

U. S. DEPARTMENT OF COMMERCE

HENRY A. WALLACE, Secretary

NATIONAL BUREAU OF STANDARDS

LYMAN J. BRIGGS, Director

**OLD GROWTH DOUGLAS FIR
STANDARD STOCK DOORS**

(THIRD EDITION)

COMMERCIAL STANDARD CS73-45(Supersedes CS73-43)

Effective Date for New Production from September 20, 1945

**A RECORDED VOLUNTARY STANDARD
OF THE TRADE****UNITED STATES
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WASHINGTON : 1945**

PROMULGATION
of
COMMERCIAL STANDARD CS73-45
for
OLD GROWTH DOUGLAS FIR STANDARD
STOCK DOORS
(Third Edition)

On April 4, 1938, at the instance of the Fir Door Institute, a general conference of representative manufacturers, distributors, and users of old growth Douglas fir standard stock doors adopted a recommended commercial standard for this commodity which was subsequently accepted by the trade and published as Commercial Standard CS73-38. The standard was revised in 1943, and issued as CS73-43.

A recommended revision, submitted by the Fir Door Institute and endorsed by the Standing Committee, was circulated on June 25, 1945, to the trade for written acceptance. Those concerned have since accepted and approved the revised standard as shown herein for promulgation by the United States Department of Commerce, through the National Bureau of Standards.

The standard is effective for new production from September 20, 1945.

Promulgation recommended.

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

Promulgated.

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

Promulgation approved.

Henry A. Wallace,
Secretary of Commerce.

OLD GROWTH DOUGLAS FIR STANDARD STOCK DOORS¹

(Third Edition)

COMMERCIAL STANDARD CS73-45

PURPOSE

1. This standard is a basis for common understanding between manufacturers, distributors, and users of stock fir doors. By its general acceptance, use, and certification by labels it is hoped to increase interest in the manufacture, sale, and use of fir doors manufactured to standard grades, to the mutual advantage of all concerned.

2. In the development of these standards there is no desire to suppress architectural expression and custom made doors will still be available from the usual sources. However, the establishment of construction standards, together with universally accepted sizes and layouts, should prove highly advantageous by eliminating the causes of many misunderstandings occurring through the lack of standards, and produce economies in manufacture and sale which should be shared by the ultimate home owner.

SCOPE

3. This standard provides minimum specifications for 4 grades of stock fir doors in four thicknesses, $\frac{3}{4}$, $1\frac{1}{8}$, $1\frac{1}{2}$, and $1\frac{3}{4}$ inches. It covers construction, defects, and the grading tolerances for these requirements. There are standard stock layouts and designs covered in door sizes ranging as follows, and in accordance with detailed schedules of Douglas fir stock door list beginning on page 6.

Cupboard doors-----	1'0"×1'6" to 2'0"×6'0".
Side lights-----	1'0"×6'8" to 1'6"×7'0".
House doors-----	1'6"×6'0" to 3'6"×8'0".
Garage doors-----	2'0"×7'0" to 4'0"×8'0".

GENERAL REQUIREMENTS

4. All commercial standard fir doors shall meet the following general requirements:

5. *Material*.—Doors shall be made of kiln-dried, old growth Douglas fir.

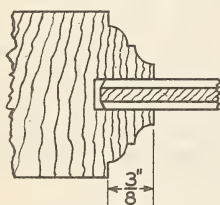
6. *Workmanship*.—Doors shall be well manufactured and machined, and both faces shall have flat surfaces; that is, with stiles, rails, and panels smoothly sanded.

¹ Old growth Douglas fir is a term generally applied to distinguish the wood developed in the later stages of the tree's growth. It is generally free from knots; of medium density with fairly close, uniformly spaced growth rings; and usually of uniform light yellowish or pinkish color. The wood is moderately hard, is resilient, tough, durable, and practically impervious to water; holds nails firmly and takes stain and paint well. The resin in the wood makes it durable. Because of the very small amount of sapwood on a Douglas fir log, it is easy to obtain lumber free from sapwood. This small portion of sapwood is a reason too for the durability of Douglas fir, for heartwood is more durable than sapwood.

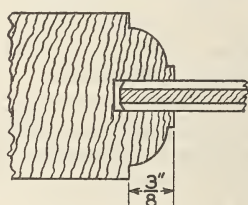
7. *Construction*.—Doors shall be assembled by what is known as “dowelled construction”; that is, stiles and rails to be bored to receive fir dowels not less than $\frac{3}{8}$ inch in diameter by 5 inches long for doors $\frac{3}{4}$ inch thick, and not less than $\frac{5}{8}$ inch in diameter by 5 inches long for doors $1\frac{1}{8}$, $1\frac{1}{2}$, and $1\frac{3}{4}$ inches thick. The dowels shall have glue grooves. Dowels shall be set in glue and extend approximately one-half their length into each stile and rail, and assembled under pressure. Because of the fact that all present standard door boring machines are built for $2\frac{1}{4}$ -inch dowel centers, the required number of dowels used in joining rails to stiles are therefore limited according to the width of the rails, and shall be based on a minimum number of dowels at each end of rails as follows:

Rails under $4\frac{1}{2}$ " wide.....	1 dowel.
Rails $4\frac{1}{2}$ " to 7" wide.....	2 dowels.
Rails over 7" wide.....	3 dowels.

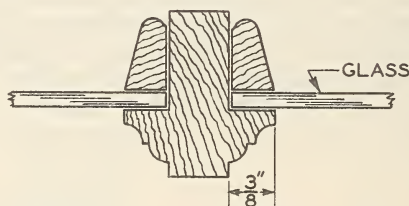
8. *Sticking*.—Three-eighths inch “bead and cove” or “ovolo” sticking shall be standard on all standard doors. “Bead and cove” sticking will be furnished, unless otherwise specified. (See fig. 1.)



BEAD & COVE STICKING



OVOLo STICKING



STANDARD PATTERN GLASS BEAD

FIGURE 1.—*Sticking*.

Defective sticking which may develop in machining must be carefully repaired or neatly replaced.

9. *Thicknesses*.—Doors shall be in the following thicknesses, and a thickness tolerance of minus $\frac{1}{16}$ inch shall be allowed:

Cupboard doors.....	$\frac{3}{4}$ " and $1\frac{1}{8}$ "
Side lights.....	$1\frac{3}{8}$ " and $1\frac{3}{4}$ "
House doors.....	$1\frac{1}{8}$ ", $1\frac{3}{8}$ ", and $1\frac{3}{4}$ "
Garage doors.....	$1\frac{3}{8}$ ", and $1\frac{3}{4}$ "

10. In standard practice, a length and width tolerance of plus $\frac{1}{8}$ inch shall be allowed. When so ordered, house doors will be trimmed to standard lengths with a tolerance of plus or minus $\frac{1}{32}$ inch. When

so trimmed, protection strips or skid blocks shall be applied to top and bottom ends.

INSPECTION AND LABELING

11. All doors guaranteed to conform to the Commercial Standard grading rules shall be grade-marked by stamp, brand, or label. All complaints involving the quality of any shipment must be made within 5 days from receipt thereof.

DETAIL REQUIREMENTS

12. Standard stock layouts and designs to which the subsequent design numbers refer are to be found in the Douglas fir stock door list beginning on page 6.

13. It is impossible to maintain absolutely arbitrary rules fixing grades, and slight variations within reason and governed by practical common sense may be expected. A shipment of any grade must represent a fair average of that grade.

14. Doors shall be graded on both sides or faces in accordance with the following standard grades. Grades *A*, *B*, and *C*, covering standard house doors, will be furnished in 1½- and 1¾-inch thicknesses only. Standard side lights, and doors of special layout or design will be furnished in grade *A* only. Cupboard doors will be furnished in *B* and better grade only. House doors 1½ inch thick will be furnished in "millrun" grade only.

HOUSE DOORS

Grade A.—RECOMMENDED FOR PAINT OR NATURAL OR STAIN FINISH

15. *Stiles, rails, and mullions*.—This stock shall be of 100-percent heartwood, all vertical grain old growth Douglas fir, the faces of which must be clear, with the exception that small, inconspicuous and neatly repaired pitch seams are permissible. Glued-up rails are permissible in widths over 7½ inches. A moisture-resistant glue shall be used.

16. *Panels—flat veneered*.—The standard thickness of 3-ply flat veneered panels shall be ¼ inch after sanding. Each face shall be of a yellowish or pinkish color or a blend of the two, and shall be from smoothly cut veneer, free from knots, splits, pitch pockets, and other open defects. Small streaks and spots of other colors are permissible, provided that they in no manner make the panel unusable for the purpose intended. Shims that occur only at the end of panels and inconspicuous well-matched patches shall be admitted.

17. *Panels—solid raised*.—The standard thickness of solid raised panels shall be not more than ¾ inch before sanding and not less than ½ inch after sanding. They shall be either all vertical or all slash grain in any one door, and shall conform to the grade of the stiles and rails.

Grade B.—RECOMMENDED PRIMARILY FOR PAINT FINISH

18. *Stiles, rails, and mullions.*—This stock shall be of vertical grain faces, with some coarse grain permitted. It shall be sound in all respects, and may contain sap, light stains, streaks, burls, and neatly repaired pitch seams. Glued-up members of not more than two pieces are permissible except that bottom rails wider than 9½ inches may contain more than two pieces. A moisture-resistant glue shall be used.

19. *Panels—flat veneered.*—The standard thickness of 3-ply flat veneered panels shall be ¼ inch after sanding. Each face shall be of one or more pieces of firm smoothly cut veneer. When of more than one piece, it shall be well joined and reasonably matched for grain and color at the joints. It shall be free from knots, splits, checks, pitch pockets, and other open defects. Streaks, discolorations, sapwood, shims, and neatly made patches shall be admitted.

20. *Panels—raised.*—The standard thickness of raised panels shall be not more than ⅝ inch before sanding and not less than ⅞ inch after sanding. They may be either slash or mixed grain, and shall conform to the grade of the stiles and rails. Two-piece, glued-up, solid panels are permissible.

Grade C.—RECOMMENDED FOR PAINT FINISH ONLY

21. This grade shall be manufactured and sold only in the standard designs, as specifically indicated in the layout details on pages 12, 13, 19, 20, 21, and 22.

22. *Stiles, rails, and mullions.*—This stock may be of mixed grain and mixed woods and may contain any amount of discolored sap or heartwood, burls, solid pitch, streaks, and any number of repaired pitch seams, or other sound defects not otherwise permitted in the higher grades, providing it presents a solid surface. Glued-up members are permissible. A moisture-resistant glue shall be used.

23. *Panels—flat veneered.*—The standard thickness of 3-ply flat veneered panels shall be ¼ inch after sanding. Each face shall present a smooth surface suitable for painting. Discoloration, unmatched patches, shims, and pieced faces are admissible.

24. *Panels—raised.*—The standard thickness of raised panels shall be not more than ⅝ inch before sanding and not less than ⅞ inch after sanding. They shall conform to the grade of the stiles and rails. Two-piece, glued-up, solid panels are permissible.

MILLRUN GRADE

25. *Stiles, rails, and mullions.*—This grade shall be manufactured and sold in 1½-inch thickness only developed and accumulated by planing down stock too thin for 1¾-inch thickness, consequently it will include an undetermined amount of all or any of the other grades. This grade and thickness shall be confined to the following standard designs: Storm doors, cupboard doors, F3, F3W, F13, F13W, F33, and F133. (See stock door list beginning on page 6.)

26. *Panels—flat veneered.*—The standard thickness of 3-ply, flat veneered panels shall be ¼ inch after sanding. They shall conform to the grades applying to grade B and/or grade C doors described above.

27. *Panels—raised.*—The standard thickness of raised panels shall be not more than ⅝ inch before sanding, and not less than ⅞ inch after sanding. They shall conform to the grades applying to grade B and/or grade C doors, described above.

GARAGE DOORS

Manufactured primarily for paint finish in one quality only, which is described below.

28. *Stiles, rails, and mullions*.—This stock shall be substantially all vertical grain, with accumulations of coarse or mixed grain permitted. It shall be sound in all respects, and may contain sap, stain, burls, pitch streaks, and neatly repaired pitch seams. Glued-up members are permissible. A moisture-resistant glue shall be used.

29. *Panels—flat veneered*.—The standard thickness of 3-ply flat veneered panels shall be $\frac{1}{4}$ inch after sanding. They shall be of door panel grade B, as described under paragraph 19.

30. *Panels—solid raised*.—The standard thickness of solid raised panels shall be not more than $\frac{1}{16}$ -inch before sanding and not less than $\frac{1}{16}$ -inch after sanding. They may be vertical, slash, or mixed grain, at the option of the manufacturer, and shall conform to the grade of the stiles and rails.

31. *Batten garage doors (designs F190 and F290)*.—The stiles and battens shall have all vertical grain faces, which shall be clear, except that neatly repaired pitch seams, not to exceed 4 inches in length, and at a minimum distance of 2 feet apart either way, will be admitted on each face of the door.

DESIGNS AND LAYOUTS

32. House doors of any design narrower than 1 foot 6 inches will be furnished with stiles $3\frac{1}{16}$ inches in width, over-all, unless otherwise specified.

33. Measurements for stiles, rails, and mullions shown in layouts are over-all, including sticking. Glass measurements shown may vary slightly.

