

No. 724,453.

PATENTED APR. 7, 1903.

C. W. EMMONS.
SEAT AND BACK.

APPLICATION FILED JUNE 27, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

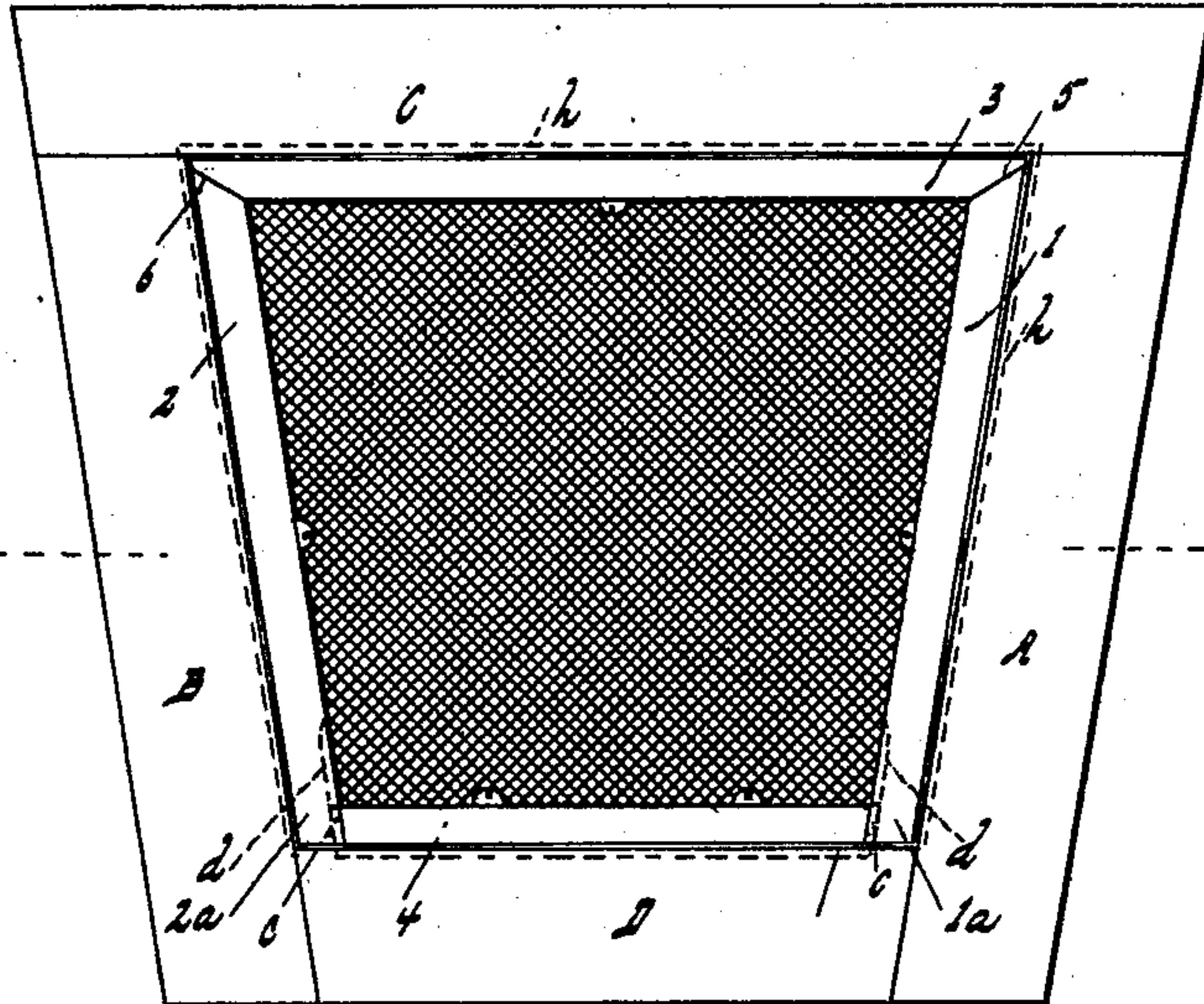


Fig. 1.

