CHIP BOARD
LAMINATED CHIP BOARD
AND MISCELLANEOUS BOARDS FOR
BOOKBINDING PURPOSES

COMMERCIAL STANDARD CS49–34

Effective Date for New Production December 15, 1934

A RECORDED STANDARD OF THE INDUSTRY

Approved by the American Standards Association
as American Standard on January 9, 1935

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1935

For sale by the Superintendent of Documents, Washington, D. C.  -  -  Price 5 cents
At the instance of the Employing Bookbinders of America, and later the Book Manufacturers Institute, representing the chief users of the product, a recommended commercial standard covering chip board and miscellaneous boards for bookbinding purposes was widely circulated for written acceptance. The industry has since accepted and approved for promulgation by the U. S. Department of Commerce, through the National Bureau of Standards, the standard as shown herein.

The standard became effective for new production December 15, 1934.

Promulgation recommended.

Promulgated.

Promulgation approved.

I. J. Fairchild,
Chief, Division of Trade Standards.

Lyman J. Briggs,
Director, National Bureau of Standards.

Daniel C. Roper,
Secretary of Commerce.
CHIP BOARD, LAMINATED CHIP BOARD, AND MISCELLANEOUS BOARDS FOR BOOKBINDING PURPOSES

COMMERCIAL STANDARD CS49-34

SCOPE

DEFINITION

1. For the purpose of establishing definite specifications for boards other than binders board used in bookbinding this general definition is accepted:
   Chip board, laminated chip board, and miscellaneous boards for bookbinding purposes are any kind of pulpboard, single ply, laminated, or otherwise manufactured, used for covers or cover stiffening in books and for other bookbinding purposes.

CLASSIFICATION

2. Such boards are divided into classes and grades as shown below; the general definition for the various classes and grades being subject to the specific data given under “Specific Requirements” for the corresponding class and grade.

Class 1.—Chip board
   A single-ply board of relatively low density made from a base stock of mixed papers, to a maximum thickness of 72 points (0.072 inch).

Class 2.—Laminated chip and other boards
   Grade A.—A board made by laminating boards of class 1.
   Grade B.—A board made by laminating chemical wood-pulp boards.

Class 3.—Miscellaneous boards
   Grades.—In this class appear such varieties of board as news, cornstalk, chestnut-chip, straw, tag, red (rope) flexible, etc. According to present plans, specifications will be developed for these materials and grades established as the need arises. No attempt is made to classify them into grades at the present time.

GENERAL REQUIREMENTS

SURFACE

3. Boards of all classes and grades shall be free from surface lumps and reasonably smooth and flat; the usable portion of the sheet shall be reasonably free of imperfections.
4. Boards of classes 1 and 2 are purchased by weight; the size, thickness, class, and grade being specified. The weight is to be net weight. The specified size of the board, expressed in inches, is exclusive of trim. Thickness is expressed either in points or in parts of an inch, a point being one-thousandth part of an inch. The bursting strength is expressed in pounds per square inch pressure, and the density in grams per cubic centimeter.

STANDARD BUNDLE WEIGHT

5. Boards of classes 1 and 2 shall be put up in bundles, the standard bundle weighing 50 pounds. A tolerance of plus or minus 3 pounds is allowed on individual bundles.

THICKNESS TOLERANCE

6. A variation of 0.003 inch (3 points) above or below the specified thickness is permitted.

DIRECTION OF GRAIN

7. Unless the direction of the grain is otherwise specified by the purchaser, the grain will be understood to run parallel to the direction of the second dimension of area.

DETAIL REQUIREMENTS

8. Each class of board shall meet the requirements of its class and grade as given in table 1, as well as the requirements which refer to physical qualities, methods of test, etc.; all tests being made according to the methods herein described.

CLASS 1. CHIP BOARD

SPECIFIC REQUIREMENTS

9. Color.—The natural pulp color, without the addition of coloring matter, shall be regarded as the standard.
10. Density.—The average density shall be 0.65 gram, plus or minus 0.05 gram, per cubic centimeter.
11. Trim.—Boards shall be trimmed to the size ordered.
12. Thickness and bursting strength.—The thickness and bursting strength shall conform with the requirements of table 1, class 1.

CLASS 2. LAMINATED CHIP AND LAMINATED CHEMICAL WOOD-PULPBOARD

SPECIFIC REQUIREMENTS

13. Color.—The natural pulp color, without the addition of coloring matter, shall be regarded as the standard.
14. Density.—The average density of laminated chip board, grade A, and laminated wood-pulp board, grade B, shall be 0.65 gram and 0.70 gram plus or minus 0.05 gram, per cubic centimeter, respectively.
15. Trim.—Boards shall be trimmed to the size ordered.
16. **Thickness and bursting strength.**—The thickness and bursting strength shall conform with the requirements of table 1, class 2, grade A, and class 2, grade B.

