with the Military and Civilian Branches of the Government in the development of Tapping Screw Specifications and Standards.

UNITED STATES CAP SCREW SERVICE BUREAU

This Bureau cooperates with the U.S. Customs Service in matters relating to the proper nomenclature and classification of industry products for customs purposes. Also, it cooperates with other Government agencies in the improvement of Military and Federal Specifications and Standards for Cap Screws. Suggested improvements in Cap Screw Standards also are developed by the Bureau's Standards Committee, which works in close cooperation with the American Standards Association and the Society of Automotive Engineers.

UNITED STATES MACHINE SCREW SERVICE BUREAU

The Standardization Committee of this organization considers the dimensional standards of the products of the industry and cooperates with the American Standards Association and the Society of Automotive Engineers in the development of proposed additions to and changes in existing Standards in industry products. Also, the Standards Committee cooperates with Government agencies in matters relating to Military and Federal Specifications and Standards.

UNITED STATES WOOD SCREW SERVICE BUREAU

The Standardization Committee of this organization develops proposed standards, dimensions and sizes of wood screws. It works in close cooperation with the American Standards Association and the Society of Automotive Engineers. The Standardization Committee also cooperates with Government agencies in matters pertaining to Military and Federal Specifications and Standards on Wood Screws.

INSTITUTE OF AMERICAN POULTRY INDUSTRIES, Dr. Cliff D. Carpenter, President, 59 East Madison Street, Chicago 2, Illinois

The objects of the Institute are: (a) to promote educational work and develop the interest of the egg and poultry industry for its general betterment; (b) to afford a means of cooperation with the Federal and State Governments in all matters of general concern to the industry; and (c) to promote study of the arts and sciences connected with the production, preparation for market, and marketing of eggs and poultry.

INSTITUTE OF APPLIANCE MANUFACTURERS, Samuel Duncel, Managing Director, Shoreham Hotel, Washington 8, D.C.

While the organization is not in the true sense a technical organization, it has carried on standardization in the fields of oil heating and color coordination. The Technical Committee of the Oil Division of the Institute developed standards for flue-connected oil-burning space heaters covering oil heater rating test, methods for publication of such ratings, and for selecting the proper size of heater to heat a given space in a particular geographical area of the country. This work has been coordinated by the National Bureau of Standards and the standard is now known as CS101-43. The institute has also assisted in other commercial standards having to do with oil furnaces and oil specifications.

Current standardization work is in the field of color, which is becoming more and more widely used on the types of major household appliances which were formerly classified as "white goods." The present color standardization card provides for six colors.

The industry is currently being polled about its reaction to these proposed colors and it is hoped that eventually a standard for matching and mixing appliance colors can be developed.

INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS, R. E. Ferry, General Manager, 608 Fifth Avenue, New York 20, N.Y.

Codes for Testing and Rating Boilers, Commercial Finned Tube Radiation and Indirect Water Heaters are issued by the institute. The Ratings developed under these codes are generally accepted by Government departments and the heating industry throughout the United States and the world.

The Institute maintains close contact with other organizations, such as the American Society of Mechanical Engineers, the American Society of Heating and Air-Conditioning Engineers, the Mechanical Contractors Association, the National Association of Plumbing Contractors, and Oil Heat Institute of America.

Other activities of the Institute include a continuation of a research program in cooperation with the University of Illinois to determine facts with respect to hot water and steam heating installation and, more recently, in connection with chilled water cooling. It publishes Calculation and Installation Guides for use by the heating industry. Another activity involves the conducting of IBR Schools of Heating and Cooling designed to promote efficient and economical installations.

INSTITUTE OF PRINTED CIRCUITS, INC. Harry P. Dolan, Managing Director; R. E. Pritchard, Executive Secretary, 27 East Monroe Street, Chicago 3, Illinois

Manufacturers in this trade association produce printed circuit boards for electrical applications.

The Institute of Printed Circuits has completed recommended tolerances for printed circuit boards for commercial and for precision applications.

**INSTITUTE OF RADIO ENGINEERS, INC., G. W. Bailey,
Executive Secretary; L. G. Cumming, Technical Secretary,
1 East 79th Street, New York 21, N.Y.**

The standardization activities of the IRE are carried on by the following technical committees, the names of which are indicative of the fields covered by them: Antennas and Waveguides, Audio Techniques, Circuits, Electroacoustics, Electron Tubes, Electronic Computers, Facsimile, Feedback Control Systems, Industrial Electronics, Information Theory and Modulation Systems, Measurements and Instrumentation, Medical Electronics, Mobile Communication Systems, Navigation Aids, Nuclear Techniques, Piezoelectric and Ferroelectric Crystals, Radio Frequency Interference, Radio Receivers, Radio Transmitters, Recording and Reproducing, Solid State Devices, Symbols, Television Systems, Video Techniques and Wave Propagation. These Committees are composed mainly of engineers active in education, industry, and government in the United States and Canada; however, at the present time there are technical committee members from England, France, Germany, the Netherlands, and Switzerland. The broad scope of standardization activities encompasses definitions of terms, glossaries of terms, abbreviations and symbols, methods of measurements, and methods of test.

As a result of the work of its technical committees, the IRE has issued standards covering most of the fields mentioned above. Many of these standards have been approved as American Standards, and some have even received recognition on an international basis.

The IRE serves as sponsor for the following ASA sectional committees: ASA Sectional Committee C16 on Radio and Electronic Equipment, ASA Sectional Committee N3 on Nuclear Instrumentation, and ASA Sectional Committee Z57 on Sound Recording. In addition, the IRE has representation on 18 ASA Sectional Committees dealing with the following subjects: electrical measuring instruments; definitions of electrical terms; standardization on electron tubes; electric and magnetic magnitudes and units; radio-electrical coordination; standardization of voltages; components for electronic equipment; terminology for automatic controls; reactor hazards, acoustics; bioacoustics; abbreviations; letter symbols; standards for drawing and drafting room practices; preferred practice for the preparation of graphs, charts, and other technical illustrations; graphical symbols and designations; preferred numbers; and standardization of optics.

The IRE also cooperates with the following international organizations: The International Electrotechnical Commission, the International Radio Consultative Committee, and the International Scientific Radio Union.

**INSULATED POWER CABLE ENGINEERS ASSOCIATION,
G. M. Haskell, Secretary, 283 Valley Road, Montclair, New
Jersey**

The membership of the Association consists of engineers from the technical staffs of the leading American and Canadian manufacturers of wire and cable used for the transmission and distribution of electrical energy.

Many of its members are also members of other technical organi-

zations, such as the American Institute of Electrical Engineers and the American Society for Testing Materials.

The Association is itself a member of the American Standards Association.

The activities of this Association are concerned with matters relating to bare, covered, and insulated conductors including preparation of engineering recommendations and standards, and consultation and collaboration with other technical organizations and agencies in the preparation and publication of engineering standards and specifications for bare and insulated wire and cable.

Copies of these publications may be obtained from the Secretary.

INSULATING SIDING ASSOCIATION, Richard G. Breeden, Jr., Secretary-Manager, 1201 Waukegan Road, Glenview, Illinois

A technical committee of the Association worked actively with the Office of Technical Services, Department of Commerce, in the preparation of Commercial Standard CS216-58, covering asphalt insulating siding. It has also assisted the Federal Housing Administration and the American Society for Testing Materials in the development of standards, specifications, practices, and test methods.

INSULATION BOARD INSTITUTE, Charles M. Gray, Manager, 111 West Washington Street, Chicago 2, Illinois

A group of manufacturers of structural insulating board initiated a program for the establishment of Commercial Standard CS42-35 covering specifications for two classes of insulating board designated as "insulating building board" and "roof insulating board." This standard was promulgated by the National Bureau of Standards and adopted by this Institute. The current issue of this standard is CS42-49, covering specifications for six classes of "structural fiber insulating board." A committee of the Institute is now preparing a new issue of this standard.

The Institute cooperated in the development and revision of Federal specifications covering fiberboard, the current issue of which is designated "LLL-F-321b, Fiberboard; Insulating." The Institute also cooperates with American Society for Testing Materials in developing specifications and testing methods for "Structural Insulating Board Made From Vegetable Fibres," and is officially represented on various committees of the American Standards Association concerned with standards relating to insulating board or its uses.

INTERNAL COMBUSTION ENGINE INSTITUTE, Charles G. Spice, Executive Secretary, Room 914, 201 North Wells Street, Chicago 6, Illinois

This organization is composed of manufacturers of high-speed (750 rpm and up) internal combustion engines, both gasoline and diesel, air or liquid cooled which are sold for automotive, agricultural, industrial, marine, oil field, and other heavy duty applications. Regular meetings are usually held in February, April, June, October, and December, and are attended by the policymaking executives of member companies. In addition, the following standing committees meet to discuss problems peculiar to the activities of each; viz, Engi-

neering and Technical, Service and Parts, Foreign Trade, Industrial Relations, Lubricating Oil, Purchasing, Marine Inspection, etc. Such committees meet as required based on specific problems in which they are individually interested. The Institute adopted standards covering gasoline engine testing and rating procedure, basic warranties, etc.

As occasion demands the Institute cooperates with the Petroleum industry and similar groups or associations. It has issued a booklet, "Lubricating Oils for Industrial and Heavy Duty Automotive Engines," in which are listed the oil company brand names which are guaranteed to meet the following specifications: MIL-L-2104A, Supplement 1 (S-1) and Series 3 (Caterpillar); such a publication was considered to be a service to the oil companies, the engine companies, and the customers of both who use such products.

INTERNATIONAL ACETYLENE ASSOCIATION, H. F. Reinhard, Secretary, 205 East 42d Street, New York 17, N.Y.

This Association is an organization composed, in general, of companies and individuals concerned with the manufacture of actylene, calcium carbide, oxygen and related products, and apparatus and supplies for their manufacture or use. It acts as a technical body to promote the general welfare of its members and the public they serve.

The main objectives of the Association are: (1) to encourage the development of broader and more generally useful applications for calcium carbide, acetylene, and allied products; (2) to encourage the development of more efficient, dependable, economical, and safe methods of manufacture, distribution, and use of the products of the industry; (3) to obtain and publish dependable technical information about such developments, and (4) to cooperate with National, Provincial, State, and Municipal Governments, and with other technical associations in establishing standards and codes that assure safety and good operating procedures without undue restrictions or penalties.

In the field of standards and codes this Association has developed the following as they relate to its fields of activity: Standard Hose Connection Specifications, Specification for Rubber Welding Hose (in cooperation with the Rubber Manufacturers Association), Regulator Connection Standards, Recommendations re Antifriction Compounds for Use With Gaseous Oxygen, Air Raid Protection of Oxy-Acetylene Equipment and Installations, Safe Practices for Installation and Operation of Oxy-Acetylene Welding and Cutting Equipment.

Representatives serve on committees of numerous other societies, such as the Compressed Gas Association, American Welding Society, National Fire Protection Association, and National Safety Council. American Standards Association committees on which this Association has membership include: Code for the Protection of Heads, Eyes, and Respiratory Organs Z2, Exhaust Systems Z9, Safety Code for Building Construction A10.2, Maximum Acceptable Concentrations of Toxic Dusts and Gases Z37, Standardization of Pressure and Vacuum Gauges B40, Code for Safety in Welding and Cutting Z49.1, Scheme for Identification of Piping Systems A13, and Pressure Piping Code B31.

**INTERNATIONAL ASSOCIATION OF ELECTROTYPERS
AND STEREOTYPERS, INC., Floyd C. Larson, Secretary-
Treasurer, 758 Leader Building, Cleveland 14, Ohio**

Through its Standardization Committee, this organization has prepared standards for printing plates. These standards cover thicknesses and tolerances for unmounted and curved electrotypes, bevel of edges of patent base plates, thickness of shell, and standard formula for electrotypes backing metal. This Association has prepared and issued "The Electrotypes and Stereotype Handbook" and "Basic Requirements for Electrotypes."

Current standardization efforts are in stereotyping operations and materials, and in rubber and plastic platemaking.

Standardization work is now under direction of the Research and Development Committee.

INTERNATIONAL ASSOCIATION OF GARMENT MANUFACTURERS, Jules Goldstein, Executive Director, 347 Fifth Avenue, New York 16, N.Y.

This Association assisted in the establishment of Commercial Standards relating to Boys' Blouses, Shirts, Waists, Pants, and Boys' Outerwear. It has also cooperated in the preparation of Federal Specifications relative to measurements for Men's Outerwear, Work Shirts, and Dungarees.

**INTERNATIONAL ASSOCIATION OF GOVERNMENT
LABOR OFFICIALS, Clara M. Beyer, Secretary-Treasurer,
c/o Bureau of Labor Standards, U.S. Department of Labor,
Washington 25, D.C.**

This Association is composed of heads of State or Provincial departments dealing with labor law administration of the United States and Canada.

The Association develops standards in the field represented by its member through committee action of its own member or in cooperation with the American Standards Association. Standards developed by Association committees are intended to provide uniformity in labor legislation and administration procedures within the various States and Provinces; those developed under the American Standards Association procedure are concerned with safety.

Most standardization activities of the IAGLO are carried on in cooperation with the ASA through membership on 43 sectional committees. It also maintains membership on the Safety Standards Board, the Construction Standards Board, and the Nuclear Standards Board. The Association is the joint sponsor for four separate safety codes—The Use, Care, and Protection of Abrasive Wheels; Mechanical Power Transmission Apparatus; Woodworking Machinery; and Laundry and Dry Cleaning Machinery and Operations.

**INTERNATIONAL CITY MANAGERS' ASSOCIATION, Orin
F. Nolting, Executive Director, 1313 East 60th Street, Chicago
37, Illinois**

This Association in the early 1930's developed measurement units for certain public works activities, and manuals describing this system, together with a budgetary accounting system, which were published as

a result of installations made in a number of cities. In 1936 and 1937 the Association made a study of measurement techniques then being used in local governments, and in 1938 published a report entitled, "Measuring Municipal Activities," the second edition of which was published in 1943. More recently the Association developed "Specifications for Annual Municipal Report," which was published in 1948. In 1958 the Association issued, with the help of other national organizations of municipal officials, a "Checklist on How To Improve Municipal Services." This pamphlet contains more than 600 questions which indicate generally accepted standards of service or methods of administration for the guidance of municipal officials.

INTERSOCIETY COLOR COUNCIL, Ralph M. Evans, Secretary, c/o Color Technology Division, Eastman Kodak Company, Rochester 4, N.Y.

This Council grew out of a color conference sponsored by the Revision Committee of the United States Pharmacopoeia in 1930. Its membership consists of officially designated representatives of 26 national societies and associations interested in the description and specification of color and of individuals interested in color. From its inception, the work of the council in coordinating and giving advice on problems submitted by its member bodies has been accomplished through committee work. The aims and purposes of the Council are to stimulate and coordinate the work being done by the various societies and other organizations leading to the standardization, description, and specification of color, and to promote the practical application of these results to the color problems arising in science, art, and industry.

The Council has developed standard designations of color first for the description of drugs and chemicals, these designations being used in the latest revisions of the National Formulary and the United States Pharmacopoeia. They also are finding acceptance in many diverse fields, having been published in 1955 as Circular 553 of the National Bureau of Standards under the title, "The ISCC-NBS Method of Designating Colors and a Dictionary of Color Names." It has also developed a method of designating theatrical gelatins. A movement by the Council for standard terminology has resulted in the compilation of a comparative list of 1,100 color terms used by its member bodies. Development of a test for color aptitude has also been completed, the test being made available through the Federation of Paint and Varnish Production Clubs.

INVESTMENT CASTING INSTITUTE, Harry P. Dolan, Executive Director, 27 East Monroe Street, Chicago 3, Illinois

Manufacturers in this trade association produce precision castings principally for aircraft and missile applications.

This association conducts a comprehensive program of standardization including standards for metal specifications and dimensional tolerances applicable to the process; and test procedures for the raw materials used in the process.

The ICI has completed metal specifications for all major alloys used in investment casting. For the benefit of design engineers who must work with the many various metal specifications developed by the Government and by Technical Societies and trade associations, the

ICI has identified all specifications with the code number system of the "Cross Index of Chemically Equivalent Specifications and Identification Code," Mil Handbook H 1B, published by the Department of Defense.

The Investment Casting Institute coordinates its standards with the Government and with appropriate technical societies and trade associations, including: Office of Technical Services, U.S. Naval Gun Factory, Society of Automotive Engineers, American Society for Metals, and other organizations.

LAWN MOWER INSTITUTE, Harold K. Howe, Executive Secretary, Mills Building, Washington 6, D.C.

The Institute is sponsor of an American Standards Association project for the development of Safety Standards for lawn mowers as well as engineering specifications and safe design recommendations. This work will be reflected from ASA Committee Project B-71.

LEAD INDUSTRIES ASSOCIATION, Robert Lindley Ziegfeld, 60 East 42d Street, New York 17, N.Y.

This organization has adopted standards for lead pipe and lead pipe sizes, lead fittings, and lead for calking purposes. In addition to its own work on standardization and simplification, this Association has representatives who serve on committees of the American Standards Association and American Society for Testing Materials. It also cooperates with various agencies of the Federal Government in the development of specifications covering lead products.

LIBRARY BINDING INSTITUTE, Dudley A. Weiss, Executive Director, 10 State Street, Boston 9, Massachusetts

Standards issued by the American Library Association, and subsequently by the Library Binding Institute, have become the basis for the vast amount of library rebinding of worn volumes, of periodicals, and the prebinding of new volumes in bindings which will withstand the rigors of normal library usage.

MAHOGANY ASSOCIATION, INC., George N. Lamb, Executive Secretary, 666 Lake Shore Drive, Chicago 11, Illinois

This Association is composed of American firms that import genuine mahogany logs into the United States and manufacture them into lumber and veneer. It cooperates with the National Hardwood Lumber Association in establishing grading rules for hardwood lumber. The rules published by the latter association also include rules covering the grading of mahogany lumber.

This association took an active part with other lumber associations in the preparation of a standard for two classes of solid hardwood wall paneling, which resulted in the formulation and promulgation of Commercial Standard CS74-39 by the National Bureau of Standards.

This association inaugurated a labeling program 20 years ago whereby it licenses manufacturers to use labels issued by them and to affix said labels to furniture made of genuine mahogany. Contracts, with the association, signed by manufacturers, contain penalty clauses in the form of liquidated damages for willful misuse of the

labels. Labels are issued in two colors. The red label so placed on a piece of furniture indicates that it is made of solid mahogany lumber, whereas the blue label means that the furniture is made of solid mahogany lumber for frame parts, and of mahogany plywood for larger surfaces. The purpose of labels is to guarantee to the customer that furniture so labeled is made of genuine mahogany, and not of cheaper substitute woods stained to resemble mahogany and frequently described as "combination mahogany" or "mahogany finish." It is also a guaranty that furniture so labeled is not made of Philippine hardwoods, or other tropical substitutes which are not related to genuine mahogany but are sometimes sold as "Philippine mahogany."

MALLEABLE CHAIN MANUFACTURERS' INSTITUTE, P. C. De Bruyne, Chairman, 11 South La Salle Street, Chicago 3, Illinois

A group of six firms comprises the membership of this organization which has been developing standards for malleable chain and attachments since 1917, when the task was first undertaken at the suggestion and recommendation of the War Industries Board. All standardization and development work is done with the participation of all the Institute's members rather than by specific committees, and is centered about the development of proposed standards for submission to the American Standards Association for adoption. The standards have been published by the American Standards Association and in the catalogs of the Institute's members.

MALLEABLE FOUNDERS' SOCIETY, L. D. Ryan, Executive Vice President, Union Commerce Building, Cleveland 14, Ohio

The work of this society deals largely in technical research and advisory services, in assisting its members to maintain standard grades of products, and in the development of new applications and uses for malleable castings. In carrying on this work, it has sponsored the adoption of the present standard specifications of the American Society for Testing Materials for malleable castings, as well as those of other technical organizations.

The society is represented on the ASTM Committee on Malleable Iron Castings. It cooperated with the National Bureau of Standards in the establishment of Simplified Practice Recommendation R79 for malleable foundry refractories, and it assisted in the development of Federal and Military Specifications in its field.

MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, Robert V. Warrick, Executive Secretary, 420 Lexington Avenue, New York 17, N.Y.

This society, with its predecessor, the Committee of Manufacturers on Standardization of Pipe Fittings and Valves, has been in continuous existence for nearly 50 years.

The method of carrying on standardization work by the society is by means of committees selected from the engineering departments of representative manufacturers that are directly engaged in the manufacture of valves and fittings.

At present the society has about 25 committees working on subjects

covering codes, screw and flanged fittings and valves (ferrous and non-ferrous), marine valves and fittings, marking and terminology, material, screw threads, cast and malleable iron fittings, unions and union fittings, water works, welding fittings, butterfly valves, pipe hangers, plastic valves and fittings, quality standards, etc.

The society has now in force approximately 20 standard practices which it has developed and adopted. These are for roughing in dimensions for light radiator valves, union elbows, and returnline vacuum valves; finishes for contact faces of connecting-end flanges of ferrous valves and fittings; spot-facing standard; standard marking system for valves, fittings, flanges, and unions; 125-lb and 100-lb bronze gate valves; specification for leaded red brass and leaded semi-red brass castings for valves and pipe fittings; specification for stainless steel castings for valves, flanges, and pipe fittings; 150-lb corrosion-resistant cast flanges, flanged valves, and flanged fittings; stainless-steel butt-welding fittings; steel pipeline flanges; bypass and drain connection standard; assembly of steel raised face flanges to cast iron, brass, bronze, or stainless-steel flanges; limiting dimensions of raised face flanged gaskets which meet requirements of ASA-B16.5 for Class A Ratings; steel butt-welding fittings (26 in. and larger); 2,000-, 3,000- and 6,000-lb. forged steel screwed fittings; forged steel plugs and bushings; cast iron pipeline valves; and quality standard for steel castings for valves, flanges, and fittings.

In addition, the Society serves as joint sponsor with the American Society of Mechanical Engineers and the Mechanical Contractors Association of America for the Sectional Committee on Pipe Flanges and Fittings, which resulted in the approval of 24 standards by the American Standards Association. It is also officially represented on 15 additional ASA Sectional Committees working on the following projects: scheme for the identification of piping systems; specifications for cast iron pipe and fittings; dimensional standardization of plumbing equipment; standardization and unification of screw threads; pipe thread, safety code for mechanical refrigeration; bolt, nut, and rivet proportions; code for pressure piping; hose coupling screw threads; standardization of dimensions and materials of wrought iron and wrought steel pipe and tubing; classification and designation of surface qualities; standardization of pallets; standardization for drainage and drafting room practice; graphical symbols and abbreviations for use on drawings. It is also represented on Committees of the American Society for Testing Materials dealing with development of specifications for: steel tubing and pipe; valves, fittings, piping, and flanges for high temperatures and subatmospheric temperatures; gray iron castings, malleable iron castings; iron chromium, iron chromium nickel, and related alloys; copper base castings and ingots for remelting; plastic pipe and fittings; and nondestructive testing.

The Society maintains official representation on committees of the ASME, American Welding Society, National Board of Boiler and Pressure Vessel Inspectors, National Fire Protection Association, and American Petroleum Institute.

Through its various Committees the Society cooperates with a number of Federal agencies in formulating and revising numerous Government specifications on valves and fittings for both military and civilian use.

MANUFACTURING CHEMISTS' ASSOCIATION, INC., M. F. Crass, Jr., Secretary-Treasurer, 1625 Eye Street NW., Washington 6, D.C.

This Association, founded in 1872, is one of the oldest and most diversified chemical trade organizations in the United States. The Plastic Materials Manufacturers' Association, Inc., was consolidated with MCA in 1950. The Association bylaws provide that eligible members shall be manufacturers of chemicals who sell to others a substantial portion of the chemicals which they produce.

Early activities included the establishment of standard strengths of acids with tables of physical properties; standard specifications for laboratory apparatus, graduates, and thermometers; publication of a table of the elements with chemical and physical data; and short historical sketches of the discovery of the different elements. Assistance to the Congress of the United States in tariff legislation affecting the chemical industry; development of transportation regulations in cooperation with the Bureau of Explosives and the Interstate Commerce Commission; and other technical work related to chemicals were not only part of MCA's early activities but are continuing on a current basis.

The Association has a permanent staff of 48 persons. The wide range of specific activities handled through the Association are administered by staff secretaries to committees which are made up of industry specialists and experts who serve without compensation.

Safety. One of the most widely known activities of the MCA is its program of chemical plant safety, administered by the General Safety Committee. For its work in this field, the Association has received awards of the American Society of Association Executives, and of the National Safety Council, four times in succession. Safety activities include the annual presentation to the two member companies showing the greatest improvement in plant safety over a 5-year period, and annual awards to individual plants of member firms having worked a calendar year without an industrial injury.

The Committee also sponsors an annual "Chemical Industry Safety Workshop" for plant supervisors. A major contribution is the publication of manuals known as Chemical Safety Data Sheets, which set forth standards for hazardous chemicals as related to handling, storage, shipping containers—unloading and emptying, waste disposal and health hazards and their control. Data Sheets have been published on 69 hazardous chemicals to date, and the program is continuing. The Committee also published in 1954 a book entitled "Guide for Safety in the Chemical Laboratory."

Traffic, Transportation, and Packaging. For over 50 years, through its Traffic, Tank Car, and Chemical Packaging Committees, the Association has carried on research and development work which has contributed substantially to the present safe methods of shipping hazardous chemicals throughout the world. The work also includes the development of standard and specialized containers for the safe transporting of the multiplicity of chemical products made by the industry. MCA sponsors technical symposia on the transportation and packaging of chemicals from time to time, both independently and in cooperation with other national organizations. Publications in this field include Manuals of Standard and Recommended Practice for the handling of chemicals in tank cars, drums, and other containers.

Air and Water Pollution Abatement. The Association has long taken a prominent part in both legislative and technical phases of pollution abatement. It has issued over 20 publications in this field.

Plastics. Committees undertake such matters as fundamental research, building and construction codes, and palletizing and bulk handling of finished product. Significant publications in this field are issued.

Precautionary Labeling. The Labels and Precautionary Information Committee was organized in 1946 to guide chemical shippers on adequate labeling and to give assistance to governmental agencies, when requested, in drafting regulations and laws governing the uniform labeling of potentially hazardous materials. Manual L-1—"A Guide to the Preparation of Warning Labels" is widely used by industry and regulatory agencies, and has served as a basis for drafting regulations.

Industrial Relations. The Association collaborated with the Chamber of Commerce of the United States and other groups in publishing "Principles and Practices of College Recruiting."

Research. The MCA sponsors and finances research of a fundamental nature in three institutions: (1) Carnegie Institute of Technology—this work is designed to supplement the International Critical Tables by producing and maintaining up to date a set of tables of data on physical and thermodynamic properties of selected chemical compounds of interest and importance to science and technology; (2) Massachusetts Institute of Technology—this research is directed to fundamental engineering properties of plastics, and is sponsored by the MCA Plastics Group; (3) the Academy of Natural Sciences of Philadelphia—work has been completed on factors affecting diatom nutrition, and the sensitivity of fish to toxic materials; still in progress is a project to determine the way a river recovers from past pollution.

Metals. In 1958, the MCA expanded its program to include the field of reactive or special metals, such as columbium, hafnium, lithium, tantalum, titanium, zirconium, and others in the nuclear, propulsion, and processing phases of the chemical industry. Activities cover legislative, technical, and other matters of interest.

Other Committee Activities. These include Atomic Energy, Chemicals in Foods, Insurance, Hydrogen Peroxide, Industrial Alcohol, Medical Advisory, Mechanical Technical (standardization of process equipment), Patents, Research Advisory, Tax Policy, International Trade and Tariff, Education, and Public Relations and Information.

Technical Publications. The MCA publishes more than 150 different pieces of technical literature pertinent to chemicals. Approximately 1,000 copies of each new publication are issued free to State and Federal officials, health departments, technical and medical school libraries, and others.

**MAPLE FLOORING MANUFACTURERS ASSOCIATION,
L. M. Clady, Secretary-Manager, 35 East Wacker Drive, Chicago
1, Illinois**

One of the prime objects of this Association is to establish and enforce uniform grades and standards of products; to constantly improve methods of manufacture; and to make the Association trade-

mark a symbol of excellence in methods and materials. Through its Grades Committee, this Association has established grading rules for northern hard maple, beech, and birch flooring. For the protection of the specifier and consumer, the Association requires its members and encourages other hardwood flooring manufacturers to properly and clearly grade mark and species market their entire flooring product. The letters MFMA on maple, beech, or birch flooring signify that the flooring is standardized and guaranteed by the Association to be in accordance with the current established grading rules.

This Association has also adopted specifications for heavy duty and for gymnasium-type floor finishing products for Maple, Beech and Birch floors. For this project, the Association employs the services of a commercial testing laboratory. The specifications are revised every three years for the purpose of improving performance characteristics of the heavy duty and gymnasium floor finishes. Products which have met these specifications and have been certified to the Association, will receive its written approval. A list of MFMA endorsed and approved finishes is published at intervals during the 3-year period. The Association reserves the right of withdrawal of its approval on substantial evidence of depreciating the quality of the product.

MARBLE INSTITUTE OF AMERICA, Romer Shawhan, Managing Director, 32 South Fifth Avenue, Mount Vernon, N.Y.

