

Insect Wire Screening

U. S. DEPARTMENT OF COMMERCE



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Charles Sawyer, Secretary

NATIONAL BUREAU OF STANDARDS

E. U. Condon, Director



INSECT WIRE SCREENING

A Recorded Voluntary Standard of the Trade

COMMODITY STANDARDS

Simplified Practice Recommendations and Commercial Standards are developed by manufacturers, distributors, and users in cooperation with the Commodity Standards Division of the National Bureau of Standards. The purpose of Simplified Practice Recommendations is to eliminate avoidable waste through the establishment of standards of practice for stock sizes and varieties of specific commodities that currently are in general production and demand. The purpose of Commercial Standards is to establish standard methods of test, rating, certification, and labeling of commodities, and to provide uniform bases for fair competition.

The adoption and use of a Simplified Practice Recommendation or Commercial Standard is voluntary. However, when reference to a Commercial Standard is made in contracts, labels, invoices, or advertising literature, the provisions of the standard are enforceable through usual legal channels as a part of the sales contract.

A Simplified Practice Recommendation or Commercial Standard originates with the proponent industry. The sponsors may be manufacturers, distributors, or users of the specific product. One of these three elements of industry submits to the Commodity Standards Division the necessary data to be used as the basis for developing a standard of practice. The Division, by means of assembled conferences or letter referenda, or both, assists the sponsor group in arriving at a tentative standard of practice and thereafter refers it to the other elements of the same industry for approval or for constructive criticism that will be helpful in making any necessary adjustments. The regular procedure of the Division assures continuous servicing of each effective Simplified Practice Recommendation and Commercial Standard, through review and revision, whenever, in the opinion of the industry, changing conditions warrant such action. Simplified Practice Recommendations and Commercial Standards are printed and made available by the Department of Commerce, through the Government Printing Office.

COMMERCIAL STANDARD 138-49

for

INSECT WIRE SCREENING

(Second Edition)

[Effective December 28, 1949]

1. PURPOSE

1.1 The purpose of this commercial standard is to provide a nationally recognized standard of quality for insect wire screening, and to promote fair marketing practices and a better understanding between manufacturers, distributors, and users of insect wire screening. It will also assist ultimate users in determining what sizes and types of insect wire screening are standard with the industry.

2. SCOPE

2.1 This standard gives the nomenclature, definitions, and general requirements for commercial standard insect wire screening designed and woven primarily for installation in or on any dwelling, building, or structure, for the purpose of preventing the ingress of flies, mosquitoes, or other insects. A recommended form for guaranteeing compliance with this standard is included.

3. DEFINITIONS

3.1 *Insect wire screening.*— 16×16 , 18×14 , and 18×18 mesh woven wire screening (carbon steel, commercial bronze, and aluminum), for protection against mosquitoes as well as flies and larger insects. (See par. 5.1.)

3.2 *Galvanized steel wire screening.*— 16×16 , 18×14 , and 18×18 mesh carbon steel insect wire screening for protection against mosquitoes as well as flies and larger insects. (See par. 5.1.) The metal used for the coating shall be zinc of at least 98 percent purity, and the thickness (by weight) of the zinc coating shall be equivalent to at least 5 percent of the weight of the bare steel wire used in weaving the screening.

3.3 *Bronze screening.*— 16×16 , 18×14 , and 18×18 mesh commercial bronze insect wire screening for protection against mosquitoes as well as flies and larger insects; woven from wire containing 89 to 91 percent of copper and the remainder zinc; lead or iron occurring as impurities shall not exceed 0.05 percent each. (See par. 5.1.)

3.4 *Aluminum screening.*— 16×16 , 18×14 , and 18×18 mesh aluminum insect wire screening for protection against mosquitoes as well as flies and larger insects; woven from aluminum alloy wire equal to, or

demonstrably better, for the purpose, than what is known in the trade as 56S-H392 clad aluminum alloy wire having a minimum tensile strength of 50,000 pounds per square inch.

3.5 *Mesh*.—Mesh is the width of one opening plus the thickness of one wire; alternatively considered as being the distance from the center of one wire to the center of the next adjacent wire. The technical designation of the mesh count of insect wire screening is the number of meshes per linear inch, counted in the direction of both the warp and the filler wires. When used as a common designation of the “mesh size” of insect wire screening, the word “mesh” is generically accepted as meaning the number of open spaces per linear inch in both warp and filler directions.

4. MATERIAL AND WORKMANSHIP

4.1 All standard wire screening shall be made of high-grade material and with good workmanship. It shall be free from any defects that might affect its serviceability or appearance. Well-made splices not over 1 inch long and showing no tails are permissible at any point of any individual wire, provided, however, that the number of splices shall not exceed 30 in any stock roll nor two splices in any 1 square foot of finished screening.

5. GENERAL SPECIFICATIONS

5.1 *Mesh and wire size*.—The mesh counts, sizes and kinds of wire, and types or character of finishes for standard insect wire screening shall be as shown in table 1.

TABLE 1.—*Standard insect wire screening*

Metal	Mesh			Diameter of wire	Finish
Steel.....	16×16	18×14	18×18	In. 0.011	Galvanized.
Commercial bronze.....	16×16	18×14	18×18	.011	Bright or antique (dark).
Aluminum.....	16×16	18×14	18×18	.013	Natural or dark.

5.2 *Widths*.—The stock widths of all types of standard insect wire screening shall be 24, 26, 28, 30, 32, 36, 42, and 48 inches.

5.2.1 Widths other than those listed in paragraph 5.2, when made to special order, may be labeled “standard” provided they conform with all requirements for mesh size, wire size, and kind of metal, as elsewhere set forth in this commercial standard for insect wire screening.

5.3 *Roll length*.—All standard stock rolls of insect wire screening shall be 100 linear feet in length; shall contain not more than two pieces per roll, and no piece shall be less than 10 linear feet in length.

5.4 *Mesh count*.—Accuracy of mesh count in the direction of the warp or filler wires shall be determined by counting the mesh openings for any interval of 1 continuous linear foot and dividing the result by 12.

5.5 *Wire diameter.*

5.5.1 Accuracy of the wire diameter of steel insect wire screening shall be determined by computing the average of the measured diameter of not less than 10 warp wires together with the same number of filler wires, taken at random from the finished screening, but with all coating or surface finish (if any) removed.