**Table 1.—Thickness and bursting strength**

<table>
<thead>
<tr>
<th>Thickness (inch)</th>
<th>Thickness (points)</th>
<th>Bursting strength (lb/in.²)</th>
<th>Thickness (inch)</th>
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<th>Thickness (points)</th>
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**CLASS 2. GRADE A, LAMINATED CHIP BOARD**

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<th>Thickness (inch)</th>
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<th>Thickness (inch)</th>
<th>Thickness (points)</th>
<th>Bursting strength (lb/in.²)</th>
<th>Thickness (inch)</th>
<th>Thickness (points)</th>
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**CLASS 2. GRADE B, LAMINATED CHEMICAL WOOD-PULPBOARD**

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<th>Thickness (inch)</th>
<th>Thickness (points)</th>
<th>Bursting strength (lb/in.²)</th>
<th>Thickness (inch)</th>
<th>Thickness (points)</th>
<th>Bursting strength (lb/in.²)</th>
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<td>260</td>
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**METHODS OF SAMPLING AND TESTING**

**ALL CLASSES AND GRADES**

17. **Sampling for tests.**—The test sample used for making thickness, density, and bursting-strength determinations shall consist of 10 specimens cut 10 by 10 inches, each specimen being cut from a different board. Where a delivery consists of less than 30 bundles, not less than 3 bundles shall be sampled. On all deliveries of 30 bundles or more, at least 10 percent of the bundles shall be sampled, except where a delivery consists of more than 100 bundles, in which event 10 bundles shall be sampled.

18. **Control testing.**—For ordinary control testing, the prevailing temperature and humidity conditions are satisfactory. In controversial cases the specimens shall be tested at 70° F and at 50 percent to 65 percent relative humidity after being exposed to this condition for 72 hours. Such tests may be made in any accredited commercial testing laboratory satisfactory to both buyer and seller.

19. **Thickness.**—Twenty readings shall be made, 2 on each of the 10 test specimens cut 10 by 10 inches. Each of the 20 individual readings shall not vary over 0.003 inch above or below the thicknesses given under specific requirements for the class, grade, and thickness ordered. In test reports thickness shall be expressed in decimal parts of an inch.

20. **Density.**—The average density is computed from the thickness and the weight per unit area. The 10 test specimens are weighed together accurately to the nearest gram and the average weight of
one test specimen is determined. The density is calculated according to the following formula:

\[
\text{Average density (g/cm}^3) = \frac{\text{average weight of one test specimen in grams}}{\text{area of test specimen (in.}^2) \times \frac{\text{average thickness of test specimen in decimal parts of an inch}}{16.39}}
\]

21. **Bursting strength.**—In determining the bursting strength, 20 bursts shall be made, one on each side of the 10 test specimens. The average of the 20 bursts shall be reported as the average bursting strength. The average bursting strength shall be not lower than the figures given under specific requirements for the class, grade, and thickness ordered.

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**GUARANTEE LABEL**

22. The following illustrates the guarantee statement to be used by the manufacturers, which is to be applied by rubber stamp to one outside sheet of each bundle:

The _______ Company, manufacturer, certifies that this class _______ , grade _______ of _______ thickness, _______ size complies with all requirements specified in Commercial Standard CS49-34 issued by the United States Department of Commerce and approved by the American Standards Association. The liability of the manufacturer shall be limited to the replacement of board, before it has been cut.

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**EFFECTIVE DATE**

The standard became effective for new production December 15, 1934.

**STANDING COMMITTEE**

The following 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:

*Book Manufacturers Institute;*
  E. W. Palmer (chairman), Chairman, Research Committee, Book Manufacturers Institute, in care of Kingsport Press, Inc., Kingsport, Tenn.
  Raymond E. Baylis, Eugene C. Lewis Co., 461 Eighth Avenue., New York, N. Y.

*Manufacturers and Distributors of Boards for Bookbinding Purposes;*
  E. R. Harris, Mead Sales Corporation, 230 Park Avenue, New York, N. Y.

*National Association of Book Publishers;*
  John Benbow, Longmans, Green & Co., 114 Fifth Avenue, New York, N. Y.

**HISTORY OF PROJECT**

The general conference on binders board (see CS50-34) held in New York City on October 14, 1931, appointed a joint committee of representatives of the Binders Board Manufacturers Association and the
Book Manufacturers Institute for harmonization of some unsettled requirements. In connection with the work of this committee, the Book Manufacturers Institute submitted a specification for chip board, laminated chip board and miscellaneous boards for bookbinding purposes, which epitomized results obtained by F. R. Blaylock, research associate at the United States Government Printing Office, and which had been prepared in consultation with producers, distributors, and users of chip board.

This specification was first presented as a part of a broader specification to include all paper boards for bookbinding purposes, but on recommendation of the joint committee on April 19, 1934, it was decided to consider binders board separately. Accordingly, on May 23, 1934 the Recommended Commercial Standard for Chip Board was circulated for written acceptance, and announcement of success of the project was issued on October 19, 1934.

AMERICAN STANDARD

This commercial standard was approved as American Standard by the American Standards Association on January 9, 1935.
ACCEPTANCE OF COMMERCIAL STANDARD

This sheet, properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this commercial standard.

Date

Division of Trade Standards,
National Bureau of Standards,
Washington, D. C.

GENTLEMEN:
Having considered the statements on the reverse side of this sheet, we accept the commercial standard CS49-34 as our

\[ \text{production} \quad \text{distribution} \quad \text{use} \]

standard of practice in the distribution of chip board, laminated chip board, and miscellaneous boards for bookbinding purposes.

We will assist in securing its general recognition and use, and will cooperate with the standing committee to effect revisions of the standard when necessary.