TABLE 1.—Door sizes (in feet and inches)

Standard sizes, cupboard doors		Standard sizes, house doors		Standard sizes, side lights	Standard sizes, garage doors		
1-0×1-6	1-0×4-0	2-0×6-0	1-6×7-0	10'' ×6-8	2-0×7-0	2-0×7-6	2-0×8-0
1-2	1-2	2-4	1-8	1-0	2-4	2-4	2-4
1-4	1-4	2-6	1-10	1-2	2-6	2-6	2-6
1-6	1-6	2-8	2-0	1-4	2-8	2-8	2-8
1-8	1-8	3-0	2-2	1-6	3-0	3-0	3-0
1-10	1-10		2-4		3-6	3-6	3-6
2-0	2-0	2-6×6-4	2-6	10'' ×6-10	3-9	3-9	3-9
			2-8	1-0	4-0	4-0	4-0
			2-10	1-2			
1-0×2-0	1-0×4-6	1-6×6-6	3-0	1-4			
1-2	1-2	1-8	3-4	1-6			
1-4	1-4	1-10	3-6				
1-6	1-6	2-0					
1-8	1-8	2-2					
1-10	1-10	2-4	2-0×7-6	10'' ×7-0			
2-0	2-0	2-6	2-4	1-0			
		2-8	2-6	1-2			
		3-0	2-8	1-4			
			2-10	1-6			
1-0×2-6	1-0×5-0						
1-2	1-2						
1-4	1-4	1-6×6-8	3-0				
1-6	1-6	1-8	3-4				
1-8	1-8	1-10	3-6				
1-10	1-10	2-0					
2-0	2-0	2-2	2-0×8-0				
		2-4	2-4				
		2-6	2-6				
1-0×3-0	1-0×5-6	2-8	2-8				
1-2	1-2	2-10	2-10				
1-4	1-4	3-0	3-0				
1-6	1-6		3-4				
1-8	1-8		3-6				
1-10	1-10	2-0×6-10					
2-0	2-0	2-2					
		2-4					
		2-6					
1-0×3-6	1-0×6-0	2-8					
1-2	1-2	2-10					
1-4	1-4	3-0					
1-6	1-6						
1-8	1-8						
1-10	1-10						
2-0	2-0						

DOUGLAS FIR STOCK DOOR LIST

34. The stock layouts and designs for old growth Douglas fir doors are illustrated below.

35. An index immediately follows showing the various use classifications including "front entrance doors," "interior doors," etc., and indicating the identifying stock number, a brief description of the panel arrangement, and the pages on which the illustrations and dimensions appear.

36. A second index is arranged on the basis of numerical arrangement of the stock numbers.

"USE" CLASSIFICATION INDEX

FRONT ENTRANCE DOORS

Stock number	Description	Page
F66, F67	6 panel Colonial	12
F88	8 equal panel	11
F144	2 panel (vertical)—1 light	14
F145	3 panel (2 vertical)—1 light	14
F182	1 panel—1 light	15
F982	1 panel—9 light (3 wide—3 high)	15
F152	5 panel—1 light	16
F154	6 panel—1 light	16
F62	3 panel (2 vertical)	17
F162	2 panel (vertical)—1 light	17
F63	4 panel (3 vertical)	17
F163	3 panel (vertical)—1 light	17
F108, F109	1 panel—1 light	15
F128, F129	do	16
F147	do	19
F214H	3 panel—3 light (horizontal)	20
F415H	2 panel—4 light (horizontal)	19
F110, F111	1 panel—1 light	18
F310, F311	1 panel—3 light (vertical)	18
F610, F611	1 panel—6 light (3 wide—2 high)	18
F810, F811	1 panel—8 light (4 wide—2 high)	18
F35, F36, F37	1 light	23
F535, F536, F537	5 light (horizontal)	23
F835, F836, F837	8 light (horizontal)	23
F935M, F936M, F937M	9 light (marginal)	23
F1035, F1036, F1037	10 light (2 wide—5 high)	24
F1235, F1236, F1237	12 light (3 wide—4 high)	24
F1535, F1536, F1537	15 light (3 wide—5 high)	24
F1635, F1636, F1637	16 light (2 wide—8 high)	24

SIDE LIGHTS

F035	1 light	25
F0535	5 light	25
F0635M	6 light (marginal)	25

"USE" CLASSIFICATION INDEX—Continued

INTERIOR DOORS

Stock number	Description	Page
F1, F2	1 panel (insert)	11
F20, F21, F22	1 panel	11
F82	2 panel	15
F28, F29	do	16
F80	2 panel (vertical)	11
F3, F3W	3 equal panel	13
F33	3 panel	13
F53	3 panel	12
F62	3 panel (2 vertical)	17
F63	4 panel (3 vertical)	17
F44	4 panel (vertical)	14
F5	5 cross panel	12
F45	5 regular panel	14
F66, F67	6 panel Colonial	12
F88	8 equal panel	11
F535, F536, F537	5 light (horizontal)	23
F835, F836, F837	8 light (horizontal)	23
F1035, F1036, F1037	10 light (2 wide—5 high)	24
F1235, F1236, F1237	12 light (3 wide—4 high)	24
F1535, F1536, F1537	15 light (3 wide—5 high)	24
F1635, F1636, F1637	16 light (2 wide—8 high)	24

REAR ENTRANCE DOORS

F13, F13W	2 panel—1 light	13
F133	do	13
F108, F109	1 panel—1 light	15
F128, F129	do	16
F147	do	19
F182	do	15
F982	1 panel—9 light (3 wide—3 high)	15
F114	2 panel—1 light	19
F415	2 panel—4 light (2 wide—2 high)	19
F415H	2 panel—4 light (horizontal)	19
F416	3 panel—4 light (2 wide—2 high)	21
F453	2 panel—4 light (2 wide—2 high)	21
F214	3 panel—1 light	20
F214H	3 panel—3 light (horizontal)	20
F117	4 panel—1 light	20
F117½	5 panel—1 light	20
F118	3 panel—1 light	21
F118½	4 panel—1 light	21
F318	3 panel—3 light (vertical)	22
F418	3 panel—4 light (vertical)	22
F618	3 panel—6 light (3 wide—2 high)	22
F918	3 panel—9 light (3 wide—3 high)	22

STORM DOORS

FS7	7 panel	25
FS07	5 panel—1 light	25

"USE" CLASSIFICATION INDEX—Continued**CUPBOARD DOORS**

Stock number	Description	Page
F05	Cross panel	26
F020	1 panel	26
F082	2 panel	26

GARAGE DOORS

F491	Saw-buck—4 light	26
F691	Saw-buck—6 light	26
F493	2 panel (vertical)—4 light	27
F693	3 panel (vertical)—6 light	27
F495	4 cross panel—4 light	27
F695	4 cross panel—6 light	27
F496	4 panel—4 light	28
F696	6 panel—6 light	28
F894	4 panel—8 light	28
F093	6 panel (vertical)	29
F099	9 panel (vertical)	29
F190	Flush door—1 light	29
F290	Flush door—2 light	29

STOCK NUMBER INDEX**HOUSE DOORS**

Stock number	Description	Page
F1	1 panel (insert)	11
F2	do	11
F3	3 panel	13
F3W	do	13
F5	5 cross panel	12
F13	2 panel—1 light	13
F13W	do	13
F20	1 panel	11
F21	do	11
F22	do	11
F28	2 panel	16
F29	do	16
F33	3 panel	13
F35	1 light	23
F36	do	23
F37	do	23
F44	4 panel (vertical)	14
F45	5 panel (4 vertical)	14
F53	3 panel	12
F62	3 panel (2 vertical)	17
F63	4 panel (3 vertical)	17
F66	6 panel Colonial	12
F67	do	12
F80	2 panel (vertical)	11
F82	2 panel	15
F88	8 panel	11
F108	1 panel—1 light	15
F109	do	15
F110	do	18
F111	do	18
F114	2 panel—1 light	19
F117	4 panel—1 light	20

STOCK NUMBER INDEX—Continued

HOUSE DOORS—Continued

Stock number	Description	Page
F117½	5 panel—1 light	20
F118	3 panel—1 light	21
F118½	4 panel—1 light	21
F128	1 panel—1 light	16
F129	do	16
F133	2 panel—1 light	13
F144	2 panel (vertical)—1 light	14
F145	3 panel (2 vertical)—1 light	14
F147	1 panel—1 light	19
F152	5 panel—1 light	16
F154	6 panel—1 light	16
F162	2 panel (vertical)—1 light	17
F163	3 panel (vertical)—1 light	17
F182	1 panel—1 light	15
F214	3 panel—1 light	20
F214H	3 panel—3 light (horizontal)	20
F310	1 panel—3 light (vertical)	18
F311	do	18
F318	3 panel—3 light (vertical)	22
F415	2 panel—4 light (2 wide—2 high)	19
F415H	2 panel—4 light (horizontal)	19
F416	3 panel—4 light (2 wide—2 high)	21
F418	3 panel—4 light (vertical)	22
F453	2 panel—4 light (2 wide—2 high)	21
F535	5 light (horizontal)	23
F536	do	23
F537	do	23
F610	1 panel—6 light (3 wide—2 high)	18
F611	do	18
F618	3 panel—6 light (3 wide—2 high)	22
F810	1 panel—8 light (4 wide—2 high)	18
F811	do	18
F835	8 light (horizontal)	23
F836	do	23
F837	do	23
F918	3 panel—9 light	22
F935M	9 light (marginal)	23
F936M	do	23
F937M	do	23
F982	1 panel—9 light (3 wide—3 high)	15
F1035	10 light (2 wide—5 high)	24
F1036	do	24
F1037	do	24
F1235	12 light (3 wide—4 high)	24
F1236	do	24
F1237	do	24
F1535	15 light (3 wide—5 high)	24
F1536	do	24
F1537	do	24
F1635	16 light (2 wide—8 high)	24
F1636	do	24
F1637	do	24

STOCK NUMBER INDEX—Continued

SIDE LIGHTS

Stock number	Description	Page
F035.....	1 light.....	25
F0535.....	5 light.....	25
F0635M.....	6 light (marginal).....	25

STORM DOORS

FS07.....	5 panel—1 light.....	25
FS7.....	7 panel.....	25

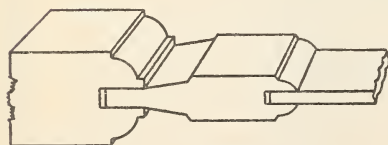
CUPBOARD DOORS

F05.....	Cross panel.....	26
F020.....	1 panel.....	26
F082.....	2 panel.....	26

GARAGE DOORS

F093.....	6 panel (vertical).....	29
F099.....	9 panel (vertical).....	29
F190.....	Flush door—1 light.....	29
F290.....	Flush door—2 light.....	29
F491.....	Saw-buck—4 light.....	26
F493.....	2 panel—4 light.....	27
F495.....	4 panel (horizontal)—4 light.....	27
F496.....	4 panel—4 light.....	28
F691.....	Saw-buck—6 light.....	26
F693.....	3 panel—6 light.....	27
F695.....	4 panel (horizontal)—6 light.....	27
F696.....	6 panel—6 light.....	28
F894.....	4 panel—8 light.....	28

F 1



Raised insert frame. Sticking: Ovolo.

F 2



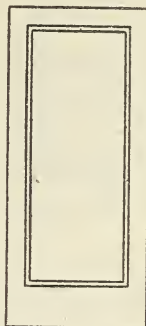
Flat insert frame. Sticking: P & G.

HOUSE DOORS

F 1
F 2

Stiles and top rail..... $4\frac{1}{8}"$
 Bottom rail..... $9\frac{3}{8}"$
 Insert frame..... $2\frac{1}{8}"$

3-ply laminated flat panel. Furnished in grades A and B only.

F 20
F 21
F 22

	F 20	F 21	F 22
Stiles.....	$4\frac{1}{8}"$	$4\frac{1}{8}"$	$5\frac{3}{8}"$
Top rail.....	$4\frac{1}{8}"$	$5\frac{3}{8}"$	$5\frac{3}{8}"$
Bottom rail.....	$9\frac{3}{8}"$	$11\frac{3}{8}"$	$11\frac{3}{8}"$

3-ply laminated flat panel. Furnished in grades A and B only. Sticking: Standard.

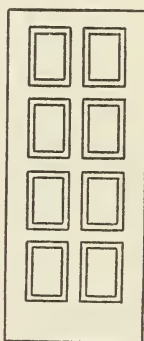
F 80



Stiles and top rail..... $4\frac{1}{8}"$
 Muntin..... $4\frac{1}{2}"$
 Bottom rail..... $9\frac{3}{8}"$

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A and B only. Sticking: Standard.

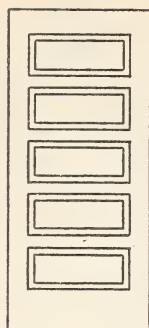
F 88



Stiles and top rail..... $4\frac{1}{8}"$
 Intermediate rails and muntins..... $2\frac{3}{8}"$
 Bottom rail..... $9\frac{3}{8}"$

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A and B only. Sticking: Standard.

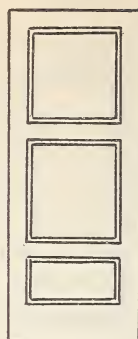
F 5



Stiles and top rail.....	4 $\frac{9}{16}$ "
Intermediate rails.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

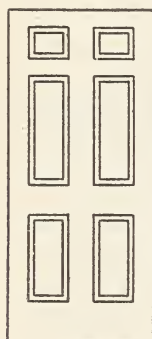
F 53



Stiles and top rail.....	4 $\frac{9}{16}$ "
Intermediate rails.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Furnished in grades A and B only. Sticking: Standard.

F 66



Stiles and top rail.....	4 $\frac{9}{16}$ "
Lock rail.....	3"
Intermediate rail and muntins.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "
Height from floor to top of lock rail.....	36 $\frac{1}{2}$ "
Height from top of intermediate rail to top of door.....	12 $\frac{5}{16}$ "
Height of center panels vary with height of door.	

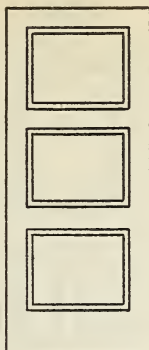
Doors 1' 8" and narrower made one panel wide. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A and B only. Sticking: Standard.