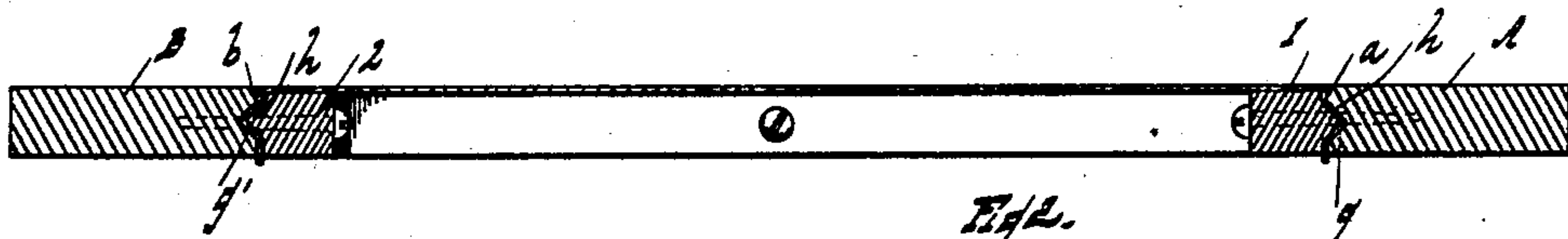


Fig. 2.

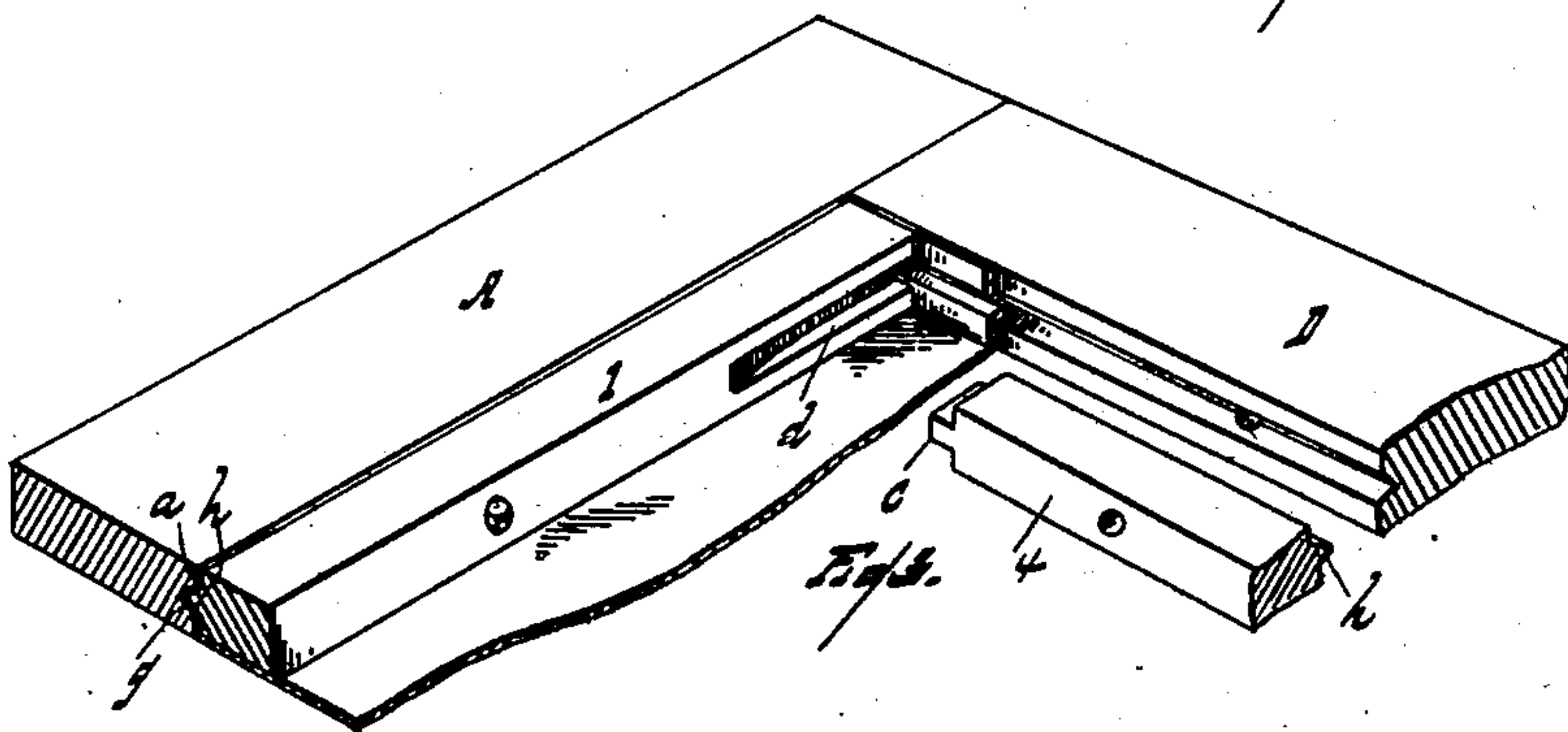


Fig. 3.

