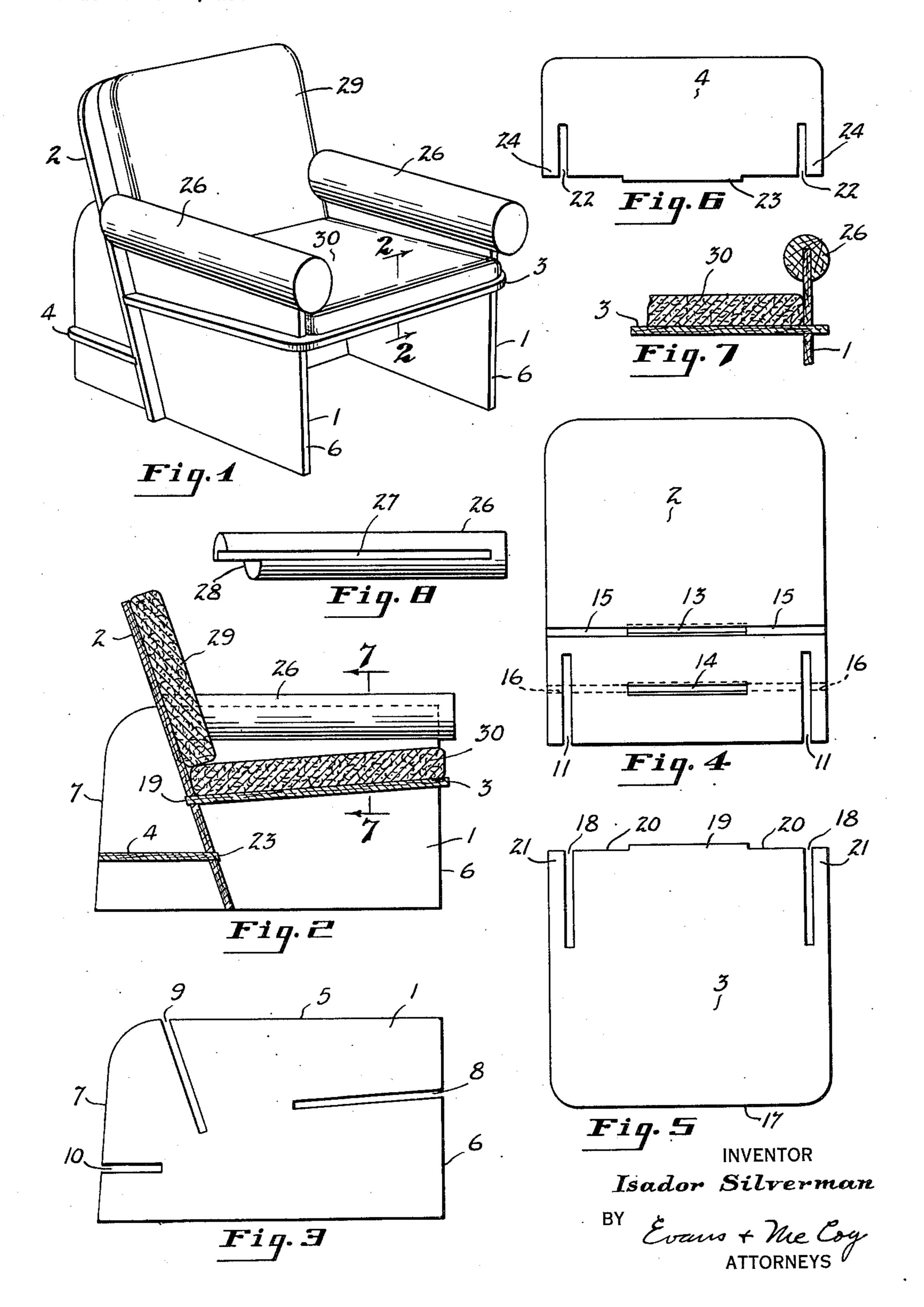
FURNITURE CONSTRUCTION

Filed Oct. 20, 1947