F 67



Stiles and top rail.....	4 $\frac{9}{16}$ "
Lock rail.....	9 $\frac{3}{8}$ "
Intermediate rail and muntins.....	4 $\frac{1}{2}$ "
Bottom rail.....	7 $\frac{15}{16}$ "
Height from floor to top of lock rail.....	41 $\frac{1}{8}$ "
Height from top of intermediate rail to top of door.....	12 $\frac{5}{16}$ "
Height of center panels vary with height of door.	

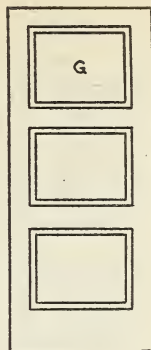
Doors 1' 8" and narrower made one panel wide. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A and B only. Sticking: Standard.



F3
F3W

	F3	F3W
Stiles.....	4 $\frac{9}{16}$ "	4 $\frac{9}{16}$ "
Top rail.....	4 $\frac{9}{16}$ "	4 $\frac{9}{16}$ "
Intermediate rails.....	2 $\frac{1}{4}$ "	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Furnished in grades A, B, C, and 1 $\frac{1}{8}$ " millrun. Sticking: Standard.



F13
F13W

	F13	F13W
Stiles.....	4 $\frac{9}{16}$ "	4 $\frac{9}{16}$ "
Top rail.....	4 $\frac{9}{16}$ "	4 $\frac{9}{16}$ "
Intermediate rails.....	2 $\frac{1}{4}$ "	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Furnished in grades A, B, C, and 1 $\frac{1}{8}$ " millrun. Sticking: Standard.

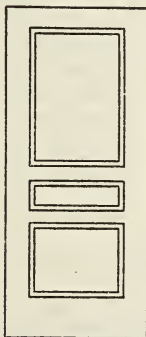
Size of door

Size of glass

	F13	F13W
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 20 $\frac{3}{8}$ "	21 $\frac{5}{8}$ " x 20 $\frac{7}{16}$ "
2'8" x 6'8".....	23 $\frac{3}{8}$ " x 21 $\frac{5}{16}$ "	23 $\frac{3}{8}$ " x 21 $\frac{1}{8}$ "
2'10" x 6'10".....	25 $\frac{3}{8}$ " x 22"	25 $\frac{3}{8}$ " x 21 $\frac{3}{16}$ "
3'0" x 7'0".....	27 $\frac{3}{8}$ " x 22 $\frac{1}{16}$ "	27 $\frac{3}{8}$ " x 22 $\frac{7}{16}$ "

Beads for glass included.

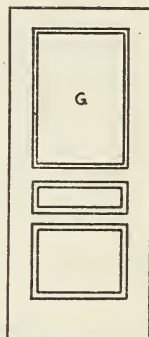
F33



Stiles and top rail.....	4 $\frac{9}{16}$ "
Intermediate rails.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "
Height from floor to top of upper cross rail.....	42 $\frac{1}{4}$ "

3-ply laminated flat panels. Furnished in grades A, B, C, and 1 $\frac{1}{8}$ " millrun. Sticking: Standard.

F133



Stiles and top rail.....	4 $\frac{9}{16}$ "
Intermediate rails.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Furnished in grades A, B, C, and 1 $\frac{1}{8}$ " millrun. Sticking: Standard.

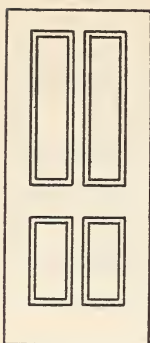
Size of door

Size of glass

2'6" x 6'6".....	21 $\frac{5}{8}$ " x 32"
2'8" x 6'8".....	23 $\frac{3}{8}$ " x 34"
2'10" x 6'10".....	25 $\frac{3}{8}$ " x 36"
3'0" x 7'0".....	27 $\frac{3}{8}$ " x 38"

Beads for glass included.

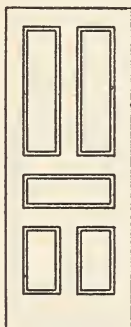
F 44



Stiles and top rail.....	49 $\frac{1}{16}$ "
Lock rail.....	8"
Muntins.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "
Height from floor to top of lock rail.....	36 $\frac{1}{2}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades *A* and *B* only. Sticking: Standard.

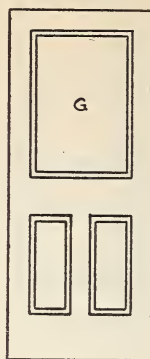
F 45



Stiles and top rail.....	49 $\frac{1}{16}$ "
Intermediate rails and muntins.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "
Height from floor to top of upper cross rail.....	42 $\frac{1}{4}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades *A* and *B* only. Sticking: Standard.

F 144



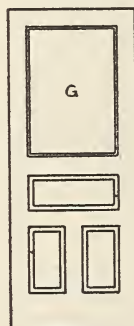
Stiles and top rail.....	49 $\frac{1}{16}$ "
Lock rail.....	8"
Muntins.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades *A* and *B* only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{3}{8}$ " x 38"
2'8" x 6'8".....	23 $\frac{3}{8}$ " x 40"
2'10" x 6'10".....	25 $\frac{3}{8}$ " x 42"
3'0" x 7'0".....	27 $\frac{3}{8}$ " x 44"

Beads for glass included.

F 145



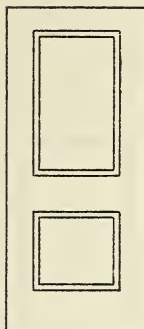
Stiles and top rail.....	49 $\frac{1}{16}$ "
Intermediate rails and muntin.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades *A* and *B* only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{3}{8}$ " x 32"
2'8" x 6'8".....	23 $\frac{3}{8}$ " x 34"
2'10" x 6'10".....	25 $\frac{3}{8}$ " x 36"
3'0" x 7'0".....	27 $\frac{3}{8}$ " x 38"

Beads for glass included.

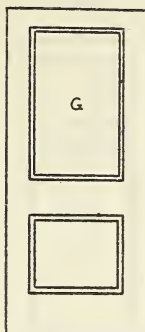
F 82



Stiles and top rail.....	4 $\frac{9}{16}$ "
Lock rail.....	8"
Bottom rail.....	9 $\frac{3}{8}$ "
Height to top of lock rail.....	36 $\frac{1}{4}$ "

3-ply laminated flat panels. Furnished in grades A and B only. Sticking: Standard.

F182



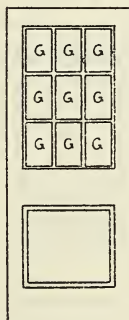
Stiles and top rail.....	4 $\frac{9}{16}$ "
Lock rail.....	8"
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 38"
2'8" x 6'8".....	23 $\frac{3}{8}$ " x 40"
2'10" x 6'10".....	25 $\frac{1}{4}$ " x 42"
3'0" x 7'0".....	27 $\frac{1}{4}$ " x 44"

Beads for glass included.

F 982



Stiles and top rail.....	4 $\frac{9}{16}$ "
Lock rail.....	8"
Bottom rail.....	9 $\frac{3}{8}$ "

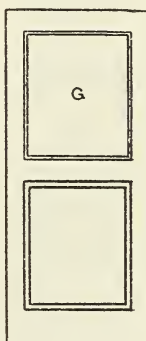
Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panel. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	6 $\frac{3}{8}$ " x 12 $\frac{9}{16}$ "
2'8" x 6'8".....	7 $\frac{1}{2}$ " x 13"
2'10" x 6'10".....	8 $\frac{1}{4}$ " x 13 $\frac{3}{8}$ "
3'0" x 7'0".....	8 $\frac{3}{8}$ " x 14 $\frac{1}{16}$ "

Beads for glass included.

F108

F109

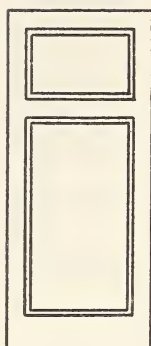


	F108	F109
Stiles.....	4 $\frac{9}{16}$ "	5 $\frac{3}{8}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "	5 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Furnished in grades A and B only. Sticking: Standard.

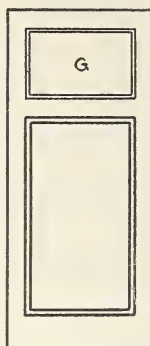
Size of door	Size of glass	
	F108	F109
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 26"	20" x 26"
2'8" x 6'8".....	23 $\frac{3}{8}$ " x 28"	22" x 28"
2'10" x 6'10".....	25 $\frac{1}{4}$ " x 30"	24" x 30"
3'0" x 7'0".....	27 $\frac{1}{4}$ " x 32"	26" x 32"

Beads for glass included.

F28
F29

	F28	F29
Stiles and top rail.....	49 $\frac{1}{16}$ "	5 $\frac{3}{8}$ "
Lock rail.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	11 $\frac{3}{8}$ "
Height from top of lock rail to top of door.....	22"	22 $\frac{3}{4}$ "

3-ply laminated flat panels. Furnished in grades A and B only. Sticking: Standard.

F128
F129

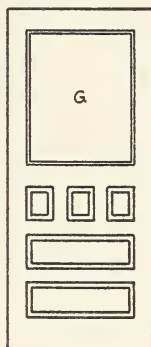
	F128	F129
Stiles and top rail.....	49 $\frac{1}{16}$ "	5 $\frac{3}{8}$ "
Lock rail.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	11 $\frac{3}{8}$ "

3-ply laminated flat panels. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass	
	F128	F129
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 18"	20" x 18"
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 18"	22" x 18"
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 18"	24" x 18"
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 18"	26" x 18"

Beads for glass included.

F152



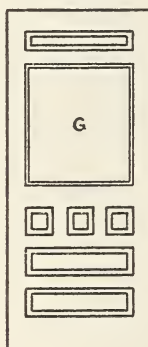
Stiles.....	49 $\frac{1}{16}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "
Intermediate rails and muntins.....	3 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 32"
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 34"
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 36"
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 38"

Beads for glass included.

F154



Stiles.....	49 $\frac{1}{16}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "
Intermediate rails and muntins.....	3 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 24"
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 26"
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 28"
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 30"

Beads for glass included.

F62



Stiles and top rail.....	4 $\frac{1}{8}$ "
Lock rail and muntin.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "
Height from top of lock rail to top of door.....	22"

3-ply laminated flat panels. Furnished in grades *A* and *B* only. Sticking: Standard.

F162



Stiles and top rail.....	4 $\frac{1}{8}$ "
Lock rail and muntin.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades *A* and *B* only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{3}{4}$ " x 18"
2'8" x 6'8".....	23 $\frac{3}{4}$ " x 18"
2'10" x 6'10".....	25 $\frac{3}{4}$ " x 18"
3'0" x 7'0".....	27 $\frac{3}{4}$ " x 18"

Beads for glass included.

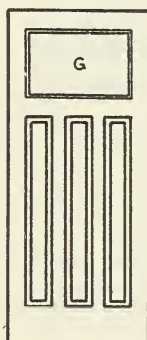
F63



Stiles and top rail.....	4 $\frac{1}{8}$ "
Lock rail.....	4 $\frac{1}{2}$ "
Muntins.....	3 $\frac{3}{4}$ "
Bottom rail.....	9 $\frac{3}{8}$ "
Height from top of lock rail to top of door.....	22"

3-ply laminated flat panels. Furnished in grades *A* and *B* only. Sticking: Standard.

F163

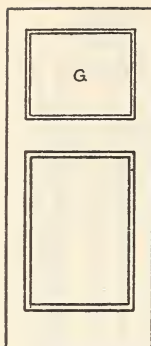


Stiles and top rail.....	4 $\frac{1}{8}$ "
Lock rail.....	4 $\frac{1}{2}$ "
Muntins.....	3 $\frac{3}{4}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades *A* and *B* only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{3}{4}$ " x 18"
2'8" x 6'8".....	23 $\frac{3}{4}$ " x 18"
2'10" x 6'10".....	25 $\frac{3}{4}$ " x 18"
3'0" x 7'0".....	27 $\frac{3}{4}$ " x 18"

Beads for glass included.

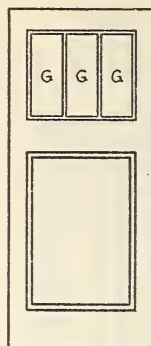
F110
F111

	F110	F111
Stiles.....	4 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "
Top rail.....	5 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "
Lock rail.....	8"	8"
Bottom rail.....	9 $\frac{3}{8}$ "	9 $\frac{3}{8}$ "

3-ply laminated flat panel. Furnished in grades A and B only. Sticking: Standard.

	Size of glass	
Size of door	F110	F111
2'6" x 6'6".....	21 $\frac{3}{8}$ " x 22"	20" x 22"
2'8" x 6'8".....	23 $\frac{3}{8}$ " x 22"	22" x 22"
2'10" x 6'10".....	25 $\frac{3}{8}$ " x 22"	24" x 22"
3'0" x 7'0".....	27 $\frac{3}{8}$ " x 22"	26" x 22"

Beads for glass included.

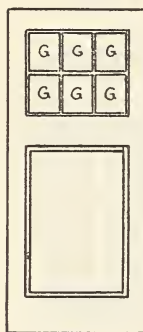
F310
F311

	F310	F311
Stiles.....	4 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "
Top rail.....	5 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "
Lock rail.....	8"	8"
Bottom rail.....	9 $\frac{3}{8}$ "	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panel. Furnished in grades A and B only. Sticking: Standard.