The Institute is an organization composed of quarriers, importers, wholesalers, finishers and contractors of marble, formed to establish standards for marble and the quality of workmanship related to its use.

This Institute has accumulated a vast amount of information from the domestic and foreign marble producing and finishing centers of the world, and is in a position to give to architects, engineers, builders, and others interested in marble, authentic information regarding the available marbles of the world.

Through the American Standards Association, the Institute has helped to produce the following ASA Standards: Standard Specifications for Interior Building Marble (A.94.1-1948), and Standard Specifications for Exterior Building Marble Two Inches and Less in Thickness and Marble Used in Curtain or Panel Walls (A.94.2-1955).

MASTER PHOTO DEALERS AND FINISHERS ASSOCIATION, R. J. Wilkinson, Executive Manager, 104 East Michigan Avenue, Jackson, Michigan

This Association's work on photographic standards is in participation on the appropriate committees of the American Standards Association, and concerns itself with standards on photographic equipment, lenses, miscellaneous accessories, and chemicals used in photography. National Photographic Dealers Association was merged with this Association in 1946.

MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA, INC., Lloyd B. Gruman, Jr., Secretary, 45 Rockefeller Plaza, Suite 570, New York 20, N.Y.

Two committees of this Association are actively engaged in standardization activities. The Committee on Standards has for its objectives the standardization of materials and design for installation of heating, piping, and air-conditioning work; also, the cooperation with other bodies interested in standardization and the representation of the industry on standardization projects developed under the procedure of other organizations.

The Committee on Welding is engaged at the present time in the standardization of welding procedures for pipe welding, both by the use of electric arc and oxyacetylene.

Through its Committee on Standards, this Association has developed standard rules for determining the amount of radiation required to properly heat a given space. It has also compiled data with reference to the proper types and sizes of boilers recommended for specific installations.

In the book on engineering standards developed by the committee, there are included rules for determining the amount of radiation required to heat a given space properly; the net load recommendations for low-pressure heating boilers; ratings for baseboard convectors and finned-tube radiation; testing and rating codes for residential and commercial boiler-burner units; pipe sizes for steam heating and hot water systems; radiant panel heating; standard welding procedures; dimensions of valves, fittings, and materials; and standards for air-conditioning installations.

The Committee on Welding has issued a Standard Manual on Pipe Welding which gives information covering development and process of oxyacetylene pipe welding; apparatus, equipment, materials, and supplies; mechanics of welding and cutting; and material and data on welded constructions. It has also prepared specifications covering metal arc welding of steel pipe, fittings, and flanges; and specifications for metal-arc welding of carbon molybdenum pipe, fittings, and flanges; and metal-arc welding and specifications for oxyacetylene welding of pipe, fittings, and flanges.

A division of the National Association, the National Certified Pipe Welding Bureau develops and tests standard procedure specifications for pipe welding which are the basis of a program for testing pipefitter welders under these standard procedures.

The Association cooperated with the National Bureau of Standards in the establishment of Commercial Standards CS5-40 for genuine wrought iron pipe nipples and CS7-29 for standard weight malleable iron or steel screwed unions; also in the development of Simplified Practice Recommendation R90-36 relating to sizes of hacksaw blades.

This Association is joint sponsor with the American Society of Mechanical Engineers and the Manufacturers Standardization Society of the Valve and Fittings Industry for the Sectional Committee on Pipe Flanges and Fittings functioning under the procedure of the American Standards Association. It is also represented on five additional ASA sectional committees which deal with the following subjects: code for pipe threading; code for pressure piping; standardization of dimensions and materials of wrought iron and wrought steel pipe and tubing; standards for drawings and drafting room practice;

approval and installation requirements for gas-burning appliances; and graphical symbols and abbreviations for use on drawings, and scheme for identification of piping systems.

MELLON INSTITUTE, W. A. Hamor, Senior Director of Research, 4400 Fifth Avenue, Pittsburgh 13, Pennsylvania

This institution is an endowed, nonprofit, corporate body for conducting comprehensive investigations on important problems in the fundamental and applied natural sciences, for training research workers, and for providing technical information adaptable to professional, public, and industrial advantage.

Various research undertakings of the Institute have been active in the field of standardization. Much of this work has involved the development of analytical methods, physical testing procedures, and facts for use in the preparation of specifications.

The Refractories Institute, a national organization comprised principally of manufacturers of refractory materials, sustains a comprehensive project in the Institute for the purpose of conducting studies relating to the production, use and development of these important commodities. The activities of the group in Mellon Institute are divided between research work and evaluation studies. Contributions are made from time to time pertaining to new test methods and specifications and to investigational results on the properties and behavior of refractories in service.

Another phase of the technical work in the Refractories Institute is that of the Technical Advisory Committee. The Committeemen are experts from the industry who assist in directing the project in Mellon Institute and who provide aid to other organizations, such as the American Ceramic Society and the American Society for Testing Materials. Cooperation is extended to the National Bureau of Standards, the Naval Boiler Testing Laboratory at Philadelphia, municipal organizations, as well as the large variety of industries which use refractory materials.

Mellon Institute maintains representation on several committees of the American Society for Testing Materials that are engaged in setting up specifications for the determination of thermal and physical properties of all types of heat-insulating materials. Standard methods of test have been evolved for many of these properties, such as compressive strength, flexural strength, lineal shrinkage, density, covering capacity, adhesion of cements, thickness and density of blankets or batts, specific heat, thermal conductivity, and water vapor transmission of materials in sheet form. Specifications have also been developed for many types of insulating materials in the form of cements, batts and blankets, felt, block and board, and pipe coverings.

Representation is also maintained by Mellon Institute on technical society committees concerned with water, petroleum and its products, and glass. The Institute collaborates with all agencies that wish its cooperation in the field of standards. In the past many additions have been made to the knowledge of consumer standards, including textiles and household commodities. The Institute has carried out studies that have resulted in a monograph entitled, "Government Purchasing and Competition" (University of California Press, Berkeley, Calif., 1954) articles on "The Role of Company Standards

in Industrial Administration" and "National Standards in Industrial Administration," and a book on "National Standards in a Modern Economy" (Harper and Bros., New York, N.Y., 1956). Research specialists of Mellon Institute have also made a study on industrial standardization in cooperation with the National Industrial Conference Board.

The Industrial Hygiene Foundation of America, which has its headquarters in Mellon Institute, operates collaboratively with various national societies and governmental agencies, through its scientists and committees composed of specialists. The Air Pollution Control Association has its secretariat and editorial offices in the institute. APCA issues the Journal of the Air Pollution Control Association, APCA News and APCA Abstracts. The publications of both IHF and APCA have enriched the knowledge of testing and research procedures in the domain of urban smoke control. The IHF, through "Industrial Hygiene Digest," transactions, and special bulletins and papers, has added much to the literature of occupational health.

METAL BUILDING MANUFACTURERS ASSOCIATION,
Thomas Associates, Inc., General Manager, 2130 Keith Building,
Cleveland 15, Ohio

The standardization work of this association is carried on by the Technical Committee. The work of this committee consists of preparation of recommendations concerning such projects as, methods used in application of design loads, recommended minimum thicknesses of steel to be used in manufacturing metal buildings in order to assure proper service, and other general recommendations for use by model code bodies in preparing or revising these codes in order to have properly constructed metal buildings. The Technical Committee of the association works in conjunction with AISI, model code bodies, and other code committees in order to assure users of metal buildings that proper installations are made.

METAL CUTTING BAND SAW MANUFACTURERS ASSOCIATION,
1015 Chestnut Street, Philadelphia 7, Pennsylvania

This association cooperated with the Commodity Standards Division in the establishment of Simplified Practice Recommendation R214-55 relating to standard sizes of metal cutting band saws. This association is at the present time accumulating data bearing upon the demand for various sizes by way of testing the sufficiency of the blades set forth in the recommendation, and also in obtaining data for further simplification of unnecessary blades.

METAL CUTTING TOOL INSTITUTE, Perry L. Houser, President,
405 Lexington Avenue, New York 17, N.Y.

One of the purposes of the Institute is to promote the standardization of sizes, dimensions and tolerances of multiple point types of metal cutting tools such as twist drills, reamers, taps, milling cutters, gear generating tools, and to simplify the same in cooperation with the American Standards Association, American Society of Mechanical Engineers and other national and international engineering bodies, with a view to elimination of waste and reduction of costs.

The results of such activity are reflected in the widely promulgated American Standards on specific subjects such as twist drills, reamers, taps, milling cutters, which in turn form the basis of many Federal Specifications, individual company standards, as well as reflecting current United States industry practice when ISO standards are formulated.

The Institute actively participates in many technical and advisory committees of the American Standards Association and other organizations.

The Institute publishes informative material dealing with tools and their application and maintenance, such as Metal Cutting Tool Handbook, pamphlets on Standards and Dimensions for Taps, Drilled Holes for Tapping, How to Use and Care for Milling Cutters, and Metal Cutting Tool Nomenclature.

METAL LATH MANUFACTURERS ASSOCIATION, Donald R. Wadle, Managing Director, Engineers Building, Cleveland 14, Ohio

Membership in the Association is composed of manufacturers of metal lath, expanded stucco mesh, and metal plastering accessories. The U.S. Department of Commerce, aided by recommendations of the Association, promulgated Simplified Practice Recommendation R3-57, Metal Lath (Expanded and Sheet) and Metal Plastering Accessories, effective May 15, 1957.

The Association supports the American Standards Association and has a membership in Section Committee A42 which has issued ASA Specification A42.1-1955, American Standard Specifications for Gypsum Plastering, and A42.4-1955, American Standard Specifications for Interior Lathing and Furring.

The Association has issued its own recommended standard specifications for installation of metal lath and expanded stucco mesh for use as a base gypsum plaster, and portland cement stucco, respectively. One publication devoted to specifications only is entitled "Specifications for Metal Lathing and Furring." Another publication includes descriptive information on various types of assemblies of metal lath and plaster and also contains many details of construction. This latter publication is known as "Metal Lath Technical Bulletin Binder." "The Metal Lath News," a quarterly publication, contains standard technical bulletins for the binder.

METAL POWDER INDUSTRIES FEDERATION, Kempton H. Roll, Executive Secretary, 130 West 42d Street, New York 36, N.Y.

Standardization is one of the major activities of the Federation and the various trade associations operating within its structure which is made up of the American Powder Metallurgy Institute, Metal Powder Producers Association, Ferrite Manufacturers Association, Metal Powder Core Association and Powder Metallurgy Equipment Association.

About 25 standards have been issued in the field of Powder Metallurgy. Basically they all deal with industry practices; i.e., methods of testing, preferred dimensions and tolerances, terminology, etc. Copies may be obtained from the office of the Federation.

METAL ROOF DECK TECHNICAL INSTITUTE, John T. W. Babcock, Managing Director, 53 West Jackson Boulevard, Chicago 4, Illinois

The Institute was formed in 1939 as a nonprofit association of manufacturers of steel roof deck for the following purposes: To formulate technical recommendations for the improvement of metal roof deck construction and the development and recommendations of Standard Design Procedures; to provide test data for public distribution on all subjects pertaining to metal roof deck; to promote proper building regulations; and to disseminate information relative to the proper use of metal roof deck.

The Institute's Technical Committee, appointed from the staff of its membership, studies and resolves a large variety of technical problems, analyzing and evaluating existing and new methods to assure safe construction.

The Institute has carried on a variety of research work suggested by current conditions, such as fire tests (conducted at Underwriter's Laboratories, Inc., and Factory Mutual Laboratories); vapor barrier research (Pennsylvania State College); wind uplift resistance; and insurance rate treatment and classification.

"A Code of Recommended Standard Practices" was adopted in 1948 and is published as part of the Sweet's Catalog Insert.

MILK BOTTLE CRATE MANUFACTURERS COUNCIL, Thomas Associates, Inc., Commissioners, 2130 Keith Building, Cleveland 15, Ohio

The standardization and simplification activities of this association are carried on by the Simplification and Standardization Committee. Its work has been confined to simplification matters dealing with development of minimum pocket sizes and minimum dimensions of the crate in order to insure proper interstacking of milk bottle crates. This information is contained in Simplified Practice Recommendation R236-54, promulgated and published by the Commodity Standards Division of the U.S. Department of Commerce.

MILK CAN INSTITUTE, Thomas Associates, Inc., Commissioners, 2130 Keith Building, Cleveland 15, Ohio

The standardization activities of this association are carried on by the Standardization and Simplification Committee. Its work has resulted in the establishment of Simplified Practice Recommendation R208-55 which was promulgated and published by the Commodity Standards Division of the U.S. Department of Commerce. Members of this Institute have also cooperated with the International Association of Milk and Food Sanitarians, Inc. in sanitation standards for manually operated bulk milk and milk products dispensers.

MILK INDUSTRY FOUNDATION, Perry R. Ellsworth, Assistant to the Executive Director, 1145 19th Street NW., Washington 6, D.C.

The Foundation, cooperating with the U.S. Public Health Service and members of the Dairy Industry Committee, has for a number of years engaged in standards work on containers for dairy products, pumps, pipelines and connections, and fluid milk processing equip-

ment. This is a continuing project with new standards being prepared each year and revisions made to existing standards as circumstances require. The standards, when published, are available in single copies from the Milk Industry Foundation, 1145 19th St. NW., Washington 6, D.C. Standards are available in quantity from the International Association of Milk and Food Sanitarians, Box 437, Shelbyville, Ind.

MIRROR MANUFACTURERS ASSOCIATION, Minita Westcott, Executive Secretary, 2217 Tribune Tower, Chicago 11, Illinois

At the request of this Association, a general conference of manufacturers, distributors, and users was held in 1930 for the purpose of establishing standards of quality for plate-glass mirrors. As a result of this conference, conducted at the National Bureau of Standards, there was adopted a specification covering five grades of plate glass mirrors and promulgated as Commercial Standard CS27-30. At the suggestion of the Association, the Standing Committee for the industry recommended revision of this standard to include "shock" or common window glass mirrors, and to eliminate two grades. The revised standard was approved and a second edition was published as Commercial Standard CS27-36.

For the guidance of the buying public and the protection of the mirror manufacturer, the Association recommended to mirror manufacturers that each commercial standard grade mirror may be labeled in the color designated below, with the following statement for each particular grade: red for "A" quality; blue for No. 1 quality; and green for No. 2 quality—we guarantee this mirror to be manufactured of polished plate glass and to be of—quality as specified in Commercial Standard CS27-36, issued by the National Bureau of Standards, Department of Commerce.

The Association has been conducting studies with the Federal Trade Commission and the National Bureau of Standards on specifications for copper-plated mirrors and plate glass qualities.

MONORAIL MANUFACTURERS ASSOCIATION, John C. Messer, Secretary-Treasurer, 71 West 35th Street, New York 1, N.Y.

The standard specifications for Overhead Track Systems which were approved in 1938 were completely revised in 1955. These specifications cover track, suspension fittings, manually operated trolleys or carriers, switches, cranes and transfer bridges, specifications for wire-rope electric hoists, electric hoists and travel carriers, and wiring.

MULTIPLE V-BELT DRIVE AND MECHANICAL POWER TRANSMISSION ASSOCIATION, H. P. Dolan, Executive Secretary, 27 East Monroe Street, Chicago 3, Illinois

The product of manufacturers in this association consists of mechanical power transmission machinery and parts thereof. The product includes drives for the mechanical transmission of power, the drives comprising sheaves with multiple grooves, and V-belts operating in these grooves. Membership in the association includes companies which manufacture sheaves and which sell complete drives and parts thereof. The membership also includes companies which

manufacture other power transmission machinery, including flat belt pulleys, couplings, collars, hangers, pillow blocks, journal bearings, shafting, babbited pillow blocks and steel conveyor pulleys. The Power Transmission Engineering Standards Committee is developing standards for babbited bearings. The Steel Pulley Engineering Committee is developing standards for steel pulleys in cooperation with ASME and the standards committees of the Conveyor Equipment Manufacturers' Association. The Multiple V-Belt Engineering Committee completed "Engineering Standards for Multiple V-Belt Drives." This 24-page manual includes data on standard groove dimensions and tolerances for V-belt sheaves, standard pitch lengths, suggested service factors, horse power rating of multiple V-belts (10 pages of tables). The Multiple V-Belt Drive Engineering Committee is conducting work on the following subjects: standards of allowable unbalance-ounce-inches-static, limits of dynamic unbalance, standard calculation of split sheaves, standard bore tolerances, tentative variable speed sheave and belt standards. The Committee cooperates with the V-Belt Technical Committee of the Rubber Manufacturers' Association for the purpose of improving its belting standards. The Committee is cooperating with ASME and Sectional Committee B-55 ASA toward completion of the American standard for multiple V-belt drives. The Committee works with ISO Technical Committee 41 (Pulley and Belts) in the development of an international standard.

NATIONAL ACADEMY OF SCIENCES—NATIONAL RESEARCH COUNCIL, Detlev W. Bronk, President, 2101 Constitution Avenue, Washington 25, D.C.

The National Academy of Sciences is a private, nonprofit corporation dedicated to the furtherance of science for the general welfare and required by its Congressional charter of 1863 to act as an official adviser on scientific matters to the Federal government. It elects its own members, now numbering about 550. The National Research Council was established by the Academy in 1916 as a co-operative organization to associate American scientists and engineers with the Academy's activities. The members of the Research Council, numbering about 230, are drawn from academic, industrial and government organizations throughout the country. Most members are nominated by the major scientific and technical societies, but those from government scientific bureaus are designated by the heads of their agencies. There are also a limited number of members-at-large. All members of the Research Council receive their appointments from the president of the National Academy of Sciences.

The overall organization of the National Academy of Sciences—National Research Council has come to be known generally as the Academy-Research Council. Its primary aim is to bring the most competent scientists and engineers of the country together in appropriate groups to deal with scientific problems and to exchange information in furtherance of research. The undertakings of the Academy-Research Council vary widely in nature and in the duration and type of effort required; the patterns of organization are kept flexible to permit each problem to be approached in a suitable manner.

The Academy-Research Council does not maintain laboratories of its own, but seeks to stimulate and support the work of individual

scientists and to coordinate investigations dealing with broad problems in research both nationally and internationally. This is carried out through a wide variety of means, including conferences, technical committees, surveys, collection and collation of scientific and technical data, the sponsorship of scientific publications and research organizations, and the administration of public and private funds for research projects and fellowships. The Academy-Research Council provides unique means for organizing attacks on scientific problems which involve many specialized fields and for obtaining disinterested and objective assessments of problems for groups representing dissimilar or conflicting interests. The effectiveness of the Academy-Research Council is dependent on the personal participation of thousands of American scientists who collaborate in these undertakings, giving generously of their time and effort without financial compensation.

Since the activities of the Academy-Research Council are directed largely toward the stimulating and facilitating of scientific research, rather than serving as arbiter or director, its program in the field of standardization is necessarily quite limited. However, the Academy-Research Council has been called upon from time to time to undertake such assignments at the request of government and other agencies. These activities normally fall within one of the eight divisions of the Academy-Research Council—Anthropology and Psychology, Biology and Agriculture, Chemistry and Chemical Technology, Earth Sciences, Engineering and Industrial Research, Mathematics, Medical Sciences and Physical Sciences. These divisions carry on their work through permanent boards and institutes, committees, subcommittees and panels as well as ad hoc groups for special projects. Interdisciplinary problems often give rise to interdivisional committees. Such standardization activities as are undertaken by the Academy-Research Council are listed below, according to the division which supervises their operation.

Anthropology and Psychology. None at this writing.

Biology and Agriculture. The Division's Institute of Laboratory Animal Resources is concerned with the establishment of scientific standards of production and usage of laboratory animals, in addition to many other activities. The Institute's Committee on Standards has developed several standards for the production of laboratory mice and laboratory rats, including principles of animal production in the areas of genetics and recordkeeping, facilities and sanitation, disease diagnosis and prevention, and nutrition. Standards for laboratory mice were published in the *Journal of the National Cancer Institute*, 19 6, Dec. 1957. The standards for laboratory rats are being prepared for publication. Similar standards for other laboratory animals will be developed as the need arises.

Standards for the transportation of laboratory dogs have been established by the Institute and will be published in the near future. These standards include minimum cage area allowable, amounts of food and water necessary for journeys of various lengths, and appropriate handling operations necessary to insure the arrival of healthy animals at the research laboratory.

Chemistry and Chemical Technology. Through its Prevention of Deterioration Center, Toxicological Information Center, and Office of Critical Tables, the Division documents literature and testing

methods in the field of deterioration of materials due to natural environments, advises on tolerances for industrial substances that might constitute a hazard for personnel; and recommends standards of quality and form of presentation for the compilation of critical numerical data on chemical compounds.

Earth Sciences. The Division is promoting, through a Conference on Arctic Sea Ice, the study and wider utilization of standard terminology and techniques in observing, reporting, and forecasting sea-ice conditions. The Division is also studying the handling and dissemination of data in appropriate fields of science through Committees on Oceanography, Climatology, Geography, National Atlas, and in disciplines related to glacial history and phenomena.

Engineering and Industrial Research. There are many units in the Division whose activities are closely related to establishing standards or codes; but it is the intent of the Division that actual formulation of standards be avoided. Rather, units are expected to help supply scientific and technical data on properties and performance to assist responsible standards writing groups.

Highway Research Board. In its several tests, "Maryland," "WASHO" and "AASHO," this Board has developed a wealth of basic data that are needed by those who formulate standards for materials, foundations, construction maintenance and traffic operation of the highways of the country. Similar data leading to standardization are developed continuously in the activities of a majority of the standing committees of all the Departments of HRB.

Committees on Ship Steel and Ship Structural Design. These committees advise the Government's Ship Structure Committee. Their findings directly influence the establishment and revision of specifications for ship steels which are promulgated by the American Bureau of Shipping.

Advisory Board on Quartermaster Research and Development. The work of this Board and its several committees guides many of the decisions of the Quartermaster General relating to specifications for the numerous items of military clothing, food and shelter for which the QM General is responsible.

Building Research Advisory Board. BRAB advisory services are used by the Federal Housing Administrator in the establishment of the "Minimum Property Requirements" of FHA which are the standards of building construction which determine the insurability of housing construction by the Federal Government. BRAB operates the Federal Construction Council, a voluntary correlating group of some eight or ten Federal agencies with major building construction responsibilities. The deliberations of this Council lead also to certain standards or accepted practices in materials, methods, and designs employed in a great volume of Federal Building activities.

Mathematics. None at this writing.

Medical Sciences. The Division is not regularly engaged in standardization activities, but does undertake projects of this nature from time to time at the request of Federal and quasi-governmental agencies. These commonly concern the evaluation of drugs and other medical items proposed for inclusion in military or civil defense supply tables, and of devices and processes significant to sanitation. Examples are the evaluation of plasma volume expanders

and of plastic transfusion equipment; the development and testing of a proposed cyanmethemoglobin standard for hemoglobinometry; sponsorship of the handbook "Coagulation of Blood; Methods of Study," by Tocantins; review of standard first aid procedures for the American National Red Cross; evaluation of the addiction liability of new narcotics; recommendation of a scale for rating hearing disability on the basis of audiometric measurements; and the establishment of criteria or standards relating to machine dishwashing, water, and sewage treatment, air-conditioning, air contamination, plastic piping for potable water systems; and other environmental factors.

Physical Sciences. Several committees of the Division concern themselves with standardization activities as part of their overall program. Among these are the following: The Committee on Symbols, Units, and Nomenclature Coordinates, in the area of physical sciences, the recommendations and views of major United States scientific and technical activities concerned with standardization of symbols, units and nomenclature in cooperation with these activities and international scientific unions and commissions; the Nuclear Data Project compiles, analyzes and publishes United States and foreign experimental data on nuclear-energy levels; the Committee on Line Spectra of the Elements surveys the field and directs attention to significant problems for investigation, encourages group attack on related aspects of major problems, and compiles data on atomic spectra; the Committee on Spectral Absorption Data is a Joint Committee with the Division of Chemistry and Chemical Technology. In cooperation with the National Bureau of Standards, it supervises the compilation and recording of spectral absorption data on cards for the use of government, industrial, and private investigators; the Nuclear Science Committee has a number of subcommittees which form research conferences and review articles, monographs and special reports, and make available data and recommended standards, constants, and procedures for benefit of other scientific groups, government, and industry. These subcommittees are also concerned with measurements and standards of radioactivity, neutron measurements and standards, nuclear constants, and shipment of radioactive substances. In addition, the Nuclear Science Committee has stimulated Division staff activity in the preparation of a Glossary of Nuclear Terms, carried out in close cooperation with the American Society of Mechanical Engineers and the American Standards Association; a Directory of Tables of Nuclear Data, a comprehensive annotated bibliography of original and review articles appearing in United States and foreign journals and other publications believed to be of particular interest and usefulness to research workers in nuclear science and technology.

The Academy-Research Council has published or has been responsible for the publication of many individual reports or series of reports dealing with some aspect of standardization. Among these are "International Critical Tables of Numerical Data, Physics, Chemistry, and Technology" (7 volumes and index); "Data on Chemicals for Ceramic Use"; "Tables of Chemical Kinetics, Homogeneous Reactions" (with supplement); "Method of Coding Chemicals for Correlation and Classification"; "A Glossary of Terms in Nuclear Science and Technology"; "Principles and Procedures for

Evaluating the Safety of Intentional Chemical Additives in Foods"; "Status Report on Standardization of Radionuclides in the United States"; and "Measurements and Standards of Radioactivity."

NATIONAL-AMERICAN WHOLESALE LUMBER ASSOCIATION, INC., Sid L. Darling, Executive Vice-President, 3 East 44th Street, New York 17, N.Y.

One of the objects of this Association is to aid and more efficiently distribute all lumber and forest products through standardization of grades and sizes, and through the elimination of unfair practices and trade abuses, in cooperation with proper governmental agencies and officials. This association's activities in standardization are carried on in cooperation with the American Lumber Standards Committee on which it maintains official representation in the development of American lumber standards. The Association endorses the principle of grade-marking all lumber and will appoint special committees when occasion requires, to consult and cooperate with grade-marking committees of lumber manufacturers' associations for the grade-marking of lumber of various species.

NATIONAL ASSOCIATION OF AUTOMOTIVE MUTUAL INSURANCE COMPANIES, Newell R. Johnson, General Manager, 20 North Wacker Drive, Chicago 6, Illinois

All standardization work of this organization is carried on with the American Standards Association of which it is a member body and officially represented on the Standards Council, the Traffic Standards Board and the Conference of Member Bodies.

This Association is officially represented on ASA technical sectional committees engaged in the development of the following safety standards: inspection of motor vehicles; railroad highway grade crossing protection; safety glass.

In addition this Association is represented on and works closely with the National Committee on Uniform Traffic Laws and Ordinances.

NATIONAL ASSOCIATION OF BEDDING MANUFACTURERS, J. P. Fanning, Secretary and General Manager, 724 Ninth Street NW., Washington 1, D.C.

One of the important activities of this organization is the promotion of Federal laws and Federal Trade Commission rules and regulations relating to the production and sale of sanitary and honestly labeled bedding products with compulsory requirements for labeling bedding products in regard to kind and prior usage of filling materials.

Through an Industrial Committee, this Association has cooperated with the National Bureau of Standards in the establishment of Simplified Practice Recommendations R2-57 for bedsteads, springs, and mattresses; and R24-37 for hospital beds; and in the development of Commercial Standards CS54-35 for mattresses for hospitals; and CS55-35 for mattresses for institutions, all of which have been promulgated and published by the National Bureau of Standards. This committee is continuing its representation on the standing committees of above mentioned Simplified Practice Recommendations and Commercial Standards for future revisions.

This Association is also collaborating with the American Standards

Association with reference to certain standards relative to items or commodities entering into the manufacture of mattresses.

NATIONAL ASSOCIATION OF BLUEPRINT AND DIAZO-TYPE COATERS, Preston B. Bergin, Executive Secretary, 1757 K Street NW., Washington 6, D.C.

This association was formed in November 1954 to further the interests of the coaters of blueprint and diazotype ultraviolet light sensitive materials, and the users of these materials. Its 30 member firms are located in all parts of the United States and represent more than 90 percent of the industry's production. The activities of the association are carried out through 10 standing committees and one of these, the Technical Practice and Standardization Committee, concerns itself with an effort to simplify and standardize the industry's product lines.

The Association sponsored, through the Commodity Standards Division, U.S. Department of Commerce, Simplified Practice Recommendation R260-57, which lists the sheet and roll sizes of blueprint and diazotype papers which are the dominant production and stock items in the industry. This Committee also developed "Glossary—an explanation of the Terms, Processes and Methods employed in the coating of Blueprint and Diazotype Ultraviolet Light Sensitive Materials. . . ." It also is active in developing product specifications and sensitometric procedures for measuring the light sensitivity of these materials.

NATIONAL ASSOCIATION OF BROADCASTERS, A. Prose Walker, Manager of Engineering, 1771 N Street NW., Washington 6, D.C.

The NAB recording and Reproducing Committees have established standards for recording and reproducing in which more than 100 of the Nation's authorities on the various phases of recording participated. The current standards were approved in 1953 by the Association's Board of Directors.