Signature

(Kindly typewrite or print the following lines)

Title

Company

Street address

City and State

1 Please designate which group you represent by drawing lines through the other two. In the case of related interests, trade papers, colleges, etc., desiring to record their general approval the words "In principle" 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 the industry. 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 Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the industry 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 branches of the industry 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 companies representing a satisfactory majority of production, the success of the project is announced. If, however, in the opinion of the standing committee of the industry or the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.
ACCEP'TORS

Individuals and organizations listed below have indicated in writing, acceptance of this specification as their standard of practice, but such endorsement does not signify that they may not find it necessary to deviate from the standard, nor that they guarantee all of their products to conform with the requirements of this standard.

ASSOCIATIONS

American Child Health Association, New York, N. Y. (In principle.)
Bible Institute Colportage Association, The, Chicago, Ill.
Book Manufacturers’ Institute, Inc., New York, N. Y.
Christian Board of Publication, St. Louis, Mo.
Employing Bookbinders of America, New York, N. Y.
National Association of Book Publishers, New York, N. Y.
Review and Herald Publishing Association, Washington, D. C.
Southern Publishing Association, Nashville, Tenn.
Union of American Hebrew Congregations, Cincinnati, Ohio.

FIRMS

Aeco Products, Inc., Long Island City, N. Y.
Adams Bookbinding Co., Brooklyn, N. Y.
Aldine Paper Co., New York, N. Y.
Allen Co., Thornton W., New York, N. Y.
Alling & Cory Co., The, Buffalo, N. Y., and New York, N. Y.
American Beauty Cover Co., Dallas, Tex.
American Loose Leaf Binder Co., St. Louis, Mo.
American Printing and Blank Book Corporation, New York, N. Y.
Anderson Co., The W. H., Cincinnati, Ohio.
Andrews Co., O. B., Chattanooga, Tenn. (In principle.)
Antietam Paper Co., Inc., Hagerstown, Md.
Arco Manifolding Co., Inc., The, New York, N. Y.
Argus Books, Chicago, Ill.
Art Bindery, The, Seattle, Wash.
Arvia Bindery, Chicago, Ill.
Ashland Bookbindery, Chicago, Ill.
Augsburg Publishing House, Minneapolis, Minn.
Augustana Book Concern, Rock Island, Ill.
Austin & MaGill, Inc., New York, N. Y.
Baker, Jones, Hausauer, Inc., Buffalo, N. Y.
Baldwin & Sons, A. C., Austin, Tex.
Baldwin Paper Co., Inc., New York, N. Y.
Banks Upshaw & Co., Dallas, Tex.
Barber’s Sons, James S., Philadelphia, Pa.
Bath Co., Ltd., M. L., Shreveport, La.
Battle Creek Sales Book Co., Inc., Battle Creek, Mich.
Bayne Co., The James, Grand Rapids, Mich.
Beacon Paper Co., St. Louis, Mo.
Beckley-Cardy Co., Chicago, Ill.
Beck-Nor Accounting System Co., The, Salina, Kans.
Becktold Co., The, St. Louis, Mo.
Beil & Evans Co., The, Youngstown, Ohio.
Bellingham Bookbindery, South Bellingham, Wash.
Bellows Reeve Co., Chicago, Ill.
Berkheimer Manufacturing Co., I. E., Tacoma, Wash. (In principle.)
Bethlehem Bookbindery, Bethlehem, Pa.
Bishop Paper Co., Inc., New York, N. Y. (In principle.)
Blackwell Wielandt Co., St. Louis, Mo.
Blake, Moffitt & Towne, San Francisco, Calif. (and other offices).
Bookwalter-Ball-Greathouse Printing Co., Indianapolis, Ind.
Boone Blank Book Co., Boone, Iowa.
Bouer Paper Co., The, Milwaukee, Wis. (In principle.)
Bradley & Scoville, Inc., New Haven, Conn.
Brandt Printing and Binding Co., Manitowoc, Wis.
Braunworth & Co., Inc., Brooklyn, N. Y.
Brock & Rankin, Chicago, Ill.
Broome Printing Co., Binghamton, N. Y.
Brown Printing and Binding Co., M. B., New York, N. Y.
Burgmeier Book Bindery, Inc., Chicago, Ill.
Burkhardt Co., Detroit, Mich.
