"STANDARD GRADE"
HOT-DIPPED GALVANIZED WARE

(Coated After Fabrication)

COMMERCIAL STANDARD CS161-49
Effective Date for New Production From November 1, 1949

A RECORDED VOLUNTARY STANDARD
OF THE TRADE

UNITED STATES DEPARTMENT OF COMMERCE
CHARLES SAWYER, Secretary

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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 FOR "STANDARD GRADE" HOT-DIPPED GALVANIZED WARE

On January 5, 1948, a commercial standard for "Standard Grade" hot-dipped galvanized ware, as developed and proposed by the Galvanized Ware Manufacturers Council, was submitted to manufacturers, distributors, and users for approval or comment. The industry and others concerned have since accepted and approved this standard, shown herein.
COMMERCIAL STANDARD CS161-49
for
“STANDARD GRADE” HOT-DIPPED GALVANIZED WARE
(Coated After Fabrication)

1. DEFINITION

1.1 The term “Standard Grade” as used herein means the usual commercially produced grade intended for ordinary domestic use, as differentiated from “Heavy Grade” or “Extra Heavy Grade.”

2. PURPOSE

2.1 The purpose of this commercial standard is to establish minimum essential requirements for material, workmanship, and construction of the articles of hot-dipped galvanized ware listed in table 1, herein.

3. SCOPE

3.1 This commercial standard covers requirements for base metal and coating, workmanship, and important features of construction, and gives weights per dozen, finished. A recommended statement for indicating compliance with the standard is also given.

4. GENERAL REQUIREMENTS

4.1 Material of base.—The base metal of bodies, bottoms, bands, covers, stamped handles, and clips shall be a good grade of sheet steel having the strength, rigidity, and quality necessary for the production of hot-dipped galvanized ware conforming to this standard. Top wires, bails for pails, and wire handles shall be of drawn-steel wire. Rivets shall be of high-grade soft steel.

4.2 Composition of bath.—The zinc bath shall contain less than 2 percent total of elements other than zinc.

4.3 Workmanship and appearance.—Workmanship shall be such as to insure the production of articles free from defects impairing their watertightness (when intended for holding liquids), service-ability, or durability. All rivets shall be securely set and all welds shall be sound and smooth.

5. DETAIL REQUIREMENTS

5.1 Sizes and items.—Capacities, dimensions, nominal sizes, and weights of the items covered by this standard shall be as set forth in table 1.
Table 1. Hot-dipped galvanized ware (“Standard Grade” items only)

<table>
<thead>
<tr>
<th>Item</th>
<th>Nominal size</th>
<th>Minimum capacity or dimension</th>
<th>Minimum weight per dozen, finished</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water pails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 qt.</td>
<td>9.6 qt.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12 qt.</td>
<td>11.5 qt.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14 qt.</td>
<td>13.6 qt.</td>
<td></td>
</tr>
<tr>
<td>Round tubes:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 0</td>
<td>8 gal</td>
<td>7.75 gal</td>
<td>50</td>
</tr>
<tr>
<td>No. 1</td>
<td>11 gal</td>
<td>11.0 gal</td>
<td>65</td>
</tr>
<tr>
<td>No. 2</td>
<td>14 gal</td>
<td>13.75 gal</td>
<td>80</td>
</tr>
<tr>
<td>No. 3</td>
<td>17 gal</td>
<td>17.0 gal</td>
<td>95</td>
</tr>
<tr>
<td>Scrub tubs</td>
<td>4 gal</td>
<td>4.0 gal</td>
<td>28</td>
</tr>
<tr>
<td>Garbage and ash cans and garbage pails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 gal</td>
<td>3.75 gal</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>6 gal</td>
<td>5.75 gal</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>8 gal</td>
<td>7.75 gal</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>10 gal</td>
<td>9.5 gal</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>15 gal</td>
<td>14.5 gal</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>20 gal</td>
<td>19.5 gal</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>25 gal</td>
<td>24.0 gal</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>32 gal</td>
<td>31.0 gal</td>
<td>195</td>
</tr>
<tr>
<td>Coal hods (open style)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 in</td>
<td>1551/2 in</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>17 in</td>
<td>1631/2 in</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>18 in</td>
<td>1731/2 in</td>
<td>39</td>
</tr>
<tr>
<td>Baskets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/4 bu</td>
<td>1/4 bu</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>1 bu</td>
<td>1 bu</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>11/2 bu</td>
<td>11/2 bu</td>
<td>80</td>
</tr>
<tr>
<td>Measures (grain and feed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/4 bu</td>
<td>1/4 bu</td>
<td>40</td>
</tr>
</tbody>
</table>