The Standards consist of Mechanical and Magnetic Recording and Reproducing for both Disk and Tape as well as methods of establishing the Standard Reproducing System and the Measurement of the Magnetization of a tape. They include standard record and playback characteristic curves, primary and secondary standard response limits, hub and flange dimensions for magnetic tape reels, and a glossary of terms used in mechanical, magnetic and optical recording. Copies are available from the NAB at \$1 each. These are the recording standards for the Broadcast Industry and they have been closely correlated with the work of Study Group X of the International Radio Consultative Committee.

NATIONAL ASSOCIATION OF BUILDING OWNERS AND MANAGERS, Robert B. Beach, Executive Vice President, 134 South LaSalle Street, Chicago 3, Illinois

This Association is essentially a service organization and its membership represents a substantial part of the larger commercial properties of the country. In connection with its other activities, this organiza-

tion devotes time and attention to matters relating to standardization. As long ago as 1915, the Association adopted a standard method of floor measurements for the office building industry and has developed standard methods of rating space. It has also prepared standard practices in accounting and a uniform chart of accounts.

The Association makes studies of operating costs and rental conditions, lease percentage rates, and kindred matters for the purpose of developing standard types of information for the guidance of the industry. It publishes an annual Office Building Experience Exchange Report dealing with economics and conducts a Building Planning Service applicable to new construction.

It is represented on the Electrical Committee of the National Fire Protection Association, which has taken an active part in developing the National Electrical Code. It has cooperated with various sectional Committees, functioning under the procedure of the American Standards Association, acting as cosponsor of proposals for American Standards of floor measurement in buildings of different types, and being currently represented on ASA sectional committees on Safety Code for Elevators and Modular Coordination.

**NATIONAL ASSOCIATION OF CHAIN MANUFACTURERS,
R. L. Ekstrand, Executive Secretary, 111 West Washington
Street, Chicago 2, Illinois**

Simplification, standardization and specifications of chains form an important part of the activities of this organization. In previous years the Committee on Simplified Specifications of the predecessor of this organization sponsored the movement for the reduction in the number of sizes of chains appearing in the manufacturers' catalogs. This resulted in the formulation of Simplified Practice Recommendation R100-47, covering standard stock items of Welded Chains and Simplified Practice Recommendation 245-51, covering Weldless Chain and Chain Products, promulgated and published by the National Bureau of Standards.

Through its Committee on Tire Chain Specifications, the Association has prepared, and keeps constantly under revision, specifications for many types of tire chains relative to material, physical dimensions, tolerances, and other requirements for the various sizes and dimensions of pneumatic tires. The Association's Committees on Welded and Weldless Chain Specifications from time to time, as necessary and desirable, cooperate with the Federal Government in revising the Federal Specification covering standard miscellaneous chains and attachments, as well as with the American Society for Testing Materials on chain specifications.

**NATIONAL ASSOCIATION OF FINISHERS OF TEXTILE
FABRICS, Joseph E. Hoesl, Secretary, 350 Fifth Avenue, New
York 1, N.Y.**

This Association, which represents textile bleaching, dyeing and printing plants principally engaged in finishing cotton fabrics, limits its activity in this field to reviewing the various proposed standards for textiles that are proposed by the Federal Government, technical societies, trade associations or consumer groups.

Its function is to determine if the proposed standards are practical

in actual plant operation on an industry-wide basis. In this respect it has participated in the development of standards for: flammability of textiles, water repellency, shrinkage, color fastness and the new wash-and-wear finishes. It reviews proposed standard test methods and its chief concern is to determine if the test method proposed is reproducible on an interlaboratory basis and is practical in day-to-day plant operations.

NATIONAL ASSOCIATION OF FOOD EQUIPMENT MANUFACTURERS, George Meredith, Executive Secretary, 25 Colfax Manor, Roselle Park, New Jersey

The Association is concerned with equipment standards and practices in the field of commercial food preparation and service. Standardization activities include research and educational programs in food-service layout, refrigeration, dishwashing and dishhandling. Advisory and Emergency Feeding Committee works in cooperation with government and civil defense agencies concerned with mass feeding in times of emergency. It maintains close liaison, for cooperative effort in standardization, with Food Facilities Engineering Society, National Sanitation Foundation and other industry groups.

NATIONAL ASSOCIATION OF FROZEN FOOD PACKERS, Lawrence S. Martin, Secretary-Manager, 1415 K Street NW., Washington 5, D.C.

This Association maintains a Container Simplification Committee which concerns itself with development of standards for frozen food containers of fiber and metal for industrial as well as retail use. The Committee serves as a clearinghouse for problems in this area, conducts surveys to determine industry requirements and follows through as necessary to effect appropriate standards.

The Association has promulgated, through the Department of Commerce OTS, a detailed Simplified Practice Recommendation for retail packages of frozen foods. It is currently engaged in a similar project for institutional size containers. Work is under way on standardization of packages for prepared frozen foods and of case sizes.

NATIONAL ASSOCIATION OF HOSIERY MANUFACTURERS, Matthew C. Kurtz, Assistant Secretary, 468 Fourth Avenue, New York 16, N.Y., and 901 Johnston Building, Charlotte 2, N.C.

Several of the principal activities of this Association deal with matters relating to technical research and standardization, which include the development of standards for hosiery and methods for testing hosiery. Recent activities of this sort are: (1) Minimum Standards of Measurement for Stretch Socks and Anklets—purpose is to provide standard methods of measuring and minimum measurements for hosiery of this type. Widely accepted as a voluntary standard of the trade in 1956; now under preparation for issuance by the Department of Commerce as a Commercial Standard; (2) Volumetric Mechanical Leg Form—patented and made available in 1952. Permits proper evaluation of fit of women's nylon stockings; quality control device; (3) Standards of Inspection for Nylon Stockings for Women—

charts and photographs showing various types of yarn and manufacturing defects for use in inspecting and grading nylon stockings; (4) Commercial Standard CS46-49, "Hosiery Lengths and Sizes"—developed under the auspices of the National Bureau of Standards and promulgated and published by that agency.

NATIONAL ASSOCIATION OF MUTUAL CASUALTY COMPANIES, Newell R. Johnson, General Manager, 20 North Wacker Drive, Chicago 6, Illinois

All standardization work of this organization is carried on with the American Standards Association of which it is a member body and officially represented on the Board of Directors, Standards Council, Safety Standards Board, Traffic Standards Board, Nuclear Standards Board and the Conference of Member Bodies. It is Administrative Sponsor of the Safety Code for Portable Wood Ladders, Safety Code for Portable Metal Ladders, and Safety Code for Fixed Ladders; and it is joint sponsor of the Safety Code for Laundry Machinery and Operations, all of which have been approved as American Standards by the American Standards Association.

This Association is officially represented on more than 50 ASA technical sectional committees. The Association also cooperates with the National Fire Protection Association in the preparation and development of standards in the fire protection and prevention field.

NATIONAL ASSOCIATION OF PRACTICAL REFRIGERATION ENGINEERS, J. Richard Kelahan, National Secretary, 435 North Waller Avenue, Chicago 44, Illinois

Although this organization does not inaugurate standardization projects in the refrigeration field, it cooperates in the standardizing activities of other organizations, notably the American Standards Association. By its representation on sectional committees, it cooperated in the establishment of several American Standard Codes, viz, ASA Sectional Committee on Refrigeration Nomenclature B53.

This is an educational, nonprofit association, concerned with furthering the knowledge and training of its members in all phases of refrigeration. There are 40 chapters in the United States, conducting refrigeration courses, together with members at large, both United States and foreign. Besides textbooks and educational literature, members receive the official organ, "Industrial Refrigeration," monthly.

Our textbooks, speaker programs, etc., include presentations on standardization activities, on safety and welfare codes.

NATIONAL ASSOCIATION OF PURCHASING AGENTS, G. W. H. Ahl, Executive Secretary-Treasurer, 11 Park Place, New York 7, N.Y.

This Association, with which are affiliated more than 90 local purchasing associations in this country, parts of Canada and Mexico, represents approximately 16,500 purchasing officials, both public and private. Representing as it does a body of corporate consumers, including purchasing agents of industrial concerns, private and public utilities, and governmental and institutional buyers, this Association takes an active part in standardization and simplification programs of value to its members.

Realizing the importance of standards, an NAPA Committee on Standardization has been created, with 1 national chairman, 2 national vice chairmen, 9 district chairmen and 90 local association chairmen. These men are constantly developing programs on standardization in the local Association monthly meetings for the benefit of members.

A few of the early efforts of this Association in standardization have been in connection with the preparation of the standard coal contract form in cooperation with the National Coal Association; and the formulation of standard forms of contract for erected and non-erected conveyor equipment in collaboration with the Conveyor Equipment Manufacturers Association.

The Iron and Steel Committee of this Association developed a standard code for marking steel bars, which was adopted by both the Federal Standard Stock Catalogue Board and the Navy Department. This committee also assisted in the development of a standard sales agreement and trade customs for the gray-iron foundry industry.

The Paper Shipping-Containers Buyers Group took an active part in the formulation of specifications for solid fibre containers and for corrugated containers, while the development of standard listings of industrial cotton constructions was made by the Cotton Fabrics Committee.

This Association's Electrical Contract Committee cooperated with several national electrical organizations in the proposed development of standard electrical contract forms for the purchase of electrical machinery.

This Association participates in the activities of the Central Committee on Lumber Standards in the establishment of American lumber standards grading rules for softwood lumber.

Through its own initiative, this Association undertook a simplification program for the reduction of catalogue sizes. This resulted in the adoption of the national standard sizes for catalogues. The Governmental Purchasers Group and the Institutional Buyers Group participated in standardization and simplification programs, either sponsored by or conducted under the auspices of technical organizations or agencies of the Federal Government.

This Association initiated simplification programs in cooperation with the National Bureau of Standards which led to the formulation of several Simplified Practice Recommendations. Specifically, there were established, promulgated, and published by the Bureau Simplified Practice Recommendation R37 covering standard sizes of commercial forms (invoice, purchase order, and inquiry); Recommendation R58 relating to classification of iron and steel scrap; and revision of Recommendation R166 with reference to color code for marking steel bars.

The Association is represented on sectional committees of the American Standards Association. It also maintains representation on technical committees of the American Society for Testing Materials.

The National Education Committee of this Association has sponsored an educational program which, although it does not come strictly within the purview of standardization proper, it does cover subjects which are either directly or indirectly related to the broad field of standardization and simplification. In an effort to advance

further sound principles of purchasing and to elevate the purchasing profession, this committee's educational program includes, among other things, the publication of series of handbooks for the guidance and use of the entire membership of the Association. The work of this committee has thus far resulted in the publication of handbooks entitled Commodity Data Sheets, Purchasing Policies and Procedures, Industrial Purchasing—Principles and Practices, and Materials Handbook. Several additional publications are in various stages of completion.

NATIONAL ASSOCIATION OF SHEET METAL DISTRIBUTORS, Thomas A. Fernley, Jr., Executive Secretary, 1900 Arch Street, Philadelphia 3, Pennsylvania

This organization of wholesale distributors has cooperated with other units of industry in the establishment of Simplified Practice Recommendations covering standard sizes and varieties of sheet steel, terneplate, and eaves trough and conductor pipe, which were promulgated and published by the National Bureau of Standards. It initiated the movements which resulted in the formulation of Simplified Practice Recommendations for the last three of the projects enumerated above.

NATIONAL ASSOCIATION OF WASTE MATERIAL DEALERS, INC., Clinton M. White, Executive Vice President, 271 Madison Avenue, New York 16, N.Y.

One of the primary functions of this Association is the standardization of commodities, and the formulation of classifications of waste material.

The Association has operating with its officers and Executive Committee, the Waste Paper Institute, Metal Dealers Division, Secondary Metal Institute, Scrap Rubber and Plastics Institute, Cotton Rag Council, Wool Stock Institute and Textile Fibres Institute. These organizations are known as commodity divisions of the National Association of Waste Material Dealers.

The Association publishes specifications on all of the scrap and waste materials handled by the above commodity divisions by publishing this information in separate pamphlets on each commodity. These pamphlets are supplied without charge to those interested.

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS, Edwin Wilkinson, Executive Vice-President, 386 Fourth Avenue, New York 16, N.Y., and 80 Federal Street, Boston 10, Massachusetts

The Association adopted standard definitions for clean wool, shrinkage, content and condition. It cooperated with the U.S. Department of Agriculture in establishing standards for wool grades. In 1955, the Association opposed the existing visual standards.

It cooperated with the Department of Agriculture in establishing standards for wool top grades. Through its Wool Top Committee, the Association supervised a project undertaken by the Textile Foundation to settle the question of top standardization and to develop some basic means for measuring fineness. As a result of this work the Association presented to the industry a schedule of fineness measurements for the qualities of 80's to 50's, inclusive, which were generally

accepted by the trade. These standards formed the basis for new wool-top standards which were promulgated by the Secretary of Agriculture in 1939.

The Association formulated, through its Committee on Olive Oil Alternatives, specifications for mineral-oil-coconut-oil blend as an alternative for olive oil, as set forth in the Annual Bulletin of the Association for 1941, Pt. III, p. 495. To meet war-caused shortage of coconut oil, it recommended specifications for substitute blend of equal parts of mineral oil with lard or grease oil.

In response to request from Wool Associates of the New York Cotton Exchange, in 1942, it made recommendations on standards of tests or methods of procedure which would have the effect of broadening the type of lubricants which could be employed in combing wool top for delivery to the Exchange.

It cooperated with the National Bureau of Standards in the establishment and revision of Simplified Practice Recommendation R11-36 relating to bed blanket sizes; it also took active part in preparation of Commercial Standard CS39-37 for wool and part-wool blankets. The Association also initiated a movement resulting in establishment of Commercial Standard CS65-38 for wool and part-wool fabrics.

The Association approved sales contract provisions for Worsted Commission Combing, Top-making, Worsted Yarn, and Woolen and Worsted Piece Goods.

Representation is maintained on Technical Committee D-13 of the American Society for Testing Materials, which has been continuously engaged in developing standards and methods of test for textile materials.

NATIONAL AUTOMATIC MERCHANDISING ASSOCIATION, David E. Hartley, Public Health Counsel, 7 South Dearborn Street, Chicago 3, Illinois

This is the national trade association representing merchandise vending machine manufacturers, suppliers, and operators. Much of the dollar volume of this industry is comprised of food and beverage vending.

In July 1957, the U.S. Public Health Service published a new suggested Ordinance and Code on "The Vending of Foods and Beverages." After cooperating in the drafting of this "Code," NAMA established an Automatic Merchandising Health-Industry Council to supervise an industry public health program including a machine standardization and evaluation activity. Industry and national health organization representatives, including Armed Forces and Public Health Service officials, make up the Health-Industry Council.

NAMA has established research grants and consultant arrangements with the public health schools at Michigan State University and Indiana University to conduct research projects and evaluate vending machines against design and construction criteria of the Ordinance and Code.

Vending machines from NAMA member and nonmember manufacturers are examined and, if in compliance, a letter of Compliance is issued by the evaluating agency. Checklists, procedural forms and program administrative activities are under the guidance of the Health-Industry Council.

NAMA publishes periodic listings of vending machines which have been evaluated and certified as being in compliance with U.S. Public Health Service Ordinance and Code requirements. These listings are available at each regional office of the Public Health Service, at the offices of the three Armed Forces Surgeons General, and at state health department and state department of agriculture offices.

NATIONAL AUTOMATIC SPRINKLER AND FIRE CONTROL ASSOCIATION, J. A. Coakley, Jr., President, 60 East 42d Street, New York 17, N.Y.

The primary objective of this Association is the advancement of the art of automatic control of fire through automatic sprinklers, and the conservation of life and property from fire. This organization is a national trade association of automatic sprinkler manufacturers and installers. It was founded in 1914.

The Association does not itself formulate standards, but rather it cooperates with several national technical bodies in the preparation of standards and fire protection sections of building codes and ordinances. It has 64 representatives on 54 important National Fire Protection Association committees. These committees set standards for design, installation, inspection, and maintenance of automatic sprinklers. The Association cooperates in the design, installation and maintenance of stand pipes and hose systems and of private underground systems supplying water for fire extinguishment, including the character and adequacy of water supplies and the selection, installation, and maintenance of valves, hydrants, monitor nozzles, hose and accessory equipments; the supervision of valves controlling water supply for fire protection.

The Association concerns itself with the design and construction of hose houses, and fire department procedure in fighting fires in buildings equipped with automatic sprinklers. In this respect it publishes regular editions of a "News Bulletin" and an internal "Industry Bulletin." To further that end the Association engages in a program of lectures to state fire schools and fire chiefs associations.

It cooperates with the National Board of Fire Underwriters, Underwriters Laboratories, Associated Factory Mutuals Laboratory relative to the formulation of standards, specifications and regulations for fire apparatus and its use.

The Association is officially represented on sectional committees, functioning under the procedure of the American Standards Association, engaged in the development and revision of the following subjects: Code for Pressure Piping, Pipe Threads and Pipe Flanges and Fittings.

Its recently developed Fire Protection Section for Building Codes and a Suggested Ordinance for the Protection of Nursing Homes is gaining wider recognition by communities wishing to adopt safer legislation, particularly with regard to loss of life from fire.

NATIONAL AUTOMOBILE THEFT BUREAU, Fred J. Sauter, President, 100 William Street, New York 38, N.Y.

This Bureau has a membership of over 350 insurance companies, both stock and nonstock in character, writing fire and theft insurance

pertaining to the ownership, use and maintenance of motor vehicles, membership being open to all insurance companies in good standing.

This Bureau was organized for the purpose of assembling and disseminating reports nationwide on automobiles reported stolen and insured by its members and to assist law enforcement agencies in the identification and recovery of automobiles where ownership is in question.

This Bureau has been designated by the International Association of Chiefs of Police as its official clearing house on automobile theft information.

This Bureau cooperated with the Governors' Commission on Uniform State Laws in drafting a Uniform Motor Vehicle Certificate of Title and Antitheft Act which was approved and recommended for enactment in all states.

This Bureau is cooperating with all automobile manufacturers in the adoption of a standard method of affixing, stamping and recording identification numbers at a uniform location on motor vehicles.

In addition to its automobile theft work, this Bureau also investigates suspicious automobile fires and distributes to law enforcement agencies a Manual for the Investigation of Automobile Fires.

NATIONAL BASKETBALL COMMITTEE OF THE UNITED STATES AND CANADA, Oswald Tower, Editor, H. V. Porter, Secretary, Andover, Massachusetts

This Committee is comprised of representatives of the National Collegiate Athletic Association, National Federation of State High School Athletic Associations, Amateur Athletic Union of the United States, Canadian Intercollegiate Athletic Union, Canadian Amateur Basketball Association, and the Young Men's Christian Association.

Purpose of the Committee: To formulate and publish rules governing the game of basketball, including all equipment pertaining thereto. In addition to an annual meeting attended by all representatives, the Committee operates through the following subcommittees: executive, publications, game administration, research, questionnaire, international relations.

NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS, C. O. Myers, Secretary, 1155 North High Street, Columbus 1, Ohio

The objects of this Association are to promote uniform boiler laws and rules throughout the jurisdiction of its members; to secure uniform approval of specific designs of boilers and other pressure vessels, as well as appurtenances and devices used in connection with their safe operation; and to promote one uniform code of rules, and one standard stamp to be placed upon all boilers and pressure vessels constructed in accordance with the requirements of that code, and one standard of qualifications and examinations for inspectors who are to enforce the requirements of said code.

Whenever it is desired to have the approval of this board on a specific design of a steam boiler, or other pressure vessel, or of any appurtenance or device used in connection with their safe operation, the applicant for such approval shall furnish the secretary of the board copies of blueprints, specifications, or other data. The matter is re-

ferred to the standing committee appointed for such purpose, for such action as may be deemed advisable. Upon a report of this committee, the matter is referred to the board.

The approval of such specific design, appurtenance, or device requires the 90 percent affirmative vote of the membership of this board. Upon receipt of approval by this board, the manufacturer of such specific design, appurtenance, or device, shall distinctly stamp same with a four-leaf clover design bearing the initials NBBPVI. No steam boiler or other pressure vessel shall be stamped unless it conforms with the rules formulated by the Boiler Code Committee of the American Society of Mechanical Engineers, and has been inspected during construction and upon completion by an inspector who has been qualified in accordance with the requirements of this board's bylaws. It shall be applied upon completion of construction only to those boilers or other pressure vessels which are distinctly stamped with the ASME symbol. Any steam boiler or other pressure vessel built after July 1, 1921, and stamped ASME and National Board, may be used within the jurisdiction of any member of this board.

NATIONAL BOARD OF FIRE UNDERWRITERS, Lewis A. Vincent, General Manager, 85 John Street, New York 38, N.Y.

This organization with a membership of more than 200 capital stock fire insurance companies prepares and issues standards, good practice requirements, and suggested codes and ordinances dealing with building construction, fire protection equipment and the safeguarding of hazards.

The Board in 1905 prepared a recommended building code to present the best thought in connection with construction and the reduction of the fire hazard to life and property. This code, now known as the National Building Code, is revised from time to time to keep abreast of modern methods and new materials of construction. Many municipalities have adopted the code for local building laws. From the standpoint of fire safety the Board is recognized as an important influence in improving building construction in the United States.

The Board has been engaged in making surveys of American cities with reference to their fire defenses and physical conditions for many years. This activity has been at the foundation of a large part of the improvement in American municipal conditions in the matter of fire hazard and fire protection. The Board was instrumental in bringing about the standardization of hydrant and hose couplings throughout the country, thereby permitting outside aid to be given by one community to another in the event of serious fires or a sweeping conflagration.

The Board in its work cooperates with national technical bodies, Federal, State, and municipal governments and other trade associations through membership on committees and through contacts with these interests by its staff of fire protection engineers.

Standards and recommended safeguards published by the Board cover a wide variety of subjects including fire extinguishing appliances and auxiliaries, flammable liquids, combustible solids, hazardous gases, explosive dust, electrical equipment, and items relating to construction. In addition, it has published a suggested fire prevention code, fire engine tests and fire stream tables, suggested

specifications for motor fire apparatus, and other publications covering special occupancies and problems.

NATIONAL BUILDERS' HARDWARE ASSOCIATION, William S. Haswell, Secretary, 515 Madison Avenue, New York 22, N.Y.

This Association serves the interests of 360 builders' hardware distributors located in the United States and Canada. One of its active programs is the promotion of standardization of installation characteristics.

It is now working with the American Standards Association to promote a standard on mounting dimensions for door locks and flush bolts.

Literature published by the Association takes the form of handbooks listing selections of proper types and sizes of hardware for typical usage situations.

The Association also works closely with Government agencies in the preparation of Federal Specifications and preapproval of samples.

NATIONAL CANNERS ASSOCIATION, Carlos Campbell, Executive Secretary, 1133 20th Street NW., Washington 6, D.C.

This organization maintains a Committee on Simplification of Containers which has cooperated with the National Bureau of Standards in the establishment of Simplified Practice Recommendation R155-49 covering names and dimensions of cans for fruits and vegetables. For the purpose of developing improvements in the metals, materials, and products used in the canning industry, this Association maintains research laboratories in Berkeley, Calif.: Seattle, Wash.; and Washington, D.C.

NATIONAL COMMITTEE ON RADIATION PROTECTION, Lauriston S. Taylor, Chairman, c/o National Bureau of Standards, Washington 25, D.C.

This organization, under a slightly different name, was established in the United States in 1929 since which time it has provided the basic standards and guidance in its field. Through the cooperation of many other organizations, its program and accomplishments have proven effective, timely, and of far-reaching importance. Moreover, through interlocking membership in the International Commission on Radiation Protection, the views of this country are integrated into world views.

The first meeting of the committee was held in 1929 and its first objective was to prepare recommendations on X-ray protection. These were published in 1931 as Handbook 15 of the National Bureau of Standards which became the sponsor of all subsequent publications.

The next effort was directed toward the preparation of recommendations on radium protection and in 1934 such a publication was issued by the sponsor as NBS Handbook 18. Shortly thereafter, the need to revise Handbook 15 became evident and a new revision appeared in 1936 as Handbook 20. It is significant that this handbook contained the first recommendation of a specific permissible exposure level of radiation that could be allowed for occupational exposure. It remained in force for 12 years and was used by the Manhattan

District Project in its operations. These two handbooks, as revised, were accepted in this country as the primary guides for protection against X-rays and radiations from radium.

Immediately following World War II, many new protection problems arose with the rapid expansion in the radiation field (protection against neutrons, multimillion volt X-rays, radioactive isotopes, etc.). Accordingly, a more systematic and enlarged organizational framework became necessary in order to consider the many different problem areas. As a result, the overall structure was reconstituted to provide the original Main Committee, plus an Executive Committee, and as many subcommittees as necessary for orderly attention to the many distinct phases to be considered. The subcommittee structure, as presented hereinafter by number and title, suggests the subjects undertaken.

1. Permissible dose from external sources
2. Permissible internal dose
3. X-rays up to two million volts
4. Heavy particles (neutrons, protons and heavier)
5. Electrons, gamma rays and X-rays above 2 million volts
6. Handling of radioactive isotopes and fission products
7. Monitoring methods and instruments
8. Waste disposal and decontamination
9. Protection against radiations from Ra, Co⁶⁰, Cs¹³⁷ encapsulated sources
10. Regulation of radiation exposure dose
11. Incineration of radioactive waste
12. Electron protection
13. Safe handling of cadavers containing radioactive isotopes
14. Permissible exposure doses under emergency conditions
- M-1 Standards and measurement of radioactivity for radiological use
- M-2 Standards and measurement of radiological exposure dose
- M-3 Standards and measurement of absorbed radiation dose
- M-4 Relative biological effectiveness

The total activities of the NCRP have resulted in the issuance by the National Bureau of Standards, of the following current handbooks:

- H42 Safe handling of radioactive isotopes
- H48 Control and removal of radioactive contamination in laboratories
- H49 Recommendations for waste disposal of phosphorus-32 and iodine-131 for medical users
- H51 Radiological monitoring methods and instruments
- H53 Recommendations for the disposal of carbon-14 wastes
- H54 Protection against radiations from radium, cobalt-60 and cesium-137
- H55 Protection against betatron-synchrotron radiations up to 100 million electron volts
- H56 Safe handling of cadavers containing radioactive isotopes
- H58 Radioactive-waste disposal in the ocean
- H59 Permissible dose from external sources of ionizing radiation
- H60 X-ray protection
- H61 Regulation of radiation exposure by legislative means

- H63 Protection against neutron radiation up to 30 million electron volts
 - H64 Design of free-air ionization chambers
 - H65 Safe handling of bodies containing radioactive isotopes
 - H66 Safe design and use of industrial beta-ray sources
 - H67 Checking prepackaged commodities
 - H68 Tabulation of data on receiving tubes
 - H69 Maximum permissible body burdens and maximum permissible concentrations of radionuclides in air and in water for occupational exposure
- Other handbooks are in various stages of development.

Note: Handbooks, not listed above, are either superseded editions, or they concern subjects other than radiation protection. All handbooks are available by purchase from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

NATIONAL COMMITTEE ON UNIFORM TRAFFIC LAWS AND ORDINANCES, Maitland H. Bustard, Executive Director, Sheraton Building, 711 14th Street NW., Washington 5, D.C.

This Committee has developed and published the Uniform Vehicle Code and the Model Traffic Ordinance, which are continually reviewed and periodically revised and republished. The Code is the recognized national standard for State legislation relating to motor vehicles and highway traffic. The Ordinance is recommended as the basis for legislation in this field by cities and counties. Both have been widely used as patterns or guides throughout the United States, and also in Canada and in some other countries.

The Uniform Vehicle Code was first produced in 1926 by a committee of the National Conference on Street and Highway Safety in cooperation with the National Conference of Commissioners on Uniform State Laws. It reflected the need, which even then was clearly apparent, for uniformity in rules of the road and other laws regulating motor vehicles and their use.

The Code committee was reorganized and expanded in 1947 under the framework of the President's Highway Safety Conference. It consists of about 100 members, including highway, motor vehicle, and police officials; legislators, judges, prosecutors, educators; representatives of the automotive, transportation, and insurance industries; motor clubs, safety councils, and women's civic, legal engineering, business, and labor organizations. It is supported by public agencies and private groups interested in more uniform and effective motor vehicle and traffic laws.

NATIONAL COTTONSEED PRODUCTS ASSOCIATION, INC., John F. Moloney, Secretary-Treasurer, 43 North Cleveland St., Memphis 4, Tennessee

This Association maintains for members, trading rules which contain standards of quality, weight and measurement of all cottonseed products, and general terms and conditions applicable to buyers and sellers who are Association members. In addition to defining product grade and quality, the Association's rules provide for adjustments, packaging, performance of contracts, weighing, sampling and inspection service, chemical analysis and arbitration of differences.

The Association has a chemists' committee, composed of qualified oil chemists, which must approve methods of chemical analysis before they are incorporated into the trading rules. A committee on seed grading cooperates with the U.S. Department of Agriculture in providing methods for the evaluations of cottonseed. The Association's research committee regularly reviews research on cottonseed and cottonseed products and recommends lines of work for support by the Association; these research fellowships are maintained at the New Orleans laboratory of the Agriculture Research Service. A committee on uniform feed laws works with the Association of American Feed Control Officials to standardize regulations governing the labeling and marketing of cottonseed cake and meal.