5.5.2. In commercial bronze and aluminum insect wire screening the same diameter of wire shall be used for both the warp and the filler, and accuracy of the wire diameter shall be determined by computing separately the average measured diameter of not less than 10 warp wires and of the same number of filler wires taken at random from the finished screening.

5.5.3 For standard galvanized insect wire screening a size of wire may be used for the warp that is different from the size employed for the filler. Such variations in size, however, shall not be excessive, and in all cases the average diameter of warp and filler wires for galvanized steel insect wire screening shall be 0.011 inch. For standard commercial bronze and aluminum insect wire screening, the same wire diameter shall be used for both the warp and the filler—0.011 inch for bronze and 0.013 inch for aluminum.

5.6 *Selvage.*—There shall be one or more wires in both selvage edges of all standard insect wire screening.

5.7 *Tolerances.*—Permissible variations shall be:

(a) For wire diameters: 0.0005 inch, plus or minus.

(b) For mesh count:

Warp, one-quarter mesh per linear inch, plus or minus.

Filler, one-half mesh per linear inch, plus or minus.

(c) For width: plus or minus $\frac{1}{8}$ inch.

(d) For length: minus 2 inches.

6. PACKAGING

6.1 Unless otherwise specified, standard insect wire screening shall be enclosed in such standard commercial containers or wrappings as will insure their acceptance by common or other carriers for safe transportation to the ultimate point of delivery, at the lowest applicable rate.

7. LABELING

7.1 The mesh count, size, kind and finish of wire, the length and width of the screening enclosed shall be shown in a conspicuous place, preferably by means of a printed label, on the outside wrapping or covering of each roll of standard insect wire screening.

8. GUARANTEE

8.1 In order to assure the purchaser that he is receiving insect wire screening that complies with the requirements of this standard, it is recommended that the label on each roll carry the following guarantee:

The manufacturer declares that this insect wire screening complies with all requirements of Commercial Standard CS138-49, as developed by the trade under the procedure of the National Bureau of Standards and issued by the United States Department of Commerce.

9. EFFECTIVE DATE

9.1 Having been passed through the regular procedure of the Commodity Standards Division, and approved by the acceptors hereinafter listed, this commercial standard was issued by the United States Department of Commerce, effective from December 28, 1949.

Edwin W. Ely,
Chief, Commodity Standards Division.

10. HISTORY OF PROJECT

10.1 *First Edition.*

10.1.1 On September 26, 1944, the wire screen manufacturers requested the cooperation of the National Bureau of Standards in the establishment of a commercial standard for insect wire screening. A preliminary draft of the proposed commercial standard was submitted to manufacturers for their review and comment. All comment was carefully considered at a meeting held in New York City on February 23, 1945. An adjusted draft was then prepared and submitted on March 28, 1945, to technical organizations, Government agencies, testing laboratories, manufacturers, and wholesale, retail, and user organizations for further review and comment. The standard was then modified in accordance with composite recommendations of those concerned, and circulated on July 16, 1945, to the trade for written acceptance.

10.1.2 Upon receipt of official acceptances estimated to represent a satisfactory majority of the production by volume, and in the absence of active valid opposition, the standard was promulgated on December 2, 1946, as Commercial Standard 138-47.

10.2 *First Revision.*

10.2.1 Pursuant to a request from the Insect Wire Screening Bureau dated July 22, 1949, and following approval by the standing committee, a revision of this standard was circulated to the trade on November 30, 1949, for written acceptance. The main purpose of the revision was to add aluminum wire screening as a standard stock item. Following acceptance by a satisfactory majority, the establishment of the revision was announced on December 28, 1949, as Commercial Standard 138-49.

Project Manager: E. C. BARRETT, Commodity Standards Division, National Bureau of Standards.

Technical Adviser: Dr. L. V. JUDSON, Metrology Division, National Bureau of Standards.

11. STANDING COMMITTEE

11.1 The following individuals comprise the membership of the standing committee, as appointed by the National Bureau of Standards. This committee is to review, prior to circulation for acceptance, revisions proposed to keep the standard abreast of progress. Comment concerning the standard and suggestions for revision may be

addressed to any member of the committee or to the Commodity Standards Division, National Bureau of Standards, which acts as secretary for the committee.

Manufacturers:

- STUART M. JONES (chairman), New York Wire Cloth Co., 445 Park Avenue, New York 22, N. Y.
RALPH W. BACON, Insect Wire Screening Bureau, 74 Trinity Place, New York 6, N. Y.
E. B. FROCK, Hanover Wire Cloth Division, Continental Copper & Steel Industries, Inc., Hanover, Pa.
FRANK G. GILBERT, Chase Brass & Copper Co., 80 Lafayette Street, New York 13, N. Y.
W. F. SEWERT, American Wire Fabrics Corp., 500 Fifth Avenue, New York 18, N. Y.
JOHN D. STODDER, Cyclone Fence Division, American Steel & Wire Co., Waukegan, Ill.

Distributors:

- T. W. McALLISTER, Southern Wholesale Hardware Association, 814 Metcalf Bldg., Orlando, Fla.
RIVERS PETERSON, National Retail Hardware Association, 333 N. Pennsylvania Street, Indianapolis 4, Ind.
WALDO J. TASTET, Fries, Beall & Sharp Co., Inc., 734 10th Street, NW., Washington 1, D. C. (Representing the National Wholesale Hardware Assn.)

Consumers:

- PRESTON B. BERGIN, American Retail Federation, 1627 K Street, NW., Washington 6, D. C.
E. W. DONAHUE, Wabash Screen Door Co., 310 S. Michigan Avenue, Chicago 4, Ill. (Representing National Woodwork Manufacturers Assn., Inc.)
L. V. JUDSON, National Bureau of Standards, Washington 25, D. C.
Representative of the American Public Health Assn. to be appointed.



ACCEPTANCE OF COMMERCIAL STANDARD

If acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this commercial standard.

Date_____

Commodity Standards Division,
National Bureau of Standards,
Washington 25, D. C.

Gentlemen:

We believe that the Commercial Standard 138-49 constitutes a useful standard of practice, and we individually plan to utilize it as far as practicable in the

production¹ distribution¹ purchase¹ testing¹
of insect wire screening.