5.2 Coating.—After fabrication and cleaning, each article shall be completely coated by the hot-dip process. The coating shall be smooth, continuous, and thorough. It shall be free from such imperfections as lumps, slivers, blisters, gritty areas, uncoated spots, acid and black spots, dross and flux, and shall have clean bright-spangled surfaces.

5.2.1 Adherence of coating shall be sufficiently tight to prevent removal by any ordinary use.

5.2.2 Composition of coating.—The coating shall be Prime Western zinc or its equal.

5.3 Tightness.—All articles intended to hold liquids shall be watertight when tested as described in paragraph 6.2.

5.4 Attachments.

5.4.1 Top wires shall be full length (not spliced), with ends butted together within 1/2 inch, and fully enclosed.

5.4.2 Bails and bail ears, handles, and handle clips shall be of ample strength and so attached that no permanent deformation shall occur when samples of the article are tested as described in paragraph 6.3.

6. METHODS OF INSPECTION AND TEST

6.1 Inspection.—Samples of galvanized ware, selected at random from each lot of each item produced (in no case fewer than one per thousand of the total quantity), shall be carefully inspected for defects in material, workmanship, and coating.

6.2 Liquid-tightness.—At least one sample representing a lot of each article intended to hold liquid shall be filled with water and
allowed to stand for 24 hours. To be acceptable under this test there shall be no indication of leakage during this period.

6.3 Deformation.—Samples of articles other than ash and garbage cans and garbage pails shall be completely filled with dry sand and suspended from the bail or handles for a period of 5 minutes; and samples of ash and garbage cans and garbage pails shall be similarly filled with dry sand to half capacity and suspended for a period of 5 minutes. Measurements shall be made before and after the test to determine whether any permanent deformation of bails or bail ears, of handles or handle clips, or of top diameter has occurred.

7. LABELING AND MARKING

7.1 Compliance.—In order that purchasers of hot-dipped galvanized ware may be assured that the articles comply with the applicable requirements of this standard, it is recommended that the following statement appear on labels affixed to the articles:

This “Standard Grade” article of galvanized ware conforms to the requirements of Commercial Standard CS161-49, as developed by the trade under the procedure of the National Bureau of Standards, and issued by the United States Department of Commerce.

(Company name)

7.2 Manufacturer’s name or trade-mark.—Each article of galvanized ware which bears a statement of compliance shall be impressed on the bottom with the manufacturer’s name or identifying symbol.

8. EFFECTIVE DATE

8.1 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 November 1, 1949.

EDWIN W. ELY,
Chief, Commodity Standards Division.

9. HISTORY OF PROJECT

9.1 The Galvanized Ware Manufacturers Council, intent on improving the quality of their products, and desirous of taking a first step in that direction, requested the National Bureau of Standards to pass the manufacturers’ proposed commercial standard through its regular procedure, and make available the means for steadily improving the program by regular revision.

9.2 After some modifications had been made in the suggested standard, a final draft was submitted to manufacturers, distributors, and users for consideration and approval.

9.3 Upon receipt of written acceptances estimated to represent a satisfactory majority of the production volume, and in the absence of
objections, the standard was promulgated as Commercial Standard CS161-49, effective for new production from November 1, 1949.

10. STANDING COMMITTEE

10.1 The following individuals comprise the membership of the standing committee, which 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.

Representing manufacturers:

W. B. THOMAS, Galvanized Ware Manufacturers Council, 2130 Keith Building, Cleveland 15, Ohio. (acting chairman).
E. P. ALTMEIER, National Enameling & Stamping Co., 270 North Twelfth Street, Milwaukee 1, Wis.
LYNDON WILSON, Lisk-Savory Corp., 90 Alabama Street, Buffalo 4, N. Y.
W. H. SCHLUETER, Schlueter Manufacturing Co., 4616 North Broadway, St. Louis 7, Mo.