**NATIONAL CRUSHED STONE ASSOCIATION, J. E. Gray,
Engineering Director, 1415 Elliot Place NW., Washington 7, D.C.**

This Association cooperates with national technical organizations in standardizing specifications, methods of test, and recommended practices involving the use of crushed stone. The Association is represented on technical committees of the American Society for Testing Materials dealing with concrete and concrete aggregates, road and paving materials, and mortars for unit masonry. Also, the Association actively participates in the technical committee work primarily concerned with the development of recommended practices of the American Concrete Institute, the American Railway Engineering Association, and the Highway Research Board of the National Research Council.

Through a joint committee composed of representatives of the National Sand and Gravel Association, the National Slag Association, and this Association, a simplification program was initiated under the auspices of the National Bureau of Standards which resulted in the establishment of Simplified Practice Recommendations R147-33 on wire diameters for mineral aggregate production screens and R163-48 on coarse aggregate (crushed stone, gravel, and slag) sizes. In continuation of the cooperative effort of the three mineral aggregates associations, a Joint Technical Committee of representatives of these associations has been formed for the purpose of coordinating and combining the technical work on problems of mutual interest.

NATIONAL DISTRICT HEATING ASSOCIATION, John F. Collins, Jr., Secretary-Treasurer, 827 North Euclid Avenue, Pittsburgh 6, Pennsylvania

This Association is engaged in furnishing technical information to its members to improve the methods of generating, distributing, and utilization of steam in district heating. It has organized a dozen committees dealing with steam station engineering, metering, air-conditioning, campus heating, commercial relations, education, rates and regulations, sales development, statistics, research, chemistry, and distribution. These committees cooperate with similar committees of other organizations, notably the National Association of Building Owners and Managers, the American Society of Heating and Ventilating Engineers, the American Society of Mechanical Engineers, and the American Standards Association.

Several years ago this Association published a handbook which provides an authoritative and complete manual of practice for the use of those actively engaged in district heating work.

This Association is officially represented on sectional committees functioning under the procedure of the American Standards Association for the following projects: code for pressure piping; standardization of dimensions and materials of wrought iron and wrought steel pipe and tubing; and graphical symbols and abbreviations for use on drawings. It is also represented on the Coordinating Committee on Corrosion of the American Society for Testing Materials.

NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION, INC., Paul M. Geary, Executive Vice President, E. R. Cornish, Research Director, Room 610 Ring Building, 1200 18th Street NW., Washington 6, D.C.

This Association organized in 1901 has actively participated in the development and promotion of the use of standards for wiring installations and engineering design for wiring adequacy including the Handbook of Residential Wiring Design and the Farmstead Wiring Handbook. It has cooperated with other organizations in the development and continual revision of the National Electrical Code which was approved as an American Standard C1-1940 and the National Electrical Safety Code which has been approved as an American Standard C2.1 to 5-1939 to 1941 by American Standards Association.

This Association which was originally a joint sponsor of the ASA standard symbols for electrical equipment of buildings, C10-1924, is now represented on the ASA Sectional Committees on graphical symbols and abbreviations for use on drawings (Z32.9 and Z10). It is also represented on ASA Sectional Committees C-80 on Standards for Conduit and Electrical Metallic Tubing and Fittings, C-73 on Standards for Attachment Plugs and Receptacles and C-43 Definition of Electrical Terms.

This Association has also developed recommended standards of estimating, accounting and job management practices for the electrical contracting industry.

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, Joseph F. Miller, Managing Director; L. D. Price, Manager, Engineering and Safety Regulations Department, 155 East 44th Street, New York 17, N.Y.

NEMA is a trade association of manufacturers of almost every kind of equipment and apparatus used for the generation, transmission, distribution and utilization of electric power. The membership of NEMA comprises over 530 of the major electrical manufacturing companies in the country. The membership is limited by its constitution to corporations, firms and individuals actively engaged in the manufacture for sale in the open market of products included within the product scope of one or more of the 75 NEMA product subdivisions. NEMA may therefore be considered as an aggregation of product subdivisions called Sections, each representing a group of manufacturers of certain classes of products, such as motors and

generators, steam and hydraulic turbines, transformers, wire and cable, switchgear, industrial control, ranges, water heaters and household appliances.

NEMA has published over 150 separate standards publications for electrical apparatus and equipment in the following classifications: appliances, illuminating equipment, signalling and communication equipment, industrial apparatus, building equipment and supplies, insulating materials, insulated wire and cable, generation, transmission and distribution equipment.

A considerable amount of the standardization activity of NEMA is in cooperation with other organizations engaged in standardization. Standards of interest to NEMA are developed in cooperation with other industries or other branches of the electrical industry, through such agencies as the American Society for Testing Materials, Edison Electric Institute, National Fire Protection Association, Underwriters' Laboratories, the American Institute of Electrical Engineers, and other associations, laboratories or governmental bodies.

Many electrical products standards originating within NEMA or initiated by other organizations are of such national significance as to make desirable their adoption as American standards under the procedure established by the American Standards Association, which provides participation by and consideration of the views of all interested groups. NEMA supports ASA through participation in its standardizing activities. NEMA has representation on many Sectional Committees and sponsors several of them. NEMA is also represented on several ASA Standards Boards and the Standards Council.

NEMA participates in the International Electrotechnical Commission (IEC)—the international body for the development and approval of recommendations for electrical standards—by means of NEMA representation on the U.S. National Committee of the IEC, by its representatives on the ASA Sectional Committees which act as advisory groups to the U.S. National Committee on the technical provisions of IEC proposals, and by the presence of the representatives of NEMA at meetings of IEC Technical Committees.

In addition to products standards, NEMA is vitally concerned with safety standards affecting electrical equipment. There are two principal codes dealing with electrical safety: the National Electrical Code—American Standard C1—developed by the National Fire Protection Association and dealing with installations in and around buildings; and the National Electrical Safety Code—American Standard C2—sponsored by the National Bureau of Standards and dealing with power houses, substations, overhead and underground lines. NEMA cooperates with other branches of the industry in an effort to secure acceptance throughout the country of nationally recognized standards for safe construction and installation. Members of NEMA also cooperate in an advisory capacity with the Underwriters' Laboratories in the development of standards for electrical safety.

NEMA upon invitation, furnishes the military and other governmental standardizing bodies information and recommendations for use in the preparation of their initial drafts or revisions of various Federal and Military Specifications affecting products within the scope of NEMA.

NATIONAL ELEVATOR MANUFACTURING INDUSTRY, INC., Emile Keltner, Office Manager, 101 Park Avenue, New York 17, N.Y.

Two committees of this organization are concerned with the development of standards, specifications and codes. The Standards Committee has developed initial engineering standards for the industry. Its work has resulted in the formulation of Standard Layouts—giving car sizes and hatchway dimensions for various types of elevators; Standard Specifications—covering complete installation of Passenger and Freight Elevators with various types of operation and control, and Standard Forms—providing outlines of suggested forms of contract covering various phases of elevator work.

The Central Code Committee of NEMI is headed by George H. Reppert, Code Engineer. This committee is concerned with the development, interpretation, revision and adoption of all safety codes for elevators, dumbwaiters and escalators. The Committee, working through regional subcommittees throughout the country, has taken an active part securing the adoption of new State and City Elevator Codes, and the revision of existing codes, conforming to the American Standard Safety Code for Elevators, and in securing uniform interpretations of codes. This Committee, working in conjunction with the Sectional Committee of the American Standards Association, assisted in the development of the American Standard Safety Code for Elevators, which was approved as American Standard A17.1-1937. A complete revision of this code was approved and printed in 1955 and is designated American Standard A17.1-1955. Subsequently, a Supplement to this 1955 Code was approved and printed in 1957 and the Central Code Committee is continuing its work in the revision and modernization of other State and City Codes and the Inspectors Manual which was last printed in 1945.

NATIONAL FIRE PROTECTION ASSOCIATION, Percy Bugbee, General Manager; Robert S. Moulton, Technical Secretary, 60 Batterymarch Street, Boston 10, Massachusetts

This Association is the clearing house for all that is authoritative on the subject of fire waste, fire protection and fire prevention. Its present membership includes 200 national and regional organizations, and more than 16,000 individuals, firms, and corporations.

The two main functions of this Association are to make standards under the guidance of which the fire waste may be checked, and to educate people in the observance of those standards and point out the grievous economical penalties for ignoring them.

The character of the technical standards formulated or adopted by the Association relate largely to the installation, maintenance, and use of equipment, and are drawn in the form of performance standards rather than as specifications. They deal with the safeguarding of equipment and processes that may cause fire, fire extinguishing equipment and procedure, and measures for restricting the spread of fire and minimizing damage.

Standards are prepared by impartial committees made up of representatives of organization members of the Association, United States and Canadian governmental departments, and other cooperating bodies. They seek reasonable safety without prohibitive expense or undue inconvenience. These standards are widely used

as the basis of State, provincial, and municipal legislation, insurance requirements, and as a guide by the increasing number of property owners who demand a reasonable level of fire safety irrespective of legal or insurance requirements. Periodic revisions are made to keep these standards in constant step with progress in science, invention, and the industrial arts.

The Association has adopted some 130 standards covering all phases of fire protection, the safeguarding of hazards, and organization for fire safety. Subjects covered include automatic sprinklers, acetylene equipment, air-conditioning, warm-air heating, air cooling and ventilating systems, anesthetic gases and oxygen, fire apparatus and equipment, fire and life safety in aviation, blower and exhaust systems for dust and vapor removal, building construction operations, carbon dioxide extinguishing systems, combustible fibres, dip tanks, dust explosions (12 separate codes), drycleaning and dry-dyeing, exits (stairs, fire escapes, etc.), electric cars and trolley buses, electric wiring and apparatus, fire-alarm systems (public and private), fire pumps, fire brigades, fire doors and windows, fire extinguishers, fire hose, foam extinguisher systems, gas piping and valves, garages, gasoline equipment of various types, hose, hose couplings and hose houses, internal combustion engines, liquefied petroleum gases, lightning protection, marine fire hazards, marine terminal operation, motorboat protection, motion-picture film, oil-burning equipment, ovens, outside protection and hydrants, paint spraying and spray booths, photographic and X-ray film, piers and wharves, pyroxylin plastic, record protection, rural fire protection, spark arresters, static electricity, standpipe and hose systems, tanks, water systems for fire protection, and many others. The standards are published by the Association in pamphlet form and as compiled in six volumes of National Fire Codes. The Association publishes a Handbook of Fire Protection, an Inspection Manual and a number of other books dealing with fire research, fire fighting methods and other subjects.

The Association carries on considerable work under the auspices of the American Standards Association. It is a member of the ASA, and serves as sponsor or joint sponsor for the following projects which were developed or are in various stages of development under ASA procedure: National Electrical Code; safety codes for the prevention of dust explosions; standard for the installation of gas piping and gas appliances in buildings; and fire protection for blower and exhaust system.

NATIONAL HARDWOOD LUMBER ASSOCIATION, M. B. Pendleton, Secretary-Treasurer, Suite 2408, 59 East Van Buren Street, Chicago 5, Illinois

One of the principal functions of this organization for the past 61 years has been the maintenance of standards for the grading of hardwood lumber, and an inspection staff for the official application of the standards.

This Association issues annually a new edition of the rules for the measurement and inspection of hardwood lumber, cypress, veneers, and thin lumber.

The Association maintains qualified inspectors in the principal hardwood markets and producing districts of the United States and Canada who are authorized to issue certificates of inspection on

hardwood lumber and cypress, the correctness of the grades and measurements shown on the certificate being guaranteed by the financial resources of the Association. This official inspection service is available to the members and nonmembers on government contracts, including Federal, State or local. Extensive use of this service is also being made by the U.S. Department of the Navy, U.S. Department of the Army, and the U.S. Treasury Department.

In cooperation with the National Bureau of Standards, this Association was instrumental in bringing about the establishment of a Commercial Standard for solid hardwood wall paneling. This resulted in the formulation and promulgation by the U.S. Department of Commerce of Commercial Standard CS74-39 providing two classes of wall paneling.

NATIONAL INDUSTRIAL LEATHER ASSOCIATION, E. R. Rath, Executive Vice President, 320 Broadway, New York 7, N.Y.

The Association through its Engineering and Technical Committees representing its different Divisions has developed dimensional standards covering leather belting, mechanical leather packings, certain textile leathers and oil seals. These same Committees have also prepared standard procedures for testing such physical characteristics of various industrial leather products as the bond strength of cement used in the fabrication of leather belting, porosity of leather packings, etc.

Through its work horsepower rating tables and correction factors, standards have been developed for flat leather belting which have been adopted by the entire industry. The Association and its Committees have cooperated with the National Bureau of Standards in the preparation of Federal Specifications covering various industrial leather products. It has worked very closely with the Joint Industry Conference in the development of recommended practices pertaining to hydraulic packings and seals.

NATIONAL INDUSTRIAL SAND ASSOCIATION, V. P. Ahearn, Executive Secretary, Stanton Walker, Consulting Engineer, Munsey Building, Washington 4, D.C.

This Association does not issue standards or specifications but it cooperates in the committee work of technical organizations such as the American Foundrymen's Society, the Air Hygiene Foundation of America, and others, in the development of standards applicable to industry problems.

NATIONAL INDUSTRIAL SERVICE ASSOCIATION, Fred B. Wipperman, Consultant, 818 Olive Street, St. Louis 1, Missouri

The Association has developed the following standards: "Electric Motor and Generator Rebuilding Standards," for integral horsepower motors and electric equipment—1 to 1000 kva, revised 1958; "Transformer Rebuilding Standards," (applying only to transformers completely rewound), revised 1953; "Rewinding Standards for Three Phase Induction Motors," for ratings up to and including 200 hp, 600v Class A insulation.

Other rewinding and rebuilding standards are in process, and all will be submitted for ASA approval.

NATIONAL INSTITUTE OF DRYCLEANING INCORPORATED (formerly National Association of Dyers and Cleaners), George P. Fulton, General Manager, Silver Spring, Maryland

This Institute cooperated with other units of the industry in the establishment of quality standards for Stoddard solvent, promulgated and published as Commercial Standard CS3-40 by the National Bureau of Standards.

The Institute maintains laboratories where research work is carried on in the fundamental problems of the drycleaning industry, and where instruction is given to members in the standard procedures developed by the Institute. Technical bulletins are issued periodically on many phases of drycleaning, textiles, and related subjects. Numerous textbooks on drycleaning, spotting, applied science, and others have been published which contain standard recommended practices in the drycleaning of various materials, standard tests for identification of fabrics, etc. Courses of instruction are also offered by correspondence.

The Institute recently developed drycleanability tests which have been adopted as tentative standards 85-57 and 86-57 by the American Association of Textile Chemists and Colorists. Currently, quality standards of Garment Finishing are being developed for publication.

It is officially represented on committees of the American Society for Testing Materials dealing with petroleum products, lubricants, soaps and detergents, and textile materials. The Institute is also represented on various committees of AATCC.

A current project is the coordination of garment damage analysis procedures in cooperation with the End Use Committee of the AATCC.

NATIONAL INSTITUTE OF GOVERNMENTAL PURCHASING, Albert H. Hall, Executive Vice President, 1001 Connecticut Avenue NW., Washington 6, D.C.

The Institute is an organization of governmental buying agencies of the United States, Alaska, Canada and Puerto Rico. Its membership includes purchasing agencies of states, counties, cities, boards of education and special authorities and districts. The Institute is chartered as a nonprofit educational and technical organization. It is dedicated to the improvement of public purchasing through the interchange of technical and professional information and ideas. Founded in 1944, it is now engaged in its fourteenth year of service to the public purchasing profession.

Its aims and objectives are to: study, discuss and recommend improvements in governmental purchasing; interchange ideas and experiences and obtain expert advice on local, state and national governmental purchasing problems; collect and distribute to governmental purchasing officials information on the organization and administration of governmental buying; develop and promote simplified standards and specifications for governmental buying; promote uniform purchasing laws and procedures; work for or against proposals affecting the welfare of governmental buying agencies; give to taxpayers information on governmental buying problems in order to foster interest in public affairs and cooperation between governmental buyers and those they serve.

NIGP has had a continuing interest in standardization. At its inception the Institute established a specifications library which has

grown to more than 10,000 specifications currently in use by the federal government and state and local governments. The acquisition of new specifications is announced each month in the official journal.

Several years ago the Institute established a committee on standards and tests for the purpose of developing its own series of recommended specifications. The first in this series has been issued and NIGP plans to issue six such specifications annually. It will expand its work in the field of standardization as rapidly as funds and facilities can be found to carry forward this important work.

NATIONAL LIME ASSOCIATION, Robert S. Boynton, General Manager, 925 Fifteenth Street NW., Washington 5, D.C.

In order to encourage a public appreciation of the economic value of lime in all its uses, this Association has issued a series of publications covering uses of lime in various manufacturing processes, and has included in them the recommended general requirements for lime entering into specific processes. In addition, this Association has prepared specifications for lime plaster and lime stucco, suggested specifications for repair of leaky masonry walls, and specifications for mortars for use in unit masonry. Two notable publications are "Exterior Masonry Construction," by Prof. Walter C. Voss, and "Lime Stabilization of Roads." Also available is a 16 mm sound-color movie on lime stabilization.

It is represented on technical committees of the American Society for Testing Materials engaged in the development of standard specifications for lime and lime products, and mortars for unit masonry.

NATIONAL LUBRICATING GREASE INSTITUTE, T. W. H. Miller, Executive Secretary, 4638 J. C. Nichols Parkway, Kansas City 12, Missouri

The Technical Committee of this Institute is charged with developing data pertinent to the manufacture, standardization, and application of the products of the industry. This committee and individual members of the Institute cooperate with committees of technical organizations in matters relating to standards and specifications.

The Institute is officially represented on the Sectional Committee for Petroleum Products of the American Society for Testing Materials, the Society of Automotive Engineers, American Petroleum Institute, American Society of Mechanical Engineers, Independent Oil Compounds Association, and American Society of Lubrication Engineers.

NATIONAL LUMBER MANUFACTURERS ASSOCIATION, Mortimer B. Doyle, Executive Vice President, 1319 Eighteenth Street NW., Washington 6, D.C.

The national Association represents affiliated associations which include the American Walnut Manufacturers Association, Appalachian Hardwood Manufacturers, California Redwood Association, Fine Hardwoods Association, Hardwood Dimension Manufacturers Association, Hardwood Plywood Institute, Maple Flooring Manufacturers Association, National Oak Flooring Manufacturers Association, Northeastern Lumber Manufacturers Association, Northern Hemlock and Hardwood Manufacturers Association, Northern Pine Manu-

facturers Association, Southern Cypress Manufacturers Association, Southern Hardwood Producers, Southern Pine Association, West Coast Lumbermen's Association and Western Pine Association.

This Association took an active part in the formulation of American lumber standards which have been promulgated as Simplified Practice Recommendation R16 by the National Bureau of Standards. The various regional and species associations and other agencies prepare and publish grading rules adapted to their respective species in accordance with these standards. The grading rules are then used for the grading of American lumber.

The Association assisted in the development of standard sizes for pallets by the ASA Sectional Committee MH1 on pallet standardization and is represented on other ASA committees. Association representatives are also active on various ASTM committees, including those which develop standard methods for fire endurance tests for building construction, and methods for testing building constructions.

NATIONAL MINERAL WOOL ASSOCIATION, William A. O'Hara, Secretary; Frank E. Parsons, Industry Engineer, 2906 Americas Building, New York 20, N.Y.

A nonprofit and unincorporated organization, rendering service to its members and the trade in connection with mineral wool insulating building products. It cooperates actively through appropriate committees in research and in the formulation and improvement of standards and specifications covering mineral wool products designed for and installed in buildings. It maintains active membership in American Society for Testing Materials, American Society of Heating and Air-Conditioning Engineers, American Society of Refrigerating Engineers, National Fire Protection Association, Building Officials Conference of America, Producers' Council, Chamber of Commerce, Building Research Institute of National Academy of Sciences, National Industrial Council, National Association of Manufacturers. It cooperates in a helpful manner with such similarly interested associations and government agencies as Standardization Division of the Federal Supply Service, Federal Housing Administration, Veterans Administration, American Standards Association, National Bureau of Standards, American Gas Association, National Electrical Manufacturers Association, Edison Electric Institute, National Warm Air Heating and Air-Conditioning Association, National Association of Home Builders. The purposes of the Association are to study and improve the industry's products, their quality, distribution, and application; to publicize and otherwise inform the public, the trade, and industry members of research, investigations, and facts tending to promote the efficiency and welfare of the Industry.

NATIONAL MUNICIPAL LEAGUE, Alfred Willoughby, Executive Director, 47 East 68th Street, New York 21, N.Y.

Model laws are devised, published, and distributed by this organization and are intended to serve as standards and to stimulate uniformity in State, county, and city legislation. They include a model bond law, budget law, city charter (which provides the council-manager form of government), model county charter, election administration system, model real property tax collection law, registration system, State civil service law, model State constitution and others.

NATIONAL OAK FLOORING MANUFACTURERS' ASSOCIATION, INC., Henry H. Willins, Executive Vice President, 814 Sterick Building, Memphis 3, Tennessee

Standardization and simplification activities of this Association are carried on by its Grading, Milling and Inspection Committee, which has been functioning for more than 40 years.

This Association has adopted official rules on oak, birch, beech, hard maple, and pecan flooring, which cover in detail the grades and sizes of quartered and plain sawn stock. It cooperated with the National Bureau of Standards in the establishment of Commercial Standard CS56-49 covering grading rules for white and red oak flooring, which was promulgated and published by that Bureau; also with the Federal Government in the formulation of the Federal specification for hardwood flooring, which includes references to the grading rules of this Association for oak, birch, beech, and hard maple flooring.

This Association maintains a rigid supervision of species, manufacture, kiln drying, bundling, and all other features pertaining to oak, birch, beech, and hard maple so that its sizes and grades will be maintained. The use of the Association's registered trade name "NOFMA" has been granted to all of its members whose stock of oak flooring has been found to comply with the Association's official grading rules. It also maintains a reinspection service available for the retail dealers who purchase products of member companies, so that, in the event there is doubt concerning the quality of stock bought, a reinspection may be had and the matter settled immediately.

NATIONAL OFFICE MANAGEMENT ASSOCIATION, Harry L. Baker III, Technical Division, 1931 Old York Road, Willow Grove, Pennsylvania

The Association maintains a National Standards Committee which was formed to establish a long-range program for the development of American office standards through the procedures of the American Standards Association with NOMA cooperation. NOMA became the sponsor of the ASA Standards Project known as X2.

To date, there have been over 20 approved office standards developed and published. These encompass such general classifications as office furniture; paper; forms, records, procedures; office supplies; business machines, etc. Many others are either in the development stage or are awaiting formal adoption by ASA.

NATIONAL PAINT, VARNISH AND LACQUER ASSOCIATION, INC., Joseph F. Battley, President, 1500 Rhode Island Avenue NW., Washington 5, D.C.

This Association cooperates with the National Bureau of Standards and with other Federal agencies on research problems; also with the General Services Administration and the Armed Forces in preparing specifications for paints and other protective coatings.

During the past 51 years the Association has issued over 800 publications relating to its researches, dealing with the properties of, test methods for, and the proper utilization of paints, varnishes, lacquers, and chemical coatings.

The Association is active on the American Society for Testing Materials Committee dealing with the development of specifications and test methods for paints and related products. It is represented

on a number of other ASTM Committees having problems related to the coatings industry or its raw materials. The Association is also active in standardization procedures, as regards test methods, in the American Oil Chemists' Society, the Federation of Paint and Varnish Production Clubs, and the Intersociety Color Council.

NATIONAL PAPERBOARD ASSOCIATION, Merritt C. Thiem, Secretary, 80 East Jackson Boulevard, Chicago 4, Illinois

At this time, the Association is active in connection with the development of standard gauge lists for boxboards together with definitions and trade customs.

This proposed standard has been submitted to the Office of Technical Services, Commodity Standards Division, U.S. Department of Commerce, for consideration in the revision of Simplified Practice Recommendation R44-36 covering boxboard thicknesses.

NATIONAL PETROLEUM ASSOCIATION, E. H. Fallin, Technical Director, 958 Munsey Building, Washington 4, D.C.

This Association through its Department of Standards and Tests has organized a cooperative testing program in which its members are invited to participate, as well as certain nonmember laboratories. The purpose of the testing program is to draw attention to the uniformity or lack of uniformity in the results of testing. This is achieved by the distribution of samples of petroleum products to the member and nonmember participating laboratories. The samples are subjected to a series of tests outlined by the headquarters office and the results forwarded to the Association's headquarters, where they are tabulated, identified by number only, and sent to the Association's members as a bulletin report. Each participating member is informed of its identification number in the report and is therefore in a position to compare the results.

The Association in its early history undertook to develop and promulgate certain specifications in cooperation with the American Society for Testing Materials, the American Standards Association, the Society of Automotive Engineers, the American Society of Mechanical Engineers, the American Petroleum Institute, and other similar organizations. This Association established color standards for petroleum products. Through its members, it is represented on the Technical Committee and Subcommittees on Petroleum Products and Lubricants of the American Society for Testing Materials and on similar committees of the American Standards Association.

NORTHERN PINE MANUFACTURERS' ASSOCIATION, W. A. Ellinger, Secretary, 4329 Oakland Avenue, Minneapolis 7, Minnesota

Simplification and standardization activities of this Association are carried on by the Board of Directors, which is charged with the duty of establishing standard grades for the products of its members. This Association has adopted standard grading rules for northern white pine, Norway Pine, jack pine, eastern spruce, western white spruce, balsam, tamarack, and aspen lumber. These grading rules are in harmony with American lumber standards, in the formulation of which this Association took an active part in cooperation with the Central Committee on Lumber Standards.

NATIONAL PLANT FOOD INSTITUTE, Paul T. Truitt, Executive Vice President, 1700 K Street NW., Washington 6, D.C.

This organization supports standardization through simplification and uniformity in State fertilizer regulatory laws and uniformity and simplification of methods of chemical analysis. Work on these problems is done by Institute staff members and its Chemical Control Committee. The Institute cooperates with a Task Force comprising selected State, Federal and industry personnel competent in this field.

The objective of such standardization is to increase the accuracy and precision of the chemical analysis of fertilizers and fertilizer materials.

Further, the Institute supports the enactment by all States of uniform fertilizer laws as recommended by the Association of American Fertilizer Control Officials. Also, the Institute supports further standardization of reporting and publication forms used in the various States to record the consumption of fertilizers by materials and grades on an annual, semiannual, quarterly, or monthly basis, by States, including in some cases figures by counties.

NATIONAL PRESERVERS ASSOCIATION, Richard F. Curry, Executive Vice President, 1346 Connecticut Avenue NW., Washington 6, D.C.

Definitions and standards for fruit preserves, jams, jellies, and fruit butters were officially published by the Food and Drug Administration to be effective December 5, 1940. These standards are, in principle, identical with Federal Specifications for the above mentioned products. Proposed standards of identity for artificially sweetened fruit spreads have been filed with the Food and Drug Administration. The preserve manufacturing industry operates under Rules of Fair Trade Practice issued by the Federal Trade Commission. These rules also incorporate the essential features of the Food and Drug standards for products of this industry. This Association cooperated with the National Bureau of Standards in the establishment of Simplified Practice Recommendation R91 for standard sizes of glass containers.

NATIONAL PRINTING INK RESEARCH INSTITUTE, Lehigh University, Bethlehem, Pennsylvania

The Institute was established at Lehigh University in 1946. It was founded to engage in scientific research on printing inks, on the equipment and techniques involved in their production, and on the printing surfaces to which they are applied. Recognizing the printing ink industry's need for such information, one of the projects undertaken by NPIRI was a compilation of a set of Standard Test Methods. Such a series of tests is an essential basis for interchange of technical information, for ink research, for scientific control of ink production, and thus for the resulting advances in ink technology.

The material in the manual, consisting of forty-four tests, has been divided into seven main sections: Sampling and Preparation, Qualitative Chemical Tests, Quantitative Chemical Tests, Physical Tests, Performance Tests, Resistance Tests, and Tests for Related Materials. The last section covers materials such as paper, rollers and blankets,

printing plates and fountain solutions, which do not enter into ink production but contact the ink and influence its behavior during use. An evaluating procedure is carried out on each recommended method both by the Institute and by individual companies cooperating with the Institute. It is intended that this group of test methods grow with time in the directions indicated by the needs of the industry.

NATIONAL READY MIXED CONCRETE ASSOCIATION, V. P. Ahearn, Executive Secretary; Stanton Walker, Director of Engineering, Munsey Building, Washington 4, D.C.

The standardization work of this Association falls in two categories: its own technical committees develop standards for ready-mixed concrete and, in particular, for the operation of ready-mixed concrete equipment, the sampling and testing of ready-mixed concrete and the design of concrete mixtures; representatives of the Association are active in the standardization work of pertinent technical organizations such as the American Society for Testing Materials, the American Concrete Institute, and several others.

This Association, jointly with the National Sand and Gravel Association, maintains research facilities in cooperation with the University of Maryland at College Park, Md. This Joint Research Laboratory conducts research pertinent to industry problems, and particularly those dealing with standardization of specifications and test methods. The policies of the laboratory are governed by a Joint Research Committee representative of the two Associations.