We reserve the right to depart from it as we deem advisable.

We understand, of course, that only those articles which actually comply with the standard in all respects can be identified or labeled as conforming thereto.

Signature of authorized officer _____

(In ink)

(Kindly typewrite or print the following lines)

Name and title of above officer_____

Organization _____

(Fill in exactly as it should be listed)

Street address_____

City, zone, and State_____

¹ Underscore which one. Please see that separate acceptances are filed for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interests, trade associations, trade papers, etc., desiring to record their general support, the words "General Support" should be added after the signature.

TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance.

1. *Enforcement.*—Commercial standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices, and the like.

2. *The acceptor's responsibility.*—The purpose of commercial standards is to establish for specific commodities, nationally recognized grades or consumer criteria, and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the commercial standard where practicable in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function performed by the Department of Commerce in the voluntary establishment of commercial standards on a Nation-wide basis is fourfold; first, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active, valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.

ACCEPTORS

The organizations listed below have individually accepted this standard for use as far as practicable in the production, distribution, testing or purchase of insect wire screening. In accepting the standard, they reserved the right to depart therefrom as they individually deem advisable. It is expected that articles which actually comply with the requirements of this standard in all respects will be regularly identified or labeled as conforming thereto, and that purchasers will require such specific evidence of conformity.

ASSOCIATIONS

(General Support)

American Retail Federation, Washington, D. C.
American Specification Institute, Chicago, Ill.
Boy Scouts of America, National Supply Service, New York, N. Y.
Insect Wire Screening Bureau, New York, N. Y.
National Association of Home Builders, Washington, D. C.
National Council of Farmer Cooperatives, Washington, D. C.
Virginia Retail Hardware Association, Scottsville, Va.

FIRMS AND OTHER INTERESTS

Abbott, L. R., Stores, Otsego, Ohio.
Abraham & Straus, Inc., Brooklyn, N. Y.
Agnew Hardware Co., Everett, Wash.
Albany Hardware & Iron Co., Albany, N. Y.
Allen, Walter H., Co., Inc., Dallas, Tex.
Allen & Jemison Co., Tuscaloosa, Ala.
Allison Erwin Co., Charlotte, N. C.
Amarillo Hardware Co., Amarillo, Tex.
American Brass Co., Waterbury, Conn.
American Grille & Screen Works, Dallas, Tex.
American Hardware & Equipment Co., Charlotte, N. C.
American Hardware Supply Co., Pittsburgh, Pa.
American Sash & Door Co., Kansas City, Mo.
American Wholesale Hardware Co., Long Beach, Calif.
American Wire Fabrics Corp., New York, N. Y.
Anderson & Ireland Co., The, Baltimore, Md.
Arizona Hardware Co., Phoenix, Ariz.
Badger Paint & Hardware Stores, Inc., Milwaukee, Wis.
Baird Hardware Co., Gainesville, Fla.
Bard Hardware Co., Reading, Pa.
Barrett Hardware Co., Joliet, Ill.
Barton-Mansfield Co., Jonesboro, Ark.
Bay City Hardware Co., Bay City, Mich.
Beals, McCarthy & Rogers, Inc., Buffalo, N. Y.
Bentley Hardware Co., The, Great Bend, Kans.
Bering-Cortes Hardware Co., Houston, Tex.
Blish, Mize & Silliman Hardware Co., Atchison, Kans.
Bluefield Hardware Co., Bluefield, W. Va.
Blumberg, Wm. L., Co., Inc., New York, N. Y.
Bostwick-Braun Co., The, Toledo, Ohio.
Breck, Joseph, & Sons Corp., Boston, Mass.

Brown-Camp Hardware Co., Des Moines, Iowa.
Brown Lynch Scott Co., Inc., Monmouth, Ill.
Buell & Co., Dallas, Tex.
Buffalo, City of, Architectural Service, Division of Buildings, Department of Public Works, Buffalo, N. Y.
Buhl Sons Co., Detroit, Mich.
Buhrman-Pharr Hardware Co., Texarkana, Ark.
Builders Supply Co., San Antonio, Tex.
California Hardware Co., Los Angeles, Calif.
Cameron, Wm., & Co., Waco, Tex.
Canton Hardware Co., The, Canton, Ohio.
Carlisle Hardware Co., Springfield, Mass.
Carolina Hardware Co., Inc., Raleigh, N. C.
Carpenter Hardware Co., Nelsonville, Ohio.
Ceco Steel Products Corp., Cicero, Ill.
Central of Georgia Railway Co., Savannah, Ga.
Central Hardware Co., St. Louis, Mo.
Centre Hardware Co., Roslindale, Mass.
Chamberlin Co. of America, Detroit, Mich.
Charleston Hardware Co., Charleston, W. Va.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago & Riverdale Lumber Co., Chicago, Ill.
Chillicothe Hardware & Supply, Inc., Chillicothe, Ohio.
Clark, Geo. A., & Son, Minneapolis, Minn.
Clark Witbeck Co., Schenectady, N. Y.
Cloverdale Hardware & Lumber Co., Cloverdale, Ind.
Coates, Henry T., & Associates, New York, N. Y.
Cole, Wm. H., & Sons, Baltimore, Md.
Colladay, Frank, Hardware Co., Hutchinson, Kans.
Collins, J. S., & Son, Inc., Moorestown, N. J.
Columbia Mills, Inc., The, Los Angeles, Calif.
Columbia University, Teachers College, New York, N. Y.
Corpus Christi Hardware Co., Corpus Christi, Tex.
Corry-Jamestown Manufacturing Corp., Corry, Pa.
Curtis Cos., Inc., Clinton, Iowa, and Topeka, Kans.
Cyclone Fence Division, American Steel & Wire Co., Waukegan, Ill.
Darol Co., Dayton, Ohio.
Davidson Sash & Door Co., Inc., Lake Charles, La.
Deats Sash & Door Co., Los Angeles, Calif.
Delaware Hardware Co., Wilmington, Del.
Delta Hardware Co., Escanaba, Mich.
Dinkins-Davidson Hardware Co., Atlanta, Ga.
Donlin Co., The, St. Cloud, Minn.