Representing distributors:

THOMAS A. FERNLEY, JR., National Wholesale Hardware Association, 505 Arch Street, Philadelphia 6, Pa.
RIVERS PETERSON, National Retail Hardware Association, 333 North Pennsylvania Street, Indianapolis 4, Ind.
J. E. SMAGAC, Sears, Roebuck & Co., Chicago, Ill.
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 CS161–49 constitutes a useful standard of practice, and we individually plan to utilize it as far as practicable in the

production ¹ distribution ¹ purchase ¹

of "Standard Grade" hot-dipped galvanized ware. 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.
The organizations listed below have individually accepted this standard for use as far as practicable in the production, distribution, or purchase of "Standard Grade" hot-dipped galvanized ware. In accepting the standard, they reserved the right to depart therefrom as they individually deem advisable. It is expected that articles that 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)

Galvanized Ware Manufacturers Council, Cleveland, Ohio.
Retail Hardware Association, Birmingham, Ala.

FIRMS AND OTHER INTERESTS

Ae Hardware Corp., Chicago, Ill.
Agnew Hardware Co., Everett, Wash.
Albany Hardware & Iron Co., Albany, N.Y.
Albright's Hardware, Harrisburg, Pa.
Allen & Jennison Co., Tuscaloosa, Ala.
Allen, Walter H., Co., Inc., Dallas, Tex.
Allison-Erwin Co., Charlotte, N.C.
Amarillo Hardware Co., Amarillo, Tex.
American Hardware & Equipment Co., Charlotte, N.C.
American Wholesale Hardware Co., Long Beach, Calif.
Anderson & Ireland Co., Baltimore, Md.
Armstrong, C. E., & Sons, Clinton, Iowa.
Athens Hardware Co., Athens, Ga.
Atlantic Stamping Co., Rochester, N.Y.
Auburn Hardware, Inc., Auburn, Ind.
Auman Hardware Co., Inc., Syracuse, N.Y.
Badger Paint & Hardware Stores, Inc., Milwaukee, Wis.
Baird Hardware Co., Gainesville, Fla.
Ballou Johnson & Nichols Co., Providence, R.I.
Bard Hardware Co., Reading, Pa.
Barnon Hardware Co., New Castle, Pa.
Bartow Mansfield Co., Jonesboro, Ark.
Bayonne Steel Products Co., Newark, N.J.
Belknap Hardware & Manufacturing Co., Inc., Louisville, Ky.
Bering Cortes Hardware Co., Houston, Tex.
Biggs Kurtz Co., Grand Junction, Colo.
Blishe, Mize & Stillman Hardware Co., Atchison, Kan.
Blumberg, Wm. L., Co., Inc., New York, N.Y.
Boettcher & Kellogg Co., Inc., Evansville, Ind.
Bostwick-Braun Co., Toledo, Ohio.
Bragg, N. H., & Sons, Bangor, Maine.
Brown-Rogers-Dixon, Winston-Salem, N.C.
Bry-Block Mercantile Corp., Memphis, Tenn.
Buck, Peter E., & Sons, Ashland, Pa.