NATIONAL RETAIL HARDWARE ASSOCIATION, Russell R. Mueller, Managing Director, 964 North Pennsylvania Street, Indianapolis 4, Indiana

This Association engages in continuous programs furthering standardization of many management, merchandising, and advertising procedures in independent retail hardware stores. Increased efficiency and economy of operation for such stores has resulted in standardization of accounting systems, basic stocks, store layout, store fixture specifications, sales planning, and newspaper advertising.

Leadership offered in standardization of retail store fixtures has brought about greater industry-wide usage of National Retail Hardware Association Merchandising Laboratory—approved manufacturer display units, package design, and point-of-sale material. Laboratory consultation and seal of approval are granted without cost to any manufacturer whose merchandising unit, package, or program meets basic NRHA established standards.

NATIONAL RETAIL MERCHANTS ASSOCIATION, J. Gordon Dakins, Executive Vice President, 100 West Thirty-first Street, New York 1, N.Y.

This Association takes an active part in the formulation of standards and specifications relative to retail store organization, retail systems, retail trade terminology, business practices, and specifications for commodities used in the trade.

In carrying forward this work, the Association cooperates actively with the American Standards Association, and other technical and trade organizations. This Association initiated programs for the

establishment of Simplified Practice Recommendations covering set-up paper boxes, folding paper boxes, corrugated-fiber boxes, and notion and millinery paper bags, under the auspices of the National Bureau of Standards.

A few years ago it cooperated in the revision of these Recommendations which are designated as R126, R127, R128, and R129. It also cooperated in the development of Simplified Practice Recommendation R177 relating to single-phase corrugated board-rolls.

In collaboration also with the National Bureau of Standards, it assisted in the development of Commercial Standards CS62-38 for colors for kitchen accessories, and CS63-38 for colors for bathroom accessories; also in the establishment of Commercial Standards CS59-41 for woven dress fabrics (testing and reporting), and CS39-37 for wool and part-wool blankets. This latter standard defines the terms used to describe the fiber content of blankets, if represented in any way to be made wholly or in part of wool; regulates the sizes of type to be used in describing the fiber content of part-wool blankets; provides methods of test for determining the percentage by weight of the total fiber content represented by wool fibers therein, in cases where the buyer and seller do not agree on method; and illustrates the manner by which manufacturers and distributors may guarantee compliance with the Commercial Standard.

The Association cooperates actively with the Commodity Standards Division, Department of Commerce, for the establishment of standard sizing of all apparel.

This organization is a member body of the American Standards Association, and participates actively in the work of several of the committees functioning under its procedure. It is officially represented on the Sectional Committee on Standards and Specifications for Refrigerators.

The NRMA is sponsor of ASA's L22 Standard which relates to rayon and acetate, and is at moment sponsoring the ASA's enlargement of L22 to include all types of fabrics.

**NATIONAL SAFETY COUNCIL, General George C. Stewart
(USA Retired), Executive Vice President, 425 North Michigan
Avenue, Chicago 11, Illinois**

The purpose of this organization is the conservation of human life through a continuous campaign of accident prevention and the promotion of industrial health. It promotes industrial, public, home, farm, and school and college safety chiefly through the gathering and distribution of information about the causes of accidents and methods for their prevention. The Council investigates and compares methods of making mechanical equipment safer and of protecting those who use it; precautions in using hazardous devices, materials and processes; and develops programs for stimulating interest in safety.

In cooperation with other organizations the Council takes part in the standardization work of the American Standards Association. It is sponsor or joint sponsor of the following projects which have been or are being developed under ASA procedures: standardization of methods for recording and measuring work injury experience and the compiling of industrial accident causes; standards for safety

in the construction industry; safety code for floor and wall openings; railings and toe boards; scheme for the identification of piping systems; safety code for window cleaning; safety standards for general industrial stairs; safety code for power presses; safety code for forging and hot metal stamping; safety code for rubber machinery; safety code for signaling devices and controls for graphic arts equipment; safety code for the identification of gas mask canisters; textile safety code; safety code for paper and pulp mills; specifications for accident prevention signs; safety performance requirements for protective occupational footwear; safety color code for marking physical hazards; safety code for the construction, care and use of ladders; safety standards for radiation protection.

In addition the National Safety Council is officially represented on approximately 75 ASA sectional committees in preparing standards on various subjects in connection with safety of individuals or the use of equipment and devices.

The Council has prepared and issued 265 Data Sheets, 16 Safe and Health Practices Pamphlets, 175 Detail Sheets, 3 Manuals on General Occupational Accident Prevention, and 4 Manuals on Accident Prevention in specific industries.

NATIONAL SAND AND GRAVEL ASSOCIATION, V. P. Ahearn, Executive Secretary, Stanton Walker, Director of Engineering, Munsey Building, Washington 4, D.C.

The standardization work of this Association falls in two categories: committees of the Association deal with specifications for various uses; representatives of the Association are active in the standardization work or pertinent technical organizations such as the American Society for Testing Materials, the American Concrete Institute, the American Railway Engineering Association and several others. It also cooperates with the National Crushed Stone Association and the National Slag Association through the Joint Technical Committee of mineral aggregates associations in the development of standards and coordinations of technical problems of mutual interest.

This Association, jointly with the National Ready Mixed Concrete Association, maintains research facilities in cooperation with the University of Maryland at College Park, Md. This Joint Research Laboratory conducts research pertinent to industry problems, and particularly those dealing with standardization of specifications and test methods. The policies of the laboratory are governed by a Joint Research Committee representative of the two Associations.

NATIONAL SANITATION FOUNDATION, Walter F. Snyder, Executive Director, School of Public Health, University of Michigan, Ann Arbor, Michigan

The Foundation is a noncommercial, nonprofit organization seeking solutions to all problems involving cleanliness and sanitation. It is dedicated to the prevention of illness and improvement of quality living through a better environment. It sponsors or conducts objective research and educational programs to find improved sanitation methods. These studies provide an authoritative basis for the establishment of minimum sanitation standards for equipment, products and devices that are generally acceptable to health authorities.

The Foundation has developed through cooperation with industry,

official and nonofficial health agencies several standards as follows: Standard No. 1—Soda Fountain and Luncheonette Equipment; Standard No. 2—Food Service Equipment; Standard No. 3—Spray-Type Dishwashing Machines; Standard No. 4—Commercial Cooking and Warming Equipment; Standard No. 5—Commercial Hot Water Generating Equipment.

The National Sanitation Foundation Seal of Approval has been authorized for use on over 8,000 items manufactured by 320 manufacturers.

NATIONAL SCALE MEN'S ASSOCIATION, Harold J. Fuller, President, c/o H. J. Fuller Company, Columbus, Ohio

This organization is composed of approximately 750 technical men engaged in the design, production, sale, installation, maintenance, testing, and operation of weighing machines.

It has organized 14 committees which are assigned to study and to develop certain phases of the scale industry, including the development of standards and specifications covering railway and industrial track scales; highway vehicle scales; built-in, self-contained, and portable scales; counter scales; grain scales, automatic and hand-operated scales; automatic indicating and recording railway and industrial scales, automatic indicating and recording scales other than large capacity, electronic and hydraulic scales of large and small capacity; pits and foundations; weighing practices, scales used for transportation and labor charges; weighing practices, scales used for purposes of barter; corrosion prevention; construction materials; and welding and heat treatment.

This Association has adopted specifications for overhauling and repair of heavy-capacity scales; light industrial service track scales; railway track-scale test weight cars; standard code of rules relating to maintenance and transportation of track-scale test weight cars; and a definition of a standard test of a railway track scale.

The standards and codes which have been adopted by the Association have received the indorsement of the National Conference on Weights and Measures and the American Railway Engineering Association.

NATIONAL SLAG ASSOCIATION, E. W. Bauman, Managing Director, 613 Perpetual Building, Washington 4, D.C.

The Association cooperates actively with specification-writing organizations (National and State level) in formulating and revising aggregate specifications and in development of standards covering test procedures. This cooperative program is carried out mainly through representation on technical committees of such national organizations as: American Standards Association, American Society for Testing Materials, American Concrete Institute, Association of Asphalt Paving Technologists, American Railway Engineering Association, American Society of Civil Engineers, American Public Works Association, Construction Specifications Institute, and the Industrial Hygiene Foundation. Standardization of aggregates is further promoted by research dealing with aggregates and their end-use products, conducted in the Association's Laboratory located at Youngstown, Ohio. Much of the research thus conducted is planned and programed by the Association's Technical Committee. This Committee is com-

posed of technical representatives from the various Member Companies, chaired by the Association's Director of Research.

In addition, the Association actively participates on the Joint Technical Committee of the Mineral Aggregates Associations. This Committee coordinates the activities of the three major national aggregate associations on technical matters of mutual interest to their respective industries. It was mainly through efforts of this committee, working under the auspices of the National Bureau of Standards, that two important Simplified Practice Recommendations R147, "Wire Diameters for Mineral Aggregate Production Screens," and R163, "Coarse Aggregates—Crushed Stone, Gravel, and Slag," were established.

**NATIONAL SLATE ASSOCIATION, W. S. Hays, Secretary,
455 West 23d Street, New York 11, N.Y.**

Standard specifications have been formulated and adopted by this Association covering the use of slate for floors, terraces, walks, and roofs. These specifications are in the form in which they may be incorporated into architects' specifications or made the subject of construction contracts, and include requirements on metalwork, weight, and laying of felt, laying of slate, etc.

This Association cooperated with the National Bureau of Standards in simplification activities which resulted in the establishment of standard sizes of structural slate for plumbing and sanitary purposes, roofing slate, and blackboard slate, promulgated and published as Simplified Practice Recommendations by the National Bureau of Standards.

The Association is represented on Sectional Committees functioning under the procedure of the American Standards Association.

**NATIONAL SILO ASSOCIATION, Dr. T. A. Meyer, Managing
Director, 131 Breckinridge Lane, Louisville 7, Kentucky**

This Association represents manufacturers of concrete, steel, tile, and wood for building tower silos, as well as silo accessories, silage feeding equipment, and loading and unloading silage equipment.

In cooperation with various organizations, this Association has developed suggested standards for the structural materials used by the industry. Manufacturers using concrete for silos have adopted Recommended Practice for the Construction of Concrete Farm Silos (ACI 714-46) as a suggested standard of the American Concrete Institute. NSA has cooperated with technical associations of the steel industry concerning standards for steel used in steel silo production. Structural Clay Products Institute cooperated in the development of standards for silo tile. Wood silo manufacturers and this Association have adopted the silo stave-pattern standard grading and dressing rules of the West Coast Lumbermen's Association.

The Research Committee of NSA is undertaking a study to standardize silage evaluations or score cards.

**NATIONAL SOYBEAN PROCESSORS ASSOCIATION, Robert G. Houghtlin, President, 3818 Board of Trade Building,
Chicago 4, Illinois**

Standardization of quantity and grades of soybean oil and soybean oil meal, and development of standard trading rules constitute impor-

tant activities of this Association. Upon the recommendations of its Soybean Oil Trading Rules Committee, this Association adopted standard specifications for crude domestic soybean oil covering quality, grade, and methods of analysis. In addition, its Meal Trading Rules Committee served a similar purpose in providing standards and trading rules for soybean oil meal.

The Association's Soybean Grades and Contracts Committee cooperates with the U.S. Department of Agriculture in seeing that fair and just grades for soybeans are established by the U.S. Department of Agriculture and other bodies so that equal protection is afforded to buyer and seller.

NATIONAL TERRAZZO AND MOSAIC ASSOCIATION, Theodore L. Medford, Executive Secretary, 711 14th Street NW., Washington 5, D.C.

This organization's work in the field of standardization has led to the development of Terrazzo construction standards covering floors, bases and shower stalls, stair construction, door trim and window stools, wainscots and partitions. This Association has also prepared and published specifications for Terrazzo work and for Mosaics. Also, marble chips have been standardized into various sizes. At the present time, it is engaged in making research and technical studies on various types of Terrazzo flooring, such as "Monolithic"—"Conductive" and "Latex" Terrazzo.

NATIONAL TUBERCULOSIS ASSOCIATION, Dr. James E. Perkins, Managing Director, 1790 Broadway, New York 19, N.Y.

Diagnostic Standards and Classification of Tuberculosis, last edition 1955, used worldwide in several languages, is produced under supervision of American Trudeau Society, Medical Section of the NTA. ATS also publishes standards for tuberculosis hospital administration, and guides on various aspects of tuberculosis therapy.

NATIONAL WARM AIR HEATING AND AIR-CONDITIONING ASSOCIATION, George Boeddener, Managing Director, 640 Engineers Building, Cleveland 14, Ohio

A major function of this Association is the development of standards for the design and installation of warm air heating and air-conditioning systems. The standards which are established are based on a thorough research program in ducted air system investigation—both heating and cooling—sponsored by the Association at the Engineering Experiment Station of the University of Illinois. Standards data are published in practical, manual form, under the direction of "Manual Committees," for use by installing dealer-contractors. Manuals are revised consistently in keeping with the development of the latest data.

Current manuals (1958) are: Manual 1—How To Make a Comfort Survey (4th ed.); Manual 2—How To Check Frame House Construction (4th ed.); Manual 3—Calculating Heat Losses (6th ed.); Manual 4—Warm Air Perimeter Heating (5th ed.); Manual 5—Design and Installation of Gravity Warm Air Heating System (5th ed.); Manual 6—Adjusting Air-Conditioning Systems for Maximum Comfort (3d ed.); Manual 7—Design and Installation of Warm Air

Winter Air-Conditioning System (4th ed.) ; Manual 7A—Design and Installation of Warm Air Ceiling Panel Systems (4th ed.) ; Manual 8—Application Guide for Residential Central Air-Conditioning Systems (Winter and Year-Round) (5th ed.) ; Manual 9—Design and Installation of Warm Air Winter Air-Conditioning Systems and Year-Round Air-Conditioning Systems (6th ed.) ; Manual 10—4-Inch Pipe Warm Air Perimeter Heating (4th ed.) ; Manual 11—Summer Air-Conditioning (3d ed.).

NATIONAL WHOLESALE HARDWARE ASSOCIATION,
Thomas A. Fernley, Jr., Executive Secretary, 1900 Arch Street,
Philadelphia 3, Pennsylvania

This organization of wholesale distributors has cooperated with other units of industry in the establishment of Simplified Practice Recommendations covering standard sizes and varieties of sheet steel, flashlight cases, insecticide and fungicide packages, hacksaw blades, shovels, spades, scoops, loaded paper shot shells, terneplate, and eaves trough and conductor pipe, which were promulgated and published by the National Bureau of Standards. It initiated the movements which resulted in the formulation of the Simplified Practice Recommendations for the last three projects enumerated above.

NATIONAL WOODWORK MANUFACTURERS ASSOCIATION,
O. C. Lance, Secretary-Manager, 332 South Michigan
Avenue, Chicago 4, Illinois

This Association has taken an active interest in the standardization of commodities in its field. It sponsored the following standards: Commercial Standard CS120-53 for ponderosa pine; CS171-50 and 200-55 for hardwood veneered flush doors; CS163-52 for ponderosa pine windows, sash, and screens; CS190-53 for wood window units; CS193-53 for insulating glass wood windows and sash; CS204-56 for wood awning and projected window and sash units; CS205-56 for wood casement window units; CS208-57 for exterior wood frames for windows and doors. A commercial standard is now pending for horizontal sliding wood window units.

The Association is studying factory preservative treatment methods and treating solutions.

NATURAL GASOLINE ASSOCIATION OF AMERICA,
William F. Lowe, Executive Director, Ronald E. Cannon, Secretary,
421 Kennedy Building, Tulsa, Oklahoma

An Association of natural gasoline manufacturers and affiliated interests of the gas-processing industry. Its principal objectives are "to improve technical procedures for producing, measuring, testing, and handling of gas and liquid products therefrom and to publicize the valuable inherent qualities of said products with a view to increasing their uses." Its standardization work is done in close cooperation with the American Society for Testing Materials, American Gas Association, Bureau of Explosives, Society of Automotive Engineers, National Bureau of Standards, and other technical bodies.

This Association has developed specifications and testing methods for commercial propane and butane which cover composition in terms of vapor pressure and end point; total sulfur and moisture in case of

propane. With reference to butane, the specifications cover vapor pressure, end point, total sulfur content, and entrained water. It has also developed and adopted official specifications and methods of sampling and testing for natural gasoline covering 24 grades.

The studies and research of committees of NGAA have resulted in many technical and operational advances for the industry. The conclusions of this work have been public in the form of printed proceedings, technical standards for testing and analysis, and product specifications. Textbooks on corrosion, low temperature distillation, safety, plant control tests, automotive fuel systems and engines, and equilibrium ratios have also resulted.

Outstanding among the many research projects sponsored by the NGAA have been the studies of automotive fuel systems with a view to increasing their ability to handle volatile fuels. Aside from the studies in this field, it sponsored at such institutions as the University of Michigan, its committees conducted separately financed and extensive road tests with current model cars, one a summer and the other a winter series. The published reports of these tests have become standard references on the subject for both the automotive and refining industries. Together with the recent publication of the text "Fuel and Fuel Systems," which summarized and reevaluated all the previous work, the NGAA effort greatly broadened the understanding of the value of volatile fuels in engine performance.

NORTHERN HEMLOCK AND HARDWOOD MANUFACTURERS ASSOCIATION, William A. McGraw, Secretary, Oshkosh, Wisconsin

This Association has a committee designated as the Bureau of Grades which deals with standards in lumber grading rules, standard sizes, Association inspection, and claim work. Through the work of this committee, the Association has adopted standard grading rules and sizes for northern hemlock and tamarack, and also rules for the grading of northern white cedar shingles. In 1941 this Association adopted and published grading rules to cover northern white pine, Norway pine, and eastern spruce. It has also adopted the hardwood grading rules of the National Hardwood Lumber Association to cover its production in northern hardwoods, including hard and soft maple, birch, basswood, hard and soft elm, oak, beech, and minor hardwoods. This Association's softwood rules comply with American lumber standards which were developed in cooperation with the General Committee on Lumber Standards, and set forth in the current edition of Simplified Practice Recommendation R16, promulgated and published by the National Bureau of Standards.

This Association has adopted and published in its 1941 issue of its grading rules a set of stress grades for softwoods, as suggested by the Federal Housing Administration and the U.S. Forest Products Laboratory, under descriptions such that a strength rating can be given to each grade.

It has cooperated with the Federal Housing Administration in various proposals made with respect to grades and inspection.

The committee is considering various problems connected with Association branding and grade marking of standard lumber which has long been a feature of its Association's standardization activities. A complete set of marks has been adopted and are now being used

by the Association for the purpose of identifying the grades of northern hemlock and northern white pine manufactured in the Lake States. These marks identify lumber graded under the Northern Hemlock and Hardwood Manufacturers Association supervision, and in accordance with its published official grading rules and other rules for the grading of northern lumber adopted and used by the Association. These marks are copyrighted trademarks and can be placed on lumber only by an Association inspector, or by an operator who has executed the specific licensing agreement and whose grading practices are under regular periodic inspection by the Association's Bureau of Grades. These marks show specie identification, the grade of the lumber to which the mark has been applied, and an identification by means of the license number of the mill that manufactured and graded the lumber. Further, the Association has adopted a system of certificates whereby the manufacturer, by the use of "manufacturers certificates," endeavors to further protect purchasers and consumers against deception by showing on the certificate the detail of the inspection report covering the contents of the car. These certificates are enclosed in an official Association envelope, designed for use with such certificates, and are placed in the car containing the shipment when the tallying and loading have been completed. These certificates are used for hemlock, hardwood, and pine lumber shipments, and are registered as to serial numbers in the Association office so that a shipper of any particular consignment can be readily identified. The privilege of using this Association car-card shipment plan likewise is provided for by a licensing agreement, and mills executing the Association licensing agreement, and whose inspection has been approved by the Association's Bureau of Grades, may grademark and issue shipper's certificates. The Association inspectors will make original inspections and issue a certificate or place the Association brand and mark on lumber for either members or nonmembers, and will make reinspections of lumber for either members or nonmembers in order to adjust misunderstandings or claims. The Association license covering these activities by a manufacturer (who may have the periodical Association lumber inspection checkup, and who is found competent in manufacture and grading) is available to any lumber manufacturer or concentrating yard in Wisconsin, Michigan, or Minnesota. The license is revocable after a hearing whenever the Association finds that the licensee is not maintaining the standards.

OIL-HEAT INSTITUTE OF AMERICA, D. H. Bottrill, Technical Secretary, 500 Fifth Avenue, New York 36, N.Y.

The Institute has issued a standard known as "Standard for the Installation of Residential Oil-Fired Central Heating Equipment; Safety and Performance, No. B-58. The standard defines the trade terms in common use and gives minimum requirements which the newly installed equipment must exceed on a "first run-in test." It also makes mandatory, where applicable, the use of existing safety and performance standards of allied agencies such as those of National Warm Air Heating Association, Steel Boiler Institute, Institute of Boiler & Radiator Manufacturers, National Fire Protection Association, Underwriters Laboratories, Inc., and those of State and local governing bodies having jurisdiction.

OPTICAL MANUFACTURERS ASSOCIATION, Charles F. Oddy, Secretary-Treasurer, 1475 Broadway, New York 36, N.Y.

The Association has developed and makes available "OMA Working Standards." These standards cover the marking and stamping of Optical Frames and Mountings made in whole or in part of gold. The Association has worked out methods for working temple lengths, and measuring frame and lens sizes. It is now undertaking a program of screw standardization for ophthalmic frames. The Association is sponsoring a project through ASA procedure covering quality standards for ophthalmic lenses.

OPTICAL SOCIETY OF AMERICA, Irvine C. Gardner, President, National Bureau of Standards, Washington 25, D.C.

The standardization and specification work of this Society is handled largely by technical committees which have published reports in the Society's journal on visual sensitometry; colorimetry; photometry; standard wavelengths; nomenclature and standards; photographic standards of intensity; geometrical, physiological, and physical optics; photochemistry and photography; radiometry; and spectro-photometry. The latest and most elaborate of these technical reports appeared as a book, "The Science of Color," published in 1953 by Thomas V. Crowell Co., for the Colorimetry Committee of the Optical Society of America.

In addition, the Society cooperates with other technical organizations in standardization and specifications within the various branches of optics. The Society cooperates actively with the International Commission of Optics and the International Commission on Illumination. It cooperates extensively with the American Standards Association, serving as sponsor for the ASA Sectional Committee on Optics, and having representatives on the ASA Photographic Standards Board and on seven ASA Sectional Committees in photography, motion pictures, safety glass, and ophthalmic lenses. The Society also maintains representation on boards or committees of the American Institute of Physics, the National Research Council, the American Association for the Advancement of Science, and the Intersociety Color Council.

OUTBOARD BOATING CLUB OF AMERICA, Robert C. Sampson, Director of Manufacturing Services, 307 North Michigan Avenue, Chicago 1, Illinois

The outboard boating industry, faced with a unique problem in standardization, conducts a continuing standardization program and issues an annual Product Standards Manual through its national trade association. Three trade associations, operating within the framework of the Outboard Boating Club of America, participate in the standards program. They are the Outboard Boat Manufacturers Association, the Outboard Motor Manufacturers Association, and the Boat Trailer Manufacturers Association.

The most popular outboard boat unit from the standpoint of the consumer consists of three parts—the boat, the motor, and the boat trailer. Each part is manufactured by a different segment.

Standards are adopted through the work of committees representing boat, motor, and trailer manufacturers, and through joint committees

of the three segments of the industry. Committee work is augmented by field tests by individual manufacturers and industrywide tests. The standards include transom dimensions, motor mounting areas, fuel tank stowage, horsepower capacity, weight capacity, motor dimensions, horsepower ratings, winch assembly, advertised trailer load capacity, trailer equipment, minimum deck hardware, steering wheel dimensions, steering system pulleys, lighting requirements. Fire protection standards are also provided for.

The OBC Standards Manual is issued annually.

PACKAGING MACHINERY MANUFACTURERS INSTITUTE, INC., R. L. Sears, Executive Director, 60 East 42d Street, Suite 863, New York 17, N.Y.

This Institute is concerned primarily with technical phases of packaging by automatic equipment, through the exchange of interindustry information. The Institute does not issue standards but does, through several committees, engage in work leading to simplification and standardization. The Institute cooperates with all the organizations concerned with packaging techniques and packaging problems. It also works with different trade associations in the electrical and metal-working industries.

PAINTING AND DECORATING CONTRACTORS OF AMERICA, Ed. S. Torrence, Secretary, 2625 West Peterson Avenue, Chicago, Illinois

One of the stated objects of this organization is its effort to protect members and the general public by endeavoring to maintain a high standard of workmanship in the application of painting and decorating service.

This Association maintains a Specifications Committee whose purpose is to make studies in connection with the development of standards and specifications relative to painting and decorating. This committee has prepared standard painting specifications as a basis for the proper use and application of material used in the painting industry. These specifications cover methods and quality of materials to be used in connection with exterior and interior painting as apply to concrete, brick, stucco, stone, shingle roofs and sidings, wood floors, plaster walls, and wood trim.

This Association also promotes and maintains an Apprentice Training Committee. This committee prepares, in conjunction with the Brotherhood of Painters, Decorators and Paperhangers, a standard course of training for painting apprentices.

PAPER BAG INSTITUTE INC., W. R. Gardiner, Director, 369 Lexington Avenue, New York 17, N.Y.

This organization took an active part in the promulgation of Simplified Practice Recommendation R42-53, Grocers Paper Bags, effective October 1, 1953, in which minimum cubic capacities and paper specifications are set forth as voluntary recommendations of the trade.

Preliminary study is now being undertaken toward a recommendation for revision of Simplified Practice Recommendation 129-41, Notion and Millinery Paper Bags, in order to provide an adequate selection of sizes for current packaging requirements.

**PAPER CAN ASSOCIATION, George J. Lincoln, Jr., Secretary,
1532 Philadelphia National Bank Building, Philadelphia 7,
Pennsylvania**

For the past 25 years standardization of paper containers has constituted an important function of this Association. Through its efforts in this field this Association has established standard measures, such as half-pint, pint, quart, 2-quart, and gallon capacities. It has also a standard method of packing, such as 300 half-pint units to a shipping case, 200 pint, 100 quart, 50 half-gallon, and 50 gallon.

The products of this industry, which are straight-sided paper containers with slip cover lid, are recognized by all the States as a measure, and not merely as a container. Manufacturers submit their containers to the bureaus of weights and measures of the several States to see that the containers are accurate capacity. If approved, a license number is granted. License numbers are printed or stamped on each container that is manufactured.

This Association, together with certain other industries, adopted sanitation standards to guide the manufacturers in meeting public health requirements for certain paper products used to package liquid and moist foods for human consumption. In 1947, a Manual of Sanitation Standards was formally issued under the guidance of the Department of Plant Sciences of Syracuse University, together with Federal, State, and municipal health officials.

**PHARMACEUTICAL MANUFACTURERS ASSOCIATION,
Karl Bambach, Executive Vice President and Secretary, 503-
507 Albee Building, Washington 5, D.C.; J. O'Neill Closs, Ad-
ministrative Vice President, 30 Rockefeller Plaza, New York
20, N.Y.**

This Association was composed in 1958 of the drug manufacturers formerly belonging to the American Drug Manufacturers Association and the American Pharmaceutical Manufacturers' Association. Scientists of member firms constitute committees which work with the United States Pharmacopoeia and the National Formulary in developing methods of analysis and standards for drugs used by the medical and allied professions. These Association committees also cooperate with the Food and Drug Administration, the National Institute of Health, the Bureau of Narcotics, and other agencies of the U.S. Government.

Among other things, the Association encourages high standards of potency, quality, and purity for pharmaceutical and biological products intended for use by the medical and allied professions in the cure, mitigation, treatment, prevention or diagnosis of disease; it assists appropriate scientific and governmental agencies in the establishment of scientific and technical standards for such products. It encourages research in the development of new and better medicinal products, and better facilities and methods for the pharmacological and clinical evaluation of medicinal products. It urges efficiency, safety, and better methods in the manufacture, maintenance, packaging, and transportation of medicinal products. It promotes the enactment of uniform and reasonable drug legislation for the protection of public health, and cooperates with regulatory agencies in the reason-

able enforcement of such legislation. It disseminates information on governmental regulations and policies and on other subjects of interest to the pharmaceutical industry, and encourages and promotes the development of scientific and technological skills useful in the discovery, evaluation, and production of pharmaceutical and biological products for the cure, mitigation, treatment, prevention, or diagnosis of disease. It cooperates in all lawful ways with professional associations in the health field, other industries, and Government authorities in the advancement of medical science, and the improvement of public health and the advancement of the pharmaceutical industry.

**PHOTOGRAPHIC SOCIETY OF AMERICA, Allen Stimson,
Publications Vice President, 2005 Walnut Street, Philadelphia
3, Pennsylvania**

The Society is a nonprofit organization, international in scope, and devoted to the advancement of photography in all its manifestations. The broad interests of PSA members include a wealth of experience in the manufacture, technology, application, and uses of photographic products of all types. Through its Standards Committee the diverse viewpoints represented are organized to assist in the formulation of Standards. The Photographic Society of America is a member of the American Standards Association and has representatives in all of the sectional committees on photography, as well as on the Photographic Standards Board. Every effort is made to select representatives who are technically competent and genuinely interested. Each representative is instructed to ascertain the feelings and attitudes of the Society on important questions of standardization before casting his ballot.