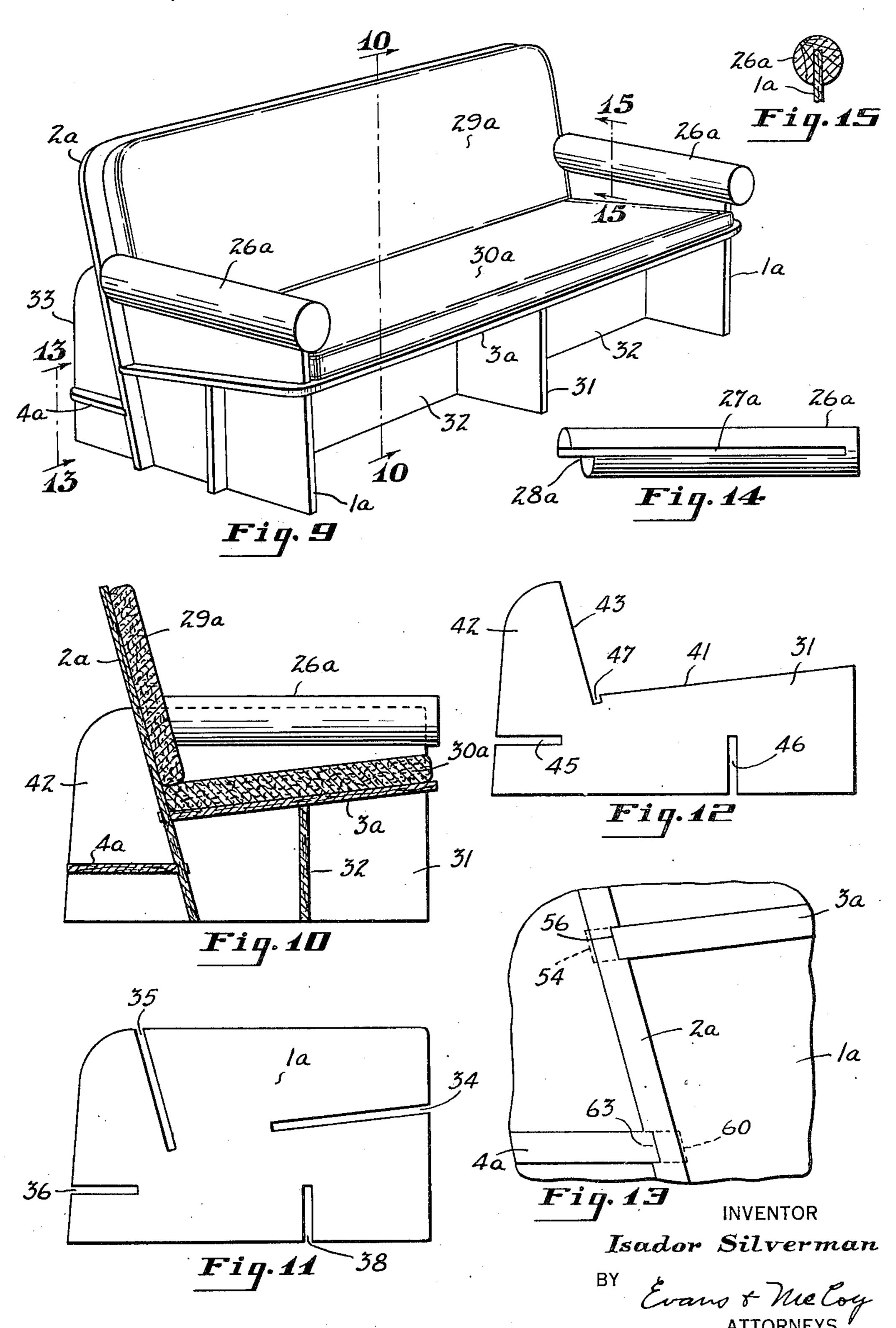
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