Budge, Fark T., Co., Miami, Fla.
Buhrman-Pharr Hardware Co., Texarkana, Ark.
Burhans & Black, Inc., Syracuse, N.Y.
Burlhead Manufacturing Co., Houston, Tex.
Carolina Hardware Co., Raleigh, N.C.
Carpenter Hardware Co., Athens, Ohio.
Carson Ciric Scott & Co., Chicago, Ill.
Central Hardware Co., St. Louis, Mo.
Centre Hardware Co., Roslindale, Mass.
Charleston Hardware Co., Charleston, W. Va.
Charlottesville Hardware Co., Charlottesville, Va.
Chillicothe Hardware & Supply, Inc., Chillicothe, Ohio.
Cincinnati Galvanizing Co., Cincinnati, Ohio.
Cleveland Hardware & Lumber Co., Cleveland, Ind.
Cole, Wm. H., & Sons, Baltimore, Md.
Colladay, Frank, Hardware Co., Hutchinson, Kans.
Collins, J. S., & Son, Inc., Morristown, N.J.
Columbia University, Teachers College, New York, N.Y.
Corson, Inc., Davenport, Ill.
Corpus Christi Hardware Co., Corpus Christi, Tex.
Crescent Supply Co., Marietta, Ohio.
Crunden Martin Manufacturing Co., St. Louis, Mo.
Cutler Hardware Co., Waterlo, Iowa.
Dakota Hardware Co., Fargo, N. Dak.
Dancer Hardware & Supply Co., Weston, W. Va.
Davis Hardware Co., Gardner, Mass.
Delta Hardware Co., Escazaba, Mich.
Delta Hardware & Implement Co., Clarksville, Miss.
Dinkins-Davidson Hardware Co., Atlanta, Ga.
Disbrow & Co., Omaha, Nebr.
Donnan, W. S., Hardware Co., Richmond, Va.
Dreischach's, C., Sons, Inc., Lewiston, Pa.
Duer, John, & Sons, Inc., Baltimore, Md.
Duncan, Harry, Corp., Everett, Mass.
Dunham, Hanson Co., Bangor, Maine.
Durango Mercantile Co., Durango, Colo.
Dutton-Laison Co., Hastings, Nebr.
Elder-Convoy Hardware Co., Clarksville, Tenn.
Emery-Watson Co., Portland, Maine.
Ennemos Hawkins Hardware Co., Huntington, W. Va.
Erb Hardware Co., Lewiston, Idaho.
Fair, D. J., Lumber Co., Steilng, Kansas.
Farwell Ozmun Kirk & Co., St. Paul, Minn.
Fitchburg Hardware Co., Fitchburg, Mass.
Fones Bros. Hardware Co., Little Rock, Ark.
Fort Plain Hardware, Fort Plain, N. Y.
Foster, F. G., Co., Hoquiam, Wash.
Franklin Hardware Co., New York, N. Y.
Gamblin-Skogin, Inc., Minneapolis, Minn.
Gates Hardware & Supply Co., Tulsa, Okla.
General Electric Co., Bridgeport, Conn.
General Metalware Co., Minneapolis, Minn.
Geuder, Paeschke & Frey Co., Milwaukee, Wis.
Goldenblum, William, & Co., New York, N. Y.
Graves Humphreys Hardware Co., Roanoke, Va.
Greenhut & Co., Chicago, Ill.
Hager & Bro., Lancaster, Pa.
Hall Hardware Co., Minneapolis, Minn.
Hall & Knight Hardware Co., Lewiston, Maine.
Harco Hardware Co., Cleveland, Ohio.
Harper & McNutt Co., Cedar Rapids, Iowa.
Harper & Reynolds Corp., Los Angeles, Calif.