WITNESSES

Lotta Lee Hayton.
J. G. Marney

INVENTOR

Charles W. Emmons.
Parker & Burton,
Attorneys.

By

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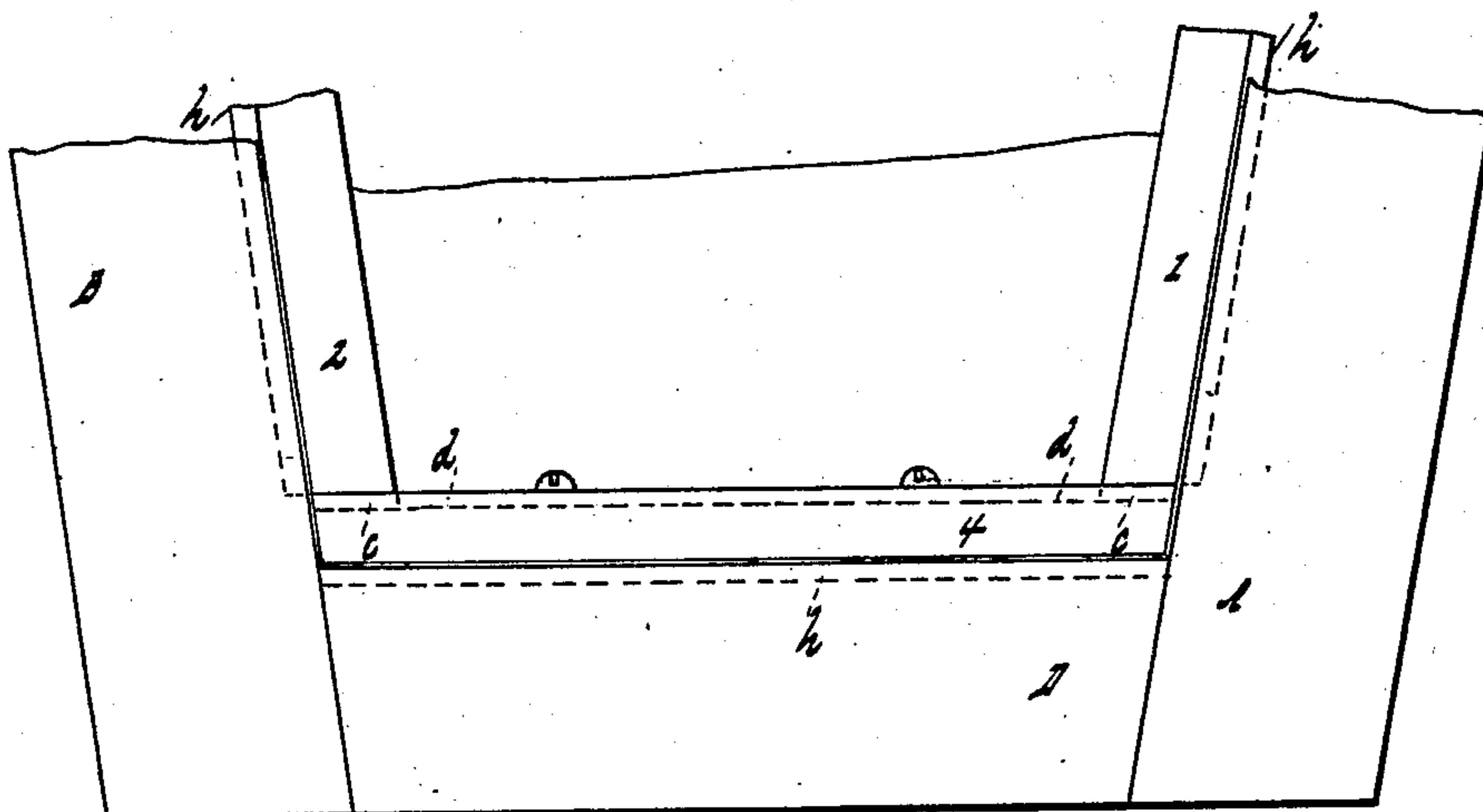


Fig. 4.