Butte Paper Co., The, Butte, Mont.
Cadillac Book Binding Co., Detroit, Mich.
California Press, University of, Berkeley, Calif.
Capital City Bindery, Salem, Oreg.
Capitol Book Bindery, Inc., Chicago, Ill.
Carpenter Paper Co. of Utah, Salt Lake City, Utah.
Carter & Co., Inc., John, Hartford, Conn.
Caxton Printers, Ltd., The, Caldwell, Idaho.
Cental Bindery Co., Des Moines, Iowa.
Central Publishing House, Cleveland, Ohio.
Chatfield Co., The Minotite E., New Haven, Conn.
Chauver Head Book Shop, Inc., New York, N. Y.
Chemical Catalog Co., Inc., The, New York, N. Y.
Chesapeake Paperboard Co., The, Baltimore, Md.
Chicago Binder and File Co., Chicago, Ill.
Chicago Press, The University of, Chicago, Ill.
Chivers Book Binding Co., Inc., Brooklyn, N. Y.
Christopher Publishing House, Boston, Mass.
Church Co., William A., Ithaca, N. Y.
Claffin & Co., Inc., W. H., Boston, Mass. (In principle.)
Clark Printing and Binding Co., Inc., W. R., New York, N. Y.
Clarke Press, The, Manchester, N. H.
Clarke Publishing Co., Inc., S. J., Indianapolis, Ind.
Cleveland Book Binding Co., Cleveland, Ohio.
Coast Envelope and Leather Products Co., Los Angeles, Calif.
Colorado, University of, Boulder, Colo.
Commercial Bindery, Inc., The, Detroit, Mich.
Commercial Bookbinding Co., The, Cleveland, Ohio.
Commercial Press, Pittsburgh, Pa.
Concordia Publishing House, St. Louis, Mo.
Conkey Co., W. B., Hammond, Ind.
Conklin Co., Inc., The, Newark, N. J.
Conolly Co., Henry, Rochester, N. Y.
Continental Artcrafts, San Diego, Calif.
Continental Paper Co., Ridgfield Park, N. J.
Cook Printshop, The Henry, Elizabeth, N. J.
Cooperative Bindery Co., San Francisco, Calif.
Co-Operative Publishing Co., Guthrie, Okla.
Copeland Co., Inc., Lewis, New York, N. Y.
Cornwall Press, Inc., New York, N. Y.
Cramer-Force Co., Inc., The, Rochester, N. Y.
Crescent Book Bindery, Chicago, Ill.
Crowell Co., Thomas Y., New York, N. Y.
Cuneo Co., John F., Chicago, Ill.
Cupples & Leon Co., New York, N. Y.
Curtiss Philosophic Book Co., The, Washington, D. C.
Daedalic Bookbinding Co., El Paso, Tex.
Dayton Blank Book & Printing Co., Dayton, Ohio.
Decatur Paper House, Inc., The, Decatur, Ill. (In principle.)
Dejonge & Co., Louis, New York, N. Y.
Diem & Wing Paper Co., The, Cincinnati, Ohio.
Dillingham's, Bangor, Maine.
Dittus, Rudolph C., Teaneck, N. J.
Dixon & Co., Denver, Colo.
Dixon & Co., Salt Lake City, Utah.
Dodd, Mead & Co., New York, N. Y.
Dodge Publishing Co., New York, N. Y.
Dodsworth Stationery Co., Samuel, Kansas City, Mo.
Doubleday, Doran & Co., Inc., Garden City, N. Y.
Duluth Paper and Specialties Co., Duluth, Minn.
Duluth Ruling and Binding Co., Duluth, Minn.
Dura Binding Co., Marlboro, Mass.
Eagle Printing Co., Marinette, Wis.
Eagle Printing and Binding Co., Pittsfield, Mass.
Earl & Son, N. R., Fall River, Mass.
Educator Supply Co., MITCHELL, S. Dak.
Eggeling Book Bindery, New York, N. Y.
Elbe File and Binder Co., Inc., New York, N. Y.
Enderlin & Son, F., Newark, N. J.
Engel & Son, H., Kansas City, Mo.
Eugenes Publishing Co., Inc., New York, N. Y.
Evangelical Press, Harrisburg, Pa.
Excelsior Printing Co., N. Adams, Mass. (In principle.)
Falconer Co., The, Baltimore, Md.
Palk Publishing Co., New York, N. Y. (In principle.)
Federbusch Co., Inc., The, New York, N. Y.
Fibreboard Products, Inc., San Francisco, Calif.
Finch & McCullouch, Aurora, Ill.
Flaminger and Grahl Blank Book Co., St. Louis, Mo.
Flanigan-Pearson Co., Champaign, Ill.
Flynn, Inc., William F., St. Louis, Mo.
Follett Publishing Co., Chicago, Ill.
Forbes Publishing Co., B. C., New York, N. Y.
Franklin Bindery, Inc., The, Chicago, Ill.
Funke Sons Co., Ferdinand, Evansville, Ind.
Funk & Wagnalls Co., New York, N. Y.
Gammel’s, Inc., Austin, Tex.
Gane Bros. & Lane, Inc., Chicago, Ill.
Gane Bros. & Lane, Inc., St. Louis, Mo.
Garber Co., The A. L., Ashland, Ohio.
Gardiner Binding and Mailing Co., New York, N. Y. (In principle.)
Garrett and Massie, Inc., Richmond, Va.