Drake Hardware Co., Burlington, Iowa.
 Dreisbach's, C., Sons, Inc., Lewisburg, Pa.
 Dunham-Hanson Co., Bangor, Maine.
 Dutton-Lainson Co., Hastings, Nebr.
 Edwards & Walker Co., Portland, Maine.
 Emery Supply Co., Bradford, Pa.
 Emery-Waterhouse Co., The, Portland, Maine.
 Erb Hardware Co., Lewiston, Idaho.
 Farley & Loetscher Manufacturing Co., Du-
 buque, Iowa.
 Farwell, Ozmun, Kirk & Co., St. Paul, Minn.
 Fischer Lime & Cement Co., Memphis, Tenn.
 Flex-Fit Screen Co., New York, N. Y.
 Fogg, Almon H., Co., Houlton, Maine.
 Fones Bros. Hardware Co., Little Rock, Ark.
 Forcum-James Lumber Co., Dyersburg, Tenn.
 Foster, F. G., Co., Hoquiam, Wash.
 Foster-Thornburg Hardware Co., Hunting-
 ton, W. Va.
 Franke, C. D., & Co., Inc., Charleston, S. C.
 Frankfurth Hardware Co., Milwaukee, Wis.
 Franklin Hardware & Supply Co., Philadel-
 phia, Pa.
 Frederick Trading Co., Frederick, Md.
 Fries, Beall & Sharp Co., Washington, D. C.
 Fuller, W. P., & Co., Portland, Oreg.
 Galloway-James Co., The, Baltimore, Md.
 Garlich, E., & Sons Hardware Co., Ashland,
 Wis.
 Gates Hardware & Supply Co., Tulsa, Okla.
 General Millwork Corp., Utica, N. Y.
 Geneseo Hardware Co., Inc., Geneseo, N. Y.
 Gibson Door Co., Inc., The, Utica, N. Y.
 Gilbert & Bennett Manufacturing Co., The,
 Georgetown, Conn.
 Goldenblum, William, & Co., New York,
 N. Y.
 Goshen Sash & Door Co., Goshen, Ind.
 Graves-Humphreys Hardware Co., Roanoke,
 Va.
 Great Lakes Sash & Door Co., The, Clevel-
 and, Ohio.
 Hallack & Howard Lumber Co., The, Denver,
 Colo.
 Hanover Wire Cloth Division, Continental
 Copper & Steel Industries, Inc., Hanover,
 Pa.
 Harbor Sales Co., Inc., The, Baltimore, Md.
 Harper & McIntire Co., Ottumwa, Iowa, and
 Cedar Rapids, Iowa.
 Harper & Reynolds Corp., Los Angeles, Calif.
 Hasson-Bryan Hardware Co., Morristown,
 Tenn.
 Hastings, A. W., & Co., Inc., Somerville,
 Mass.
 Hauser Lumber Co., Gibbon, Minn.
 Hayward Lumber & Inv. Co., Los Angeles,
 Calif.
 Heilig Bros. Co., Inc., York, Pa.
 Henderson & Baird Hardware Co., Green-
 wood, Miss.
 Henkle & Joyce Hardware Co., Lincoln,
 Nebr.
 Higginbotham Pearlstone Hardware Co.,
 Dallas, Tex.
 Hillsdale Screen Co., Hillsdale, Mich.
 Hogan Lumber Co., Oakland, Calif.
 Holmes Hardware Co., Pueblo, Colo.
 Holter, A. M., Hardware Co., Helena, Mont.
 Hopkins & Co., New York, N. Y.
 Hospital Bureau of Standards & Supplies,
 Inc., New York, N. Y.
 Houston Sash & Door Co., Houston, Tex.
 Huey & Philp Hardware Co., Dallas, Tex.
 Hufish, Worth, & Sons, Inc., Alexandria, Va.
 Hunt & Mottet Co., Tacoma, Wash.
 Ideal Screen & Manufacturing Co., Los An-
 geles, Calif.
 Igoe Bros, Inc., Brooklyn, N. Y.
 Ifield, Charles, Co., Las Vegas, N. Mex.
 Imperial Hardware Co., El Centro, Calif.
 Industrial Wire Cloth Co., New York, N. Y.
 Industrial Wire Cloth Products, Inc., Wayne,
 Mich.
 Interstate Hardware Co., Inc., Bristol, Tenn.
 Interstate Sash & Door Co., The, Canton,
 Ohio.
 Iron City Sash & Door Co., Pittsburgh, Pa.