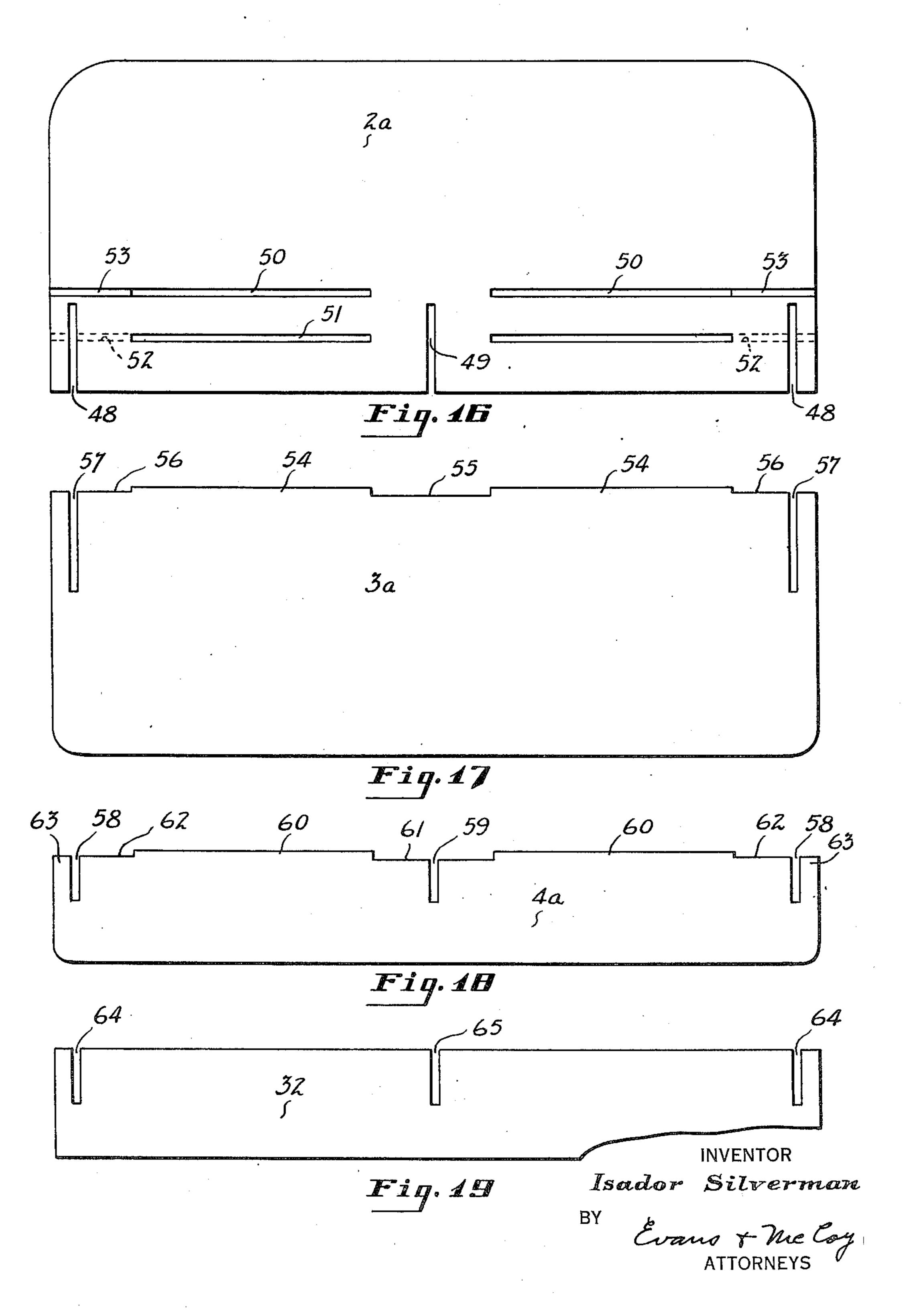
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FURNITURE CONSTRUCTION