Centre Hardware Co., Roslindale, Mass.
Charleston Hardware Co., Charleston, W. Va.
Charlottesville Hardware Co., Charlottesville, Va.
Chillicothe Hardware & Supply, Inc., Chillicothe, Ohio.
Cincinnati Galvanizing Co., Cincinnati, Ohio.
Cleveland Hardware & Lumber Co., Cleveland, Ind.
Cole, Wm. H., & Sons, Baltimore, Md.
Colladay, Frank, Hardware Co., Hutchinson, Kans.
Collins, J. S., & Son, Inc., Morristown, N. J.
Columbia University, Teachers College, New York, N. Y.
Corson, Inc., Davenport, Ill.
Corpus Christi Hardware Co., Corpus Christi, Tex.
Crescent Supply Co., Marietta, Ohio.
Crunden Martin Manufacturing Co., St. Louis, Mo.
Cutler Hardware Co., Waterlo, Iowa.
Dakota Hardware Co., Fargo, N. Dak.
Dancer Hardware & Supply Co., Weston, W. Va.
Davis Hardware Co., Gardner, Mass.
Delta Hardware Co., Escazaba, Mich.
Delta Hardware & Implement Co., Clarksville, Miss.
Dinkins-Davidson Hardware Co., Atlanta, Ga.
Disbrow & Co., Omaha, Nebr.
Donnan, W. S., Hardware Co., Richmond, Va.
Dreischach's, C., Sons, Inc., Lewiston, Pa.
Duer, John, & Sons, Inc., Baltimore, Md.
Duncan, Harry, Corp., Everett, Mass.
Dunham, Hanson Co., Bangor, Maine.
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Ennemos Hawkins Hardware Co., Huntington, W. Va.
Erb Hardware Co., Lewiston, Idaho.
Fair, D. J., Lumber Co., Steilng, Kansas.
Farwell Ozmun Kirk & Co., St. Paul, Minn.
Fitchburg Hardware Co., Fitchburg, Mass.
Fones Bros. Hardware Co., Little Rock, Ark.
Fort Plain Hardware, Fort Plain, N. Y.
Foster, F. G., Co., Hoquiam, Wash.
Franklin Hardware Co., New York, N. Y.
Gamblin-Skogin, Inc., Minneapolis, Minn.
Gates Hardware & Supply Co., Tulsa, Okla.
General Electric Co., Bridgeport, Conn.
General Metalware Co., Minneapolis, Minn.
Geuder, Paeschke & Frey Co., Milwaukee, Wis.
Goldenblum, William, & Co., New York, N. Y.
Graves Humphreys Hardware Co., Roanoke, Va.
Greenhut & Co., Chicago, Ill.
Hager & Bro., Lancaster, Pa.
Hall Hardware Co., Minneapolis, Minn.
Hall & Knight Hardware Co., Lewiston, Maine.
Harco Hardware Co., Cleveland, Ohio.
Harper & McNutt Co., Cedar Rapids, Iowa.
Harper & Reynolds Corp., Los Angeles, Calif.
Harris Ace Store, Jamesville, Wis.
Harris Hardware Co., Washington, N. C.
Harris Hardware & Supply Co., Kingston, Pa.
Haseen, Inc., Denver, Colo.
Hathaway Hardware Co., Oskaloosa, Iowa.
Haynes & Chalmers Co., Bangor, Maine.
Heberlein, L. H., Inc., Brooklyn, N. Y.
Helfrich Hardware Co., Elgin, Ill.
Henderson & Baird Hardware Co., Greenwood, Miss.
Hendriks & Bolthoff Co., Denver, Colo.
Henkle & Joyce Hardware Co., Lincoln, Nebr.
Herrstein Hardware, Chillocothe, Ohio.
Hibbard, Spencer, Bartlett & Co., Chicago, Ill.
Higginbotham-Pearlstone Hardware Co., Dallas, Tex.
Hobs, W. H., Supply Co., Eau Claire, Wis.
Holler, A. M., Hardware Co., Helena, Mont.
House-Hasson Hardware Co., Knoxville, Tenn.
Hure & Mottet Co., Tacoma, Wash.
Hufeld, Chas. Co., Santa Fe and Las Vegas, N. Mex.
Imperial Hardware Co., El Centro, Calif.
Interstate Hardware Co., Inc., Bristol, Tenn.
James Semple Hill & Co., Minneapolis, Minn.
Jellico Hardware Co., Jellico, Tenn.
Jenison Hardware Co., Bay City, Mich.
Jensen Hardware Co., Spokan, Wash.
Johnson & Co., Langdale, Ala.
Johnson Hardware Co., Clarksburg, W. Va.
Kaminski Hardware Co., Georgetown, S. C.
Keith Simmons Co., Inc., Nashville, Tenn.
Kelley-How-Thomson Co., Duluth, Minn.
Kleinhardt Hardware Co., New York, N. Y.
Knapp & Spencer Hardware Co., Sioux City, Iowa.
Kruze Hardware Co., Cincinnati, Ohio.
Lake City Hardware, Cleveland, Ohio.
Lampert Lumber Co., St. Paul, Minn.
Larrabee, John E., Co., Inc., Amsterdam, N. Y.
Larson Hardware Co., Moorhead, Minn.
Larson Hardware Co., Sioux Falls, S. Dak.
Lawson, F. H., Co., Cincinnati, Ohio.
Lee Hardware Co., Salina, Kans.