Jackson Hardware Co., The, Aberdeen,
 S. Dak.
 Jacksonville Sash & Door Co., Jacksonville,
 Fla.
 Jacobi Hardware Co., Inc., Wilmington, N. C.
 Jacobs & Hutchinson Hardware Co., Fair-
 mont, W. Va.
 Janney-Semple-Hill & Co., Minneapolis,
 Minn.
 Jellico Hardware Co., Jellico, Tenn.
 Jelliff, C. O., Manufacturing Corp., The,
 Southport, Conn.
 Jennings, S. Barry, Co., The, New Haven,
 Conn.
 Jenson Hardware Co., The, Bay City,
 Mich.
 Jensen-Byrd Co., Spokane, Wash.
 Johnson & Co., Langdale, Ala.
 Kalispel Mercantile Co., Kalispell, Mont.
 Kaminski Hardware Co., Georgetown, S. C.
 Kane & Keyser Hardware Co., Belington,
 W. Va.
 Kane Manufacturing Corp., Kane, Pa.
 Keene Screen & Awning Co., Keene, N. H.
 Keith, Simmons Co., Inc., Nashville, Tenn.
 Kemp, Bunch & Jackson, Jacksonville, Fla.
 Kendall Hardware Mill Supply, Inc., Battle
 Creek, Mich.
 Keystone Wire Cloth Co., Hanover, Pa.
 Kleinhardt Hardware Co., New York, N. Y.
 Knapp & Spencer Co., Sioux City, Iowa.
 Korber, J., & Co., Albuquerque, N. Mex.
 Korb-Pettit Wire Fabrics & Iron Works, Inc.,
 Philadelphia, Pa.
 Krebs, Arthur H., & Co., Springfield, Ill.
 Kruse Hardware Co., The, Cincinnati, Ohio.
 Lake Erie Hardware Co., The, Cleveland,
 Ohio.
 Lakin & Co., Prineville, Oreg.
 Lampert Lumber Co., St. Paul, Minn.
 Lane-Stewart Co., The, Chicago, Ill.
 Lato Products Co., Texarkana, Tex.
 Lee Hardware Co., Ltd., The, Shreveport,
 La.
 Leonhardt, H. E., Lumber Co., The, Whole-
 sale Division, Oklahoma City, Okla.
 Lewiston Hardware & Plumbing Supply Co.,
 Lewiston, Maine.
 Lilien Hardware & Supply Corp., Long Is-
 land City, N. Y.
 Loetscher & Burch Manufacturing Co., Des
 Moines, Iowa.
 Lorenz Co., Klamath Falls, Oreg.
 Lumbermens Supply Co., Oklahoma City,
 Okla.
 Lundell-Eckberg Manufacturing Co., Inc.,
 Jamestown, N. Y.
 Luthe Hardware Co., Des Moines, Iowa.
 Madison Hardware Co., Madison, Wis.
 Madison Lumber Co. (Dendinger, Inc.,
 owner), New Orleans, La.
 Mahoney Sash & Door Co., The, Canton,
 Ohio.
 Marr, Charles J., Office of, New Philadelphia,
 Ohio.
 Marshall, A. H., Co., Inc., Plattsburg, N. Y.
 Marshall Wells Co., Duluth, Minn.
 Martin Hardsoeg Co., The, Pittsburg, Pa.
 Masback, Inc., New York, N. Y.
 Mason City Millwork Co., Mason City, Iowa.
 Mathews & Boucher, Inc., Rochester, N. Y.
 Maxwell Wholesale Hardware Co., Oakland,
 Calif.
 May Hardware Co., Portland, Oreg.
 May Hardware Co., Washington, D. C.
 McAleer, E. J., & Co., Philadelphia, Pa.
 McClung, C. M., & Co., Inc., Knoxville, Tenn.
 McGowin-Lyons Hardware & Supply Co.,
 Mobile, Ala.
 McGregor Hardware Co., Springfield, Mo.
 McKee, R. D., Inc., Hagerstown, Md.
 McPhillips Manufacturing Co., Inc., Mobile,
 Ala.
 Mesker Bros. Iron Co., St. Louis, Mo.
 Metal Products Corp., Miami, Fla.
 Metalcraft Screen Co., Boston, Mass.
 Miller Bros. Hardware Co., Richmond, Ind.
 Miller Screen Co., Kansas City, Mo.