The PSA Standards Committee also aids in the formulation of other useful standards involving such photographic activities as exhibitions, proper lighting of pictures, definitions of terms, and other regulations which contribute to the success of amateur photographic events.

**PIPE FABRICATION INSTITUTE, N. F. Young, President-
Commissioner, Suite 759, One Gateway Center, Pittsburgh 22,
Pennsylvania**

The activities of this Institute in the field of standardization are carried on in cooperation with the American Standards Association, the American Society of Mechanical Engineers, the American Society for Testing Materials, and other technical engineering bodies. Through its members, this Institute is officially represented on technical committees of the organizations mentioned above. The Institute has adopted standard specifications for power piping recommended as minimum requirements for safe, economical, and commercial installations. These specifications have been prepared as a guide for framing actual specifications for an installation job, and cover the conditions ordinarily encountered in powerplant piping.

POWDER ACTUATED TOOL MANUFACTURERS' INSTITUTE, INC., Richard F. Webster, Secretary, 250 East 43d Street, New York 22, N.Y.

The Institute has prepared a proposed Uniform State Code relating to powder Actuated Tools using Studs, Pins and Fasteners, to serve as a guide to State and other agencies in the issuance of regulations covering use, operation, and application of powder-actuated tools.

A powder-actuated tool is a tool which by means of a powder load, propels or discharges a stud, pin, or fastener for the purpose of impinging it upon, affixing it to, or penetrating another object or material. It is used mainly in construction and plant maintenance.

A basic feature of the recommended Uniform Code is the provision for training and qualifying powder-actuated tool operators. An operator becomes qualified upon successful completion of a prescribed training course and written examination, and is issued a card attesting to this training. The Code proposes that no worker be permitted to use the tool without such a card. The Code provides for revocation of the card if the operator fails to comply with the rules for safe operation. The Code also provides for built-in safety features in the design of tools.

PRESSURE SENSITIVE TAPE COUNCIL, Richard G. Breeden, Jr., Managing Secretary, 1201 Waukegan Road, Glenview, Illinois

The Council has a Technical and Specifications Committee which conducted roundrobin tests and it developed a series of test methods covering the basic characteristics of pressure sensitive tapes. The committee has also developed a glossary of terms used in the industry. The council maintains close liaison with all Government specifications bodies, as well as participation with the American Society for Testing Materials.

RAILWAY AND INDUSTRIAL SPRING ASSOCIATION, F. C. Gaylor, Secretary, Room 509-E, 30 Church Street, New York 7, N.Y.

The members of this Association comprise manufacturers of springs of all descriptions for use on steam, diesel, diesel-electric, and electric locomotives, railroad passenger and freight cars, as well as heavy industrial machines in the United States. This Association maintains a Technical Committee whose duty is to give consideration to standardization of springs for railway equipment; to investigate all the merits of alloy and special steel to determine their value in the manufacture of springs; and to the testing of various new coatings applied to springs for the purpose of resisting corrosion. This committee does not issue publications on the results obtained from their investigations, but it does cooperate with technical committees of the Association of American Railroads and the American Society for Testing Materials. The standards and specifications developed by these agencies relating to springs and spring material become the adopted standards of this Association for use by its members in the manufacture of springs.

**RAILWAY TIE ASSOCIATION, R. M. Hamilton, Secretary,
1221 Locust Street, St. Louis 3, Missouri**

Several of the main objects of this Association are with reference to standardization of cross ties, collection and dissemination of statistics concerning cross ties, proper methods and practices in preventing forest fires, and preservation and conservation of forests and forest products in the several States of the Union.

Through work of its Committee on Specifications and Inspection, this Association at its annual meeting in July 1946 adopted specifications for cross and switch ties, and specifications for narrow-gage cross ties and switch ties. This Association is continuing its efforts in developing additional standards for the products of the industry which it represents.

**RAILWAY WHEEL ASSOCIATION, C. M. Stoner, President,
445 North Sacramento Boulevard, Chicago 12, Illinois**

This Association, organized in 1908, includes in its membership every commercial manufacturer of cast iron and cast steel car wheels in the United States and Canada.

The functions of this organization are divided into several primary responsibilities relative to cast iron car wheels; namely, research related to improvements in chemical, physical, and metallurgical properties of material; inspection and quality control of the manufactured product and the standardization of specifications and inspection methods; and standardization of wheel design.

The Association maintains several standing committees dealing with metallurgical research projects, wheel design, and specifications. In carrying out its functions the Association cooperates with technical committees of the Association of American Railroads and the American Society for Testing Materials on standardization matters relating to methods of testing, theory and practice of mounting railroad wheels on axles, and wheel design.

The Association has issued a Manual of Inspection to its members, which includes a code of practice covering specifications relative to pouring, annealing, and testing; recommended practices with respect to inspection for the purpose of eliminating any product which has been found to be imperfect or undesirable; instructions covering association standard forms; and specifications of the Association of American Railroads for cast iron wheels for locomotives, tenders, and cars.

RECORD INDUSTRY ASSOCIATION OF AMERICA, John W. Griffin, Executive Secretary, One East 57th Street, New York 22, N.Y.

During 1957 and 1958 the Association adopted frequency response standards and dimensional standards for all types of disk phonograph records intended for home use. Although disk records have been marketed in large quantities since the beginning of the century, this is the first time that recording and manufacturing standards have been codified and adopted by all leading companies. Subsequently, standards for stereophonic disk records, the newest product of the industry, were similarly adopted. In addition to its work with disk records, the Association has also adopted magnetic tape standards.

RED CEDAR SHINGLE BUREAU, Virgil G. Peterson, Secretary-Manager, White Building, Seattle 1, Washington

At the request of this Bureau, a general conference of representative manufacturers, distributors, and users of red cedar shingles was called in 1931 under the auspices of the National Bureau of Standards, following which there was adopted a Commercial Standard for this commodity. At the request of the groups at interest, the standard was later revised to include California redwood and tidewater red cypress shingles, and issued as Commercial Standard for wood shingles CS31-33. It was revised in 1938 and in 1952, and accepted and approved for promulgation by the National Bureau of Standards. This standard covers No. 1 grade shingles.

In order that interest may be increased in the manufacture, sale, and use of high-grade shingles, and consumers may be protected on the basis of quality, the Red Cedar Shingle Bureau inaugurated a certification program. In accordance with this program, the Bureau has developed a quality label which manufacturers place on bundles of No. 1 grade of red cedar shingles with a statement of guarantee that the shingles meet all the quality requirements of the commercial standard. In addition, the Bureau maintains a corps of trained inspectors who visit the plants at irregular intervals to check on the quality of shingles. Failure on the part of producers to comply with the requirements of the Commercial Standard will mean the loss of the right to use the labels until satisfactory adjustment has been made. Labels are also issued and placed on bundles of shingles for No. 2 and No. 3 grades which are indicated in plain figures on the labels, and carry statements that the shingles are guaranteed to meet all quality requirements of the respective grades, as shown in current grading and packing rules of the Red Cedar Shingle Bureau.

In 1955, at the request of this Bureau, similar standards were drawn up for machine-grooved red cedar shakes and rebuted-rejointed red cedar shingles, designated as CS199-55. These two products are derived from red cedar shingles, and are used for exterior walls of buildings. A similar grademarking and certification program is followed as in the case of red cedar shingles, described above.

**RESISTANCE WELDER MANUFACTURERS' ASSOCIATION,
R. Bruce Wall, Secretary, 1900 Arch Street, Philadelphia 3,
Pennsylvania**

The development of standards and specifications of this Association is by the Technical Committee, assisted and advised by various subcommittees. RWMA has developed specifications for resistance welding machine: Spot, press, portable, seam, upset butt, flashbutt, etc.

Standard classification of resistance welding electrode alloys has been developed, stating the minimum permissible physical and electrical qualities. Trade names and numbers are identified and classified.

Standards have been developed for spot welding electrode holders, welding electrodes (spot and seam); together with recommended electrode alloys for spot welding of similar and dissimilar metal combinations.

Standard nomenclature and definitions on resistance welding equipment and techniques have been developed. Cooperation of RWMA

has assisted in development of National Electric Manufacturers Association standards on Resistance Welding Control.

RICE MILLERS' ASSOCIATION, W. M. Reid, President, 1308 National Bank of Commerce Building, New Orleans 12, Louisiana

This Association has promulgated rules governing transactions in rice that include uniform recommendations regarding weights, terms of payment, rates of brokerage, methods and manner of arbitration, packaging requirements, etc. It has prescribed forms of sales contracts for use in the rice trade in the United States, in Cuba, and Puerto Rico. The Association adopted and uses standards for milled rice promulgated by the U.S. Department of Agriculture. The standards are the basis for the inspection service in issuance of certificates of grade for rice sales.

ROOF DRAINAGE MANUFACTURERS INSTITUTE, Thomas Associates, Inc., Managing Director, 2130 Keith Building, Cleveland 15, Ohio

The standardization and simplification activities of this Institute are carried on by the Technical and Research Committee. The work of this committee has been confined to simplification matters. It continues to offer recommendations for revision of Simplified Practice Recommendations 29-51, Eaves Trough, Conductor Pipe, and Fittings. At the present time this Simplified Practice Recommendation is being revised to cover all roof drainage products. Simplified Practice Recommendation 29-51 was promulgated and published by the Commodity Standards Division of the U.S. Department of Commerce.

RUBBER MANUFACTURERS ASSOCIATION, INC., George Flint, Secretary, 444 Madison Avenue, New York 22, N.Y.

The Technical Committees of this organization's several product groups collaborate with Federal, State, and municipal agencies; domestic and foreign associations; and individual commercial users in the development of new or improved specifications for all kinds of rubber products. Emphasis is placed on the practicality of physical requirements and minimization of sizes and types of products, endeavoring to achieve the utmost simplification of sizes and types, with greatest potential economic benefit to producers, wholesalers, retailers, and consumers in processing, distribution, and inventory costs. Most efficient use of raw materials and labor also is an objective.

Products covered by these standardization activities are many and varied, and include both military and civilian requirements. Typical are motor vehicle and agricultural tires; rubber protective and rubber-and-canvas footwear; druggists' sundries; surgical, hospital, and industrial rubber gloves, tubing, sheeting, and other items; sponge rubber and foam latex mattresses, pillows, cushions, furniture upholstery, carpet and rug underlays; conveyor, elevator, and transmission belts and belting; fire, gasoline, steam, air, suction, and discharge hoses; rubber heels, soling materials, and other rubber shoe products; floor tile and tiling, natural-rubber-type descriptions, and standard samples.

**RUBBER RECLAIMERS ASSOCIATION, INC., C. T. Jansen,
Secretary, 101 West 31st Street, New York 1, N.Y.**

The Association publishes specifications on scrap rubber. These deal with grading, sorting, packing, and shipping and are designed to protect both the scrap-rubber supplier and the reclaimer. These specifications are used throughout the United States and Canada as well as many foreign countries. The Association also publishes uniform conditions for the testing of reclaimed rubber.

**SAFE MANUFACTURERS NATIONAL ASSOCIATION, INC.,
W. J. Parker, Executive Secretary, 366 Madison Avenue, New
York 17, N.Y.**

This Association has formulated and adopted specifications for fire-insulated safes, fire-insulated cabinets, fire-insulated filing devices, fire-insulated vault doors, file-storage-room doors, burglary-resistive chests, and robbery-resistive containers. The test requirements for fire-insulated safes are essentially identical to those which have been established by the National Bureau of Standards and Underwriters' Laboratories.

To safeguard the public against unwarranted claims as to the fire resistance and/or burglary resistance of products of the fire-resistive safe industry, members of the Association use labels on their products. The label on a fire-insulated product is a certification by the manufacturer that that design has been shown by test to comply with the specification and rating indicated on the label, and that the product has been shown by the manufacturer's inspection-in-course-of-manufacture to warrant the label attached thereto. Fire-resistance ratings are stated as the number of hours that the product was subjected to American standard time-temperature curve conditions, in a furnace, without failure. The label on a burglary or robbery-resistive product indicates compliance with the SMNA construction specification for the type (group) indicated on the label.

**SALT PRODUCERS ASSOCIATION, Frank J. Madden, Man-
aging Director, 33 North La Salle Street, Chicago 2, Illinois**

In the early 1920's, salt could be purchased in packages of many sizes; but in 1927, the Salt Producers Association, at the invitation of the U.S. Department of Commerce, recommended a list of salt packages which could be eliminated and Simplified Practice Recommendation R70 was issued on April 13, 1927. Since then, the list of recommended packages has been revised several times with the result that subsequent editions of R70 were issued in 1941, 1942, 1946, and 1954. A separate list of packages applicable to the Pacific coast appeared in R70-41 for the first time.

Although the number of packages available to the public has at all times been entirely adequate to take care of needs, it has been reduced considerably over a period of time. By way of illustration, at the time the first Standardization Committee of the Association went to work on the problem of decreasing the number of packages, there were 18 sizes. Now they are available only in 5-lb and 10-lb sizes of rock, high grade (popcorn), and table salt.

Similarly, the sizes of square cartons (8, running from 1 lb to 5 lb) have been reduced to 2; the number of large sizes of bags of cotton

and burlap (15, running from 25 lb to 224 lb) has been decreased considerably, the heavy-to-handle sizes, in particular, being eliminated; barrels in 280-lb and 320-lb sizes have been dropped entirely, etc.

On the other hand, packages which have become necessary over the years have been added; for example, paper bags for pressed water-softener salt and mineralized salt.

SANITARY INSTITUTE OF AMERICA, E. D. Szold, Secretary, 173 West Madison Street, Chicago 2, Illinois

This Institute was established in April 1932 and contains 110 members. This organization has adopted specifications for the sale of wiping cloths which cover process of sterilization and grading. In addition, it also has adopted an official label, the presence of which on a bale or carton of industrial wipers represents a guarantee that the contents of the bale or carton conform to the specifications. The wording of the label reads as follows: "The wiping cloths contained in this bale or package have been produced and packed according to specifications of the Sanitary Institute of America." Each member of the Institute issues an affidavit certifying that he, as a manufacturer of the particular bale or package of wiping cloths, has complied with all rules and regulations of the State and city health departments. The manufacturer also certifies that the wipers contained in a given shipment are correct in weight, and that he has complied with all of the recommendations promulgated by the Sanitary Institute of America.

Concerning enforcement of specifications, label, and affidavit, the Institute relies chiefly upon the integrity of its members, each of whom pledges himself to the Institute's specifications upon becoming a member of the Institute. A Complaints Committee investigates any alleged failure to conform. Violation of the pledge is punishable by expulsion from the Institute, with attendant loss of the privilege of using the Institute label and affidavit. During recent years several committees of the Institute have cooperated with technical committees of the Navy Department and General Services Administration in preparation of specifications for purchase of wiping cloths for Federal agencies.

SCIENTIFIC APPARATUS MAKERS ASSOCIATION, Kenneth B. Andersen, Executive Vice President, 20 North Wacker Drive, Chicago 6, Illinois

This organization has been one of the pioneer groups engaged in standardization beginning with the elimination of obsolete designs and useless size and shapes of apparatus. The SAMA's Recorder-Controller Section, in particular, is prominent in establishing industry standards for process control instrumentation.

Working with the American Standards Association, the SAMA continually works with professional societies' standardization committees and it reflects the interest of instrument makers in its many user groups.

The SAMA Liaison Committee maintains close contact with such professional and technical groups as the American Chemical Society, the Institute of Radio Engineers, American Institute of Electrical Engineers, American Society for Testing Materials, American In-

stitute of Physics, American Society of Mechanical Engineers, Instrument Society of America, American Standards Association, National Academy of Science, National Science Teachers Association, electronic weighing groups, and others.

The Recorder-Controller Section of Scientific Apparatus Makers Association is a trade association composed of manufacturers of process control instruments.

One of the Association's major activities concerns the development of industry standards which are formulated by committees of engineering representatives of member companies and it follows the procedure outlined in the "Manual for Scientific Apparatus Makers Association Standards."

Standardization projects are also carried on in cooperation with other industries and professional societies. With the adoption of standards over the years, the advantages that accrue to both manufacturing and user organizations are considerable. Interchangeability between compatible components is realized and complete interchangeability between given units with one manufacturer's organization is also realized.

Industry standards are adopted in the public interest. These standards do not in any respect preclude any member or nonmember from manufacturing or selling products not conforming with the standards. While use of standards recommended is on a voluntary basis, it is generally recognized that their use results in reduced production costs, lower inventory carrying charges, and the greater and easier availability of component parts.

During the 15 years of this activity, nine Industry Standards have been adopted, and others are in process.

SHIPBUILDERS COUNCIL OF AMERICA, Clifford C. Knerr, Secretary, 21 West Street, New York, N.Y.

One of the main functions of the activities of this Council is to correlate and disseminate information relative to developments in shipbuilding and ship-repairing and allied industries. Although this organization does not deal directly in standardization problems, it has through its board of directors organized a technical committee whose purpose is to keep in touch with technical developments in the shipbuilding and allied industries. It also maintains a Committee on Standard Contracts and Forms to study contracts and forms of contracts for the purpose of obtaining reasonable uniformity in both Government and private contracts.

SOCIETY OF AUTOMOTIVE ENGINEERS, John A. C. Warner, Secretary and General Manager, 485 Lexington Avenue, New York 17, N.Y.

Standardization has been an important activity of this Society from its very beginning. It now carries on technical standardization work for the motor vehicle, aircraft, airline, space vehicles, farm tractor, earth-moving, and roadbuilding machinery, and other manufacturing industries using internal combustion engines. With the exception of standards for the aeronautical industry, which are published in looseleaf form, the standards of the Society are published annually in the SAE Handbook. The Society's standardization work

is under the general direction of the SAE Technical Board which organizes such technical committees as may be necessary to carry on the work. Most of these technical committees are of a permanent nature, but some are appointed to handle specific projects and are disbanded upon their completion. The Society's standards and technical committee activities also include active advisory cooperation with the Armed Forces and numerous other Federal and State government agencies.

The SAE standardization activity began in 1902 with the adoption of standards by the National Association of Automobile Manufacturers that was organized in 1900. In 1903, the Association of Licensed Automobile Manufacturers was organized by manufacturers licensed under the Selden patent. In 1910 the Society took over from the Mechanical Branch of the ALAM its work of preparing technical data and appointed the first Standards Committee in the automotive industry. During the years immediately following, other industries began to use internal combustion engines more widely, and it became evident that the SAE was the logical body in which to centralize all such activities. In 1917 the American Society of Aeronautics Engineers and the Society of Tractor Engineers merged with the SAE and soon thereafter the National Association of Engine and Boat Manufacturers and the National Gas Engine Association merged their engineering and standardization work in the SAE, and the Society of Automobile Engineers then became the Society of Automotive Engineers, Inc. In 1926 the Society initiated standardization in automotive production engineering, and in 1931 adopted the first standardization in the motor transport field.

In cooperation with the American Petroleum Institute, the SAE sustains the Coordinating Research Council. This Council was set up in 1942 to conduct cooperative research, standardization, and similar work aimed at mating fuels and lubricants to their power plants.

All standards, specifications, and reports developed by the Society are made available for industry and Government use on a voluntary basis. Frequent checks are made to determine use of each document. Unused documents are canceled. The SAE has been important in aiding Government agencies, both civil and defense, in the development of sound technical documents. SAE standards are recognized in Government publications as sources for establishing minimum technical requirements in areas where Government regulatory control has been established.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS, W. N. Landers, Secretary, 74 Trinity Place, New York 6, N.Y.

This Society takes an active part in the standardization movement in cooperation with other interested organizations. Through representation on sectional committees functioning under the procedure of the American Standards Association, it cooperates in the development of standards covering the following projects: Standardization of gears; pipe flanges and fittings; bolt, nut, and rivet proportions; code for pressure piping; classification and designation of surface qualities; ventilation code; standards for drawings and drafting room

practice (exclusive of architectural drawings); mechanical refrigeration installations on shipboard; safety code for forging and hot metal forming; terminology for automatic controls; and reactor hazards.

SOCIETY FOR NONDESTRUCTIVE TESTING, Philip D. Johnson, National Secretary, 1109 Hinman Avenue, Evanston, Illinois

The Society has a membership of approximately 2,500 within its 24 local sections. It holds section meetings regularly together with regional conventions annually. It also convenes a national annual meeting each year.

The Society is devoted to education and research in the field of techniques in nondestructive testing of materials, employing radiography, ultrasonics, magnetic particle, gaging, eddy currents and other electrical tests, pressure, proof loading, etc.

The bimonthly journal, "Nondestructive Testing," is published by the Society.

SOCIETY OF THE PLASTICS INDUSTRY, William T. Cruse, Executive Vice President, 250 Park Avenue, New York 17, N.Y.

This is a trade and technical society of over 1,100 companies and 1,400 individuals in all branches of the plastics industry interested in quality standards, research, uniform accounting, traffic rates, wage rate surveys, tariffs, codes, public relations, informative labeling, safety, fire prevention, food packaging, etc.

SPI runs a number of industry conferences each year and sponsors the National Plastics Exposition every 2½ years, alternating between New York City and Chicago.

The companies making up the membership of this Society are: injection, compression, and transfer molders; laminators; extruders; fabricators; calenderers; printers; embossers; reinforced plastics processors; raw material suppliers; machinery and equipment manufacturers; tool, die, and mold makers, research, development, and testing laboratories.

The Society's members are located throughout the United States, Canada, and 28 other countries. A branch office is maintained in Canada at 77 York St., Toronto, Ontario.

For years SPI has worked closely with the U.S. Department of Commerce through the National Bureau of Standards toward the development of voluntary Commercial Standards on plastic products. The cooperative efforts of companies in the plastics industry, the Society, and the National Bureau of Standards have proved highly successful. As a result, these industry standards represent the largest number of voluntary Commercial Standards prepared by any trade association through the Department of Commerce.

So far, voluntary Commercial Standards have been promulgated by the Department of Commerce on the following plastics products: Reinforced Plastics Bathtubs; Reinforced Plastics Shower Receptors; Reinforced Plastics Corrugated Structural Panels; Melamine Dinnerware for Household Use; Melamine Tableware for Institutional Use; Vinyl Plastics Garden Hose; Polyvinyl Chloride Pipe; Cellulose Acetate Butyrate Pipe; Polyethylene Plastic Pipe; Polyvinyl Chloride Sheets; Vinyl Plastic Film; Polystyrene Plastic Wall Tile and Adhesives.

In addition, SPI Committees are working on the preparation of other standards for plastics products for submission to the National Bureau of Standards which are intended to become Commercial Standards.

**SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION,
J. A. Prestridge, Secretary-Manager, 1037 Hendricks Avenue,
P.O. Box 5772, Jacksonville 7, Florida**

This Association has formulated and adopted standard specifications for grades of tidewater red cypress, which are in conformity with American lumber standards as set forth in the current edition of Simplified Practice Recommendation R16, and Commercial Standard CS92-41 for cedar cypress, and redwood tank-stock lumber, promulgated and published by the National Bureau of Standards.

Recognizing the need for uniform marking and authoritative supervision of the marking of standard grades of red cypress lumber, this Association has adopted standard grademarks. The insignia "SCMA" is the property of the Southern Cypress Manufacturers Association. Only licensed inspectors of this Association or competent inspectors or manufacturers authorized by this Association to officially grademark cypress, are permitted to place this mark on lumber. Lumber bearing this symbol is officially grademarked. The appearance of official marks on planing mill products, such as flooring, ceiling, bevel siding, drop siding, etc., indicate an official grademark for the particular product of the planing mill.

SOUTHERN HARDWOOD PRODUCERS, INC., L. J. Heatherly, Secretary-Manager, 805 Sterick Building, Memphis, Tennessee

Southern hardwoods are graded under the rules of the National Hardwood Lumber Association, as are all hardwoods manufactured in the United States and Canada. This organization cooperates with the National Hardwood Lumber Association in grade standardization of hardwood lumber; also with Government agencies and all lumber associations in the development of American lumber standards fostered by the Department of Commerce.

This organization has also cooperated with the National Oak Flooring Manufacturers Association, and the Hardwood Dimension Manufacturers Association, in formulating Commercial Standards for flooring, trim, paneling, etc. These standards have been promulgated and issued by the National Bureau of Standards, U.S. Department of Commerce.

**SOUTHERN INDUSTRIAL DISTRIBUTORS' ASSOCIATION,
E. L. Pugh, Secretary-Treasurer, 1626 Fulton Bank Building,
Atlanta 3, Georgia**

As an organization of distributors, this Association has participated in standardization projects carried out by industry in general, and it cooperated in the preparation and revision of Simplified Practice Recommendations promulgated by the National Bureau of Standards covering standard sizes of wrought iron and wrought steel pipe, valves, and fittings; standard packaging of carriage, machine, and lag bolts; and standard sizes of hacksaw blades.

This Association is represented on the American Standards Association Sectional Committee on Standardization of Gears, which has already developed the American Standard for spur-gear tooth form (B6.1-1932), and the American recommended practice for gear materials and blanks (B6.2-1933).

SOUTHERN PINE INSPECTION BUREAU, A. S. Boistontaine, Secretary, National Bank of Commerce Building, New Orleans, Louisiana

This Bureau is an autonomous agency of the Southern Pine Association and is considered the recognized organization in the southern pine industry for the formulation and maintenance of grading standards. For more than 25 years the Southern Pine Association, as such, carried on a standardization program in developing grading rules for southern pine lumber. Since 1940, this activity has been undertaken through the Southern Pine Inspection Bureau. These rules are in conformity with American lumber standards as set forth in the current edition of Simplified Practice Recommendations R16, which were promulgated and published by the National Bureau of Standards.

The Southern Pine Inspection Bureau took an active part in the formulation of these national standards and has direct representation currently on the American Lumber Standards Committee. This Bureau also is officially represented on the Technical Committee on Timber of the American Society for Testing Materials with reference to the preparation of standard specifications for timber and timber products, and on the Technical Advisory Committee of the National Lumber Manufacturers Association.

It is the function of this Bureau not only to maintain standards of size and definite grade classifications, as reflected in its published grading and inspection rules, for the benefit of the lumber-using public and of the industry, but to provide competent and adequate inspection facilities. These inspection facilities are universally regarded as fair and impartial, and are used not only as a means of adjudicating disputes as to grades between buyers and sellers but also for the certification of southern pine lumber before shipment from the mill. The grading and manufacture of subscribers to the Bureau are under the supervision of Bureau inspectors, and those mills which prove their efficiency in grading and agree to maintain the established standards of size and grade are licensed to grademark their lumber with a Bureau mark symbolizing such supervision and efficiency.

SPECIALTY PAPER AND BOARD AFFILIATES, George V. Johnson, Secretary-Treasurer, 122 East 42d Street, New York 17, N.Y.

This organization is a Division of the American Paper and Pulp Association. Within this framework, there is the Polyethylene Extrusion Coaters Group, which is active in standardization. Its technical committee developed "Standards for Polyethylene Extrusion Coating."

The committee is working on other standards involving flexible barrier materials. It also works closely with the American Society for Testing Materials.

SPORTING ARMS AND AMMUNITION MANUFACTURERS' INSTITUTE, R. F. Webster, Secretary, 250 East 43d Street, New York 17, N.Y.

Two committees of this organization are engaged in carrying on simplification and standardization work for the industry represented by this Institute. The Simplified Practice Committee in cooperation with the National Bureau of Standards initiated the movement which resulted in the establishment of Simplified Practice Recommendation R31 covering the sizes of loaded paper shot shells currently in general demand. A similar movement for the development of a program for the elimination of unnecessary varieties and sizes of metallic cartridges initiated by this committee led to the establishment of Simplified Practice Recommendation R62 for metallic cartridges, promulgated and published by the National Bureau of Standards. Both of these recommendations have, through the efforts of this committee, in cooperation with the Commodity Standards Division, Office of Technical Service, U.S. Department of Commerce, been revised from time to time to keep them in harmony with changes in consumer demand.

The activities of the Technical Committee in the field of standardization have been varied. Through this committee, the Institute gives continuous attention to the publishing of maximum measurements for loaded paper shot shells and metallic cartridges, and minimum chamber dimensions for sporting arms in which these shells and cartridges are used. This committee has also established definitive proof loads recommended for factory testing of shotguns, sporting rifles, pistols and revolvers, thereby insuring greater safety to the users of such arms. Another activity of this committee is in recommending standardization of ballistic test methods and equipment.

The Technical Committee cooperates closely with the Department of Defense in connection with manufacturing, testing, and performance specifications covering commercial ammunition of numerous calibers purchased by the Government.

STANDARDS ENGINEERS SOCIETY, J. A. Caffiaux, Secretary, P.O. Box 281, Camden 1, New Jersey

The Standards Engineers Society is a professional society of standards engineers founded in 1947, incorporated in 1956, and currently consisting of some 750 individual members organized in 14 local sections throughout the United States and Canada. The objectives of this professional technical association are: (1) To provide a forum for the interchange of information on standardization and standardization methods. This forum is provided by meetings at the local and national level; and by the publications of the Society—a quarterly magazine “Standards Engineering” and an annual “Proceedings”; (2) to further standardization as a means of enhancing general welfare; (3) to promote knowledge and use of approved standards; (4) to encourage additions to the literature of standardization; and (5) to stimulate education in standardization at the collegiate level.

The Society does not participate in standardization by regularly constituted standardizing bodies, such as the ASA, the technical societies, or the trade associations.