Lee Hardware Co., Ltd., Meridian, Idaho.
Lewis & Bennett Hardware Co., Wilkes-Barre, Pa.
Lewis Lumber Co., Ashbury Park, N. J.
Lillen Hardware & Supply Corp., Long Island City, N. Y.
Lisk-Savory Corp., Buffalo, N. Y.
Little River Hardware Co., Miami, Fla.
Logan Hardware Co., Pittsburgh, Pa.
Logan Hardware & Supply Co., Logan, W. Va.
Longacre Hardware & Electric Co., Inc., New York, N. Y.
Louisville Tin & Stove Co., Louisville, Ky.
Lovett & Tharpe Hardware Co., Dublin, Ga.
Lowe, Geo. A., Co., Ogden, Utah.
Madison Hardware Co., Madison, Wis.
Mahowald Cycle Co., Mankato, Minn.
Marian Hardware & Supply Co., Inc., Marion, Va.
Marshall-Wells Co., Duluth, Minn.
Massey Hardware Co., Conway, Ark.
Maxwell Wholesale Hardware Co., Oakland, Calif.
May Hardware Co., Portland, Ore.
May Hardware Co., Washington, D. C.
McGowen-Lyons Hardware & Supply Co., Mobile, Ala.
McGregor Hardware Co., Springfield, Mo.
McKee, R. D., Hagerstown, Md.
Melcon Hardware Co., Meridian, Miss.
Midland Coal & Lumber Co., Miles City, Mont.
Miltown Hardware Co., Richmond, Ind.
Missoula Mercantile Co., Missoula, Mont.
Montana Hardware Co., Butte, Mont.
Moore-Handley Hardware Co., Inc., Birmingham, Ala.
Morhease & Wells Co., Decatur, Ill.
Morgan Hardware & Paint Co., New York, N. Y.
Morrow-Thomas Hardware Co., Amarillo, Tex.
Morse Hardware Co., Bellingham, Wash.
Mueller & Wendt, Hudson, Wis.
Myer-Leaf Co., Elgin, Ill.
Murchison, J. W., Co., Inc., Wilmington, N. C.
Myers-Bridge Co., Inc., Louisville, Ky.
Nash Hardware Co., Fort Worth, Tex.
Nelson Hardware & Plumbing Supply Co., Manchester, N. H.
Newberry's Hardware Co., Alliance, Nebr.
Northern Wholesale Hardware Co., Portland, Oreg.
O'Connell, J. T., Inc., Newport, R. I.
Oedl Hardware Co., Greensboro, N. C.
Ohio Valley Hardware & Roofing Co., Evansville, Ind.
Oklahoma City Hardware Co., Oklahoma City, Okla.
O'Neil, M., Co., Akron, Ohio.
O'Neill McNamara Hardware Co., Vicksburg, Miss.
Oregon Hardware Distributors, Bend, Ore.
Oregon Lumberman Co., Spokan, Wash.
Page, Steele & Flagg Co., New Haven, Conn.
Paxton & Gallagher Co., Omaha, Nebr.
Pedley Hardware Co., St. Louis, Mo., S. C.
Pearlstone, I. M., & Sons, Charleston, S. C.
Peavey, L. L., Co., Inc., Portsmouth, N. H.
Peck, Geo. W., Co., Bath, N. Y.
Pegasus Hardware & Supply Co., Houston, Tex.
Pensacola Hardware Co., Pensacola, Fla.
Petersen Lumber Co., El Paso, Tex.
Piper Hardware Co., Tampa, Fla.
Piedmont Hardware Co., Danville, Va.
Pierce Hardware Co., Taunton, Mass.
Porter, E. R., Hardware Co., Dothan, Ala.
Pottsville Supply Co., Inc., Fostoria, Ohio.
Prattish, John G., Hardware Co., Milwaukee, Wis.
Reeves Steel & Manufacturing Co., Dover, Ohio.
Reilly Bros. & Rauch, Lancaster, Pa.
Rice & Miller Co., Bangor, Maine.
Rich & Coonover Hardware Co., Kansas City, Mo.
Richardson Lumber Co., Forest City, Mo.
Roakoke Hardware Co., Roanoke, Va.
Roberts, Sanford & Taylor Co., Sherman, Tex.
Rochester Can Co., Rochester, N. Y.
Rogers & Baldwin Hardware Co., Springfield, Mo.
Royal Oak Wholesale Co., Royal Oak, Mich.
San Jose Hardware Co., San Jose, Calif.
Schafer, Inc., & Decatur, Inc., N. Y.
Schiffer's, Inc., Appleton, Wis.
Schatzler Hardware Co., Fort Wayne, Ind.
Schneider Manufacturing Co., St. Louis, Mo.
Schwabacher Hardware Co., Seattle, Wash.
Schwabuck & Co., Chicago, Ill.
Seattle Hardware Co., Seattle, Wash.
Sechtmann Hardware Co., Inc., Hartford, Conn.
Sennier Bros. Hardware Co., Inc., Newark, N. J.
Shapleigh Hardware Co., St. Louis, Mo.
Sharp-Horsey Hardware Co., Atlanta, Ga.
Sheehan Hardware Co., Americk, Ga.
Shepard, Clark Co., Boston, Mass.
Silver City Hardware Co., Silver City, N. M.
Simon & Co., Inc., Yonkers, N. Y.
Smith-Comstock Co., Inc., Bridgeport, Conn.
“Standard Grade” Galvanized Ware