	Size of glass	
Size of door	F310	F311
2'6" x 6'6".....	6 $\frac{3}{8}$ " x 22"	6 $\frac{5}{16}$ " x 22"
2'8" x 6'8".....	7 $\frac{1}{8}$ " x 22"	6 $\frac{13}{16}$ " x 22"
2'10" x 6'10".....	8 $\frac{1}{4}$ " x 22"	7 $\frac{9}{16}$ " x 22"
3'0" x 7'0".....	8 $\frac{3}{8}$ " x 22"	8 $\frac{1}{4}$ " x 22"

Beads for glass included.

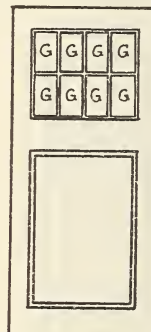
F610
F611

	F610	F611
Stiles.....	4 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "
Top rail.....	5 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "
Lock rail.....	8"	8"
Bottom rail.....	9 $\frac{3}{8}$ "	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panel. Furnished in grades A and B only. Sticking: Standard.

	Size of glass	
Size of door	F610	F611
2'6" x 6'6".....	6 $\frac{3}{8}$ " x 10 $\frac{3}{4}$ "	6 $\frac{5}{16}$ " x 10 $\frac{3}{4}$ "
2'8" x 6'8".....	7 $\frac{1}{8}$ " x 10 $\frac{3}{4}$ "	6 $\frac{13}{16}$ " x 10 $\frac{3}{4}$ "
2'10" x 6'10".....	8 $\frac{1}{4}$ " x 10 $\frac{3}{4}$ "	7 $\frac{9}{16}$ " x 10 $\frac{3}{4}$ "
3'0" x 7'0".....	8 $\frac{3}{8}$ " x 10 $\frac{3}{4}$ "	8 $\frac{1}{4}$ " x 10 $\frac{3}{4}$ "

Beads for glass included.

F810
F811

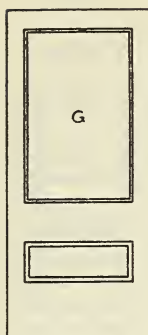
	F810	F811
Stiles.....	4 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "
Top rail.....	5 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "
Lock rail.....	8"	8"
Bottom rail.....	9 $\frac{3}{8}$ "	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panel. Furnished in grades A and B only. Sticking: Standard.

	Size of glass	
Size of door	F810	F811
2'6" x 6'6".....	5" x 10 $\frac{3}{4}$ "	4 $\frac{5}{8}$ " x 10 $\frac{3}{4}$ "
2'8" x 6'8".....	5 $\frac{1}{2}$ " x 10 $\frac{3}{4}$ "	5 $\frac{1}{8}$ " x 10 $\frac{3}{4}$ "
2'10" x 6'10".....	6" x 10 $\frac{3}{4}$ "	5 $\frac{5}{8}$ " x 10 $\frac{3}{4}$ "
3'0" x 7'0".....	6 $\frac{1}{4}$ " x 10 $\frac{3}{4}$ "	6 $\frac{1}{8}$ " x 10 $\frac{3}{4}$ "

Beads for glass included.

F147



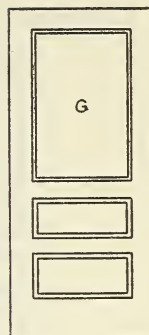
Stiles and top rail.....	5 $\frac{3}{4}$ "
Lock rail.....	9 $\frac{3}{8}$ "
Bottom rail.....	11 $\frac{3}{8}$ "

3-ply laminated flat panel. Can also be furnished with raised panel, if desired. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass
2'8" x 6'8".....	22" x 46"
2'10" x 6'10".....	24" x 48"
3'0" x 7'0".....	26" x 50"

Beads for glass included.

F114



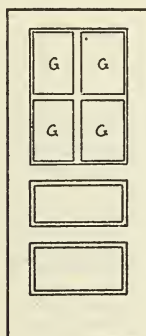
Stiles and top rail.....	4 $\frac{9}{16}$ "
Intermediate rail.....	4 $\frac{1}{2}$ "
Lock rail.....	5"
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{3}{4}$ " x 36"
2'8" x 6'8".....	23 $\frac{3}{4}$ " x 38"
2'10" x 6'10".....	25 $\frac{3}{4}$ " x 40"
3'0" x 7'0".....	27 $\frac{3}{4}$ " x 42"

Beads for glass included.

F415



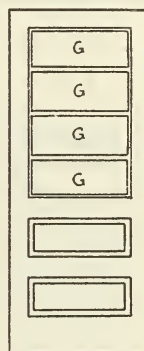
Stiles and top rail.....	4 $\frac{9}{16}$ "
Lock and intermediate rails.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	10 $\frac{5}{8}$ " x 18"
2'8" x 6'8".....	11 $\frac{5}{8}$ " x 19"
2'10" x 6'10".....	12 $\frac{5}{8}$ " x 20"
3'0" x 7'0".....	13 $\frac{5}{8}$ " x 21"

Beads for glass included.

F415H



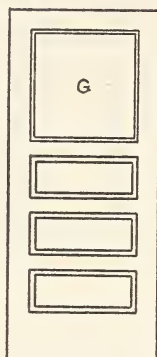
Stiles and top rail.....	4 $\frac{9}{16}$ "
Lock and intermediate rails.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{3}{4}$ " x 8 $\frac{3}{4}$ "
2'8" x 6'8".....	23 $\frac{3}{4}$ " x 9 $\frac{1}{4}$ "
2'10" x 6'10".....	25 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ "
3'0" x 7'0".....	27 $\frac{3}{4}$ " x 10 $\frac{1}{4}$ "

Beads for glass included.

F214 F119 (5X PANEL LAYOUT)



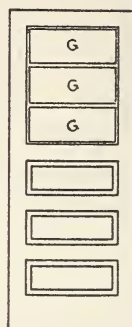
Stiles and top rail.....	49 $\frac{1}{8}$ "
Lock and intermediate rails.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass	F214	F119
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 24"	21 $\frac{5}{8}$ " x 23 $\frac{7}{8}$ "	
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 26"	23 $\frac{5}{8}$ " x 24 $\frac{5}{8}$ "	
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 28"	25 $\frac{5}{8}$ " x 25 $\frac{5}{8}$ "	
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 30"	27 $\frac{5}{8}$ " x 28"	

Beads for glass included.

F214H



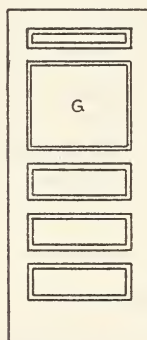
Stiles and top rail.....	49 $\frac{1}{8}$ "
Lock and intermediate rails.....	4 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

Bars $\frac{1}{4}$ " between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 7 $\frac{3}{4}$ "
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 8 $\frac{3}{8}$ "
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 9"
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 9 $\frac{3}{4}$ "

Beads for glass included.

F117



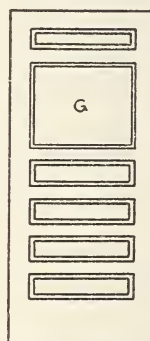
Stiles.....	49 $\frac{1}{8}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "
Intermediate rails.....	3 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 24"
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 26"
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 28"
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 30"

Beads for glass included.

F117 $\frac{1}{2}$



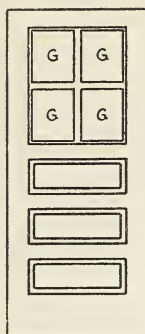
Stiles.....	49 $\frac{1}{8}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "
Intermediate rails.....	3 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 22"
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 24"
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 26"
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 28"

Beads for glass included.

F 416



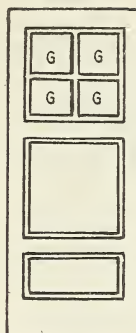
Stiles and top rail.....	49 $\frac{1}{8}$ "
Lock rail.....	53 $\frac{3}{8}$ "
Intermediate rails.....	41 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	10 $\frac{3}{4}$ " x 15"
2'8" x 6'8".....	11 $\frac{5}{8}$ " x 16"
2'10" x 6'10".....	12 $\frac{5}{8}$ " x 17"
3'0" x 7'0".....	13 $\frac{5}{8}$ " x 18"

Beads for glass included.

F 453



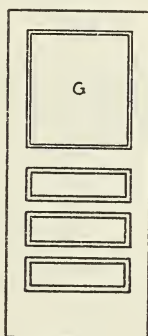
Stiles and top rail.....	49 $\frac{1}{8}$ "
Intermediate rails.....	41 $\frac{1}{2}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panels. Furnished in grades A and B only. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	10 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ "
2'8" x 6'8".....	11 $\frac{1}{2}$ " x 12"
2'10" x 6'10".....	12 $\frac{1}{2}$ " x 12 $\frac{3}{4}$ "
3'0" x 7'0".....	13 $\frac{1}{2}$ " x 12 $\frac{3}{4}$ "

Beads for glass included.

F 118

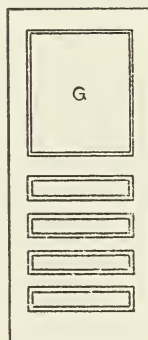


Stiles.....	49 $\frac{1}{8}$ "
Top and lock rails.....	53 $\frac{3}{8}$ "
Intermediate rails.....	33 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 32"
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 34"
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 36"
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 38"

Beads for glass included

F 118 $\frac{1}{2}$ 

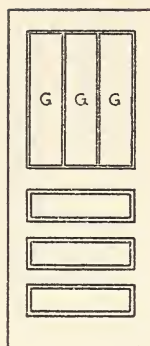
Stiles.....	49 $\frac{1}{8}$ "
Top and lock rails.....	53 $\frac{3}{8}$ "
Intermediate rails.....	33 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	21 $\frac{5}{8}$ " x 30"
2'8" x 6'8".....	23 $\frac{5}{8}$ " x 32"
2'10" x 6'10".....	25 $\frac{5}{8}$ " x 34"
3'0" x 7'0".....	27 $\frac{5}{8}$ " x 36"

Beads for glass included.

F 318



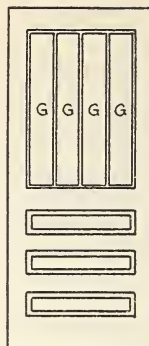
Stiles.....	49 $\frac{1}{8}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "
Intermediate rails.....	3 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	6 $\frac{7}{8}$ " x 32"
2'8" x 6'8".....	7 $\frac{1}{2}$ " x 34"
2'10" x 6'10".....	8 $\frac{1}{4}$ " x 36"
3'0" x 7'0".....	8 $\frac{7}{8}$ " x 38"

Beads for glass included.

F418



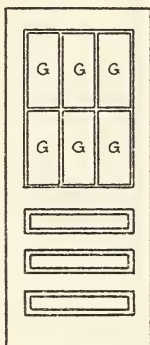
Stiles.....	49 $\frac{1}{8}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "
Intermediate rails.....	3 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	5" x 32"
2'8" x 6'8".....	5 $\frac{1}{4}$ " x 34"
2'10" x 6'10".....	6" x 36"
3'0" x 7'0".....	6 $\frac{1}{2}$ " x 38"

Beads for glass included.

F618



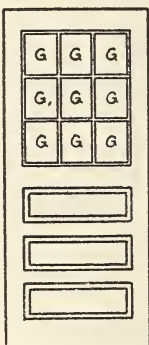
Stiles.....	49 $\frac{1}{8}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "
Intermediate rails.....	3 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	6 $\frac{7}{8}$ " x 15 $\frac{3}{4}$ "
2'8" x 6'8".....	7 $\frac{1}{4}$ " x 16 $\frac{3}{4}$ "
2'10" x 6'10".....	8 $\frac{1}{4}$ " x 17 $\frac{3}{4}$ "
3'0" x 7'0".....	8 $\frac{7}{8}$ " x 18 $\frac{3}{4}$ "

Beads for glass included.

F 918

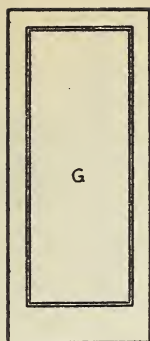


Stiles.....	49 $\frac{1}{8}$ "
Top and lock rails.....	5 $\frac{3}{8}$ "
Intermediate rails.....	3 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

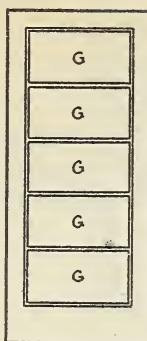
Bars $\frac{1}{2}$ " between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in grades A, B, and C. Sticking: Standard.

Size of door	Size of glass
2'6" x 6'6".....	6 $\frac{7}{8}$ " x 10 $\frac{5}{8}$ "
2'8" x 6'8".....	7 $\frac{1}{4}$ " x 11"
2'10" x 6'10".....	8 $\frac{1}{4}$ " x 11 $\frac{5}{8}$ "
3'0" x 7'0".....	8 $\frac{7}{8}$ " x 12 $\frac{5}{8}$ "

Beads for glass included.



F35
F36
F37



F535
F536
F537

	F35	F36	F37
Stiles.....	4 1/8"	5 3/8"	5 3/8"
Top rail.....	4 1/8"	5 3/8"	6 3/8"
Bottom rail.....	9 3/8"	11 3/8"	18 3/8"

Furnished in grades A and B only. Sticking: Standard.

	F535	F536	F537
Stiles.....	4 1/8"	5 3/8"	5 3/8"
Top rail.....	4 1/8"	5 3/8"	6 3/8"
Bottom rail.....	9 3/8"	11 3/8"	18 3/8"

Bars 1/2" between glass. Furnished in grades A and B only. Sticking: Standard.

Size of door	Sizes of glass		
	F35	F36	F37
2'6"x6'6"---	21 5/8"x64 1/4"	20"x62"	20"x54"
2'8"x6'8"---	23 3/8"x66 1/4"	22"x64"	22"x56"
2'10"x6'10"---	25 3/8"x68 1/4"	24"x66"	24"x58"
3'0"x7'0"---	27 3/8"x70 1/4"	26"x68"	26"x60"

Beads for glass included.