Minot Builders Supply Co., Inc., Minot, N. Dak.
 Mitchell-Powers Hardware Co., Inc., Bristol, Va.
 Momsen, Dunnegan, Ryan Co., El Paso, Tex.
 Montana Hardware Co., Butte, Mont.
 Montgomery & Crawford Co., Inc., Spartanburg, S. C.
 Morgan Co., Oshkosh, Wis.
 Morgan Sash & Door Co., Chicago, Ill.
 Morley Bros., Saginaw, Mich.
 Morrison-Merrill & Co., Salt Lake City, Utah.
 Morrow-Thomas Hardware Co., Amarillo, Tex., and Lubbock, Tex.
 Murray-Brooks, Inc., Lake Charles, La.
 Myers, M. P., & Co., Inc., Plattsburg, N. Y.
 Nash Hardware Co., Fort Worth, Tex.
 Nassau Suffolk Lumber & Supply Corp., Amityville, N. Y.
 National Sash & Door Co. (Hortman Salmen Co., Inc., owner), New Orleans, La.
 Neal-Blum Co., Savannah, Ga.
 New York Wire Cloth Co., New York, N. Y. (General support.)
 Newark Wire Cloth Co., Newark, N. J.
 Noelke-Lyon Manufacturing Co., Burlington, Iowa.
 Nord, E. A., Co., Inc., Everett, Wash.
 Northern Commercial Co., Seattle, Wash.
 Northern Hardware & Supply Co., Menominee, Mich.
 Odell Hardware Co., Greensboro, N. C.
 Ohio Valley Hardware & Roofing Co., Evansville, Ind.
 Oklahoma City Hardware Co., Oklahoma City, Okla.
 Oklahoma Sash & Door Co., Oklahoma City, Okla.
 O'Neill-McNamara Hardware Co., Vicksburg, Miss.
 Oregon City Lumber Co., Oregon City, Ore.
 Ornamental Iron Work Co., Akron, Ohio.
 Ott-Heiskell Co., Wheeling, W. Va.
 Our Own Hardware Co., Minneapolis, Minn.
 Pacific Mutual Door Co., Garwood, N. J.
 Pacific Wire Products Co., Compton, Calif.
 Pacific Wire Works Co., Seattle, Wash.
 Page, Steele & Flagg Co., The, New Haven, Conn.
 Palmour's, Gainesville, Ga.
 Patterson Bros., New York, N. Y.
 Patzig Testing Laboratories, Des Moines, Iowa.
 Pearlstine, I. M., & Sons, Charleston, S. C.
 Peden Iron & Steel Co., Houston, Tex.
 Penn Traffic Co., Johnstown, Pa.
 Pennwoven, Inc., New York, N. Y.
 Perry Wood Products Co., Bellwood, Ill.
 Peterson Lumber Co., El Paso, Tex.
 Pettee, W. J., & Co., Oklahoma City, Okla.
 Phenix Manufacturing Co., Inc., Milwaukee, Wis.
 Phillips, I. W., & Co., Tampa, Fla.
 Phoenix Wire Works, Inc., Detroit, Mich.
 Piedmont Hardware Co., Danville, Va.
 Pierce Hardware Co., The, Taunton, Mass.
 Porter, E. R., Hardware Co., Dothan, Ala.
 Porter Screen Co., Winooski, Vt.
 Portsmouth Lumber Corp., Portsmouth, Va.
 Pritzlaff, John, Hardware Co., Milwaukee, Wis.
 Queensborough Lumber Co., Inc., Bayside, N. Y.
 Quigley, J. R., Co., Gloucester City, N. J.
 Rehm Hardware Co., Chicago, Ill.
 Reilly Bros. & Raub, Inc., Lancaster, Pa.
 Rennart Lumber Yards, Inc., Coral Gables, Fla.
 Reynolds Wire Co., Dixon, Ill.
 Rice & Miller Co., Bangor, Maine.
 Richards & Conover Hardware Co., Kansas City, Mo.
 Richmond Hardware Co., Richmond, Va.
 Riezer Iron & Wire Works, Inc., Pittsburgh, Pa.
 Rike-Kumler Co., The, Dayton, Ohio.
 Rinn-Scott Lumber Co., Chicago, Ill.
 Roberson, A., & Son, Inc., Binghamton, N. Y.
 Roberts, Sanford & Taylor Co., Sherman, Tex.
 Roebbling's, John A., Sons Co., Woven Wire Fabrics Division, Roebbling, N. J.
 Rolock, Inc., Fairfield, Conn.
 Rolscreen Co., Pella, Iowa.
 Rudiger-Lang Co., Berkeley, Calif.
 Rudinger, C. R., Inc., South Kearny, N. J.
 Saginaw Hardware Co., Saginaw, Mich.
 St. Louis, Board of Education of the City of, St. Louis, Mo.
 Salt Lake Hardware Co., The, Salt Lake City, Utah.
 San Jose Hardware Co., San Jose, Calif.
 Sanders Bros. Manufacturing Co., Ottawa, Ill.
 Schelly, C. Y., & Bros., Inc., Allentown, Pa.
 Schlafer Supply Co., Appleton, Wis.
 Schlatter Hardware Co., Inc., Fort Wayne, Ind.
 Schumacher, F. E., Co., The, Hartville, Ohio.
 Schwabacher Hardware Co., Seattle, Wash.
 Screens & Fabricated Metals Corp., North Bergen, N. J.
 Sears, Roebuck & Co., Chicago, Ill.
 Sechtman Hardware Co., Inc., Hartford, Conn.
 Segelke & Kohlhaus Co., La Crosse, Wis.
 Seneca Wire & Manufacturing Co., Fostoria, Ohio.
 Shapleigh Hardware Co., St. Louis, Mo.
 Sharp-Horsey Hardware Co., Atlanta, Ga.
 Sheffield Hardware Co., Americus, Ga.
 Shields & Bro., Philadelphia, Pa.
 Simons, S., Hardware Co., Boston, Mass.
 Sloan Lumber Co., Fort Worth, Tex.
 Sloss & Brittain, San Francisco, Calif.
 Small, P. A. & S. Co., Inc., York, Pa.
 Smith, Chas. J., & Co., Jersey City, N. J.
 Smith, F. P., Wire & Iron Works, Chicago, Ill.
 Smith, John P., Co., The, New Haven, Conn.
 Smith-Winchester Co., Jackson, Mich.
 Snedaker, Frank C., & Co., Inc., Fleetwood, Pa.
 Solmsen, M., Fly Screen Co., The, Baltimore, Md.
 Somers Bros., Springfield, Ohio.
 Southern Hardware Co., Charleston, W. Va.
 Southern Hardware Co., Ltd., Monroe, La.
 Southwest Hardware Co., Los Angeles, Calif.
 Southwestern Sash & Door Co., Joplin, Mo.
 Spargo Wire Co., Rome, N. Y.
 Speer Hardware Co., Fort Smith, Ark.
 Spicola Hardware Co., Tampa, Fla.
 Standard Wire Cloth Co., York, Pa.
 Standard Wire Cloth & Screen Co., York, Pa.
 Stauffer, Eshleman & Co., Ltd., New Orleans, La.
 Steinman Hardware Co., Lancaster, Pa.
 Sterling Hardware Co., Inc., Hazard, Ky.
 Stichter Hardware Co., Inc., Reading, Pa.
 Stow Hardware Co., Stow, Ohio.
 Stowe Hardware & Supply Co., Kansas City, Mo.
 Strange Jones Hardware Co., Clinton, Okla.
 Stratton-Baldwin Co., Inc., New Orleans, La.
 Stratton & Terstege Co., Louisville, Ky.
 Stratton-Warren Hardware Co., Memphis, Tenn.
 Strevell Paterson Hardware Co., Salt Lake City, Utah.
 Strong Hardware Co., Burlington, Vt.
 Suburban Hardware Co., St. Bernard, Ohio.
 Summers Hardware & Supply Co., Johnson City, Tenn.
 Supplee-Biddle-Steltz Co., Philadelphia, Pa.
 Sweetwater Sash & Door Co., Sweetwater, Tex.
 Tausche, V., Hardware Co., La Crosse, Wis.
 Teachout Sash, Door & Glass Co., The, Detroit, Mich.
 Tenk Hardware Co., Quincy, Ill.
 Thomas & Sons, Inc., Boonsboro, Md.
 Thompson, H. D., & Co., Malone, N. Y.
 Thompson Miler Hardware Corp., Charleston, S. C.
 Thompson Yards, Inc., Aberdeen, S. Dak.
 Thomson-Diggs Co., Sacramento, Calif.

Towner Hardware Co., Muskegon, Mich.
 Townley Metal & Hardware Co., Kansas City, Mo.
 Truscon Steel Co., Youngstown, Ohio.
 Tryon, Edward K., Co., Philadelphia, Pa.
 Tyler, W. S., Co., Cleveland, Ohio.
 Tyrrell Hardware Co., Beaumont, Tex.
 Underwood Coal & Supply Co., Mobile, Ala.
 United Cooperatives, Inc., Alliance, Ohio.
 United Hardware & Supply Co., Titusville, Pa.
 Valley Screen Co., Burbank, Calif.
 Van Camp Hardware & Iron Co., Indianapolis, Ind.
 Van Kleeck Co., Panama City, Fla.
 Vetter Manufacturing Co., Stevens Point, Wis.
 Wabash Railroad Co., St. Louis, Mo.
 Wabash Screen Door Co., The, Chicago, Ill.
 Wade Hardware Co., Greenwood, Miss.
 Wagner Hardware Co., Mansfield, Ohio.
 Wainwright, A. B., Co., Philadelphia, Pa.
 Walling Sash & Door Co., Wichita, Kans.
 Warren Lumber Co., The, Fort Morgan, Colo.
 Watertown Sash & Door Co., Watertown, S. Dak.
 Watkins-Cottrell Co., Richmond, Va.
 Watson Manufacturing Co., Inc., Jamestown, N. Y.
 Watts Hardware & Supply Co., San Antonio, Tex.
 Wayne Hardware Co., Inc., Fort Wayne, Ind.
 Weakley - Watson - Miller Hardware Co., Brownwood, Tex.
 Weed & Co., Buffalo, N. Y.
 Western Door & Sash Co., Oakland, Calif.
 Western Metal Supply Co., San Diego, Calif.
 Whaley Hardware, Inc., Painesville, Ohio.
 Whissel, L. N., Lumber Co., Inc., Buffalo, N. Y.
 White Pine Sash Co. of Illinois, Chicago, Ill.
 Whitehead Metal Products Co., Inc., New York, N. Y.