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UNITED STATES PATENT OFFICE

2,543,875

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8 Claims. (Cl. 155—196)

This invention relates to articles of furniture and particularly to easy chairs and davenports manufactured from interfitting pieces of rigid sheet material.

One of the objects of this invention is to 5 previde various articles of furniture constructed from slotted members that are easily assembled and disassembled and yet which have great strength and rigidity when assembled.

Another object is to provide articles of fur- 10 niture that may be inexpensively manufactured by mass production methods.

Still another object is to provide articles of furniture composed of parts that occupy a small space when disassembled so that the expense of shipping is materially reduced.

Further objects and advantages will become apparent from the following description and on examination of the accompanying drawing in which like numerals refer to like parts.

In the drawing:

Figure 1 is a perspective drawing of an easy chair built according to this invention;

Fig. 2 is a fragmentary vertical section taken on the line indicated at 2-2 in Fig. 1;

Fig. 3 is an elevation of one of the supporting members of the chair;

Fig. 4 is an elevation of the back member of the chair:

Fig. 5 is a plan view of the seat of the chair; 30 Fig. 6 is a plan view of the shelf member of the chair;

Fig. 7 is a fragmentary vertical section taken on the line indicated at 7—7 in Fig. 2 showing how the supporting member, seat member and 35 arm rests fit;

Fig. 8 is a bottom plan view of one of the two arm-rests of the chair;

Fig. 9 is a perspective drawing of a davenport built according to this invention;

Fig. 10 is a vertical section on the line indicated at 10-10 in Fig. 9;

Fig. 11 is an elevation of one of the end supporting members of the davenport;

Fig. 12 is an elevation of the intermediate 45 supporting member of the davenport;

Fig. 13 is a fragmentary elevation showing how the seat and shelf fit into the back member;

Fig. 14 is a bottom plan view of one of the two arm-rests of the chair;

Fig. 15 is a fragmentary vertical section on the line indicated by 15—15 in Fig. 9 showing how the arm-rest fits on the supporting member;

Fig. 16 is an elevation of the back member of the davenport;

Fig. 17 is a plan view of the seat of the davenport;

Fig. 18 is a plan view of the member that forms a shelf on the back of the davenport; and Fig. 19 is an elevation of the longitudinal bracing member.

Furniture embodying this invention can be made in several forms or designs developed to provide attractive pieces that are relatively inexpensive and suitable for use in the home and office and especially suitable for use in summer cottages and the like.

In the accompanying drawings, Figs. 1 to 9 show an easy chair embodying the invention that comprises five main parts or members. namely, two identical supporting members I such as shown in Fig. 3, a back member 2 shown in Fig. 4, a seat member 3 shown in Fig. 5, and a shelf 4 shown in Fig. 6.

The supporting members I are preferably substantially rectangular in shape with a substantially straight top edge 5 and front and rear edges 6 and 7 of suitable configuration. As shown in Fig. 3, the edges 6 and 7 are straight. the top rear corner is rounded, and the rear edge 7 has a slight downward and outward divergence from the vertical. Each member i has an elongated, substantially horizontal slot 8 extending rearwardly from the front edge 6, which receives the seat member 3 and serves to position the seat member. Each member I has in addition an elongated back slot 9 extending downwardly from the top edge near the rear end thereof which receives the back member 2 and serves to position it, the slot 9 being preferably positioned at a slight inclination to the vertical to give a rearward slant to the back member 2. Each member I also has a substantially horizontal slot 10 extending forwardly from the rear edge near the bottom thereof which receives the shelf 4 and serves to position the shelf.

The back member 2 is of generally rectangular shape, as shown in Fig. 4, and rests in the supporting members at a slight rearward inclination as shown in Figs. 1 and 2. The member 2 is provided with slots !! extending upwardly from its bottom edge, the sides of which engage opposite faces of the supporting members when the back member 2 is positioned in the downwardly extending slots 9 in the supporting members 1. The back member 2 also has an elongated horizontal recess or slot 13 at the level of the rear edge of the seat member 3 to receive a rear edge portion of the seat member

and another lower horizontal recess or slot 14 at the level of the shelf member 4 to receive a front edge portion of the shelf member. These horizontal recesses in the back member are cut at the same angle with the plane of the back member as the seat and shelf members make with the back member in the assembled chair. The recesses may be slots through from one face to the other or merely indentations in the face of the back member. The back member 10 may also have recesses 15 adjacent opposite edges of its front face that are alined with the recess 13 and recesses 16 adjacent opposite edges of its rear face that are alined with the recess 14.