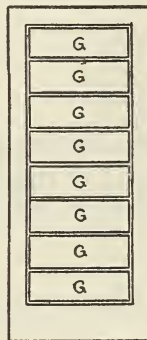
Size of door	Sizes of glass	
	F535	F536
2'6"x6'6"---	21 5/8"x12 1/2"	20"x11 1/4"
2'8"x6'8"---	23 3/8"x12 1/4"	22"x12 1/4"
2'10"x6'10"---	25 3/8"x13 1/4"	24"x12 3/4"
3'0"x7'0"---	27 3/8"x13 3/4"	26"x13 1/8"

	F537
2'6"x6'6"---	20"x10 1/4"
2'8"x6'8"---	22"x10 3/4"
2'10"x6'10"---	24"x11 1/8"
3'0"x7'0"---	26"x11 1/4"

Beads for glass included.



F935 M
F936 M
F937 M



F835
F836
F837

	F935M	F936M	F937M
Stiles.....	4 1/8"	5 3/8"	5 3/8"
Top rail.....	4 1/8"	5 3/8"	6 3/8"
Bottom rail.....	9 3/8"	11 3/8"	18 3/8"

Bars 1/2" between glass. Furnished in grades A and B only. Sticking: Standard.

	F835	F836	F837
Stiles.....	4 1/8"	5 3/8"	5 3/8"
Top rail.....	4 1/8"	5 3/8"	6 3/8"
Bottom rail.....	9 3/8"	11 3/8"	18 3/8"

Bars 1/2" between glass. Furnished in grades A and B only. Sticking: Standard.

Size of door	Sizes of glass (in inches)		
	F935M		
2'6"x6'6"---	5x5	5x53 3/4	5x10 1/4
2'8"x6'8"---	5x5	5x55 3/4	5x12 1/4
2'10"x6'10"---	5x5	5x57 3/4	5x14 1/4
3'0"x7'0"---	5x5	5x59 3/4	5x16 1/4

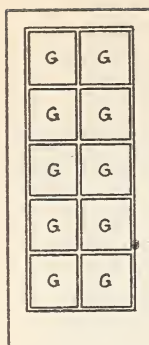
Size of door	Sizes of glass		
	F936M		
2'6"x6'6"---	5x5	5x50 7/8	5x8 7/8
2'8"x6'8"---	5x5	5x52 7/8	5x10 7/8
2'10"x6'10"---	5x5	5x54 7/8	5x12 7/8
3'0"x7'0"---	5x5	5x56 7/8	5x14 7/8

Size of door	Sizes of glass		
	F937M		
2'6"x6'6"---	5x5	5x42 1/4	5x8 1/4
2'8"x6'8"---	5x5	5x44 1/4	5x10 1/4
2'10"x6'10"---	5x5	5x46 1/4	5x12 1/4
3'0"x7'0"---	5x5	5x48 1/4	5x14 1/4

Beads for glass included.

Size of door	Sizes of glass		F837
	F835	F836	
2'6"x6'6"---	21 5/8"x7 3/4"	20"x7 1/4"	20"x6 1/4"
2'8"x6'8"---	23 3/8"x7 3/4"	22"x7 1/4"	22"x6 1/4"
2'10"x6'10"---	25 3/8"x8 3/4"	24"x7 3/4"	24"x6 3/4"
3'0"x7'0"---	27 3/8"x8 3/4"	26"x8 3/4"	26"x7"

Beads for glass included.



F 1035
F 1036
F 1037

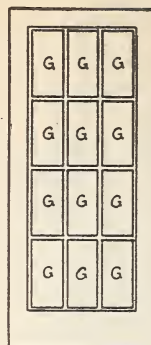
	F1035	F1036	F1037
Stiles.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	5 $\frac{3}{8}$ "
Top rail.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	6 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	11 $\frac{3}{8}$ "	18 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. Furnished in grades A and B only. Sticking: Standard.

Size of door (same for 3 designs)	Sizes of glass (in inches)
	F1035
2'6" x 6'6".....	10 $\frac{1}{2}$ x 12 $\frac{1}{2}$
2'8" x 6'8".....	11 $\frac{1}{2}$ x 12 $\frac{1}{2}$
2'10" x 6'10".....	12 $\frac{1}{2}$ x 13 $\frac{1}{2}$
3'0" x 7'0".....	13 $\frac{1}{2}$ x 13 $\frac{1}{2}$

Size of door (same for 3 designs)	Sizes of glass (in inches)
	F1036
2'6" x 6'6".....	9 $\frac{1}{4}$ x 11 $\frac{1}{2}$
2'8" x 6'8".....	10 $\frac{1}{4}$ x 12 $\frac{1}{2}$
2'10" x 6'10".....	11 $\frac{1}{4}$ x 12 $\frac{1}{2}$
3'0" x 7'0".....	12 $\frac{1}{4}$ x 13 $\frac{1}{2}$

Beads for glass included.



F 1235
F 1236
F 1237

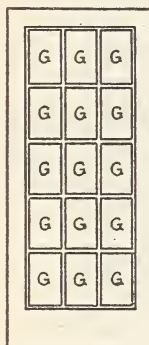
	F1235	F1236	F1237
Stiles.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	5 $\frac{3}{8}$ "
Top rail.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	6 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	11 $\frac{3}{8}$ "	18 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. Furnished in grades A and B only. Sticking: Standard.

Size of door (same for 3 designs)	Sizes of glass (in inches)
	F1235
2'6" x 6'6".....	6 $\frac{1}{4}$ x 15 $\frac{1}{4}$
2'8" x 6'8".....	7 $\frac{1}{4}$ x 16 $\frac{1}{4}$
2'10" x 6'10".....	8 $\frac{1}{4}$ x 16 $\frac{3}{4}$
3'0" x 7'0".....	8 $\frac{1}{4}$ x 17 $\frac{1}{4}$

Size of door (same for 3 designs)	Sizes of glass (in inches)
	F1236
2'6" x 6'6".....	6 $\frac{1}{4}$ x 15 $\frac{1}{4}$
2'8" x 6'8".....	6 $\frac{1}{4}$ x 15 $\frac{1}{4}$
2'10" x 6'10".....	7 $\frac{1}{4}$ x 16 $\frac{1}{4}$
3'0" x 7'0".....	8 $\frac{1}{4}$ x 16 $\frac{1}{4}$

Beads for glass included.



F 1535
F 1536
F 1537

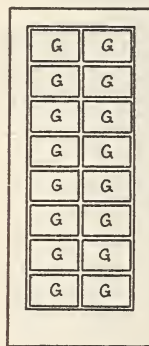
	F1535	F1536	F1537
Stiles.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	5 $\frac{3}{8}$ "
Top rail.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	6 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	11 $\frac{3}{8}$ "	18 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. Furnished in grades A and B only. Sticking: Standard.

Size of door (same for 3 designs)	Sizes of glass (in inches)
	F1535
2'6" x 6'6".....	6 $\frac{1}{4}$ x 12 $\frac{1}{2}$
2'8" x 6'8".....	7 $\frac{1}{4}$ x 12 $\frac{1}{2}$
2'10" x 6'10".....	8 $\frac{1}{4}$ x 13 $\frac{1}{2}$
3'0" x 7'0".....	8 $\frac{1}{4}$ x 13 $\frac{1}{2}$

Size of door (same for 3 designs)	Sizes of glass (in inches)
	F1536
2'6" x 6'6".....	6 $\frac{1}{4}$ x 11 $\frac{1}{2}$
2'8" x 6'8".....	6 $\frac{1}{4}$ x 12 $\frac{1}{2}$
2'10" x 6'10".....	7 $\frac{1}{4}$ x 12 $\frac{1}{2}$
3'0" x 7'0".....	8 $\frac{1}{4}$ x 13 $\frac{1}{2}$

Beads for glass included.



F 1635
F 1636
F 1637

	F1635	F1636	F1637
Stiles.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	5 $\frac{3}{8}$ "
Top rail.....	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	6 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "	11 $\frac{3}{8}$ "	18 $\frac{3}{8}$ "

Bars $\frac{1}{2}$ " between glass. Furnished in grades A and B only. Sticking: Standard.

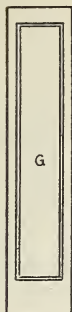
Size of door (same for 3 designs)	Sizes of glass (in inches)
	F1635
2'6" x 6'6".....	10 $\frac{1}{2}$ x 7 $\frac{1}{2}$
2'8" x 6'8".....	11 $\frac{1}{2}$ x 7 $\frac{1}{2}$
2'10" x 6'10".....	12 $\frac{1}{2}$ x 8 $\frac{1}{2}$
3'0" x 7'0".....	13 $\frac{1}{2}$ x 8 $\frac{1}{2}$

Size of door (same for 3 designs)	Sizes of glass (in inches)
	F1636
2'6" x 6'6".....	9 $\frac{1}{4}$ x 7 $\frac{1}{4}$
2'8" x 6'8".....	10 $\frac{1}{4}$ x 7 $\frac{1}{4}$
2'10" x 6'10".....	11 $\frac{1}{4}$ x 7 $\frac{3}{4}$
3'0" x 7'0".....	12 $\frac{1}{4}$ x 8

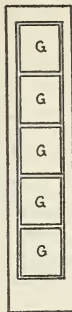
Beads for glass included.

SIDELIGHTS

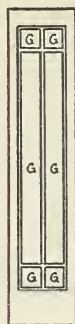
F035



F0535



F0635M



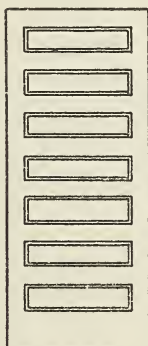
Stiles.....	Not over 2½" wide.
Top rail.....	Not over 6½" wide.
Bottom rail.....	Not over 18½" wide.

Top and bottom rails made same width as in doors with which they are used. Bars ½" between glass.
Furnished in grade A only. Sticking: Standard.

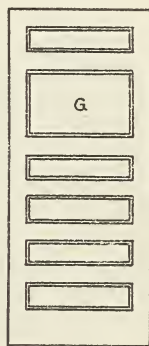
Beads for glass included.

STORM DOORS

FS7



FS07



Stiles and top rail.....	4¾"
Intermediate rails.....	4½"
Bottom rail.....	9¾"

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in 1½" millrun grade only. Sticking: Standard.

Stiles and top rail.....	4¾"
Intermediate rails.....	4½"
Bottom rail.....	9¾"

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Furnished in 1½" millrun grade only. Sticking: Standard.

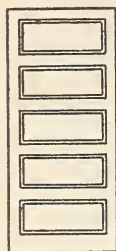
Size of door	Size of glass
2'6½" x 6'7"	22" x 16½"
2'8½" x 6'9"	24" x 18¾"
2'10½" x 6'11"	26" x 17½"
3'¼" x 7'1"	28" x 18½"

Beads for glass included.

Storm doors made ½" over in width and 1" over in length than corresponding standard size openings.

CUPBOARD DOORS

F05



Stiles, top and cross rails. $2\frac{3}{4}"$
Bottom rail. $4\frac{1}{2}"$

F020



Stiles and top rail. $2\frac{3}{4}"$
Bottom rail. $4\frac{1}{2}"$

F082



Stiles and top rail. $2\frac{3}{4}"$
Cross rail. $3\frac{1}{2}"$
Bottom rail. $4\frac{1}{2}"$

F05 doors are made as below:

1'10" to 2'2"	2 cross panel.
2'4" to 3'0"	3 cross panel.
3'2" to 3'10"	4 cross panel.
4'0" to 5'6"	5 cross panel.

3-ply laminated flat panels.

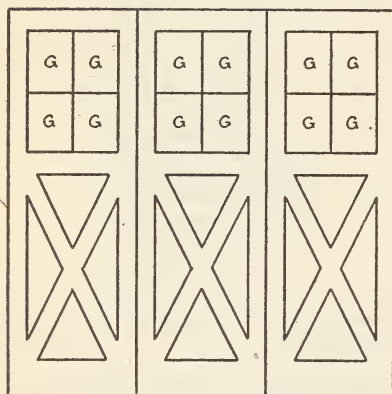
F05 can be furnished with raised panels.

Cupboard doors made in B and better grade only.

Sticking: Standard

GARAGE DOORS

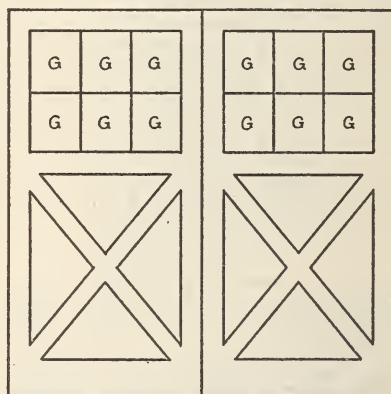
F491



Stiles. $4\frac{9}{16}"$
Top and lock rails. $5\frac{3}{8}"$
Bottom rail. $9\frac{3}{8}"$

Vertical bars $\frac{5}{8}"$ between glass. Horizontal bars 1" between glass. Ceiling panels. Cross braces screwed on. Sticking: Standard. Beads for glass included.

F691

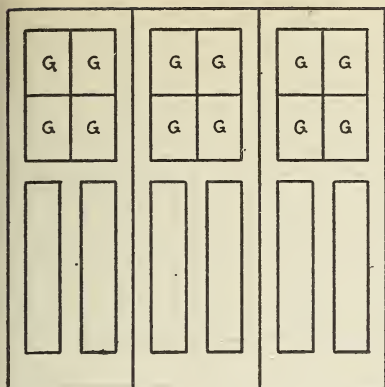


Stiles, top and lock rails. $5\frac{3}{8}"$
Bottom rail. $9\frac{3}{8}"$

Vertical and horizontal bars 1" between glass. Ceiling panels. Cross braces screwed on. Sticking: Standard. Beads for glass included.