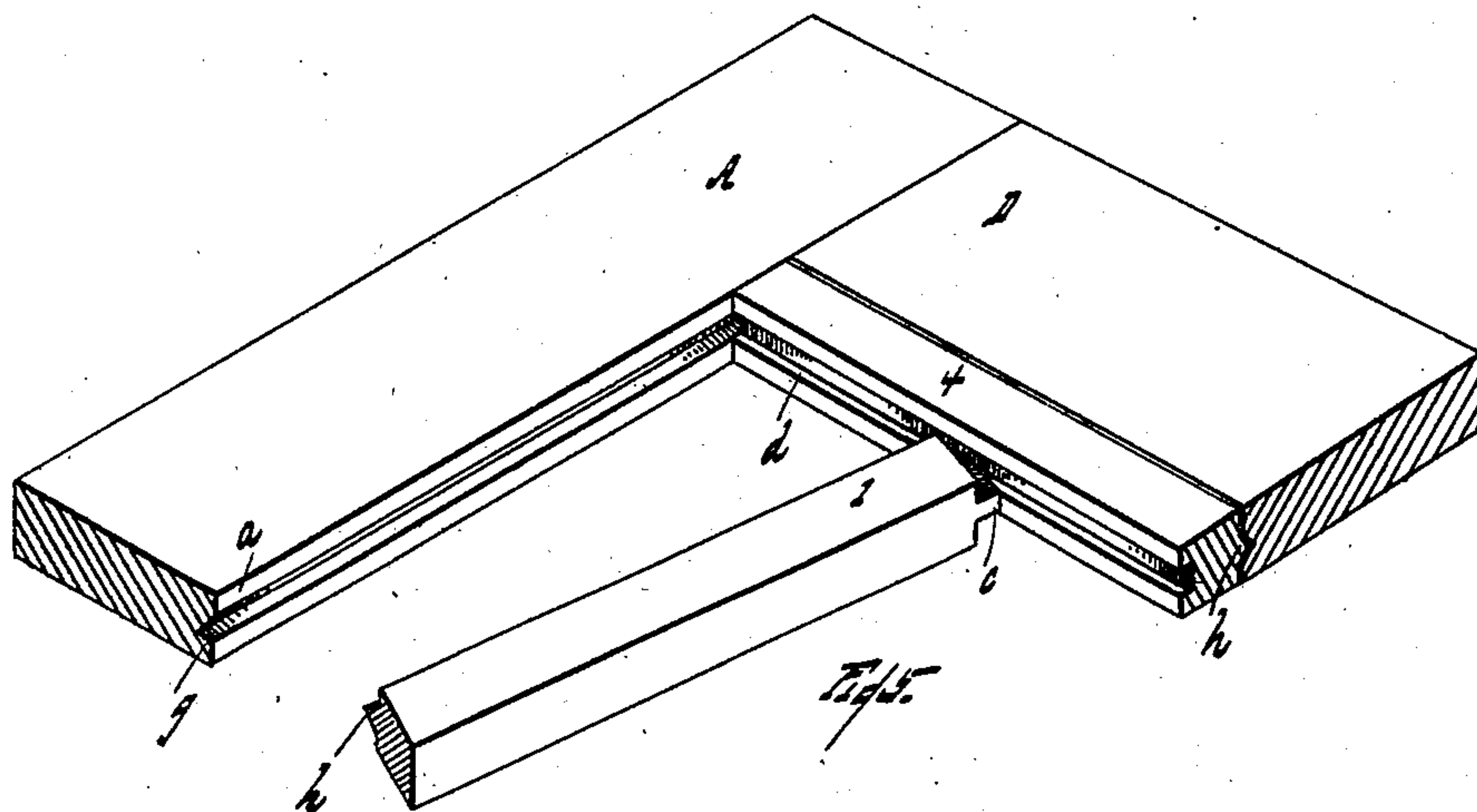


Fig. 5.

WITNESSES

May E. Kott.
J. H. Massey.