Smith, Timothy, Co., Boston, Mass.
Southern Hardware Co., Charleston, W. Va.
Southern Hardware Co., Ltd., Monroe, La.
Specification Record, Chicago, Ill.
Spicola Hardware Co., Tampa, Fla.
Spiegel, Inc., Chicago, Ill.
Stankeel, J. J., Hardware Co., Manitowoc, Wis.
Steinman Hardware Co., Lancaster, Pa.
Stichter Hardware Co., Inc., Reading, Pa.
Stowe Hardware & Supply Co., Kansas City, Mo.
Strange-Jones Hardware Co., Clinton, Okla.
Stratton & Terstegge Co., Louisville, Ky.
Stratton-Waren Hardware Co., Memphis, Tenn.
Strevell Paterson Hardware Co., Salt Lake City, Utah.
Simmers Hardware & Supply Co., Johnson City, Tenn.
Swank Hardware Co., Johnstown, Pa.
Tallahadega Hardware Co., Talladega, Ala.
Tank Hardware Co., Quincy, Ill.
Thalhimer Bros., Richmond, Va.
Thomas & Sons, Inc., Boonsboro, Md.
Thompson, H. D., & Co., Malone, N. Y.
Thompson Hardware Co., Lowell, Mass.
Thompson-Miller Hardware Corp., Charleston, S. C.
Thompson, W. A. L., Hardware Co., Topeka, Kans.
Traey-Wells Co., Columbus, Ohio.
Van Camp Hardware & Iron Co., Indianapolis, Ind.
Vance Co., Inc., Chilhowie, Va.
Van Hoogenhuyze, Wm., Hardware Co., San Antonio, Tex.
Van Kleek Co., Panama City, Fla.
Varick, John B., Co., Manchester, N. H.
Vaughn, Geo. C., & Sons, Houston, Tex.
Wade Hardware Co., Greensboro, N. C.
Wagner Hardware Co., Mansfield, Ohio.
Watts Hardware & Supply Co., San Antonio, Tex.
Weakley-Watson-Miller Hardware Co., Brownwood, Tex.
Weed & Co., Buffalo, N. Y.
Western Metal Supply Co., San Diego, Calif.
Western Windmill Co., Sweetwater, Tex.
Whaley Hardware Inc., Painesville, Ohio.
Wholesale Hardware Co., Inc., New York, N. Y.
Wiant & Barr Hardware Co., Parkersburg, W. Va.
Williams Hardware Co., Fort Smith, Ark.
Wilson & Pugh Co., Cumberland, Md.
Wimberly & Thomas Hardware Co., Inc., Birmingham, Ala.
Winter Hardware Co., Billings, Mont.
Wirtz Bros., Hardware Supply, Chicago, Ill.
Witbeck, Clark, Co., Scheneectady, N. Y.
Witt Cornice Co., Cincinnati, Ohio.
Witte Hardware Corp., St. Louis, Mo.
Woodbury Hardware Co., Portland, Ore.
Woodward Hardware Co., Cairo, Ill.
Woodward, Wm. W., Hardware Co., Newton, N. J.
Worthington, Geo., Co., Cleveland, Ohio.
Wyatt, Job P., & Sons Co., Raleigh, N. C.
ZCM1 Wholesale Hardware Division, Salt Lake City, Utah.