General Bookbinding Co., Cleveland, Ohio.
General Pass Book Corporation, Ste. Genevieve, Mo.
Geographical Publishing Co., The, Chicago, Ill.
G. H. Bindery, New York, N. Y.
Globe Book Co., New York, N. Y.
Gotham-Ebert, Inc., New York, N. Y.
Grabau Art Bookbinding Studio, John F., Buffalo, N. Y.
Graham Paper Co., St. Louis, Mo.
Great Falls Paper Co., Great Falls, Mont.
Grimm Book Bindery, Madison, Wis.
Groneweg Printing Co., Dayton, Ohio.
(G. H. Bindery) Grossett & Dunlap, Inc., New York, N. Y.
Gubitz & Sons, W. F., Glens Falls, N. Y.
Guide Printing Co., Inc., Brooklyn, N. Y.
Guerney, Bernard Guilbert, New York, N. Y.
Haddon Book Bindery, Inc., The, Camden, N. J.
Hale, Cushman & Flint, Inc., Boston, Mass. (In principle.)
Hall and McClesney, Inc., Syracuse, N. Y.
Harper & Bros., New York, N. Y.
Hartmann-Bruderlin Printing Co., The, Denver, Colo.
Hassenfeld Bros., Inc., Providence, R. I.
Haynes Bookbinding Co., Schenectady, N. Y.
Heitman-Garand Co., Detroit, Mich.
Henley Publishing Co., Norman W., New York, N. Y.
Herman Book Bindery, Mandel, Chicago, Ill.
Hertzberg and Craftsmen, Arthur, Chicago, Ill.
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<td>Hillig Book Bindery</td>
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<td>The, Sandusky, Ohio</td>
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<td>Inc., Richmond, Va. (In principle.)</td>
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<td>Inland Printing Co.</td>
<td>Springfield, Mo.</td>
</tr>
<tr>
<td>Irwin-Hodson Co.</td>
<td>The, Portland, Oreg. (In principle.)</td>
</tr>
<tr>
<td>Irwin Paper Co.</td>
<td>Chicago, I1l. (In principle.)</td>
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<tr>
<td>J. L. Bindery</td>
<td>Chicago, Ill.</td>
</tr>
<tr>
<td>Jontzen Printing Co.</td>
<td>Cleveland, Ohio</td>
</tr>
<tr>
<td>Judy Publishing Co.</td>
<td>Chicago, Ill.</td>
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<tr>
<td>Keystone Bindery</td>
<td>Inc., New York, N. Y.</td>
</tr>
<tr>
<td>King Printing Co.</td>
<td>Bristol, Tenn.</td>
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<tr>
<td>Kingsport Press, Inc.</td>
<td>Kingsport, Tenn.</td>
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<tr>
<td>Knapp-Printing</td>
<td>Pittsburgh, Pa.</td>
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<tr>
<td>Knight Bros. Paper Co.</td>
<td>Jacksonville, Fla.</td>
</tr>
<tr>
<td>Knoll, A.</td>
<td>Bookbindery, New York, N. Y.</td>
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<tr>
<td>Kohlhaas Co.</td>
<td>The, Chicago, Ill. (In principle.)</td>
</tr>
<tr>
<td>Kolarik Bookbinding Co.</td>
<td>Cedar Rapids, Iowa</td>
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<td>Kroner &amp; Co.</td>
<td>Wm. F., Cincinnati, Ohio. (In principle.)</td>
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<tr>
<td>Kuenstner &amp; Lucie Paper Co.</td>
<td>Inc., New York, N. Y.</td>
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<tr>
<td>Lafayette Printing Co.</td>
<td>Lafayette, Ind.</td>
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<tr>
<td>Langille &amp; Co.</td>
<td>V. J., Spokane, Wash.</td>
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<tr>
<td>Laux &amp; Co.</td>
<td>A. J., Lockport, N. Y.</td>
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<tr>
<td>Lawrence Bindery Co.</td>
<td>Lawrence, Mass.</td>
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<tr>
<td>Law Co.</td>
<td>Robert O., Chicago, Ill.</td>
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<tr>
<td>Lea &amp; Feibiger</td>
<td>Philadelphia, Pa. (In principle.)</td>
</tr>
<tr>
<td>Lee Co.</td>
<td>The Wilson H., Orange, Conn.</td>
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<tr>
<td>Leland, Inc.</td>
<td>Samuel R., New York, N. Y.</td>
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<tr>
<td>Leslie Paper Co.</td>
<td>F. G., St. Paul, Minn.</td>
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<tr>
<td>Lewis Co.</td>
<td>Eugene C., New York, N. Y.</td>
</tr>
<tr>
<td>Lewis Historical Publishing Co.</td>
<td>Inc., New York, N. Y.</td>
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<tr>
<td>Litergy Paper Board Co.</td>
<td>Inc., Steubenville, Ohio</td>
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<tr>
<td>Library Bindery</td>
<td>St. Louis, Mo.</td>
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<tr>
<td>Linde Paper Co.</td>
<td>J. E., New York, N. Y.</td>
</tr>
<tr>
<td>Linotype Printing Co.</td>
<td>Memphis, Tenn.</td>
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<tr>
<td>Lloyd Co.</td>
<td>W. G., Chicago, Ill.</td>
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<tr>
<td>Login &amp; Son, Inc.</td>
<td>B., New York, N. Y.</td>
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<tr>
<td>Lokke Bookbindery</td>
<td>Los Angeles, Calif.</td>
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<tr>
<td>Longmans, Green &amp; Co.</td>
<td>New York, N. Y.</td>
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<tr>
<td>Louisville Paper Co.</td>
<td>Louisville, Ky.</td>
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<tr>
<td>Lutheran Book Concern</td>
<td>The, Columbus, Ohio</td>
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<tr>
<td>Mack Printing Co.</td>
<td>Easton, Pa.</td>
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<tr>
<td>Macmillan Co.</td>
<td>The, New York, N. Y.</td>
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<tr>
<td>Magee Bros. Co.</td>
<td>The, Piqua, Ohio.</td>
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<tr>
<td>Majestic Paper Corporation</td>
<td>New York, N. Y.</td>
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<tr>
<td>Marshall and Bruce Co.</td>
<td>Nashville, Tenn.</td>
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<tr>
<td>Marvel Bindery Co.</td>
<td>Inc., New York, N. Y.</td>
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<tr>
<td>Master-Craft Corporation</td>
<td>Kalamazoo, Mich.</td>
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<tr>
<td>McBee Co.</td>
<td>The, Athens, Ohio</td>
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<td>McBee Printing Co.</td>
<td>Butte, Mont.</td>
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<tr>
<td>McLaughlin Bros., Inc.</td>
<td>Springfield, Mass.</td>
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<tr>
<td>McMillan Book Co.</td>
<td>Syracuse, N. Y.</td>
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<tr>
<td>Mead Paperboard Corporation</td>
<td>The, Chillicothe, Ohio.</td>
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<td>Mead Sales Co.</td>
<td>The, New York, N. Y.</td>
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<td>Messinger Paper Co.</td>
<td>Chicago, Ill.</td>
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<tr>
<td>Mexico Bank-Supply Co.</td>
<td>Mexico, Mo.</td>
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<td>Michigan, The University of</td>
<td>Ann Arbor, Mich.</td>
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<tr>
<td>Midwest Publishers Co.</td>
<td>Minneapolis, Minn.</td>
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<tr>
<td>Midwestern Paper Co.</td>
<td>Kansas City, Mo.</td>
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<tr>
<td>Miller Blank Book Co.</td>
<td>Fred R., Williamsport, Pa.</td>
</tr>
<tr>
<td>Millar &amp; Co., Inc.</td>
<td>Geo. W., New York, N. Y.</td>
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<tr>
<td>Miller-Davis Co.</td>
<td>Minneapolis, Minn.</td>
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Chip Boards for Bookbinding Purposes