The Society recognizes accomplishments in standards work by appropriate awards and by a membership structure which includes the grade of Fellow and Honorary Life Fellow.

**STEEL BOILER INSTITUTE, INC., R. A. Locke, President,
1308 Land Title Building, Philadelphia 10, Pennsylvania**

The Simplification and Standardization Committee of this Institute drafted a proposed recommendation for steel firebox boilers which was approved by a general conference of the industry and other interested groups. This proposal was submitted to the National Bureau of Standards, which resulted in the establishment of Simplified Practice Recommendation R157-37 and promulgated and published by the Bureau. This Recommendation became effective as of January 1, 1937, and resulted in revising 2,328 different sizes of boilers which were then cataloged by 30 manufacturers. Through the application of Simplified Practice, this total was reduced to 38 sizes and 98 percent of those sizes, formerly listed, were discontinued as stock items.

In 1950, SPR 157-37 was reviewed and recommendation was made to include residential type boilers which were not covered by R157-37. As a result of this effort, SPR 157-50 became effective January 1, 1950, and has resulted in the reduction of considerable number of sizes in residential-type boilers to a maximum of 13 sizes.

Historically, heating boiler manufacturing has been a seasonal business and about 12 percent of the total annual business has occurred in the first quarter. Without standardization, it was impossible for a manufacturer to build up stock during this slack period. As a result of standardization, manufacturers have continued to operate during the slack period and have built up stock which could be disposed of at the peak of the season, which occurred in the third quarter. The resulting leveling of employment has been most beneficial to both employees and manufacturers and has also resulted in better deliveries to purchasers.

STEEL DOOR INSTITUTE, Thomas Associates, Inc., Executive Secretary, 2130 Keith Building, Cleveland 15, Ohio

The standardization and simplification activities of this Institute are carried on by its Technical Committee. The work of the Technical Committee has been confined to the development of commercial standards for the products of the industry and, also, the development of standardized mounting dimensions for hardware used in conjunction with steel doors. Three Commercial Standards have been issued: CS211-57 covering Flush-Type Interior Steel Doors and Frames; CS212-57 covering Steel Sliding Closet Door and Frame Units; and CS213-57 covering Steel Knockdown Sliding Closet Door Units (for Wood Frame Installation). Currently the Technical Committee is working with the builders' hardware manufacturers, the National Builders' Hardware Association, and the American Standards Association in the development of American Standards covering the mounting dimensions of cylindrical and mortise locks and flush bolts. The Institute is represented on one ASA Sectional Committee.

STEEL FOUNDERS' SOCIETY OF AMERICA, F. Kermit Donaldson, Executive Vice President, 606 Terminal Tower, Cleveland 15, Ohio

The Society has issued a Recommended Minimum Standard for Commercial Carbon Steel Castings, three tentative specifications for steel foundry raw materials covering: (1) Western Bentonite, (2) Gelatinized Cereal Binder, and (3) Zircon Sand and Flour. The Society Specifications Committee has other raw material specifications in process (April 1958). The Society is represented on specification committees of other organizations and cooperates particularly with technical committees of the American Society for Testing Materials in the development of standards and methods of test for steel and steel castings, metallography, radiographic and magnetic particle testing, and other matters of interest.

STEEL SHIPPING CONTAINER INSTITUTE, Livingston Keplinger, President, 600 Fifth Avenue, New York 20, N.Y.

The Institute is a national trade association representing manufacturers of steel drums and pails. It initiated cooperative efforts with customer industries to develop recommended standard specifications for all types of containers made according to certain requirements of either the Bureau of Explosives or of the Uniform and Consolidated Freight Classifications and of the National Freight Classifications.

The purpose of these specifications, which are gaining wide acceptance here and abroad, is to reduce wide variations in container design and to facilitate filling, handling, and shipping.

Joint efforts with customer industry standards groups and the Government have produced recommended standard specifications for 15 different types of steel shipping containers. Ten of these specifications were submitted to the American Standards Association for publication as American Standards, and the Steel Shipping Container Institute has been designated proprietary sponsor for these standards.

Copies of steel shipping container specifications are available from the Institute.

STEEL WINDOW INSTITUTE, George Hingston, Executive Secretary, Cheltenham, Pennsylvania

Three committees of this organization are currently interested in activities relating to standardization and simplification of products. These committees, known as Executive, Technical, and Coordinating Committees, cooperate through the Institute with various agencies of the Federal, State, and local governments in the preparation of standards and specifications relative to steel windows. This effort is national in scope.

Specifically, the Institute recommends standards for types and sizes of steel windows and specifications covering these standards. A production survey establishes the units designated as Warehouse Types. These are stock items.

The Institute is represented on the Sectional Committee engaged in the development of modular dimensioning of building materials and equipment, functioning under the American Standards Association procedure.

**STOKER MANUFACTURERS ASSOCIATION, Marc G. Bluth,
Consultant, 307 North Michigan Avenue, Chicago 1, Illinois**

The work in standardization and recommended technical practices carried on by this Association is handled through its Engineering Committee, which is composed of chief engineers from several of its member companies. This committee is empowered and authorized to undertake such studies on standardization as will help to simplify practice dealing with ratings and application of coalburning under-feed stoker equipment. Codes and recommended practices formulated by the Engineering Committee require the unanimous approval of the entire membership of the Association before they are officially adopted and published.

In cooperation with engineering and technical committees from other organizations, the Engineering Committee formulated and adopted a uniform stoker rating code and a minimum setting heights code. Work is underway in revising some of the older established codes in cooperation with organizations in the coal industry and in the air pollution control field.

STRUCTURAL CLAY PRODUCTS INSTITUTE, Harry C. Plummer, Director of Engineering and Technology, 1520 18th Street NW., Washington, D.C.

This Institute cooperates actively with committees of technical organizations in the standardization of structural clay products. It is represented on technical committees of the American Society for Testing Materials dealing with methods of testing building constructions; specifications for lime; mortars for unit masonry; and manufactured masonry units. It is also officially represented on sectional committees functioning under the procedure of the American Standards Association on Coordination of Building Materials and Equipment, and Building Code Requirements and Good Practice Recommendations for Masonry. The Institute cooperates with the Federal construction agencies in the formulation and revision of specifications for masonry construction.

The Institute is affiliated with the Structural Clay Products Research Foundation, which is located in Geneva, Ill., in the Foundation-owned Research Center. Research conducted by the Foundation includes tests of properties of materials and assemblies, such as strength, heat transmission, and permeability.

While this work is not directed primarily toward standardization, it is providing data that will be of material assistance, both in the development of specifications and in the standardization of products.

SULPHITE PULP MANUFACTURERS' RESEARCH LEAGUE, Averill J. Wiley, Technical Director, 1043 East South River Street, Appleton, Wisconsin

The research activities of the Sulphite Pulp Manufacturers' Research League are primarily intended to develop methods of processing this byproduct of the pulp and paper industry to find uses for the 3 million tons of organic matter derived from the other half of the tree not used in producing chemical cellulose pulp. A wide variety of byproducts obtained directly and indirectly from the sugars and the liginosulfonates are presently on the market and many others

are proposed. The League includes standardization of these products in the fields of dispersing agents, adhesives, food and feed yeast products, roadbinder, clay additives for the ceramic industry, and oil well mud additives. Standardization includes development of analytical control methods, as well as specifications for products to be used by industry and by State, local, and Federal Governments.

SUMP PUMP MANUFACTURERS ASSOCIATION, Harold K. Howe, Managing Director, Mills Building, Washington 6, D.C.

This Association developed and published a set of standards known as "SPMA Sump Pump Standards." These standards cover Definitions and Nomenclature, Testing and Rating, Design and Electrical, and Installation Recommendations. The Association also promotes a labeling program whereby pumps are certified to comply with the requirements of these standards.

TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY, R. G. Macdonald, Secretary, 155 East 44th Street, New York 17, N.Y.

Several of the stated objects of this Association are to promote investigation, research, and interchange of ideas among its members, and to provide technical facts and standards fundamental to pulp and paper manufacture and use.

The Association is divided into nine divisions dealing with problems relating to engineering, pulp and paper manufacture, research and development, testing, converting, industrial coating and graphic cuts, and corrugated containers. Under these divisions function a number of committees engaged in research and development of standards on projects coming within the scope of activities of each division.

Standards or specifications, recommended practices, and testing methods prepared by any committee are submitted to the Standards Committee for approval. The purpose of this latter committee is to establish regulations governing standards; to review and edit existing and proposed standards; and to coordinate standardization activities within the Association and with other organizations.

All standards, recommended practices, and testing methods when so approved by the Standards Committee and the Association in accordance with the prescribed rules and regulations are published in the Association's Manual of Standards. Standards included in the manual cover subjects relating to equipment, heat and power, material of construction, alkaline and acid pulping, fibrous materials testing, pulp and paper testing, and nonfibrous materials testing.

The Association cooperates actively with the American Society for Testing Materials. Through representation on ASTM technical committees, it assists in the development of standards covering the following projects: Iron-chromium, iron-chromium-nickel, and related alloys; bituminous waterproofing and proofing materials; electrical insulating materials; lime; paper and paper products; and corrosion. It also cooperates with the American Society of Mechanical Engineers on boiler studies, and with the Intersociety Color Council in developing color standards.

TELEPHONE GROUP, W. K. MacAdam, American Telephone & Telegraph Company, 195 Broadway, New York 7, N.Y.

This Group, which functions under the auspices of the American Standards Association, consists of the Bell Telephone System and the United States Independent Telephone Association. The Group is represented on the ASA Board of Directors, the Standards Council, the Electrical Standards Board, the Safety Standards Board, the Mechanical Standards Board, the Graphic Standards Board, and the Miscellaneous Standards Board. It is also represented by 78 individuals on 59 ASA sectional committees concerned with the following projects: Safety code for the construction, care, and use of ladders; standardization and unification of screw threads; standards for small tool and machine tool elements; bolt, nut, and rivet proportions; standardization of washers and machine rings; wire and sheet metal gages; classification and designation of surface qualities; classification of materials for tools, fixtures, and gages; safety code for industrial power trucks; diamond abrasives; National Electrical Code; National Electrical Safety Code; code for protection against lightning; bare electrical conductors; specifications for wires and cables (other than telephone and telegraph); magnet wire; radio; specifications for dry cells and batteries; mercury arc rectifiers; electrical measuring instruments; storage batteries; definitions of electrical terms; rotating electrical machinery; capacitors; electrical insulating materials; electron devices; electric and magnetic magnitudes and units; standards for lightning arresters; radio-electrical coordination; carbon graphite and metal graphite brushes; preferred voltages (100 v and under); standards for attachment plugs and receptacles; standards for electric lamps; steel raceways for electric wiring systems; electronic components; terminology for automatic controls; standards for the inspection of motor vehicles; rubber protective equipment for electrical workers; protective occupational clothing; specifications for wood poles; photographic reproduction of documents; acoustics; mechanical shock and vibration; bio-acoustics; office standards; sectional committee on abbreviations; letter symbols for science and engineering; standards for drawings and drafting practices; standards for graphic presentation; graphical symbols for use on drawings; safety code for the protection of heads, eyes, and respiratory organs of industrial workers; safety code for industrial sanitation; petroleum products and lubricants; accident statistics; preferred numbers; specifications for accident prevention signs; performance requirements for protective occupational footwear; colors for industrial apparatus and equipment; and sectional committee on optics. In addition, the Group is represented on the committees of such organizations as the American Institute of Electrical Engineers and the Institute of Radio Engineers in the preparation and revision of American Standards sponsored by these organizations.

Additional standardization work is carried on through representation on committees of various engineering societies and international organizations such as the International Electrotechnical Commission, an affiliate of the International Organization for Standardization. Cooperative work is handled with numerous committees of the Electrical Section and the Communications Section of the Association

of American Railroads, engaged in the formulation of recommendations and specifications dealing with various phases of communication on railroads.

**THREAD INSTITUTE, INC., David Snyder, Executive Director,
11 West 42d Street, New York 36, N.Y.**

All matters relating to standardization and simplification are carried on by committees appointed by the Chairman of the Board of Directors.

The Thread Institute Federal Thread Specifications and Industry Advisory Committee has been cooperating for many years with the Federal Government in the preparation and revision of Federal Specification V-T-276 for Cotton Thread. In recent years, the Synthetic Thread Standards Committee of the Thread Institute has been working with various Government agencies in the preparation and revision of Government specifications for Orlon, Nylon, and Dacron Threads. This Committee has also endeavored to set up standards of thread sizes and specifications for Nylon, Dacron, and Orlon Threads for commercial use.

In the past a Simplification of Products Committee has studied the problem of simplifying the "put-ups" and yardages of industry products and of establishing the types of threads which should be sold on a yardage basis and those which should be sold on a weight basis; however, no standards in these matters have been set up. During World War II, in the interests of conservation, this Committee had made recommendations for the elimination of certain "put-ups" of thread on cones and certain sizes of wooden spools, as well as the reduction in the use of tissue for wrapping thread units.

**TIN RESEARCH INSTITUTE, R. M. MacIntosh, Manager, 492
West Sixth Avenue, Columbus 1, Ohio**

Members of the Institute participate widely in the development of standards and specifications for tin ingots, tinplate, tin containers, tin alloys, tin castings, bearings, solders, and electrodeposited tin. Membership is held on the specifications committees of the British Standards Institution and the American Society for Testing Materials.

**TIRE AND RIM ASSOCIATION, INC., C. G. Hoover, Executive
Vice President, 2001 First National Tower, Akron 8, Ohio**

This Association is the technical standardizing body of the tire, rim, and related parts manufacturers of the United States. It also carries on rim contour inspection to assure satisfactory tire application and fit. Among the standards established are tire loads, tire inflations, tire section limits, recommended rims, dual spacings, rim dimensions, valve and valve hole dimensions for tire and rim equipment used on passenger cars, motorcycles, motor scooters, trucks, buses, low platform trailers, earthmovers, road graders, agricultural tractors and implements, industrial vehicles, mobile homes, and aircraft.

In addition to standardization activities, this Association has the following five committees to advise Government agencies and other associations: Technical Advisory Committee, Ordnance Advisory

Tire and Rim Committee, Ordnance Advisory Tire Reconditioning Committee, Ordnance Advisory Bogie Roller Committee, Aircraft Tire Advisory Committee.

TRUCK-TRAILER MANUFACTURERS ASSOCIATION, John B. Hulse, Managing Director, 710 Albee Building, Washington 5, D.C.

Acting in concert with other organizations, the Truck-Trailer Manufacturers Association took the lead in making available a Standard Industry Procedure for Determining Heat Transfer of Refrigerated Truck Trailers. This standard was developed at the National Bureau of Standards with assistance from the U.S. Department of Agriculture and the Association. It is available from the Association.

TWISTED JUTE PACKING AND OAKUM INSTITUTE, Lester B. Platt, Secretary, 19 West 44th Street, New York 36, N.Y.

In connection with standardization matters arising in this industry, this Institute has appointed a Standardization Committee whose sole function is to prepare and recommend standards covering the Institute's members' products. This committee cooperated with the Plumbing Fixtures Committee of the Federal Specifications Executive Committee in the development of Federal Specifications for marine oakum and twisted jute packing. These specifications are in use at the present time by the Federal Government agencies on which to base contracts for purchases.

UNDERWEAR INSTITUTE, Robert D. McCabe, Managing Director, 468 Fourth Avenue, New York 16, N.Y.

The Institute's pioneering in the field of standardization dates back to 1920. At that time it began work on the collection of data looking toward the standardization of methods of measuring, measurements and tolerances for knit underwear in the interest of the consumer, as well as the jobber, manufacturer, and retailer. To facilitate this work the Institute detailed one of its employees to the National Bureau of Standards where for over 7 years he collected and tabulated essential data.

In 1930, the Institute requested the cooperation of the National Bureau of Standards in the establishment of a Commercial Standard for Knit Underwear, which was promulgated as CS33-32, effective January 1, 1932. Over the years the Institute has continued its work in this field in cooperation with the Commodity Standards Division of the U.S. Department of Commerce. Most recently the Underwear Institute was the first manufacturer's association to recognize the value of, and to endorse, the height-weight body-measurement standards as the basis for revising its infants', children's, girls', and boys' standards. The Institute also has work in progress on a T-shirt standard and on standards for knit pajamas.

UNDERWRITERS' LABORATORIES, INC., C. R. Welborn, President, 207 East Ohio Street, Chicago 11, Illinois

This organization was established to maintain and operate laboratories for the examination and testing of devices, systems, and materials. Founded in 1894, the enterprise is sponsored by the

National Board of Fire Underwriters, and is operated for service, not for profit. It is chartered as a nonprofit corporation without capital stock, under the laws of the State of Delaware.

Testing laboratories are maintained at Chicago, Ill., New York, N.Y., Northbrook, Ill., and Santa Clara, Calif. Of equal importance with the examination and testwork of Underwriters' Laboratories is its inspection and followup program in the factories where listed devices are manufactured. Representatives charged with the responsibility for making these periodic inspections are located in approximately 200 cities throughout the United States.

The objects of Underwriters' Laboratories are to conduct scientific investigations, studies, experiments, and tests to determine the relation of various materials, devices, constructions, and methods to life, fire, and casualty hazards, and to ascertain, define, and publish standards, classifications, and specifications for materials, devices, constructions, and methods affecting such hazards, and other information tending to reduce and prevent loss of life and property from fire, crime, and casualty.

The majority of underwriters in the United States, and many Federal, State, and municipal authorities, plant operators, and architects, building owners and users either accept or require listing by Underwriters' Laboratories as a condition of their recognition of devices, systems, and materials having a bearing upon life and fire hazards, and upon theft and accident prevention.

It should, however, be noted that findings of Underwriters' Laboratories in any case represent only its independent opinion arrived at in accordance with its aims and purposes. The correctness of this opinion cannot be guaranteed, nor can Underwriters' Laboratories guarantee that its findings will be accepted or recognized in any individual case. Such assurances can be obtained only from the authority having jurisdiction.

It should be noted as well that products labeled or listed are not necessarily equivalent in quality or merit.

In the event of a disagreement between Underwriters' Laboratories, and any of its clients with respect to an engineering or technical matter involving the method of measurement used in the tests applied by Underwriters' Laboratories, the results of the tests so used, or the interpretation of these results, the question at issue may be submitted to the National Bureau of Standards, provided that in the opinion of the Bureau the importance of the case justifies its acceptance by the Bureau and that parties to the submission agree in writing to accept and abide by the finding of the Bureau.

The Underwriters' Laboratories is divided into several engineering departments, each dealing with distinct and separate subjects as follows: Burglary protection, casualty and automotive, chemical, electrical, gases and oils, and fire protection. Each of these departments has prepared standards providing specifications and requirements for construction and performance under test and actual use of systems, materials, and appliances of numerous classes submitted to the Laboratories.

The Underwriters' Laboratories has issued more than 200 of these standards and sets of requirements based on sound engineering principles, actual experience, and an appreciation of the problems of manufacturing, installation, and utility. These standards are the

result of years of research and collaboration by Laboratories' engineers, manufacturers, and recognized specialists in many fields, including the members of the four Laboratories' Engineering Councils.

The requirements of a standard are so stated that if correctly applied, there is no discrimination between the products of two or more manufacturer-submitters.

The standards are not intended for use by others except as manufacturers may find them useful as guides to design. They are published so that others may know the basis for Laboratories' opinions and the standards must necessarily justify the opinions.

The standards are an important tool of Underwriters' Laboratories in its established policy of stating the facts concerning products investigated, and its opinion concerning these facts.

A manufacturer whose product passes the Laboratories' requirements and for which factory inspections service is to be established is provided with a procedure, prepared by Laboratories' engineers as part of the work under the application. This procedure describes and illustrates the product in detail, particularly as to the construction or performance of the features tested. It becomes the manufacturer's guide for future production, and is used by inspectors of Underwriters' Laboratories in reexamination and periodic check testing. The Laboratories' factory inspection service of listed products is intended to supplement and check the manufacturer's own regular inspections to insure compliance of the factory output with the requirements established for the product.

Manufacturers, regularly employing inspection service, are freely consulted in all matters concerning standards of performance and inspection in their respective industries.

Under Label Service the manufacturer attaches labels to such of his products as are found, by the specified examinations and tests conducted by him, to be in compliance with the applicable requirements. The Laboratories' representatives conduct frequent inspections at the factory in which the products are manufactured and labeled for the purpose of checking the efficiency of the manufacturer's own inspection program. Should the inspection by the Laboratories' representative disclose features not in compliance with the requirements, the manufacturer is required to either correct such items or remove labels from the product. In many cases, examinations and tests are conducted at the Laboratories on samples of labeled products purchased on the open market and serve as a countercheck on factory inspection work. All such labels (manifests of inspection) include the words "Underwriters' Laboratories, Inc., Inspected," and are obtainable only from Underwriters' Laboratories. Label service includes listing in the published records of Underwriters' Laboratories.

More than 965,000,000 labels were delivered to manufacture-subscribers to the label service during 1957.

A number of Federal Specifications covering material or appliances of classes which are under supervision of Underwriters' Laboratories recognize the Laboratories' label as evidence of compliance with the applicable requirements of such Federal Specifications.

The bidder shall submit to the purchasing agency proof that the material or appliance he proposes to supply under this specification conforms to the standards of the Underwriters' Laboratories as

regards fire and casualty hazards. The label of the Underwriters' Laboratories will be accepted as conforming with this requirement. In lieu of the label, the bidder may submit independent proof satisfactory to the purchasing agency that his material or appliance conforms to the published standard, including methods of test, of Underwriters' Laboratories.

In its work in standardization, the Underwriters' Laboratories has cooperated with other organizations. It has worked with the American Standards Association in the development of American standards relative to building exit code and safety code for mechanical refrigeration; with the National Board of Fire Underwriters in establishing standards for electric wiring and apparatus, industrial control apparatus, rolled threads for screw shells of electric sockets and lamp bases, rotating electrical machinery; and with the Fire Protection Group in establishing ASA specifications for cotton rubber-lined fire hose for public and private fire department use. Many of the Laboratories' standards bear ASA approval. It is also officially represented on many ASA sectional committees.

The Underwriters' Laboratories also cooperates with the American Society for Testing Materials through representation on technical committees dealing with the development of standards and methods of test for gypsum, electrical insulating materials, rubber products, bituminous waterproofing and roofing materials, petroleum products and lubricants, and spread of flame on interior finishes.

**UNITED HOROLOGICAL ASSOCIATION OF AMERICA,
Orville R. Hagans, Executive Secretary, 1901 East Colfax
Avenue, Denver 6, Colorado**

The Association has, as a major objective, the improvement of repair standards in the retail watchmaking industry. It has developed a certification program for professional watchmakers as a step in the completion of their courses at accredited watchmaking schools or at any time that a practicing watchmaker feels qualified to pass the rigorous examination which includes both a written and a practical test. In the practical test the candidate is required to repair a badly damaged watch and regulate it to a mean time adjustment of 2 min a day, and a position adjustment of 20 sec. He is also required to make a balance staff and a balance hole jewel setting to absolute tolerances. All such examinations are taken under supervision.

The Association also contributes to standardization in the industry through the publication of technical bulletins on watchmaking and through the operation of a free horological lending library for its members.

**UNITED STATES COUNCIL OF THE INTERNATIONAL
CHAMBER OF COMMERCE, INC., Michael W. Moynihan,
Director of Public Relations, 103 Park Avenue, New York
17, N.Y.**

The International Chamber of Commerce, with headquarters in Paris and national committees in 38 countries, promotes standardization in most phases of world commerce. These include banking and trading procedures, definitions of trade terms, sizes of pallets

and containers, markings for dangerous goods, extent and validity of distribution statistics, etc. In addition, the Chamber publishes comparison studies of conditions and regulations affecting such matters as advertising and arbitration in various countries. It also issues codes of fair play and recommendations for uniformly high levels of commercial practice. Full information and all publications are available from its United States Council.

UNITED STATES GOLF ASSOCIATION, William Ward Foshay, Counsel, 48 Wall Street, New York 16, N.Y.

Standardization work carried on by this Association is through its Implements and Balls Committee, which has developed standards for golf balls and golf equipment. In its current booklet, "Rules of Golf," this Association's specifications concerning the style and make of clubs, and the size, weight, and velocity of golf balls, are included. These specifications are applicable only to equipment and balls used in connection with tournaments conducted by this Association, or under its rules.

U.S. PHARMACOPOEIA, PHARMACOPOEIA OF THE UNITED STATES OF AMERICA, UNITED STATES PHARMACOPOEIAL CONVENTION, INC., Lloyd C. Miller, Director of Pharmacopoeial Revision, 46 Park Avenue, New York 16, N.Y.

This Convention is a nonprofit corporation which meets every 10 years to reorganize the revision program of the Pharmacopoeia of the United States of America. It is made up mainly of representatives of the medical and pharmacy colleges of the United States, of the State and national medical and pharmaceutical associations, the national trade associations, and the six departments of the Federal Government most concerned with standards for medical preparations. The Convention elects, for 10-year terms, officers, a Board of Trustees, and a Committee of Revision consisting of 60 members, each of whom is qualified in a special branch of medicine, pharmacy, or the allied sciences. The Convention is financed solely through the sale of the Pharmacopoeia. The Committee members receive only modest honoraria for a vast amount of voluntary work.

The sole object of the Convention is to produce at intervals of 5 years a new revision of the Pharmacopoeia by the Committee of Revision serving under the direction of a salaried permanent staff. The revision program includes: (a) Selection of those drugs held in high esteem as representing the soundest practice of medicine; (b) the establishment of standards of strength and purity for the selected drugs; and (c) the provision of tests, assays, and material standards of reference required to demonstrate compliance with the specifications set forth. Supplements of the Pharmacopoeia are provided as required.

The standards given in the Pharmacopoeia are recognized by Congress in the Federal Food, Drug, and Cosmetic Act for the purpose of regulating the quality of drugs moving in interstate commerce and by the State legislatures in corresponding statutes for enforcement by State agencies.

VACUUM CLEANER MANUFACTURERS ASSOCIATION,
C. G. Frantz, Secretary, 2775 South Moreland Boulevard, Cleve-
land 20, Ohio

Standardization work of this Association is carried on from time to time by its Executive Committee. Although this organization does not develop any standards of its own, it does carry on standardization work with respect to certain types of material covering cord and plug for electrical connections, and also with reference to standard sizes and diameters of vacuum cleaner hose. These standards have been accepted by the industry and have been in use a number of years.

Another matter of considerable importance which was developed by the Association deals with a standard method of testing the operating efficiency and performance of vacuum cleaners for comparative tests.

VACUUM WOOD PRESERVERS INSTITUTE, T. P. Wier, Jr.,
President, c/o Wood-Protection Company, 5151 Holmes Road,
Houston 21, Texas

This organization is made up of persons interested and active in the field of wood preservation. The organization is engaged in promoting improvement in preservatives and in processes for their application to wood as well as the standardization of specifications therefor.

VENETIAN AND VERTICAL BLIND ASSOCIATION OF
AMERICA, Minita Westcott, Executive Vice President, 2217
Tribune Tower, Chicago 11, Illinois

The Association has a Standards Committee which prepared the original drafts for the revised edition of Commercial Standard 61 covering Venetian Blinds. This standard covers the minimum requirements for Custom Made Grade A Venetian Blinds of the conventional open-head fascia type and the U-type metal-enclosed head. It is known as CS61-51.

VINYL FABRICS INSTITUTE, Paul F. Johnson, Executive
Secretary, 65 East 55th Street, New York 22, N.Y.

The Institute engages in certain aspects of standardization by cooperating with various Government agencies in the development and revision of Federal Specifications. It assisted in the development of Federal Specification CCC-A-700 for Artificial Leather Upholstery Materials. Other work in the past in this field concerned the development of specifications for gray goods and the preparation and classification of key numbers for use in identifying comparable grades of pyroxylin-coated fabrics.

Cooperation has also been extended to the National Bureau of Standards and the Department of Health, Education, and Welfare in the development of vinyl wall covering qualifications.

WALL PAPER INSTITUTE, Joseph Roby, Secretary, 509 Mad-
ison Avenue, New York 22, N.Y.

Through the Trade Practices and Standards Committee, the Wall Paper Manufacturer's Association, predecessor of this Institute, cooperated with the National Bureau of Standards in the establishment of Commercial Standard CS16-29 covering quality of wall paper.

The Standards Committee of the Institute is charged with the responsibility of determining the need and application of standards for the manufacturers.

WEST COAST LUMBERMEN'S ASSOCIATION, H. V. Simpson, Executive Vice President, 1410 SW. Morrison, Portland 5, Oregon

This Association, through its independent branch, the West Coast Bureau of Lumber Grades and Inspection, has adopted and revised its standard grading and dressing rules for Douglas fir, West Coast hemlock, Western red cedar, Sitka spruce, and White fir. These rules are in conformity with American lumber standards which are set forth in the current edition of Simplified Practice Recommendation 16-53, promulgated and published by the National Bureau of Standards. The Bureau maintains an Executive Committee, which cooperates with similar committees of other lumber manufacturing associations, including the American Lumber Standards Committee, relative to the adoption and maintenance of American Lumber Standards.