For standard glass sizes of garage doors, see page 28.

F493



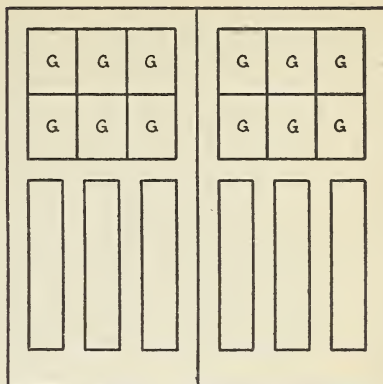
Stiles.....	4 9/16"
Top and lock rails.....	5 3/8"
Muntin.....	5 3/8"
Bottom rail.....	9 3/8"
Vertical bars, 5/8" between glass.	
Horizontal bars, 1" between glass.	

3-ply laminated flat panels. Can also be furnished with raised panels, if desired.

Sticking: Standard.

Beads for glass included.

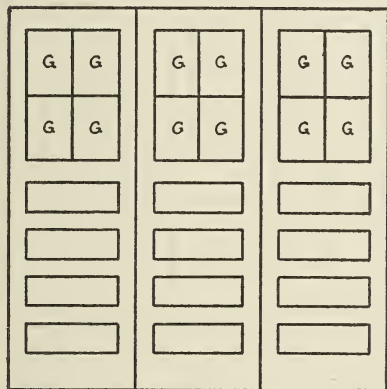
F693



Stiles, top and lock rails.....	5 3/8"
Muntins.....	5 3/8"
Bottom rail.....	9 3/8"
Vertical and horizontal bars, 1" between glass.	
3-ply laminated flat panels. Can also be furnished with raised panels, if desired.	
Sticking: Standard.	

Beads for glass included.

F495



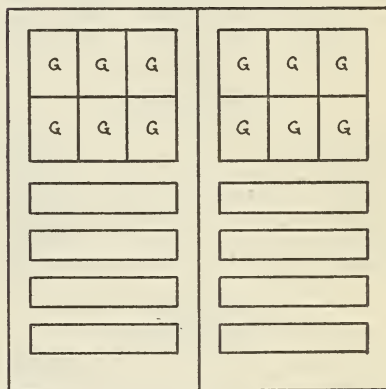
Stiles.....	4 9/16"
Top and lock rails.....	5 3/8"
Intermediate rails.....	4 1/4"
Bottom rail.....	9 3/8"
Vertical bars, 5/8" between glass.	
Horizontal bars, 1" between glass.	

3-ply laminated flat panels. Can also be furnished with raised panels, if desired.

Sticking: Standard.

Beads for glass included.

F695



Stiles, top and lock rails.....	5 3/8"
Intermediate rails.....	4 1/4"
Bottom rail.....	9 3/8"
Vertical and horizontal bars, 1" between glass.	

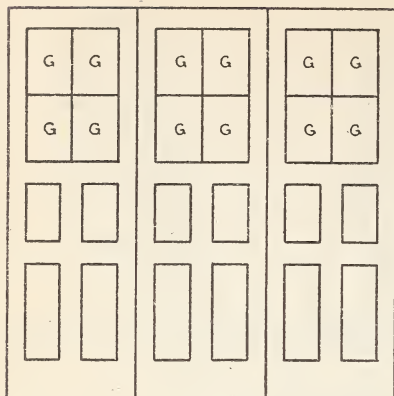
3-ply laminated flat panels. Can also be furnished with raised panels, if desired.

Sticking: Standard.

Beads for glass included.

For standard glass sizes of garage doors, see page 23.

F496

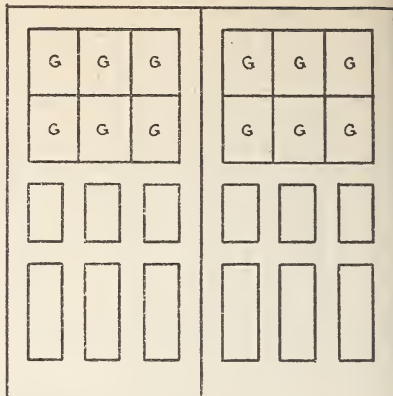


Stiles	49 1/4"
Top and lock rails	5 3/4"
Intermediate rail and muntins	5 3/4"
Bottom rail	9 3/4"
Height of top panels 9 3/4", shoulder to shoulder.	

Vertical bars 5/8" between glass. Horizontal bars 1" between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Sticking: Standard.

Beads for glass included.

F696

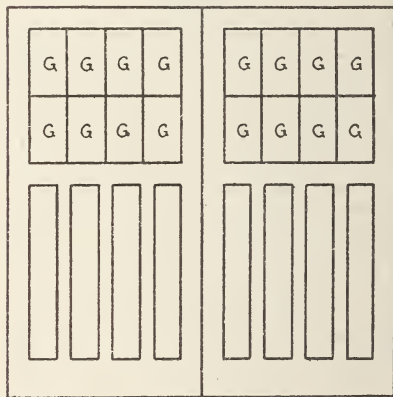


Stiles, top and lock rails	5 3/4"
Intermediate rail and muntins	5 3/4"
Bottom rail	9 3/4"
Height of top panels 9 3/4", shoulder to shoulder.	

Vertical and horizontal bars 1" between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Sticking: Standard.

Beads for glass included.

F894



Stiles, top and lock rails	5 3/4"
Muntins	3 1/4"
Bottom rail	9 3/4"

Vertical bars 5/8" between glass. Horizontal bars 1" between glass. 3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Sticking: Standard.

STANDARD GLASS OPENINGS FOR STANDARD GARAGE DOOR DESIGNS SHOWN ABOVE

SETS

4 lights per door

Size of door	Size of glass
2'0" x 7'6"	9 1/4" x 16"
2'0" x 8'0"	9 1/4" x 16"
2'6" x 7'0"	10 1/4" x 13"
2'6" x 7'6"	10 1/4" x 16"
2'6" x 8'0"	10 1/4" x 16"
2'8" x 7'0"	11 1/4" x 13"
2'8" x 7'6"	11 1/4" x 16"
2'8" x 8'0"	11 1/4" x 16"

PAIRS

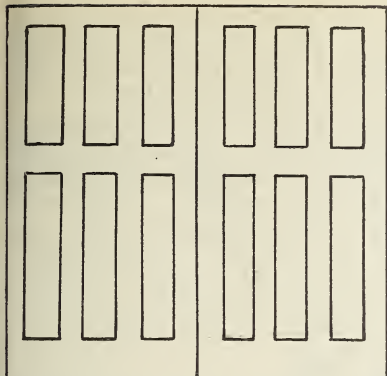
6 lights per door

Size of door	Size of glass
3'6" x 7'0"	10" x 13"
3'6" x 7'6"	10" x 16"
3'6" x 8'0"	10" x 16"
3'9" x 7'0"	11" x 13"
3'9" x 7'6"	11" x 16"
3'9" x 8'0"	11" x 16"
4'0" x 7'0"	12" x 13"
4'0" x 7'6"	12" x 16"
4'0" x 8'0"	12" x 16"

Size of door	Size of glass
3'6" x 7'0"	7 1/2" x 13"
3'6" x 7'6" & 3'6" x 8'0"	7 1/2" x 16"
3'9" x 7'0"	8 3/4" x 13"
3'9" x 7'6" & 3'9" x 8'0"	8 3/4" x 16"
4'0" x 7'0"	9" x 13"
4'0" x 7'6" & 4'0" x 8'0"	9" x 16"

Beads for glass included.

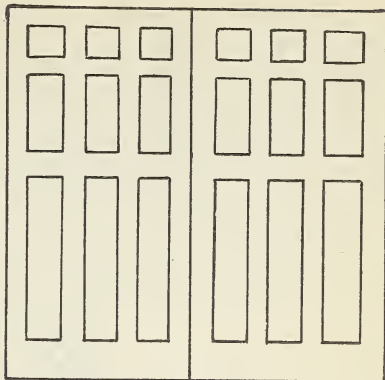
F093



Stiles, top and lock rails.....	5 $\frac{3}{4}$ "
Muntins.....	5 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Sticking: Standard.

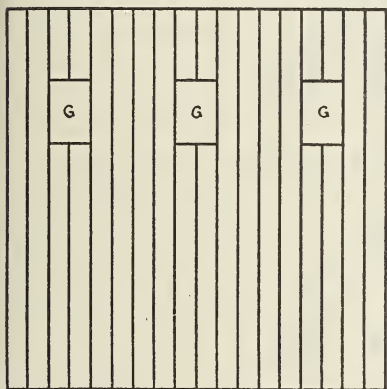
F099



Stiles, top and lock rails.....	5 $\frac{3}{4}$ "
Intermediate rails and muntin.....	5 $\frac{3}{8}$ "
Bottom rail.....	9 $\frac{3}{8}$ "

3-ply laminated flat panels. Can also be furnished with raised panels, if desired. Sticking: Standard.

F190



V.G. flush garage door in sets, with standard glass openings, as shown, or without glass openings (blank).

Each side of each door with 6 batts ("V" ceiling strips) wide, 5 "V" grooves.

Stiles full thickness of door with intervening ceiling strips glued and nailed to core.

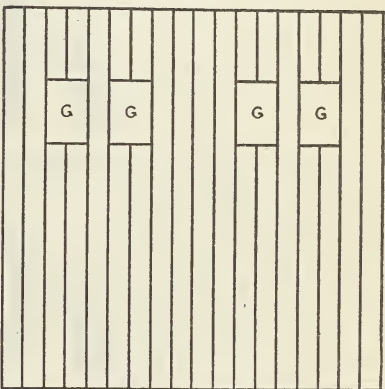
Sets of 3, standard width of each door 2'8", glass size 10 $\frac{5}{8}$ "x16", beads tacked in.

One light per door, standard, placed 18" from top of door.

Metal bars or leaded glass recommended for divided light effect, if desired.

Made in 1 $\frac{3}{4}$ " thickness only.

F290



V.G. flush garage door in pairs, with standard glass openings, as shown, or without glass openings (blank).

Each side of each door with 9 batts ("V" ceiling strips) wide, 8 "V" grooves.

Stiles full thickness of door with intervening ceiling strips glued and nailed to core.

Standard width of each door in pairs, 4'0", glass size 10 $\frac{5}{8}$ "x16", beads tacked in.

Two lights per door, standard, placed 18" from top of door.

Metal bars or leaded glass recommended for divided light effect, if desired.

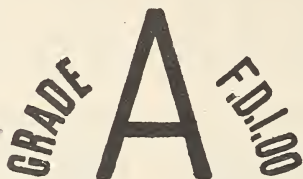
Made in 1 $\frac{3}{4}$ " thickness only.

GRADE MARKING

37. The following sets forth the grade marking rules adopted by the Fir Door Institute to preserve the high standards of quality herein recorded and to insure distributors and ultimate consumers receiving the proper grade of fir door for their specific needs:

38. All fir doors guaranteed to conform to the commercial standard grading rules shall be marked or branded with the letters "FDI" followed by the numerals designating the particular manufacturer. (The numerals 00 are used here only for illustration.)

38 (a). All fir doors of *A* grade shall be stamped or branded



38 (b). All fir doors of *B* grade shall be stamped or branded



38 (c). All fir doors of *C* grade shall be stamped or branded



38 (d). All fir doors of "*Millrun*" grade shall be stamped or branded



EFFECTIVE DATE

39. The standard is effective for new production from September 20, 1945.

STANDING COMMITTEE

40. 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. Each organization nominated its own representatives. Comment concerning the standard and suggestions for revision may be addressed to any member of the committee or to the Division of Trade Standards, National Bureau of Standards, which acts as secretary for the committee.

Manufacturers:

W. P. WOOLLEY (chairman), M and M Wood Working Co., Portland, Oreg.
 HENRY L. MERTZ, Buffelen Lumber and Manufacturing Co., Tacoma, Wash.
 N. O. CRUVER, Wheeler Osgood Sales Corporation, Tacoma, Wash.
 D. C. SALLEY, Northwest Door Co., Tacoma, Wash.

Distributors:

DON S. COLES, W. P. Fuller & Co., 1117 A St., Tacoma 1, Wash.
 FRED TIBBETTS, Brockway-Smith-Haigh-Lovell Co., Boston, Mass.
 LIONEL RAY, Huttig Sash and Door Co., 1000-1300 S. Vandeventer Ave., St. Louis, Mo.
 DON A. CAMPBELL, Bonner Campbell Co., Lebanon, Ky., Representing National Retail Lumber Dealers Association.
 GEORGE W. LAPOINTE, JR., O. and N. Lumber Co., 620 Main St., Menominee, Wis.

Users:

EARL W. MACY, Property Standards Unit, Federal Housing Administration, National Housing Agency, Washington 25, D. C.
 THEODORE IRVING COE, The American Institute of Architects, The Octagon, 1741 New York Ave., Washington, D. C.
 NELSON J. MORRISON, Room 228, Perkins Bldg., Tacoma, Wash., Representing The American Institute of Architects.

HISTORY OF PROJECT

41. On January 25, 1938, the Fir Door Institute requested the cooperation of the Division of Trade Standards in bringing together all interested parties for the development and establishment of standards for stock fir doors. A draft of the preliminary standard was sent on March 11, 1938, to a comprehensive list of those interested in the production, distribution, sale, and use of this commodity. On April 4, 1938, a general conference was held at Tacoma, Wash., for the public discussion of the proposed standard. Some modifications were made and the conference unanimously passed a resolution that the standard, as modified, be circulated for public acceptance as the commercial standard of the industry. This was done on April 28, 1938. Following satisfactory acceptance and in the absence of active opposition, the establishment of the commercial standard, designated as CS73-38, was announced on June 30, 1938, to become effective for new production immediately.