Wholesale Hardware Co., Inc., New York, N. Y.
 Wiant & Barr Hardware Co., Parkersburg, W. Va.
 Wickwire Bros., Inc., Cortland, N. Y.
 Wilcox & Haslup, Inc., Baltimore, Md.
 Williams, Geo. A., & Son, New York, N. Y.
 Williams, J. A., Co., Pittsburgh, Pa.
 Williams Hardware Co., Fort Smith, Ark.
 Williams & Hunting Co., Cedar Rapids, Iowa.
 Williamson, Ben, & Co., Inc., Ashland, Ky.
 Wilson & Pugh Co., Cumberland, Md.
 Wise, Smith & Co., Inc., Hartford, Conn.
 Witbeck, Clark, Co., Schenectady, N. Y.
 Wolf & Dessauer, Fort Wayne, Ind.
 Wood Construction & Building Materialist Magazine, Xenia, Ohio.
 Woodbury Hardware Co., Portland, Oreg.
 Woodward Hardware Co., Cairo, Ill.
 Woodwell, Joseph, Co., Pittsburgh, Pa.
 Worthington, George, Co., The, Cleveland, Ohio.
 Wright, G. F., Steel & Wire Co., Worcester, Mass.
 Wyeth Co., St. Joseph, Mo.
 Yardley Insulation Co., Columbus, Ohio.
 Zero Weather Stripping Co., Inc., New York, N. Y.
 Zork Hardware Co., El Paso, Tex.

UNITED STATES GOVERNMENT

Agriculture, U. S. Department of, Division of Purchase, Sales & Traffic, Washington, D. C.
 Army, Department of the, Washington, D. C.
 Federal Housing Administration, Washington, D. C. (General support.)
 General Services Administration, Public Buildings Service, Washington, D. C. (General support.)
 Justice, U. S. Department of, Bureau of Prisons, Washington, D. C.
 Public Housing Authority, Washington, D. C.

COMMERCIAL STANDARDS

CS No.
 0-40. Commercial standards and their value to business (third edition).
 1-42. Clinical thermometers (third edition).
 2-30. Mopsticks.
 3-40. Stoddard solvent (third edition).
 4-29. Staple porcelain (all-clay) plumbing fixtures.
 5-46. Pipe nipples; brass, copper, steel and wrought-iron (second edition).
 6-31. Wrought-iron pipe nipples (second edition). Superseded by CS5-46.
 7-29. Standard weight malleable iron or steel screwed unions.
 8-41. Gage blanks (third edition).
 9-33. Builders' template hardware (second edition).
 10-29. Brass pipe nipples. Superseded by CS5-46.
 11-41. Moisture regains of cotton yarns (second edition).
 12-48. Fuel oils (sixth edition).
 13-44. Dress patterns (fourth edition).
 14-43. Boys' button-on waists, shirts, junior and sport shirts (made from woven fabrics) (third edition).
 15-46. Men's pajama sizes (made from woven fabrics) (third edition).
 16-29. Wall paper.
 17-47. Diamond core drill fittings (fourth edition).
 18-29. Hickory golf shafts.
 19-32. Foundry patterns of wood (second edition).
 20-49. Vitreous china plumbing fixtures (fifth edition).

CS No.
 21-39. Interchangeable ground-glass joints, stopcocks, and stoppers (fourth edition).
 22-40. Builders' hardware (nontemplate) (second edition).
 23-30. Feldspar.
 24-43. Screw threads and tap-drill sizes.
 25-30. Special screw threads. Superseded by CS24-43.
 26-30. Aromatic red cedar closet lining.
 27-36. Mirrors (second edition).
 28-46. Cotton fabric tents, tarpaulins and covers (second edition).
 29-31. Staple seats for water-closet bowls.
 30-31. (Withdrawn.)
 31-38. Wood shingles (fourth edition).
 32-31. Cotton cloth for rubber and pyroxylin coating.
 33-43. Knit underwear (exclusive of rayon) (second edition).
 34-31. Bag, case, and strap leather.
 35-49. Hardwood plywood (fourth edition).
 36-33. Fourdrinier wire cloth (second edition).
 37-31. Steel bone plates and screws.
 38-32. Hospital rubber sheeting.
 39-37. (Withdrawn.)
 40-32. Surgeons' rubber gloves.
 41-32. Surgeons' latex gloves.
 42-49. Structural fiber insulating board (fourth edition).
 43-32. Grading of sulphonated oils.
 44-32. Apple wraps.
 45-48. Douglas fir plywood (eighth edition).
 46-49. Hosiery lengths and sizes (fourth edition).