INVENTOR

Charles W. Emmons

By

Parker & Burton Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES W. EMMONS, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO
JOHN L. McDONELL, OF DETROIT, MICHIGAN.

SEAT AND BACK.

SPECIFICATION forming part of Letters Patent No. 724,453, dated April 7, 1903.

Application filed June 27, 1902. Serial No. 113,390. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. EMMONS, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Seats and Backs; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to furniture, and has for its object an improved means for attaching a flexible bottom or back or bottom or back of fabric to the main frame of the furniture, and it is applicable to all of that class of furniture, particularly chairs, in which there is a frame made of one or more pieces bounding a central opening in which is to be placed a flexible material.

In the drawings, Figure 1 is a reversed plan view of a chair-seat in which the central opening is bounded by right lines meeting at angles. Fig. 2 is a cross-section of the seat shown in Fig. 1. Fig. 3 is a detail of the corner-joint of the retaining-frame used with Fig. 1. Fig. 4 shows a modified form of construction of which the retaining-frame is locked in a different manner from the manner shown in Fig. 1 or Fig. 3. Fig. 5 is a detail.

It is unimportant what shape is given to the main frame; but whatever shape be given to it the strip or strips of material of which the main frame is composed are provided with a groove in that face which bounds the opening. Thus the pieces A B C D are each provided with a groove which shows on the face *a*' at *g* and on the face *b* at *g'*. A retaining-frame is made to correspond with the main frame, the pieces being arranged to form a frame that fits with approximate closeness in the opening in the main frame and when in place is held from escaping from the main frame by a short tongue *h*, cut on that face of the retaining-frame which lies adjacent to the corresponding face of the main frame and arranged to engage loosely in the groove *g*. Where the main frame is made of several pieces, as in Fig. 1, and the retaining-frame is made of a similar number of pieces, two an-

gles of the retaining-frame are preferably beveled together, as is shown at the angle 5 at the junction of pieces 1 and 3 and at the angle 6 at the junction of pieces 2 and 3. The bars 1 and 2 of the retaining-frame are arranged, preferably with reference to the opening, to bring the beveled ends of each closely adjacent to that side of the opening that has the longest rail—viz., C—and at another part of the frame, preferably where the shortest bar 4, hereinafter designated as the “locking-bar” of the retaining-frame, engages the shortest rail of the frame D, the inner sides of the two side pieces 1 and 2 are grooved for a short distance from the end inward with a groove *d*, that vanishes in the inside surface of the bar 1, and the bar 2 is provided with a similar vanishing groove. Each end of the short bar 4 is provided with a tenon *c*.

In using the retaining-frame described the main frame is placed face downward, and the fabric is placed thereon and forced into the opening from above. The strip or bar 3 is first placed in position with an edge of the fabric engaging between the same and the adjacent surfaces of the rail C. The strips or bars 1 and 2 are next placed in position with an edge of the fabric engaging between the strip or bar 2 with rail B and an edge of the fabric engaging between the strip or bar 1 with rail A. An edge of the fabric also lies along the inner face of the rail D.

From the construction the bars 1 and 2 serve to force the bar 3 closely against the rail C, as they must be put in place by engaging the beveled ends first and then forcing the ends 1^a and 2^a along the rail D outward until sufficient space exists to enter the locking-bar 4 between them and by forcing the said locking-bar 4 outward toward and against the rail D forces the tenoned ends of said locking-bar 4 to enter the side grooves *d d* of the bars 1 and 2 and forces the tongued sides of bars 1, 2, 3, and 4 to engage closely in the grooves of the rails A, B, C, and D and also has the effect of stretching the fabric outward to a drum-head tightness. The bar 4 is, in effect, a locking-bar for the entire retaining-frame and which when secured in its proper position by screws or otherwise firmly

holds the fabric and all parts of the retaining-frame in their respective positions. The other side pieces may also be further secured by screws or otherwise, if desired. With this form of construction the fabric that engages between the face of the main frame and the retaining-frame is bent abruptly over the edges of the tongue and into the groove *h*, and the fabric is held very securely in place and through the action of the tongue and groove takes up all slack in the fabric and stretches same tightly. When cane is the fabric used, it should be first dampened. The fabric thus held in place may be removed for repairs easily at any time, or it may be removed and new fabric put in place, and the means described for placing and securing the fabric is especially useful because the article of furniture may be entirely finished and polished or varnished before the flexible part of the seat or back is placed in position, and as there is no part of the article of furniture that needs to be finished after the fabric is placed in position, it being, if so desired, the last or final operation in completing the same, it thereby prevents the soiling of the fabric by stain, varnish, or handling. No glue being used in connection with securing the fabric to either frame, the article of furniture can be utilized for outdoor use, which is not permissible with articles of furniture, particularly cane-seated chairs, where the fabric is secured to the frame in whole or in part through the use of glue.