FIRST REVISION

42. On January 4, 1943, the Fir Door Institute submitted a proposed revision which included two new door layouts and a slight modification in the requirements for panels and bottom rails for grade A and grade B doors. These changes were approved by the Standing Committee, and the recommended revision was circulated on February 27, 1943 to those directly concerned for written acceptance.

43. Following acceptance by a satisfactory majority, the success of the revision was announced on May 15, 1943, as CS73-43, effective for new production from June 15, 1943.

SECOND REVISION

44. Difficulties encountered in securing wide widths of old growth Douglas fir shop lumber led to the submission of a proposed revision on April 27, 1945, by the Fir Door Institute to permit a limited number of stiles, rails, and mullions to be glued-up with moisture-resistant glue. The millrun grade was dropped from five layouts, two stock layouts were deleted entirely, and six additional layouts were made available in grades *C* and millrun. Upon approval by the standing committee, the recommended revision was circulated to the trade for written acceptance on June 25, 1945. Following acceptance by a satisfactory majority, the success of the revision was announced on August 20, 1945 as Commercial Standard CS73-45.

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_____

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

Gentlemen:

We believe that the Commercial Standard CS73-45 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 Testing ¹

of old growth Douglas fir standard stock doors.

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

45. The organizations listed below have individually accepted these grading rules for use as far as practicable in the production, distribution, testing or purchase of old growth Douglas fir standard stock doors. 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)

Building Officials Conference of America, Washington, D. C.
 Carolina Lumber & Building Supply Association, Charlotte, N. C.
 Douglas Fir Plywood Association, Tacoma, Wash.
 Fir Door Institute, Tacoma, Wash.
 Michigan Retail Lumber Dealers Association, Lansing, Mich.
 National Hardwood Lumber Association, Chicago, Ill.
 North East Lumbermen's Association, Columbia, Mo.
 Ohio Association of Retail Lumber Dealers, The, Xenia, Ohio.
 Prefabricated Home Manufacturers' Institute, Washington, D. C.
 Southern California Retail Lumber Association, Los Angeles, Calif.
 Southern Woodwork Association, Atlanta, Ga.
 West Coast Lumbermen's Association, Seattle, Wash.
 Wisconsin Retail Lumbermen's Association, Milwaukee, Wis.
 Woodwork Jobbers Service Bureau, Chicago, Ill.

FIRMS

Acme Door Co., Hoquiam, Wash.
 Adams, Franklin O., Tampa, Fla.
 Adams & Kelly Co., Omaha, Nebr.
 Adams-Rogers Co., Indianapolis, Ind.
 Addison-Rudesal Co., Atlanta, Ga.
 Aetna Industrial Corporation, C. C. Coolbaugh & Son Co. Division, Gloucester City, N. J.
 Andrews, Jones, Bischoe & Goodell, Boston, Mass.
 Andrews Lumber Co., C. E., New Bethlehem, Pa.
 Angelina County Lumber Co., Keltys, Tex.
 Arizona Sash, Door & Glass Co., Tucson, Ariz.
 Ashton Co., C. J., Detroit, Mich.
 Atkinson Mill & Manufacturing Co., Oakland, Calif.
 Atlantic City Lumber Co., Atlantic City, N. J.
 Augusta Lumber Co., Augusta, Ga.
 Austin, Ennis R., South Bend, Ind.
 Baltimore, City of, Bureau of Plans & Surveys, Baltimore, Md.
 Barger Millwork Co., Statesville, N. C.
 Barnes Lumber Co., W. F. & J. F., Waco, Tex.
 Barthmaier, Eugene V., Philadelphia, Pa.
 Baxter & Co. C. B., Kansas City, Mo.
 Beasley & Sons Co., Nashville, Tenn.
 Bedard & Morency Mill Co., Oak Park, Ill.
 Bell Manufacturing Co., Inc., C. C., West Monroe, La.
 Bennett-Bailey Lumber Co., Minneapolis, Minn.
 Bennison, H. C., Kansas City, Mo.
 Berger, F. E., & R. L. Kelley, Champaign, Ill.
 Beuttler, William, Sioux City, Iowa.
 Beyster & Sons Co., John, Detroit, Mich.
 Billings Sash & Door Co., Billings, Mont.
 Binswanger & Co., Inc., Richmond, Va.
 Birmingham Sash & Door Co., Birmingham, Ala.
 Bishop, Horatio W., La Mesa, Calif.
 Blackburn, Inc., Robert, Milwaukee, Wis.
 Blithe, Wesley Lesher, Philadelphia, Pa.
 Blount Lumber Co., The, Lacona, N. Y.
 Boehm, George A., New York, N. Y.
 Bohnhoff Lumber Co., Inc., Los Angeles, Calif.
 Borland Lumber Co., Oil City, Pa.
 Bosman & Casson, Harrison, N. J.
 Bovard, William R., Kansas City, Mo. (General support.)
 Brainerd, Harry B., New York, N. Y. (General support.)
 Brazer, Clarence W., New York, N. Y.
 Bristol Door & Lumber Co., Bristol, Va.
 Brittain & Cannon Co., E. Watertown, Mass.
 Brown-Graves Co., Akron, Ohio.
 Brust & Brust, Milwaukee, Wis.
 Buechner & Orth, St. Paul, Minn. (General support.)
 Buell Lumber & Manufacturing Co., Dallas, Tex.
 Buffalo, City of, Department of Public Works, Architectural Service, Buffalo, N. Y.
 Buffalo Plywood Corporation, Buffalo, N. Y.
 Buffelen Lumber & Manufacturing Co., Tacoma, Wash., and Fort Worth, Tex.
 Builders Supply Co., Bismarck, N. Dak.
 Building Service, Inc., Great Falls, Mont.
 Burton Lingo Co., Ft. Worth, Tex.
 Byron Sash & Door Co., Inc., Louisville, Ky.
 C & M Construction Co., Inc., Philadelphia, Pa.
 C-W Plywood Co., Chicago, Ill.
 California Door Co., The, Los Angeles, Calif.
 California Panel & Veneer Co., Los Angeles, Calif.
 Calmar Manufacturing Co., The, Calmar, Iowa.
 Cameron Lumber Co., Inc., Newburgh, N. Y.
 Camlet, J. Thomas, Passaic, N. J.
 Camp Plywood Co., Inc., The E. W., Indianapolis, Ind., and Louisville, Ky.
 Cannon & Mullen, Salt Lake City, Utah.
 Carnahan Manufacturing Co., Loogootee, Ind.
 Cellular Lumber Co., The, Westerville, Ohio.
 Central Glazing Co., Fort Worth, Tex.
 Central Wholesale Co., Inc., Shreveport, La.
 Chapin, Rollin C., Minneapolis, Minn. (General support.)
 Chapin Lumber Co., The, Denver, Aurora Branch, Colo.
 Charlottesvill Lumber Co., Inc., Charlottesville, Va.
 Chicago & Riverdale Lumber Co., Chicago, Ill.
 Christmann Veneer & Lumber Co., St. Louis, Mo.
 Cincinnati, City of, Cincinnati, Ohio.
 Clark Veneer Co., Walter, Grand Rapids, Mich.
 Cleary Millwork Co., Inc., Ansonia, Conn.
 Clem Lumber Co., Dallas, Tex.
 Cline Bros. Lumber Co., Inc., Kendallville, Ind.
 Cogswell Construction Co., The, Baltimore, Md.
 Collier Barnett Co., The, Toledo, Ohio.
 Combs Lumber Co., Lexington, Ky.
 Conrad & Cummings, Binghamton, N. Y.
 Conrow, H. S., Wichita, Kans.
 Continental Homes, Inc., Crawfordsville, Ind.
 Coolidge, Shepley, Bulfinch & Abbott, Boston, Mass.
 Cordele Sash, Door & Lumber Co., Inc., Cordele, Ga.
 Cram & Ferguson, Boston, Mass.
 Crawford Co., Baton Rouge, La.
 Crawford Manufacturing Co., El Paso, Tex.
 Cross Austin & Ireland Lumber Co., Brooklyn, N. Y.
 Crouch & Beahan Co., Rochester, N. Y.
 Crowell & Lancaster, Bangor, Maine.
 Crown City Lumber & Mill Co., Pasadena, Calif.
 Curtis Co.'s, Inc., Chicago Division, Chicago, Ill.
 Dakota Sash & Door Co., Aberdeen, S. Dak.
 D'Arcy Co., Dover, N. H.
 Davidson Sash & Door Co., Inc., Lake Charles, La.
 Dayton Sash & Door Co., The, Dayton, Ohio.
 DeJarnette, Charles Wagner, Des Moines, Iowa.
 Delmarva Sash & Door Co., Philadelphia, Pa.
 Lancaster, Pa., and Sudlersville, Md.
 Deming & Thompson Co., Inc., Frankfort, Ind.
 Dietel, George J., Buffalo, N. Y.

- Doddington Corporation, The, Columbus, Ohio.
 Donlin-Johnson Co., St. Cloud, Minn.
 Donovan, John J., Berkeley, Calif.
 Dunlap & Co., Inc., Columbus, Ind.
 Dyke Bros., Fort Smith, Ark.
 Dykes Lumber Co., New York, N. Y.
 Elliott Bay Mill Co., Seattle, Wash.
 Emery Industries, Inc., Cincinnati, Ohio.
 Emmons-Hawkins Hardware Co., Huntington, W. Va.
 Erlanson Lumber Co., Superior, Wis.
 Estes Lumber Co., Birmingham, Ala.
 Evans-MacArthur Co., New York, N. Y.
 Everett & Associates, H. F., Allentown, Pa.
 Exchange Lumber & Manufacturing Co., Spokane, Wash.
 Fant, Charles William, Anderson, S. C.
 Farley & Loetscher Manufacturing Co., Dubuque, Iowa.
 Ferguson Lumber Co., W. T., St. Louis, Mo.
 Fischer Lime & Cement Co., Memphis, Tenn.
 Fish & Hunter Co., The, Rapid City, S. Dak.
 Flannagan, Eric G., Henderson, N. C.
 Florida, University of, School of Forestry, Gainesville, Fla.
 Foltz & Son, Herbert, Winter Haven, Fla.
 Fort Wayne Builders Supply Co., Fort Wayne, Ind.
 Foster Lumber Co., R. S., Indianapolis, Ind.
 Frank & Co., R. W., Salt Lake City, Utah.
 Frederick Bros., Inc., Pottstown, Pa.
 Fuller & Co., W. P., Spokane, Wash., and other cities.
 Furer, William C., Honolulu, Hawaii.
 Galliher & Huguely, Inc., Washington, D. C.
 Garber, Frederick W., Cincinnati, Ohio.
 General Millwork Corporation, Utica, N. Y.
 General Paint Corporation, Spokane, Wash.
 Gibson Door Co., The, Utica, N. Y.
 Glendale Sash & Millwork Corporation, Glendale, L. I., N. Y., and Brooklyn, N. Y.
 Gourley & Co., John, Highland Park, Ill.
 Grand Rapids Sash & Door Co., Grand Rapids, Mich.
 Great Lakes Sash & Door Co., The, Cleveland, Ohio.
 Greene & Wood, Inc., New Bedford, Mass.
 Gresham Lumber Co., Inc., Griffin, Ga.
 Grobstein Construction Co., Lakewood, N. J.
 Hahn, Stanley W., Silver Spring, Md.
 Haley Bros., Santa Monica, Calif.
 Hannaford & Sons, Samuel, Cincinnati, Ohio.
 Haralson & Mott, Fort Smith, Ark.
 Harbor Plywood Corporation, Atlanta, Ga., Hockiam, Wash., and Jacksonville, Fla.
 Harbor Plywood Corporation (Chicago Division), Chicago, Ill.
 Harbor Sales Co., Inc., Baltimore, Md., and Washington, D. C.
 Harrison-Martin Lumber Co., Grand Island, Nebr.
 Hartung Co., F. L., Seattle, Wash.
 Hasness, Carlisle D., Harrisburg, Pa.
 Hastings & Co., A. W., Somerville, Mass.
 Hawkins Lumber & Warehouse Co., Boston, Mass.
 Haxby & Bissell, Minneapolis, Minn.
 Heidritter Lumber Corporation, Elizabeth, N. J.
 Helfensteller, Hirsch & Watson, St. Louis Mo.
 Higgins, Charles H., New York, N. Y.
 Higgins Lumber Co., J. E., San Francisco, Calif.
 Hodgdon & Son, Charles, San Gabriel, Calif.
 Hoener, P. John, St. Louis, Mo.
 Hogan Lumber Co., Oakland, Calif.
 Holsman & Holsman & Klekamp, Chicago, Ill.
 Honerkamp Co., F. W., New York, N. Y.
 Hope, Frank L., Jr., San Diego, Calif.
 Houkom, S. M., Fargo, N. Dak.
 Huber-Lanctot Housewrecking Corporation, Buffalo, N. Y.
 Hudson Lumber, Inc., Akron, Ohio.
 Hussey-Williams Co., Inc., Ozone Park, L. I., N. Y.
 Huttig Sash & Door Co., Columbus, Ohio, Jacksonville, Fla., and St. Louis, Mo.
 Huttig Sash & Door Co. of Texas, Dallas, Tex.
 Indiana Lumber & Manufacturing Co., South Bend, Ind.
 Interior Woodwork Co., Milwaukee, Wis.
 Interstate Lumber Co., Missoula, Mont.
 Interstate Sash & Door Co., The, Canton, Ohio.
 Iron City Sash & Door Co., Pittsburgh, Pa.
 Ivey, Inc., Edwin J., Seattle, Wash.
 Jacksonville Sash & Door Co., Jacksonville, Fla.
 Jersey Millwork Corporation, Jersey City, N. J.
 Johnson & Lundgren, Tacoma, Wash.
 Johnson, Wallwork & Dukehart, Portland, Oreg.
 Kaelber & Waasdrop, Rochester, N. Y.
 Keich & O'Brien, Warren, Ohio.
 Kellogg & Sons Co., Charles C., Utica, N. Y.
 Kilham, Hopkins & Greeley, Boston, Mass.
 Kimball Lumber Co., Watertown, Mass.
 Kimball, Steele & Sandham, Omaha, Nebr. (General support.)
 Kimball & Wilson, Inc., Detroit, Mich.
 Kneeland, Bigelow Distributing Co., Bay City, Mich.
 Koehl & Son, Inc., John W., Los Angeles, Calif.
 Kornweibel, Theodore, Alhambra, Calif.
 Kohn, Robert D.-Chas. Butler, New York, N. Y.
 Krauss Bros. Lumber Co. of Florida, Tampa, Fla.
 Kullberg Manufacturing Co., Minneapolis, Minn.
 Larick, Thomas, Columbus, Ohio.
 Law, Law, Potter & Nystrom, Madison, Wis.
 Levy, Will, St. Louis, Mo.
 Lewis Lumber Co., Spring Lake, N. J.
 Liberty Lumber & Manufacturing Co., Inc., Erwin, Tenn.
 Lock City Manufacturing Co., Sault Ste. Marie, Mich.
 Loeb, Laurence M., White Plains, N. Y.
 Loetscher & Burch Manufacturing Co., Des Moines, Iowa.
 Long-Bell Lumber Co., The, Fort Smith, Ark.
 Lowell, Inc., J. B., Worcester, Mass.
 Lumber & Millwork Co. of Philadelphia, The, Philadelphia, Pa.
 Lumber Products, Inc., Portland, Oreg.
 Lumbermen's Door & Trim Co., The, Cleveland, Ohio.
 Lumbermen's Supply, Inc., Sacramento, Calif.
 Lyman Hawkins Lumber Co., Akron, Ohio.
 Lyon-Gray Lumber Co., Dallas, Tex.
 M & M Wood Working Co., Portland, Oreg.
 Mahood, Alex B., Bluefield, W. Va.
 Mansfield Lumber Co., Fort Smith, Ark.
 Markland Contracting Co., M. B., Atlantic City N. J.
 Marquard Sash & Door Manufacturing Co., The, Cleveland, Ohio.
 Martin Lumber Co., Springfield, Mass.
 Martino, A. R., Waterbury, Conn.
 Mason City Millwork Co., Mason City, Iowa.
 Mason & Co., George D., Detroit, Mich.
 Mason & Sons, Inc., A., Peru, N. Y.
 Massena & duPont, Wilmington, Del.
 Matheny Sash & Door Co., Oakland, Calif.
 Mauk Seattle Lumber Co., Seattle, Wash.
 Mauran, Russell, Crowell & Mulgardt, St. Louis Mo.
 McClelland Co., The, Davenport, Iowa.
 McClung & Co., Inc., C. M., Knoxville, Tenn.
 McCoy & Co., Inc., Lawrence R., Worcester, Mass.
 McGoldrick Lumber Co., Spokane, Wash.
 McGowin Lyons Hardware & Supply Co., Mobile, Ala.
 McGuinn Lumber Co., N. J., Charlotte, N. C.
 McPhillips Manufacturing Co., Mobile, Ala.
 Melander & Co., C. T., East Orange, N. J.
 Memphis Sash & Door Co., Memphis, Tenn.
 Merritt Lumber Yards, Inc., Reading, Pa.
 Metropolitan Millwork Co., Brooklyn, N. Y.
 Michigan Wholesalers, Inc., Fort Wayne, Ind., and Jackson, Mich.
 Miller Bros., Inc., Lebanon, Pa.
 Miller & Yeager, Terre Haute, Ind. (General support.)
 Minot Builders Supply Co., Minot, N. Dak.
 Montgomery Ward & Co., Chicago, Ill.
 Mooser, William, San Francisco, Calif.
 Morgan, David H., Philadelphia, Pa.
 Morgan Millwork Co., Baltimore, Md.
 Morris & Noonan, San Antonio, Tex. (General support.)
 Mueller, Hair & Hetterich, Hamilton, Ohio.
 Muhlenberg Bros., Reading, Pa.
 Murphy & Ames, Inc., Arlington, Va.
 Nashville Sash & Door Co., Nashville, Tenn.
 National Plywood Co., Inc., New York, N. Y.
 National Plywoods, Inc., Chicago, Ill.
 National Woodworks Co., Birmingham, Ala.
 Neal-Blum Co., Savannah, Ga.
 Neumann & Sons, William, Jersey City, N. J.