This Association has adopted a grade and trademark insignia which is officially registered by the Association and may only be applied under individual mill licenses or by inspectors or supervisors of the West Coast Bureau of Lumber Grades and Inspection. Graders who use the official stamp are subject to examination for grading efficiency prior to license being issued. Following the issue of the license, their work is subject to regular unannounced checkup by the Bureau's supervisors of grades to insure efficient and accurate application of the official stamps. The license may be revoked unless the efficiency is maintained at 95 percent as measured by the Bureau's standards of grade and official review by grading supervisors. The official trade and grademarks used by this Bureau are for the purpose of identifying the quality of Douglas fir, West Coast hemlock, Western red cedar, Sitka spruce, and White fir. These marks identify West Coast lumber as the grades described in the Association's standard grading and dressing rules. In the use of the Association's grade-mark trademark, a manufacturer is identified by a firm name or trademark or by a number assigned to him by the Bureau. These marks thus identify the lumber bearing them as of a standard West Coast grade.

WESTERN PINE ASSOCIATION, S. V. Fullaway, Jr., Secretary-Manager, Yeon Building, Portland, Oregon

This Association has adopted standard grading rules for Ponderosa pine, sugar pine, Idaho white pine, larch, Douglas-fir, White fir, Engelmann spruce, incense cedar, and red cedar lumber. These grading rules are in conformity with the American lumber standards which are set forth in the current edition of Simplified Practice Recommendation R16, promulgated and published by the National Bureau of Standards. In the development of American lumber standards, this Association took an active part in cooperating with the Central Committee on Lumber Standards, under whose auspices the lumber standards were developed.

In order that the manufacturers in the Western Pine Region may be in a position to meet such requirements from the buyers and users

of their products, this organization has formulated official grade, trade, and species marks. The symbol of the Association indicates that a piece bearing this mark is graded under the standard grading rules of the Association. It further signifies that the stock is manufactured to standard Association size, and graded under Association supervision. Under special arrangements with the Association stock shipped by a nonmember mill may bear the Association mark. As to mill identification, this information is given by use of the firm name, brand, or an assigned number. The grade is shown by the standard grade name referred to in the Association's standard grading rules. The kind of wood is disclosed by species mark or common name. These marks are protected and can be placed on lumber only by a Western Pine Association inspector or by an operator whose grading practices are given regular and periodic inspection by the Association's Bureau of Grades, under whose jurisdiction the marks are used. When a lumber inspector's certificate issued by the Association is required on a shipment of lumber and the official grademarks are not used, the stock is identified by an imprint of the Association mark and the number of the shipping mill.

WINE INSTITUTE, Don W. McColly, President, 717 Market Street, San Francisco 3, California

This Institute does not of itself sponsor any standards or specifications for the products of its members, but it does devote efforts in standardization primarily towards advocating the adoption of wine and brandy quality standards as established by Federal and State agencies. This Institute's committees make studies and recommendations in connection with standards of identity and quality for wine and brandy. These recommendations are then placed before official agencies for consideration in connection with the establishment of new standards or the revision of existing standards.

III. Government Agencies

The following Government agencies develop and issue a majority of the commodity standards and specifications in the general area of natural and manufactured products, together with other types of standardization such as standard methods, techniques, nomenclature, tests, evaluations, etc.

There are, of course, many other Government agencies whose daily pursuits involve standardization to an important degree. Since their work is more highly specialized, and directed to a narrower audience, such agencies were not included.

COMMERCE, DEPARTMENT OF, OFFICE OF TECHNICAL SERVICES, COMMODITY STANDARDS DIVISION, WASHINGTON 25, D.C.

Two series of standards are issued by the U.S. Department of Commerce through the Commodity Standards Division of the Office of Technical Services. Although referred to collectively as commodity standards, they are published as "Commercial Standards" and "Simplified Practice Recommendations." They are established as a service to business, for general use by the public, and not for purposes of Government regulation or control.

Simplified Practice Recommendations were first undertaken in 1921 under the direction of Hon. Herbert Hoover when he was Secretary of Commerce. A program of aid to business for general economic improvement was being actively pursued at that time. These Recommendations set forth the sizes, kinds, and types of specific manufactured articles that are in greater demand, as one means of reducing the cost of production and distribution, thereby gaining other needed economic benefits for the community.

Commercial Standards were first undertaken in 1928 to establish definite quality levels for certain commercial products so as to make them more acceptable to the trade, and to promote sound commercial practices in their manufacture, marketing, and application.

Commodity Standards are established in cooperation with all segments of the industries concerned, including manufacturers, distributors, and users, as well as others whose interests may be involved, such as testing laboratories, health officials, trade associations, and technical organizations. Every commodity standard is undertaken only when specifically requested by a responsible organization or group in the industry, and they are not issued until formally accepted by individual firms in all branches of the industry. Thus a Commodity Standard does not become effective until a clear record of industry endorsement is established. The names of the acceptors are published in each standard.

Of particular significance is the distinctly voluntary nature of commodity standards. The initial request, the acceptance, and the application of the standards when established, are matters of free choice by the parties concerned. They desire certain mutual benefits which the standard provides and utilize it to obtain such benefits.

Experience has shown that certain steps in the preparation of commodity standards are essential, and these form the basis for the officially established Commodity Standards Procedures. Since the success of a standard depends on broad industry acceptance, rigid adherence to the procedures is not demanded. They are observed rather as dependable guides by which the desired results are obtained in an efficient, orderly manner, so as to avoid delays, misunderstanding, and ultimate failure when the standard is presented to the industry for acceptance. The basic procedure is described briefly in subsequent paragraphs.

Revisions of Commodity Standards are prepared in the same manner as a new standard, except that proposals for revision are initially referred to a Standing Committee. The Committee is formed when the standard is first established, and its limited membership represents the principal branches of the industry, including the proponents. The Committee considers the proposed changes and recommends appropriate action. A suitable revision is then submitted to the trade. It is not established until adequately supported by written acceptances from the industry. However, when a revision is needed, it can be issued promptly with the cooperation of the acceptors.

Commercial Standards.—Commercial Standards have been established by the method described above for more than 200 products. Among them are items of apparel, building materials, plastics, and textiles, to name but a few. Each standard includes requirements for materials, construction, dimensions, tolerances, testing, grading, and marking, or other details in accordance with the desired objectives.

In general, however, the central purpose is to establish definite quality levels according to the principal demands of the trade, and to provide for close adherence to the qualities thus defined.

Commercial Standards are designed to accomplish their objectives without Government controls. Basically, a Commercial Standard is not enforceable until it is voluntarily included in a formal agreement between the interested parties. Most often a sales contract is employed so that the standard is enforceable by the buyer or seller under the contract. A simple and effective method for assuring compliance is certification and labeling. A label or mark is voluntarily placed on the product by the producer which clearly identifies it as one that meets the standard. Grademarks and labels controlled by a trade organization are also utilized in conjunction with Commercial Standards. In some cases they are supported by commercial inspection and testing programs. Such methods have been particularly successful.

Simplified Practice Recommendations.—Surveys of economic conditions made shortly after World War I revealed much waste in certain industries due to the great variety of manufactured products on its inventories. Many types and sizes could not be justified from a sound economic standpoint. In many cases approximately 80 percent of the total business of the industry was being conducted with only about 20 percent of the varieties offered. Thus, a majority of the varieties constituted an unnecessary waste of materials, production facilities, and operating capital, needlessly increasing the cost to the consumer. The results of the surveys were made available and the industries concerned were shown the advantages to be gained by concentrating production on the varieties in greatest demand.

Simplified practice, therefore, is not a method of rigid standardization. In fact, standardization in a direct sense is not necessarily involved at all. The process of reducing excess variety, being essentially a matter of selection, is termed "simplification." Also, since it is advised rather than established by regulation, lists of items selected for concentrated production are termed "Simplified Practice Recommendations." However, they may be considered standards to the extent that they are usable as standard stock lists. The recommended sizes and types are those regularly produced for distributors' stocks, other varieties being generally available only from the manufacturers.

These "recommendations" are prepared and issued by substantially the same method as Commercial Standards, varying only in minor details according to their specific purposes. In some cases, simplification is combined with a Commercial Standard. They are initiated only upon request from industry, and are not established until accepted in writing by representative organizations in all branches of the industry. More than 250 products are included in the present list of Simplified Practice Recommendations.

Procedure.—There are five major steps in establishing Commodity Standards. Salient features of each are as follows:

1. *Request.*—The request is simply a letter which serves to record the initiation of the standard by the industry. It definitely requests the cooperation of the Commodity Standards Division in establishing the desired standard. There may be prior investigations into its feasibility, and assistance may be given by the Division in securing needed information.

2. *Draft*.—The requesting industry group, or proponent, furnishes a draft of the standard, or provides sufficient data for the preparation of a draft by the Commodity Standards Division. An industry committee may be formed by the proponents to do this specific job. When the draft is received by the Division, it is assigned to a project manager, who edits it and corrects any technical or editorial deficiencies as far as practicable. It may be referred to other Government agencies for further criticism, such as the National Bureau of Standards and the Federal Trade Commission.

3. *Adjustment*.—The draft is circulated by the Division to leading manufacturers, distributors, users, and technicians for their views and recommendations. Their comments are reviewed with the proponent group to determine the most satisfactory method of adjustment. If need be, conferences of various interested groups are held by the project manager, and the draft is revised and resubmitted for further consideration, the cycle being repeated until all proposals have been resolved. The draft is then adjusted to secure widest concurrence.

4. *Acceptance*.—The adjusted draft is circulated by the Division to all segments of the trade, including manufacturers, distributors, users, and related interests, for voluntary written acceptance. It is also announced in appropriate trade publications. Acceptance is given as a signed endorsement of the standard, but does not constitute a rigid agreement to adopt it. The acceptance shows, however, a definite intention to utilize the standard, and to obtain a copy when issued. When the response from acceptors includes a substantial majority of the primary interests in the industry, in addition to general concurrence in the standard without important opposition, satisfactory industry support is considered to have been achieved. An effective date is determined, and the establishment of the standard is officially announced to the trade by the Division.

5. *Publication*.—The standard thus established is printed under the direction of the Division and is issued as a Department of Commerce publication. Copies are furnished each acceptor and are sent to numerous cooperating organizations. A supply of copies is maintained by the Superintendent of Documents for sale to the public at low cost as long as there is a demand for them. Copies are also available from the Division in limited numbers upon request.

DEFENSE, DEPARTMENT OF, ARMED FORCES SUPPLY SUPPORT CENTER, STANDARDIZATION DIVISION, WASHINGTON 25, D.C.

This is the unit of the Department of Defense which has the overall responsibility for its standardization program and activities.

Prior to 1947, each Service and Bureau in the old War and Navy Departments undertook standardization unilaterally to meet their own individual needs, with attempts only in a few instances to coordinate with other Services or Bureaus. In some cases this policy resulted in duplication and it supported the contention that closer cooperation and coordination between the several segments of the Armed Forces was desirable. To further support this contention it was shown that there were many instances where specifications and standards of various units need not be different, one from the other, and that to a very substantial degree the level of standards and stand-

ardization could be expected to be identical. Accordingly, a military standards agency was erected and operated at a high level so as to be in the proper position organizationally to control and coordinate all other standardization activities of the many military services.

Prior to this action, the War Department had its own series of specifications, the U.S. Army series. Moreover, Ordnance, Quartermaster, Engineers, etc., also issued their own tentative specifications; the Navy Department had its own specifications, as did some of its Bureaus. In all, there were a dozen or more separate series of specifications in the entire Military Establishment. This led not only to duplication but to confusion among contractors and others who were seeking to supply defense items.

At this writing, the Standardization Division is established as a Defense-wide function and the importance and necessity for a substantial centralized standardization policy has become widely acknowledged.

One of the first major actions concluded by this policy was to urge the abolition of so many of the separate series of specifications and to harmonize, to the greatest degree possible, the standardization activities of all military agencies. This has been achieved with a phenomenal degree of success. In place of the early Navy specifications and the original Army specifications, there has been issued approximately 20,000 Military (MIL) Specifications, and the earlier Army and Navy series were canceled. Since then, the development and revision of Military Specifications has been proceeding at an accelerated rate. This is of inestimable importance should total mobilization become necessary.

The development of standards has also been pursued with diligence and dispatch. Military Standards occupy a very important part of the overall military standardization program. There are at present approximately 3,000 such standards. Many of these standards have been developed in many different technologic areas. They represent one of the greatest forces in the interest of unification of operation. In some respects, this work is builded upon documented activities of the professional societies, the handbooks, and tradition. In many respects, however, it is original, creative, and a necessary contribution to the sciences and to the welfare of our country. The fact that it is of Military origin does not react to control or regulate manufacturing practices or industrial creative genius. However, it does have an elevating and enlightening effect upon industry and it is therefore felt by the consumer for his good.

The products of Military standardization represent the largest accomplishments by far of any other standardization activity in the world,—governmental or nongovernmental. They are widely copied, and extensively used. While their primary purpose is in the defense of the United States of America, they are of equal value to the daily pursuits and well-being of her people.

GENERAL SERVICES ADMINISTRATION, FEDERAL SUPPLY SERVICE, STANDARDIZATION DIVISION, W. S. MacLeod, Director, Washington 25, D.C.

In 1910 Congress directed that a General Supply Committee, consisting of representatives of the Federal departments, be formed, and

indefinite quantity term contracts entered into, for items in common use against which purchase orders might be placed by the departments for direct delivery. Substantial savings through standardizing requirements and quantity prices resulted.

Immediately following World War I, Boards and Committees were established under the direction of the Bureau of the Budget to coordinate traffic management, purchase specifications, surplus disposal, commodity cataloging, and the standardization of contract forms. Each agency, however, continued to perform its own supply operations, except for participation on the General Supply Committee for term contracting.

In 1927, the construction of a Federal warehouse in the District of Columbia was authorized by Congress to enable the consolidated purchase of supplies in continuous and recurring use for distribution to Federal agencies as required.

In 1933, the first central supply organization for the Federal Government was established as the Procurement Division of the Treasury Department. It was authorized to determine policies and methods of Government-wide procurement.

With the passage of the Federal Property and Administrative Services Act of 1949, known as Public Law 152, 81st Congress, there came into being on July 1, 1949, for the first time in the organization of the Federal Government, a general housekeeping service. The agency thus established by the Congress, known as the General Services Administration, is made responsible under the law "to provide for the Government an economical and efficient system for: (a) The procurement and supply of personal property and nonpersonal services, including related functions such as contracting, inspection, storage, issue, specifications, standards, property identification and classification, transportation, and traffic management, management of public utility services, repairing and converting, establishment of inventory levels, establishment of forms and procedures, and representation before Federal and State regulatory bodies; (b) the utilization of available property; (c) the disposal of surplus property; and (d) records management."

GSA Operating Services.—The General Services Administration consists of five operating services: Defense Materials Service, Federal Supply Service, National Archives and Records Service, Public Building Service, and Transportation and Public Utilities Service. Each of these is headed by a Commissioner with the exception of the National Archives and Records Service, which is headed by the Archivist of the United States.

GSA Standardization Activities.—The standardization activities of the General Services Administration apply not only to real and personal property but also extend into certain aspects of standardization of management practices and procedures. Recognizing this, the act gives the Administrator authority to "Establish and maintain a uniform Federal Supply Catalog System and prescribe standardized forms and procedures . . . and standard purchase specifications." Relating this to the five operating services, it follows that the basic elements for design and the types of materials to be used follow standardized practices for utilizing and operating buildings, insofar as these involve Federal buildings and public works under GSA's program. They are also coordinated with standardized methods and

procedures for handling records. This coordination contributes much to overall standardization and the attainment of one of the principal objectives of the act.

The Standardization Division of the Federal Supply Service.—The standardization program for materials, supplies, and equipment purchased and used by the Federal Government is centralized in the Standardization Division of the Federal Supply Service. This Division has two operating Branches covering specifications and standards, and cataloging.

The objective of the General Services Administration is to provide the essential commodity standards operations necessary to support all supply and property management activities under the act. These operations include the planning, directing, and coordinating of all programs of the Administration on: (a) The development and maintenance of Federal specifications and standards and General Services Administration specifications; (b) the standardization of commodities purchased and used by the Government, and coordination of governmental standardization activities; (c) the development and maintenance of the Federal Catalog System; (d) the technical aspects of the Federal Supply Service personnel safety and fire prevention programs; and (e) the coordination of participation by GSA technical personnel in activities of nationally recognized technical societies and standardizing bodies.

High on the list of progressive steps in commodity standardization is the recently issued General Services Administration regulation on Federal Specifications and Standards. This regulation fills a long-time need for a Government-wide statement of policies and procedures for the development and use of specifications and standards covering items of common use in the Federal Government.

Specifications and standards must reflect the best technical knowledge and experience of Government and industry, be responsive to technological advances, must provide an efficient and economical medium for filling the procurement needs of Federal agencies, and make it easier for manufacturers to fill Government orders from their normal commercial production. Specifically included in the GSA regulation are the policies and procedures to be followed by all Federal agencies in the preparation of specifications and standards to meet these high objectives.

Federal Specifications and Federal Standards.—The Federal Specifications Board and its 77 subsidiary Technical Committees were abolished in 1952. The Board's work was recognized as competent and authoritative. However, a need was felt for greater speed and flexibility in the preparation of new and revised specifications in order to keep ahead of a fast-moving supply machine. To solve this need, the "assigned agency" method of developing new Federal Specifications and revising and amending existing ones was adopted. This method provides the facility whereby, under GSA's leadership, the wealth of experience and ability of technical personnel of Federal agencies and industries are utilized in maximum degree. Under the assigned agency method, Federal agencies are given responsibility for development of specifications and standards projects for which they have specialized knowledge. As agencies accept assignments, specifications and standards projects are carefully coordinated to meet the most pressing needs of agencies.

Also, Interim Federal Specifications were introduced in such a way as to provide urgently needed temporary specifications for immediate use. This change has resulted in doubling the annual output of new Federal Specifications. It has accelerated the job of keeping existing specifications up to date. To accomplish GSA's standardization objectives, provision had to be made to limit procurements to standard items. Federal Standards do this job. They are of three types—(a) Supply Item Limitation Standards: The limitation standard is most significant. The 81 now available limit procurements to those qualities, types, and sizes of supply items which most economically and effectively satisfy the needs of using agencies. For example, the Standard on Paper Towels (No. 7) reduced the varieties of towels previously bought from 18 to 7, simultaneous standardizing qualities and packs. (b) Test Method Standards: There are more than a dozen of these documents. They appear as large compilations of widely coordinated test methods covering as many different product or commodity areas. In all, there are more than 1,200 separate test methods each of which is "standard" for the testing of Federal purchases, and each is widely accepted. For instance, Federal Test Method Standard No. 791, Lubricants, Liquid Fuels and Related Products, brings together the whole category of Test Methods in the field which it covers. It adopts to a great extent the ASTM test methods. The looseleaf arrangement of the individual test methods permits ready revision. This standard reflects agreement and uniformity between Government, suppliers, and industrial users of standard test methods. (c) Engineering, Process and Procedural Standards: The Engineering and Process type of Standard is typified by No. 245 which provides uniform dimensions for aluminum and magnesium wrought products for use throughout the Government. Procedural Standard No. 5 provides the necessary instructions for preparation of Federal item descriptions so that supply items which will enter a supply system will be cataloged before the item actually enters the system.

Promulgation of Federal Specifications and Standards by GSA.—Federal Specifications and Standards are promulgated by GSA. Before approval and promulgation, GSA reviews them to assure that the comments of Federal agencies and suppliers have been properly incorporated or reconciled. In some instances, it is necessary for the assigned agency as discussed above, or GSA to hold conferences with agencies and industry in further development before the specification or standard is ready for promulgation for mandatory use.

Although the responsibility for developing Federal and Interim Federal Specifications and Standards is in some cases assigned to Federal agencies with their consent, GSA has sole promulgation authority for them.

The recommendations of Federal agencies and of industry on the need for amending or revising specifications are most helpful to GSA in doing this job. In this connection, suppliers are encouraged to recommend substitute items offering the same or better service at lower cost than those covered in existing specifications. Consideration can then be given specification revisions for future invitations.

Use of Industry Standards in Federal Specifications and Standards.—GSA uses recognized industry and technical society

standards in formulating Federal Specifications and Standards. As an example, coordination with industry and Government resulted in the adoption of eight industrial methods of testing glassware. The industrial methods are referenced in a Federal test-method standard, rather than being reprinted. In the field of metallurgy 25 standard methods of testing metals were combined into one Federal standard for the first time. Twelve of the tests are newly developed in the field of metallurgy.

Use of Federal Standards by Industry.—The American Standards Association has adopted its first Federal Standard: X-Ray Tube Focal Spot, Method of Measurement. Prior to the establishment of this standard, there was no commonly accepted method of measuring the performance of diagnostic X-ray equipment. Another standard in the X-ray field under consideration by the ASA is shockproof cable terminal and receptacles for use on X-ray equipment. These universal connectors eliminate the need for individually designed connectors for each make of machine. State governments also have shown a vital interest in supply standardization by adopting in whole or in part more than 1,300 Federal specifications that were recommended for use by the National Association of State Purchasing Officials.

Federal Cataloging Program.—Public Law 152 recognizes and makes statutory the requirement that the Administrator establish and maintain a uniform Federal Catalog System. The statute stipulates that such a uniform commodity classification, the uniform stock numbers, and item identification descriptions are to be used in all applicable supply activities of Federal agencies. The military departments have completed the stock numbering and identification of all military supply items. The military departments will use the Federal Catalog System exclusively in all their supply activities after December 1958.

GSA has cataloged all of the items in Stores Stocks and Federal Supply Schedules which it procures for agencies. The items which civil agencies procure directly from suppliers are being progressively brought into the Federal Catalog System. When completed, this system will eliminate the confusion of many different systems of stock numbering identifying civil agency items; thus providing a single basis upon which the functions of requisitioning, procurement, storage, issue, and utilization can be handled without the confusion of differing numbers, differing item names, and varying description characteristics.

Too much emphasis cannot be placed upon the significance of the Federal Catalog program. Every phase of supply administration requires the facility of a uniform identity for each individual supply item. Thus, requirements planning, requisitioning, procurement, warehousing, stores issue, utilization, and disposal sales are simplified, expedited, and effectively handled.

The Federal Supply classification makes possible the organization of supply information, reports, programing, and financial and inventory control on a comparable basis not heretofore possible. This, combined with the standardization identification number and description, enables the buyer and seller to speak the same language in all dealings, from procurement to utilization and disposal.

The full benefits of standardization cannot be obtained without first

finding out what individual line items of supply are being used by each Federal agency. When all have been uniformly identified under the Federal Catalog System, standardization can then go the whole distance of eliminating the unnecessary and wasteful items from the supply system. It will also provide the means of keeping current with the new or revised standards required by technological changes.

The Quality Control Division of the Federal Supply Service, Inspection and Quality Assurance.—It has long been the responsibility of the contractor to determine that materials and equipment produced for the Government are manufactured, fabricated, and assembled to meet all contract and specification requirements. It is the manufacturer's responsibility to build quality into the product and to conduct inspection and tests to screen out defectives and determine beyond doubt that the material presented for inspection is acceptable.

Responsibility rests upon the contractors and producing activities for controlling product quality and for offering to the Government for acceptance only those items considered by them to conform to contractual requirements.

Quality Assurance Policy.—Responsibility rests upon the Government for determining that contractual requirements have been complied with prior to the acceptance of the product.

Determination of conformance of the product to contract requirements shall be made on the basis of objective evidence of quality and quantity. The Government Inspector shall make optimum use of quality data generated by contractors in determining the acceptability of supplies. To the extent that the contractor quality data are available and reliable, as determined by the Government Inspector, such data shall be used to adjust the amount of Government inspection of products for acceptance purposes to a minimum consistent with proper assurance that the supplies accepted conform to the quality requirements established by the procurement documents.

Under this policy, reputable and efficient contractors who consistently produce fully satisfactory material or equipment are rewarded by minimizing the amount of Government inspection.

Several levels of inspection application are available under the plan to fully protect the Government against marginal and submarginal producers. The plan serves as an incentive to produce satisfactory material, meanwhile giving the contractor an opportunity to reduce material rehandling, eliminate duplicate company-Government inspection stations through the plant checking identical characteristics, create and maintain greater quality appreciation consciousness on the part of plant production and quality control personnel, and generally contribute to the consistent output of quality products at the lowest cost.

Generally, there are two basic types, and a third type of Government inspection procedure which combines the two basic types by various means. They are: Type A—acceptance is based on findings of the Government Inspector, with no important dependence or use of contractor's inspection system; type B—acceptance is primarily based on surveillance of the contractor's inspection system and records, supplemented by necessary product examination. The method used to determine the success or failure of the contractor's system must be completely satisfactory to the Government; type C—this type of inspection combines types A and B in varying degrees and methods,

with some reliance on contractor inspection but with a reduced-type Government inspection of the material. This type of inspection is generally on a limited or selective basis.

The Government Inspector.—The Government Inspector, more than any other Government representative, is the constant link between the contractor and all of the Government activities with which he must deal during the life of his contract. The Inspector's competency, attitude, and work performance largely determine the relationship between the Government and the contractor and his employee. It may even determine whether the contractor will accept a Government contract or continue to be a Government supplier.

Statistical Quality Control.—Statistical quality control, now generally referred to as quality control, is a proved system for maintaining high standards of manufacturing quality, at minimum cost. Quality control is a major contribution to manufacturing efficiency. It effects substantial savings in cost of production by preventing waste, eliminating rework, and reducing the amount of necessary inspection. It gives assurance of a high, uniform quality of product leaving the plant. By providing a common measure of product quality, it greatly facilitates understanding between producer and consumer, and it helps to insure acceptance of a quality-controlled product. Altogether, quality control is becoming recognized by both Government and industry as the hallmark of efficient management, and it has become standard operating procedure in the acceptance inspection programs of the Government.

Statistical quality control is easy to apply. Instructions for routine application of its methods in process control and in acceptance or evaluation inspection can be followed without the need for extensive training or higher mathematics; nor is additional plant equipment usually required. The same men, the same equipment, and the same plants in both Government and private industry have demonstrated, time and again, that more products of higher quality can be obtained at lower costs by the application of "quality control." Greater uniformity of products can be obtained, quality standards improved, production costs better controlled, and quality assurance obtained more easily by the procuring and inspecting activities, with full utilization of effective quality control principles and methods.

To the uninitiated, SQC may appear difficult only because the mathematical principles upon which it rests are not immediately obvious. Once the commonsense of these simple principles is appreciated, this new approach—a new way of thinking—for inspection, process control, test evaluation, and management organization finds widespread application. This new approach provides a scientific foundation for the correction of many trouble areas, long routinized and neglected.

JOINT COMMITTEE ON PRINTING OF THE CONGRESS OF THE UNITED STATES, Hon. Carl Hayden, U.S. Senate, Chairman, Washington 25, D.C.

The Joint Committee on Printing (JCP) has, among other functions, the responsibility for establishing standards and specifications for papers used in public printing and binding. For this purpose the JCP has established its Committee on Paper Specifications, whose staff director is Mr. James L. Harrison, and whose members are

representatives of the Government Printing Office; the General Services Administration; and the Commerce, Navy, and Post Office Departments.

The JCP has published specifications for 84 varieties of printing papers and boards. Testing standards for 25 test methods used in these specifications have also been developed. Six color standards for colored writing papers have been established, and basic packaging and packing standards have been adopted. These requirements are all found in the printed document, "Government Paper Specification Standards," of which the first edition was issued on July 1, 1959. These standards are mandatory upon the U.S. Government, unless otherwise authorized by the JCP. Federal Specifications for the types of paper covered by the JCP Standards are rapidly being revised to conform thereto.

NATIONAL CONFERENCE ON WEIGHTS AND MEASURES, W. S. Bussey, Secretary, National Bureau of Standards, U.S. Department of Commerce, Washington 25, D.C.

The Conference, sponsored by the National Bureau of Standards, is composed primarily of State, county, and city weights and measures officials, who constitute the "active" membership. It includes also, as "advisory" members, representatives of the Federal Government who are concerned in any way with regulatory weights and measures officers or their official activities, or who are interested in the objectives and activities of the Conference. A third membership category, "associate members," comprises representatives of manufacturers of commercial weighing and measuring devices, business, industry, railroad, and industrial weighing and scale departments, consumers, and others interested in the objectives and work of the Conference.

The Conference meets annually to consider various problems arising in connection with weights and measures administration; to promote efficiency and uniformity in laws, rules, specifications, tolerances, and methods of supervision and test; and to coordinate activities of State and local weights and measures officials.

In the development of codes and specifications, tolerances, and regulations for commercial weighing and measuring devices, the National Bureau of Standards cooperates closely with the Conference Committee on Specifications and Tolerances. Nineteen codes have been adopted by the Conference to date. As necessity arises, these codes are modified, and new codes are formulated, thus keeping the entire group in line with changing conditions of the trade and with the developments of the equipment industry.

The Conference codes are recommended by the National Bureau of Standards for adoption by the States, and these, as well as the reports of the proceedings of each annual meeting of the Conference, are published by the Bureau, the former in the handbook series and the latter in the miscellaneous series.

The Conference has adopted model State laws on weights and measures, and from time to time endorses standard methods of test for commercial apparatus.

The Conference has been effective in bringing about a gratifying degree of uniformity and mutual cooperation among the States in the matter of weights and measures supervision.

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