CS No.
47-34. Marking of gold-filled and rolled-gold-plate articles other than watchcases.
48-40. Domestic burners for Pennsylvania anthracite (underfeed type) (second edition).
49-34. Chip board, laminated chip board, and miscellaneous boards for bookbinding purposes.
50-34. Binders board for bookbinding and other purposes.
51-35. Marking articles made of silver in combination with gold.
52-35. Mohair pile fabrics (100-percent mohair plain velvet, 100-percent mohair plain frieze, and 50-percent mohair plain frieze).
53-35. Mohair and finishes for cast stone.
54-35. Mattresses for hospitals.
55-35. Mattresses for institutions.
56-49. Oak flooring (third edition).
57-40. Book cloths, buckrams, and impregnated fabrics for bookbinding purposes except library bindings (second edition).
58-36. Woven elastic fabrics for use in overalls (overall elastic webbing).
59-44. Textiles—testing and reporting (fourth edition).
60-48. Hardwood dimension lumber (second edition).
61-37. Wood-slat venetian blinds.
62-38. Colors for kitchen accessories.
63-38. Colors for bathroom accessories.
64-37. Walnut veneers.
65-43. Methods of analysis and of reporting fiber composition of textile products (second edition).
66-38. Marking of articles made wholly or in part of platinum.
67-38. Marking articles made of karat gold.
68-38. Liquid hypochlorite disinfectant, deodorant, and germicide.
69-38. Pine oil disinfectant.
70-41. Phenolic disinfectant (emulsifying type) (second edition) (published with CS71-41).
71-41. Phenolic disinfectant (soluble type) (second edition) (published with CS70-41).
72-38. Household insecticide (liquid spray type).
73-48. Old growth Douglas fir, Sitka spruce, and Western hemlock standard stock doors (fourth edition).
74-39. Solid hardwood wall paneling.
75-42. Automatic mechanical draft oil burners designed for domestic installations (second edition).
76-39. Hardwood interior trim and molding.
77-48. Enameled cast-iron plumbing fixtures (second edition).
78-40. Ground-and-polished lenses for sun glasses (second edition) (published with CS79-40).
79-40. Blown, drawn, and dropped lenses for sun glasses (second edition) (published with CS78-40).
80-41. Electric direction signal systems other than semaphore type for commercial and other vehicles subject to special motor vehicle laws (after market).
81-41. Adverse-weather lamps for vehicles (after market).
82-41. Inner-controlled spotlamps for vehicles (after market).
83-41. Clearance, marker, and identification lamps for vehicles (after market).
84-41. Electric tail lamps for vehicles (after market).

CS No.
85-41. Electric license-plate lamps for vehicles (after market).
86-41. Electric stop lamps for vehicles (after market).
87-41. Red electric warning lanterns.
88-41. Liquid burning flares.
89-40. Hardwood stair treads and risers.
90-49. Power cranes and shovels.
91-41. Factory-fitted Douglas fir entrance doors.
92-41. Cedar, cypress and redwood tank stock lumber.
93-41. Portable electric drills (exclusive of high frequency).
94-41. Calking lead.
95-41. Lead pipe.
96-41. Lead traps and bends.
97-42. Electric supplementary driving and passing lamps for vehicles (after market).
98-42. Artists' oil paints.
99-42. Gas floor furnaces—gravity circulating type.
100-47. Porcelain-enameled steel utensils (third edition).
101-43. Flue-connected oil-burning space heaters equipped with vaporizing pot-type burners.
102- . (Reserved for Diesel and fuel-oil engines).
103-48. Rayon jacquard velour (with or without other decorative yarn) (second edition).
104-49. Warm-air furnaces equipped with vaporizing type oil burners (third edition).
105-48. Mineral wool insulation for low temperatures (second edition).
106-44. Boys' pajama sizes (woven fabrics) (second edition).
107-45. (Withdrawn.)
108-43. Treading automobile and truck tires.
109-44. Solid-fuel-burning forced-air furnaces.
110-43. Tire repairs—vulcanized (passenger, truck, and bus tires).
111-43. Earthenware (vitreous - glazed) plumbing fixtures.
112-43. Homogeneous fiber wallboard.
113-44. Oil-burning floor furnaces equipped with vaporizing pot-type burners.
114-43. Hospital sheeting for mattress protection.
115-44. Porcelain-enameled tanks for domestic use.
116-44. Bituminized-fibre drain and sewer pipe.
117-49. Mineral wool insulation for heated industrial equipment (second edition).
118-44. Marking of jewelry and novelties of silver.
(E) 119-45.¹ Dial indicators (for linear measurements).
120-48. Standard stock ponderosa pine doors (third edition).
121-45. Women's slip sizes (woven fabrics).
122-49. Western softwood plywood (second edition).
123-49. Grading of diamond powder (second edition).
(E) 124-45.¹ Master disks.
125-47. Prefabricated homes (second edition).
126-45. Tank mounted air compressors.
127-45. Self-contained mechanically refrigerated drinking water coolers.
128-49. Men's sport shirt sizes—woven fabrics (other than those marked with regular neckband sizes) (second edition).
129-47. Materials for safety wearing apparel (second edition).

¹ Where "(E)" precedes the CS number, it indicates an emergency commercial standard, drafted under war conditions with a view toward early revision.

CS No.	CS No.
130-46. Color materials for art education in schools.	149-48. Utility type house dress sizes.
131-46. Industrial mineral wool products, all types—testing and reporting.	150-48. Hot-rolled rail steel bars (produced from Tee-section rails).
132-46. Hardware cloth.	151-48. Body measurements for the sizing of apparel for infants, babies, toddlers, and children (for the knit underwear industry).
133-46. Woven wire netting.	152-48. Copper naphthenate wood-preservative.
134-46. Cast-aluminum cooking utensils (metal composition).	153-48. Body measurements for the sizing of apparel for girls (for the knit underwear industry).
135-46. Men's shirt sizes (exclusive of work shirts).	154- . (Reserved for wire rope.)
136-46. Blankets for hospitals (wool, and wool and cotton).	155-50. Body measurements for the sizing of boys' apparel (knit underwear, shirts, trousers).
137-46. Size measurements for men's and boys' shorts (woven fabrics).	156-49. Colors for polystyrene plastics.
138-49. Insect wire screening (second edition).	157-49. Ponderosa pine and sugar pine plywood.
139-47. Work gloves.	158-49. Model forms for girls' apparel.
140-47. Testing and rating convectors.	159-49. Sun-glass lenses made of ground and polished plate glass, thereafter thermally curved.
141-47. Sine bars, blocks, plates, and fixtures.	160-49. Wood fiber blanket insulation (for building construction).
142-47. Automotive lifts.	161-49. "Standard grade" hot-dipped galvanized ware.
143-47. Standard strength and extra strength perforated clay pipe.	162-49. Tufted bedspreads.
144-47. Formed metal porcelain enameled sanitary ware.	163-49. Standard stock ponderosa pine windows, sash, and screens.
145-47. Testing and rating hand-fired hot water supply boilers.	
146-47. Gowns for hospital patients.	
147-47. Colors for molded urea plastics.	
148-48. Men's circular flat and rib knit rayon underwear.	

NOTICE.—Those interested in commercial standards with a view toward accepting them as a basis of everyday practice may secure copies of the above standards, while the supply lasts, by addressing the Commodity Standards Division, National Bureau of Standards, Washington 25, D. C.