- New York Sash & Door Co., Inc., Clifton, N. J.
 Nicolai Door Sales Co., San Francisco, Calif.
 Northwest Door Co., Tacoma, Wash.
 Northwestern Sash & Door Co., Fergus Falls, Minn.
 Nureburg, W. S., Fort Worth, Tex.
 O & N Lumber Co., Menominee, Wis.
 Oettinger Lumber Co., Greensboro, N. C.
 Officer, Gwynn, Berkeley, Calif.
 Ohio City Sash & Door Co., Dayton, Ohio.
 Oklahoma, University of, Norman, Okla.
 Pacific Lumber Co., The, San Francisco, Calif.
 Pacific Manufacturing Co., Santa Clara, Calif.
 Pacific Mutual Door Co., Chicago, Ill.
 Paducah Sash & Door Co., Paducah, Ky.
 Parker Building Specialties, Inc., San Francisco, Calif.
 Parshelsky Bros., Inc., Brooklyn, N. Y.
 Patten Blinn Lumber Co., Los Angeles, Calif.
 Pease Woodwork Co., Inc., Cincinnati, Ohio.
 Pehrson, G. A., Spokane, Wash.
 Pennsylvania, Commonwealth of, Department of Property & Supplies, Harrisburg, Pa.
 Pennsylvania Lumber Trade Journal, Scranton, Pa.
 Pennsylvania State College, The, Department of Forestry, State College, Pa. (General support.)
 Portsmouth Lumber Corporation, Portsmouth, Va.
 Queen City Sash & Door Co., The, Cincinnati, Ohio.
 Quigley Co., J. R., Gloucester City, N. J.
 Radford & Sanders, Inc., Baltimore, Md.
 Ramsey & Sons, Inc., A. H., Miami, Fla.
 Reid, William H., Jr., Billings, Mont.
 Remington Yards, Hibbing, Minn.
 Rensselaer Polytechnic Institute, Troy, N. Y.
 Resnikoff, Abraham, New York, N. Y.
 Reynolds Lumber Co., The, New London, Ohio.
 Rinn-Scott Lumber Co., Chicago, Ill.
 Robbins Door & Sash Co., Scranton, Pa.
 Roberson & Son, Inc., A., Binghamton, N. Y.
 Robert & Co., Inc., Atlanta, Ga.
 Roberts Corporation, U. N., Davenport, Iowa.
 Robinson Manufacturing Co., Everett, Wash.
 Rock Island Lumber Co., Cleveland, Ohio.
 Rock Island Sash & Door Works, Rock Island, Ill.
 Rockwell Bros. & Co., Houston, Tex.
 Roddis Plywood & Door Co., Inc., New York, N. Y.
 Roemer Bros. Lumber Co., Bowling Green, Ky.
 Rose & Sons, W. J., Johnstown, Pa.
 Rounds & Porter Co., Wichita, Kans.
 Rudinger, Inc., C. R., South Kearny, N. J.
 Ruggles Lumber Co., Carlos, Springfield, Mass.
 Rust Sash & Door Co., Kansas City, Mo.
 St. Louis Sash & Door Works, St. Louis, Mo.
 St. Paul & Tacoma Lumber Co., Tacoma, Wash.
 Sanders Bros. Manufacturing Co., Ottawa, Ill.
 Sandusky Lumber & Supply, Sandusky, Ohio.
 Sash, Door & Glass Corporation, Richmond, Va.
 Schell-Sasse Manufacturing Co., Jacksonville, Fla.
 Schulzke, William H., Moline, Ill.
 Sears, Roebuck & Co., Chicago, Ill.
 Segelke & Kohlhaus Co., La Crosse, Wis.
 Shannon Sash & Door Co., Kansas City, Kans.
 Shenk Co., Henry, Erie, Pa.
 Sherman's Sons Co., R. A., Westerly, R. I.
 Sidells, Philpott & Lawrence, Warren, Ohio.
 Simons, Inc., Minneapolis, Minn.
 Simpson Logging Co., Seattle, Wash.
 Sloan Lumber Co., Ft. Worth, Tex.
 Snell Sash & Door Co., St. Paul, Minn.
 Southern Counties Gas Co. of California, Los Angeles, Calif.
 Southwestern Sash & Door Co., Albuquerque, N. Mex.
 Southwestern Sash & Door Co., El Paso, Tex.
 Southwestern Sash & Door Co., Joplin, Mo.
 Spaulding Logging Co., Chas. K., McMinnville, Oreg.
 Spokane Sash & Door Co., Spokane, Wash.
 Standard Lumber Co., Pine Bluff, Ark.
 Standard Lumber & Supply Co., Ft. Wayne, Ind.
 Standard Millwork & Supply Co., Jackson, Miss.
 Stanley, F. W.—Sash-Doors-Millwork, Ft. Worth, Tex.
 Stark & Co., Kansas City, Mo.
 Staub & Rafter, Houston, Tex.
 Stotzel, Ralph E., Chicago, Ill.
 Strable Hardwood Co., Oakland, Calif.
 Summers Hardware & Supply Co., Johnson City, Tenn.
 Swan Lake Moulding Co., Klamath Falls, Oreg.
 Sweetwater Sash & Door Co., Sweetwater, Tex.
 Taylor, Ellery K., Haddonfield, N. J.
 Taylor Sash & Door Co., Pensacola, Fla.
 Teachout Sash, Door & Glass Co., The, Detroit, Mich.
 Tennessee Glass Co., Nashville, Tenn.
 Theiling-Lothman Manufacturing Co., St. Louis, Mo.
 Throop-Martin Co., The, Columbus, Ohio.
 Toledo Door & Sash Co., Toledo, Ohio.
 Toombs & Co., Springfield, Mo.
 Townsend Sash, Door & Lumber Co., Tampa, Fla.
 Trexler Lumber Co., Allentown, Pa.
 Tulane Hardwood Lumber Co., Inc., New Orleans, La.
 Tuna Manufacturing Co., Bradford, Pa.
 Turner Lumber Co., J. C., Irvington, N. Y.
 Underwood Coal & Supply Co., Mobile, Ala.
 Union Planing Mill, Stockton, Calif.
 United Lumber Co., St. Louis, Mo.
 United Sash & Door Co., Wichita, Kans.
 Vancouver Door Co., Inc., Montesano, Wash.
 Vaughan & Sons, Geo. C., Houston, Tex.
 Vetter Manufacturing Co., Stevens Point, Wis.
 Virginia Polytechnic Institute, Blacksburg, Va.
 Voell, Richard F., Alexandria, Va.
 Wahlfeld Manufacturing Co., Peoria, Ill.
 Wallis & Carley Co., Sharon, Pa.
 Walsh, Louis A., Waterbury, Conn.
 Wanke Panel Co., Portland, Oreg.
 Ware & McClenahan, Salt Lake City, Utah.
 Warren Lumber Co., The, Fort Morgan, Colo.
 Washington Door Co., Tacoma, Wash.
 Washington Woodworking Co., Inc., Washington, D. C.
 Watertown Sash & Door Co., Watertown, S. Dak.
 Weimer & Sons, George, St. Albans, W. Va.
 Weinell Lumber Co., A. F., Columbia, Ill.
 Welch, Carroll E., Huntington, N. Y.
 Welch Sash & Door Co., Port Huron, Mich.
 West, Albert E., Boston, Mass.
 West Side Manufacturing Co., Milwaukee, Wis.
 Western Door & Plywood Corporation, Portland, Oreg.
 Western Door & Sash Co., Oakland, Calif.
 Western Hardwood Lumber Co., Los Angeles, Calif.
 Western Reserve Lumber Co., The, Warren, Ohio.
 Weybrecht's Sons Co., The J. T., Alliance, Ohio.
 Weyerhaeuser Sales Co., Tacoma, Wash. (General support.)
 Wheeler, Osgood Co., The, Tacoma, Wash.
 Wheelock, Inc., E. U., Los Angeles, Calif.
 Whissel Lumber Co., Inc., L. N., Buffalo, N. Y.
 White Brothers—Hardwood Headquarters, San Francisco, Calif.
 Wholesale Building Supply, Inc., Oakland, Calif.
 Wholesale Distributing Co., Pittsburgh, Pa.
 Wilbur Lumber Co., Waukesha, Wis.
 Williams & Hunting Co., Cedar Rapids, Iowa.
 Willingham & Co., Chattanooga, Tenn.
 Willingham-Tift Lumber Co., Atlanta, Ga.
 Wilson, Fred F., Bozeman, Mont.
 Wimberly & Thomas Hardware Co., Inc., Birmingham, Ala.
 Wood Glass Co., Syracuse, N. Y.
 Wood Lumber Co., E. K., Los Angeles, Calif.
 Woodruff Lumber Co., Duluth, Minn.
 Wright & Wright, Detroit, Mich. (General support.)
 Zimmerman, A. C., Pasadena, Calif.

U. S. GOVERNMENT

- Agriculture, U. S. Department of, Washington D. C.
 Federal Public Housing Authority, Washington, D. C.
 Interior, U. S. Department of the, Office of Indian Affairs, Chicago, Ill.
 War Department, Washington, D. C.
 War Production Board, Washington, D. C. (General support.)