The seat member 3 fits in the slots 8 in the supporting members I and is preferably at a slight backward inclination as shown. The member 3 is substantially rectangular in shape and its front edge 17 is preferably provided with rounded corners. The member 3 has slots 18 that ex- 20 tend forwardly from its rear edge substantially parallel to the side edges thereof, in which portions of the supporting members fit. The rear edge of the seat member I is provided between the slots 18 with a wide tongue 19 which fits into the recess 13 in the back member and with seating portions 20 that bear against the bottoms of recesses 15. The seat fits in the slots 8 of the supporting members 1, the slots 18 of the seat receive portions of the supporting member rear- 30 wardly of the slots 8, and the tongue 19 and side portions 21 of the seat member fit into their recesses 13 and 15 in the back member and serve to lock the back member against movement with respect to the supporting member.

As shown in Fig. 6, the shelf 4 has slots 22 near its side edges extending rearwardly from its front edge and substantially parallel to its side edges. Intermediate the slots 22 the front edge of the member is formed to provide an ex- 40 tending portion or tongue 23 which fits into the recess 14 in the back member and portions 24 of said front edge outwardly of the tongue 23 fit into the recesses 16 in the rear face of the back member. The shelf fits into the slots 10 of the 45 supporting members and portions of the supporting members forwardly of the slots 10 are received in the slots 22 of the shelf member. The tongue 23 and side portions 24 fitting into their respective recesses 14 and 16 serve to lock 50 the back member against movement with respect to the supporting member.

If desired, an arm rest 26 may be provided on the top edges 5 of each supporting member 1 and each arm rest 26 has an elongated slot 27 to receive the top edge of the member 1. As shown, in Figs. 1 and 2, the rear end of each arm rest engages the front face of the back member 2 and each arm rest has a cutaway portion 28 on the inner side thereof at its rear end. The chair is preferably provided with a back cushion 29 and a seat cushion 30. The back cushion 29 is received in the recesses 28 of the arm rests which serve to hold the cushion 29 in position and the seat cushion 30 fits between the supporting mem- 65 bers I below the arm rests 26.

A davenport embodying the invention is shown in Figs. 9 to 19 of the drawing and is composed of two identical end supporting members a, such as shown in Fig. 11, an intermediate sup- 70 porting member 31 shown in Fig. 12, a back member 2a (Fig. 16), a seat member 3a (Fig. 17), a shelf member 4a (Fig. 18), and a lengthwise bracing member 32 (Fig. 19).

tially rectangular with a rear edge 33 that is preferably inclined at a small angle to the vertical as shown in Fig. 11. Each member (a has an elongated slot 34 extending rearwardly from its front edge which may be horizontal or at a slight inclination to the horizontal as shown and these slots of the supporting members serve to position the seat member 3a. In addition, the members 1a each have an elongated slot 35 extending downwardly from their top edge near the rear thereof and these slots of the supporting members serve to position the back member 2a. Each member also has a substantially horizontal slot 36 extending forwardly from its rear 15 edge near the bottom thereof and these slots of the members la serve to position the shelf member 4a. A slot 38 extends upwardly from the bottom edge of each member 1a and these slots 34 serve to position the bracing member 32.

The intermediate supporting member 31 as shown in Fig. 10 is positioned between the supporting members 1a and supports the seat member 3a on its top edge 41 and has an upright back bracing extension 42, the front edge 43 of which engages the rear face of the back member 2a. Extending forwardly from its rear edge, the intermediate supporting member has a substantially horizontal shelf receiving slot 45 in which the shelf member 4a fits and extending upwardly from the bottom of the member 31 there is a slot 46 in which the bracing member 32 fits. The intermediate supporting member also has a small recess 47 at the rear of top edge 41 into which recess a portion of the back member 2a fits.