Miller Press, The, Jacksonville, Fla.
Mississippi Valley Paper Co., St. Louis, Mo.
Modern Library, Inc., New York, N. Y.
Modern Bookbinding Co., New York, N. Y.
Mohawk Book Bindery, Schenectady, N. Y.
Monmouth Book Co., Monmouth, Ill.
Moore & Co., Inc., Baltimore, Md.
Morehouse Publishing Co., Milwaukee, Wis.
Morton & Co., John P., Louisville, Ky.
Moser Paper Co., Chicago, Ill.
Motter Bookbinding Co., Muskogee, Okla.
Murphy-Travis Co., Minneapolis, Minn.
Nankervis Co., C. T., Indianapolis, Ind.
Nassau Paper Co., Minneapolis, Minn.
Natiek Box and Board Co., Natieck, Mass.
National Bureau of Economic Research, New York, N. Y. (In principle.)
National Edition and Library Bindery, New York, N. Y.
National Library Bindery Co., The, East Cleveland, Ohio.
National Library Bindery Co., Indianapolis Branch, Indianapolis, Ind.
Nelson Publishing Co., C. C., Appleton, Wis.
Newhouse Paper Co., Minneapolis, Minn.
Newman & Co., S. B., Knoxville, Tenn.
New York Times Co., The, New York, N. Y.
Nickerson & Collins Co., Chicago, Ill. (In principle.)
North & Co., Jacob, Lincoln, Nebr.
North Carolina Press, The University of, Chapel Hill, N. C.