This invention is particularly applicable to chairs, settees, and similar furniture when the fabric used is woven cane or leather.

I do not confine myself to forming the groove in any particular part of the frame nor to any particular shape of said groove or of the tongue to engage therein, but they may be of any size or shape desired or of any desired material; nor do I confine myself to any particular shape or construction of either the main frame or retaining-frame, which may be square, oblong, round, or polygonal.

In the modification shown in Figs. 4 and 5 the strips or bars composing the retaining-frame and indicated by reference-numbers 1, 2, 3, and 4 while retaining the tongues cut on their outer side may be changed in other ways as to their shape, so that instead of being put into position as heretofore described they may be assembled in other ways. The bars 1 and 2 besides being beveled at the end where they join bar 3 may be tenoned at the other end and bar 4 furnished with a groove to receive the tenoned ends of bars 1 and 2. With this arrangement bar 3 may be put in place first, followed by bar 4, this followed by bars 1 and 2. The bars 1 and 2 serve to force bars 3 and 4 closely against rails C and D and are in turn themselves forced into position against rails A and B of the main frame and stretch the fabric tightly. The bars 1 and 2 are then secured to the main

frame by screws or otherwise, and bars 3 and 4 may likewise be so secured.

In all the forms shown the contiguous parts of the holding-frame mutually lock each other in place.

What I claim is—

1. In combination with a main frame, provided with a groove extending around the walls which bound the opening therethrough, a retaining-frame made in sections, one section of which at least is provided with a tongue arranged to project into the groove in the main frame, and one section of which is arranged to spread and lock the retaining-frame, substantially as described.

2. In combination with a main frame provided with a groove extending around the walls which bound the opening therethrough, a retaining-frame made in sections, one section of which at least is provided with a tongue arranged to project into the groove in the main frame, and one section of which is arranged to spread the retaining-frame, substantially as described.

3. In combination with a main frame provided with a groove extending around the walls which bound the opening therein, a sectional retaining-frame having tongues on the sections thereof to engage the groove in the main frame and means for spreading and locking in place the retaining-frame; substantially as and for the purposes set forth.

4. In combination with a main frame having a groove extending around the walls which bound the opening therein, a retaining-frame having sections beveled at their connecting edges and tongues to engage the groove in the main frame, and means for spreading and locking the retaining-frame; substantially as described.

5. In combination with a main frame having an opening therein, a retaining-frame inserted in said opening comprising a plurality of sections beveled at their adjoining edges, and means for spreading and locking the retaining-frame in the main frame; substantially as described.

6. In combination with a main frame having a groove extending around the walls which bound the opening therein, a sectional retaining-frame having a tongue adapted to engage the groove in the main frame, a portion of said retaining-frame being cut away, and means adapted to fit in said cut-away portion to spread and lock the retaining-frame in place; substantially as and for the purposes set forth.

7. In combination with a main frame having a groove extending around the walls which bound the opening therein, and a retaining-frame comprising sections having tongues adapted to engage the groove in the main frame, one of said sections being arranged to spread and lock the retaining-frame; substantially as and for the purposes set forth.

8. In combination with a main frame having a groove extending around the walls which

bound the opening therein, a retaining-frame comprising sections having tongues adapted to engage the groove in the main frame, two of said sections having beveled grooves at one 5 of their ends, and a retaining-strip having tongues adapted to engage the beveled grooves to spread and lock the retaining-frame in place; substantially as described.

9. In combination with a main frame having a groove extending around the faces which 10 bound an approximately rectangular opening therein, a sectional retaining-frame ex-

tending around three sides of the main frame and having interlocking sections each of which is provided with a tongue adapted to 15 engage said groove, and means for spreading and locking the said retaining-frame in place; substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES W. EMMONS.

Witnesses:

CHARLES F. BURTON,
MAY E. KOTT.