U. S. GOVERNMENT

Department of the Army, Logistics Division, Washington, D. C.
COMMERCIAL STANDARDS

CS No. Item


2-30. Mopsticks.


4-29. Staple porcelain (all-day) plumbing fixtures.

5-46. Pipe nipples; brass, copper, steel, and wrought-iron (second edition).


Superseded by CS5-46.

7-29. Standard weight malleable iron or steel screwed unions.


16-29. Wall paper.


18-29. Hickory golf shafts.


23-30. Feldspar.

24-43. Screw threads and tap-drill sizes.


26-30. Aromatic red cedar closet lining.


30-31. Colors for sanitary ware. (Withdrew as commercial standard, March 15, 1948.)


37-31. Steel bone plates and screws.

38-32. Hospital rubber sheeting.

39-37. Wood and part wool blankets (second edition). (Withdrew as commercial standard, July 14, 1941.)

40-32. Surgeons’ rubber gloves.

41-32. Surgeons’ latex gloves.


43-32. Grade of sulphonated oils.

44-32. Apple wraps.


47-34. Marking of gold-filled and rolled-gold-plated articles other than watch cases.


49-34. Chip board, laminated chip board, and miscellaneous boards for bookbinding purposes.

50-34. Binders board for bookbinding and other purposes.
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>93-41</td>
<td>Portable electric drills (exclusive of high frequency).</td>
</tr>
<tr>
<td>94-41</td>
<td>Calking lead.</td>
</tr>
<tr>
<td>95-41</td>
<td>Lead pipe.</td>
</tr>
<tr>
<td>96-41</td>
<td>Lead traps and bends.</td>
</tr>
<tr>
<td>97-42</td>
<td>Electric supplementary driving and passing lamps for vehicles (after market).</td>
</tr>
<tr>
<td>98-42</td>
<td>Artists' oil paints.</td>
</tr>
<tr>
<td>99-42</td>
<td>Gas floor furnaces—gravity circulating type.</td>
</tr>
<tr>
<td>100-47</td>
<td>Porcelain-enameled steel utensils (third edition).</td>
</tr>
<tr>
<td>101-43</td>
<td>Flue-connected oil-burning space heaters equipped with vaporizing pot-type burners.</td>
</tr>
<tr>
<td>102-49</td>
<td>(Reserved for Diesel and fuel-oil engines.)</td>
</tr>
<tr>
<td>103-48</td>
<td>Rayon jacquard velour (with or without other decorative yarn) (second edition).</td>
</tr>
<tr>
<td>104-49</td>
<td>Warm-air furnaces equipped with vaporizing type oil burners (third edition).</td>
</tr>
<tr>
<td>106-44</td>
<td>Boys' pajama sizes (woven fabrics) (second edition).</td>
</tr>
<tr>
<td>107-45</td>
<td>Commercial electric-refrigeration condensing units (second edition). (Withdrawn as commercial standard September 4, 1947.)</td>
</tr>
<tr>
<td>108-43</td>
<td>Treading automobile and truck tires.</td>
</tr>
<tr>
<td>109-44</td>
<td>Solid-fuel-burning forced-air furnaces.</td>
</tr>
<tr>
<td>110-43</td>
<td>Tire repairs—vulcanized (passenger, truck, and bus tires).</td>
</tr>
<tr>
<td>111-43</td>
<td>Earthenware (vitreous-glazed) plumbing fixtures.</td>
</tr>
<tr>
<td>112-43</td>
<td>Fibrous glass fiber wallboard.</td>
</tr>
<tr>
<td>113-44</td>
<td>Oil-burning floor furnaces equipped with vaporizing pot-type burners.</td>
</tr>
<tr>
<td>114-43</td>
<td>Hospital sheeting for mattress protection.</td>
</tr>
<tr>
<td>115-44</td>
<td>Porcelain-enameled tanks for domestic use.</td>
</tr>
<tr>
<td>116-44</td>
<td>Bituminized-fibre drain and sewer pipe.</td>
</tr>
<tr>
<td>118-44</td>
<td>Marking of jewelry and novelties of silver.</td>
</tr>
<tr>
<td>(E)119-451</td>
<td>Dial indicators (for linear measurements).</td>
</tr>
<tr>
<td>121-45</td>
<td>Women's slip sizes (woven fabrics).</td>
</tr>
<tr>
<td>122-49</td>
<td>Western softwood plywood (second edition).</td>
</tr>
<tr>
<td>(E)124-451</td>
<td>Master disks.</td>
</tr>
<tr>
<td>126-45</td>
<td>Tank-mounted air compressors.</td>
</tr>
<tr>
<td>127-45</td>
<td>Self-contained mechanically refrigerated drinking water coolers.</td>
</tr>
<tr>
<td>128-49</td>
<td>Men's sport shirt sizes—woven fabrics (other than those marked with regular neckband sizes) (second edition).</td>
</tr>
</tbody>
</table>

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

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.