Northwestern Bindery, The, Evanston, Ill.
Northwestern Publishing House, Milwaukee, Wis.
Oberly & Newell, New York, N. Y.
Ogilvie Publishing Co., J. S., New York, N. Y.
Ohio Boxboard Co., The, Rittman, Ohio.
Ohio State Bindery, Columbus, Ohio.
Old Dominion Paper Co., The, Norfolk, Va.
Old Dominion Press, Inc., Richmond, Va.
Open Court Publishing Co., The, Chicago, Ill. (In principle.)
Optic Bindery, Baltimore, Md.
Oregon Bookbinding Co., The, Portland, Oreg.
Oregon, University of, The University Press, Eugene, Oreg.
Owen Publishing Co., F. A., Dansville, N. Y.
Oxford Book Co., New York, N. Y. (In principle.)
Pacific Coast Paper Co., Fresno, Calif.
Pacific Coast Publishing Co., Santa Barbara, Calif.
Pacific Library Binding Co., Los Angeles, Calif.
Paine Publishing Co., Dayton, Ohio.
Pairpoint Corporation, The, New Bedford, Mass. (In principle.)
Palmer Co., The, Boston, Mass.
Palmer & Co., Ltd., E. C., Tampa, Fla.
Palmer Corporation, Lester W., New York, N. Y.
Paper Supply Co., The, Houston, Tex.
Paragon Binder Corporation, New York, N. Y.
Parke, Davis & Co., Detroit, Mich.
Parker, C. A. A., Medford, Mass.
Parker Paper and Twine Co., High Point, N. C. (In principle.)
Pease Co., The C. F., Chicago, Ill.
Peerless Album Co., Inc., New York, N. Y.
Peerless Printing Corporation, Marion, Ind.
Pencil Points Press, Inc., The, New York, N. Y.
Perry Book and Bindery Co., Fond du Lac, Wis.
Peterson Lithograph and Printing Co., Omaha, Nebr.
Pill Bros. Co., Sioux City, Iowa. (In principle.)
Pioneer, Inc., Tacoma, Wash.
Plymouth Bindery, Chicago, Ill.
Port Huron Sulphite and Paper Co., Port Huron, Mich. (In principle.)
Post Co., The H. H., Denver, Colo. (In principle.)
Pratt Institute Free Library, Brooklyn, N. Y. (In principle.)
Prime Co., Inc., Charles H., New York, N. Y. (In principle.)
Princeton University Press, Princeton, N. J.
Progress Bookbinding Co., Cincinnati, Ohio. (In principle.)
Progressive Ruling & Binding Co., New York, N. Y.
Prospect Press, Inc., New York, N. Y.
Provence, Jarrard & Martin, Greenville, S. C.
Publishers Printing Co., New York, N. Y.
Pugh Printing Co., The A. H., Cincinnati, Ohio.
Putvis, Walter S., Utica, N. Y.
Quality Book Binding Co., New York, N. Y.
Queen City Paper Co., Cincinnati, Ohio.
Quiney Bookbindery, Quincy, Mass.
Ready Reference Publishing Co., New York, N. Y.
Reinhold Publishing Corporation, New York, N. Y.
Remington Rand, Inc., Buffalo, N. Y.
Republic Publishing Co., Yakima, Wash.
Resch Printing and Binding Co., The Sheboygan, Wis.
Revell Co., Fleming H., New York, N. Y. (In principle.)
Riverside Paper Corp., Appleton, Wis. (In principle.)
Rogers Co., Inc., John C., New York, N. Y.
Rohner Paper Co., Akron, Ohio.
Rowland Paper Co., Louisville, Ky.
Royal Card & Paper Co., New York, N. Y.
St. Louis Public Library, St. Louis, Mo. (In principle.)
San Antonio Paper Co., San Antonio, Tex.
Schwarz Paper Co., Lincoln, Nebr.
Scioto Paper Co., Columbus, Ohio.
Scribner Press, New York, N. Y.
Seavey Co., The, Portland, Maine.
Seeman Printery, Inc., The, Durham, N. C.
Service Bindery, Chicago, Ill.
Shelby Salesbook Co., The, Shelby, Ohio.
Sherman Printing and Binding Co., Seattle, Wash.
Shiner-Sien Paper Co., San Antonio, Tex.
Slade, Hipp & Meloy, Inc., Chicago, Ill.
Snyder Manufacturing Co., Inc., W. W., Cohoes, N. Y.
Sonoco Products Co., Hartsville, S. C.
Southern Publishing Co., Dallas, Tex.
Southwestern Paper Co., Houston, Tex.
Southwest Press, Inc., The, Dallas, Tex.
Springer, Walter G., Carthage, Mo.
Standard Paper Co., Milwaukee, Wis.
Stanford University Press, Stanford University, Calif.
State Co., The, Columbia, S. C.
Stationers Loose Leaf Co., Milwaukee, Wis.
Stikeman & Co., Inc., New York, N. Y.
Stillwell Paper Co., E. J., St. Paul, Minn.
Stokes Co., Frederick A., New York, N. Y.
Stoll & Westerlin, Chicago, Ill.
Straub Bindery, Henry, Buffalo, N. Y.
Strickland Paper Co., Inc., Birmingham, Ala.
Stuarts Wilmington Bookbindery, Wilmington, Del.
Studio Publications, Inc., The, New York, N. Y.
Stuebe Binding and Printing Co., Green Bay, Wis.
Success Bookbindery, New York, N. Y.
Sudden Service Bindery, Chicago, Ill.
Superior Bindery, Chicago, Ill.
Sutherland Binder and Punch Co., New York, N. Y.
Sweetnam Inc., Geo. H., Cambridge, Mass. (In principle.)
Talley Co., J. F., Long Island City, N. Y.
Taylor & Greenough Co., The, Hartford, Conn. (In principle.)
Tennessee Paper Mills, Chattanooga, Tenn.
Texas, University of, Austin, Tex.
Theosophical University Press, Point Loma, Calif.
Thornton-Levey Co., Indianapolis, Ind.
Todd Co., Inc., Rochester, N. Y.
Tonawanda Boxboards, Inc., Tonawanda, N. Y.
Torch Press, The, Cedar Rapids, Iowa.
Toronto Paper Manufacturing Co., Toronto, Ohio.
Trade Ruling and Binding Co., The, Cleveland, Ohio.
Traver Corporation, Chicago, Ill.
Triangle Bookbinding Co., Detroit, Mich.
Tri-State Wholesale Paper Co., Shreveport, La.
Trussell Manufacturing Co., Poughkeepsie, N. Y.
Union Bindery, New York, N. Y. (In principle.)
Union Binding and Cover Co., West Springfield, Mass.
Union Paper Supply Co., Los Angeles, Calif.
United Bindery, New York, N. Y.
United Brethren Publishing House, Dayton, Ohio.
Universal Bookbinding Co., Inc., New York, N. Y.
Universal Old Hickory Bindery, Nashville, Tenn.
University Publishing Co., The, Lincoln, Nebr.
Uptown Bindery, Inc., New York, N. Y. (In principle.)
Utah Library Bindery, Salt Lake City, Utah.
Vail Ballou Press, Inc., Binghamton, N. Y.
Van Male, John, Denver, Colo. (In principle.)
Van Nostrand Co., Inc., D., New York, N. Y. (In principle.)
Van Rees Book Binding Corporation, New York, N. Y.
Victory Bindery, New York, N. Y.
Virginia Paper Co., Washington, D. C.
Von Heill, Wm., Brooklyn, N. Y.
Voss Co., The Herman, Milwaukee, Wis.
Wagenfuhr Bookbinding Co., F. A., St. Louis, Mo.
Waldorf Bindery Co., Inc., St. Paul, Minn.
Walker Goulard Plehn Co., Inc., New York, N. Y.
Ward’s Bindery, Seattle, Wash.
Warne & Co., Inc., Frederick, New York, N. Y.
Waser’s Bindery and Specialty Shop, Champaign, Ill.
Waverly Press, Inc., Baltimore, Md.
Weise Binding Co., Cincinnati, Ohio.
Wenatchee Printing Co., Wenatchee, Wash.
West Coast Printing & Binding Co., Portland, Oreg.
West End Press, Inc., The, Cicero, Ill.
Western Baptist Publishing Co., Kansas City, Mo.
Western Newspaper Union, Des Moines, Iowa.
Western Newspaper Union, Salt Lake City, Utah.
Wetzel Publishing Co., Inc., Los Angeles, Calif.
White Book House, The, Chicago, Ill.
Whitney-Graham Co., Inc., The Buffalo, N. Y.
Whitney Paper Co., Wichita, Kans.
Wiley & Sons Inc., John, New York, N. Y.
Williams & Wilkins Co., Baltimore, Md.
Williamsport Printing and Binding Co., Williamsport, Pa.
Wilson Paper Co., B. W., Richmond, Va.
Wilson-Jones Co., Chicago, Ill.
Winckler Bindery, Cincinnati, Ohio.
Wolff Estate, Harris, New York, N. Y.
World Book Co., Yonkers, N. Y.
Worth Bindery, The, New York, N. Y.
Worth Bindery, Fort Worth, Tex.
Worzalla Publishing Co., Stevens Point, Wis.
Yakima Bindery & Printing Co., Yakima, Wash.
Yorkville Bindery, New York, N. Y.
Youngstown Printing Co., Youngstown, Ohio.
Zellerbach Paper Co., San Francisco, Calif.
Zimmerman Co., E. F., Watsonville, Calif.
Zimmerman, E. F. W., Sheboygan, Wis.
Zimmerman, Win. G., Newark, N. J. (In principle.)
Zonne & Co., Chicago, Ill.
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<th>CS no.</th>
<th>Item</th>
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<tr>
<td>0-30</td>
<td>The commercial standards service and its value to business.</td>
<td>26-30</td>
<td>Aromatic red cedar closet lining.</td>
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<td>3-28</td>
<td>Stoddard solvent.</td>
<td>29-31</td>
<td>Staple seats for water-closet bowls.</td>
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<tr>
<td>4-29</td>
<td>Staple porcelain (all-clay) plumbing fixtures.</td>
<td>30-31</td>
<td>Colors for sanitary ware.</td>
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<td>5-29</td>
<td>Steel pipe nipples.</td>
<td>31-33</td>
<td>Wood shingles (second edition).</td>
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<td>7-29</td>
<td>Standard weight malleable iron or steel screwed unions.</td>
<td>33-32</td>
<td>Knit underwear (exclusive of rayon).</td>
</tr>
<tr>
<td>10-29</td>
<td>Brass pipe nipples.</td>
<td>36-33</td>
<td>Fourdrinier wire cloth (second edition).</td>
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<td>11-29</td>
<td>Regain of mercerized cotton yarns.</td>
<td>37-31</td>
<td>Steel bone plates and screws.</td>
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<td>14-31</td>
<td>Boys' blouses, button-on waists, shirts, and junior shirts.</td>
<td>40-32</td>
<td>Surgeons' rubber gloves.</td>
</tr>
<tr>
<td>15-29</td>
<td>Men's pajamas.</td>
<td>41-32</td>
<td>Surgeons' latex gloves.</td>
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<td>16-29</td>
<td>Wall paper.</td>
<td>42-32</td>
<td>Fiber insulating board.</td>
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<td>18-29</td>
<td>Hickory golf shafts.</td>
<td>44-32</td>
<td>Apple wraps.</td>
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<td>20-30</td>
<td>Staple vitreous china plumbing fixtures.</td>
<td>46-33</td>
<td>Hosiery lengths.</td>
</tr>
<tr>
<td>21-34</td>
<td>Interchangeable ground-glass joints, stopcocks and stoppers (second edition).</td>
<td>47-34</td>
<td>Marking of gold-filled and rolled-gold-plate articles other than watch cases.</td>
</tr>
<tr>
<td>22-30</td>
<td>Builders' hardware (nontemplate).</td>
<td>48-34</td>
<td>Domestic burners for Pennsylvania anthracite (underfeed type).</td>
</tr>
<tr>
<td>23-30</td>
<td>Feldspar.</td>
<td>49-34</td>
<td>Chip board, laminated chip board, and miscellaneous boards for bookbinding purposes.</td>
</tr>
<tr>
<td>24-30</td>
<td>Standard screw threads.</td>
<td>50-34</td>
<td>Binders board for bookbinding and other purposes.</td>
</tr>
<tr>
<td>25-30</td>
<td>Special screw threads.</td>
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</table>

Notice.—Those interested in commercial standards with a view toward accepting them as a basis of every day practice in their industry, may secure copies of the above standards, while the supply lasts, by addressing the Division of Trade Standards, National Bureau of Standards, Washington, D. C.