The back member 2a as shown in Fig. 16 is rectangularly shaped with rounded corners on the upper edge. Two slots 48 near opposite ends of the member 2a extend upwardly from its bottom edge parallel to its end edges and receive portions of the end supporting members a below the lower ends of their slots 35. A slot 49 extends upwardly from the bottom edge intermediate the two slots 48 and receives a portion of the intermediate supporting member 31 below the recess 47, the two slots 48 and the slot 49 serving to position and brace the end and intermediate supporting members. The back member 29 has two alined elongated horizontal slots 53 adapted to receive rear edge portions 54 of the seat member 3a and the back member has elongated horizontal slots 51 below the slots which aline with the front edge of the shelf member 4a. In addition, the back member 2ahas recesses 52 in its rear face at the ends thereof which are in alinement with the recesses 51 and recesses 53 in its front face which extend from the outer ends of the slots 50 to the end edges of the back member.

The rear edge of the seat member 3a is formed to provide two wide tongue portions 54 that fit in the slots 50 of the back member 2a, an intermediate recessed seating portion 55 that engages the front face of the back member between the slots 50, and outer less deeply recessed seating portions 56 that engage in the recesses 53 of the back member.

The seat member has two slots 57 extending forwardly from the seating portions 56 and parallel to the side edges thereof which receive portions of the end supporting members a rearwardly of their slots 35.

As shown in Fig. 18, the shelf 4a is a rectangular piece with two end slots 58 and an intermediate slot 59 extending rearwardly from its The end supporting members ia are substan- 75 front edge and substantially at right angles

thereto. The slots 58 receive portions of the end supporting members 1a forwardly of their slots 36 and the slot 59 receives portions of the intermediate supporting member forwardly of the slot 45 thereof. The front edge of the shelf 5 member 4a is formed with wide tongues 60 on opposite sides of the slot 59 that fit into the horizontal slots 51 in the back member, seating portions 61 that engage the rear face of the back member 2 between the inner ends of the slots 51, 10 seat portions 62 that engage the bottoms of recesses 52, and side portions 63 that fit in the recesses 52 of the back member as shown in Fig. 13.

The bracing member 32, as shown in Fig. 19, is a relatively narrow rectangular piece with two vertical slots 64 extending downwardly from its top edge near the ends thereof and a similar intermediate vertical slot 65. The bracing member 32 fits in the slots 38 and 46 of the end and 20 intermediate supporting members and the slots 64 receive portions of the end supporting members above their slots 38, and the slot 65 receives portions of the intermediate supporting member above its slot 46.

The davenport may be provided with cushions 29a and 30a similar to the chair cushions 29 and 30 and with arm rests 26a identical with the chair arm rests 26 and provided with slots 27a to receive the end supporting members and with recesses 28a to accommodate the back cushion 29a.

The furniture pieces described are preferably made of plywood, stained, painted or varnished as desired. In addition to wood, cardboard, paperboard, sheet plastic or metallic sheet can be employed to make articles of furniture embodying the invention.

After assembly, the interfitted slotted members, if of wood, can be glued, nailed, or doweled together. If the members are formed of metallic sheets the members can be welded or brazed after assembly. If the members are formed of a plastic they may be permanently joined with a cement suitable for the particular plastic. It is not, however, essential that the members be permanently secured together.

The knockdown construction is advantageous because, when disassembled, the pieces fit into a compact flat package which is easily stored or shipped and are not readily damaged.

The construction of the present invention can also be used in manufacturing miniature pieces of furniture for children's toys. Small chairs and sofas can be made which are inexpensive, which are easily assembled and disassembled by children.

It will be understood that numerous modifications of the construction herein shown may be resorted to without departing from the spirit of this invention as defined in the appended claims.

What I claim is:

1. An article of furniture comprising laterally spaced upright supporting members each having an elongated substantially horizontal slot extending rearwardly from its front edge, an elongated slot extending downwardly from its top edge near the rear end thereof, and a substantially horizontal slot extending forwardly from its rear edge near the bottom thereof, a 70 back member fitting in said downwardly extending slots of the supporting members and provided with upwardly extending slots to receive portions of the supporting members below the downwardly extending slots thereof, said back 75

member having a horizontal recess in its front face and a horizontal recess in its rear face below the level of the first mentioned recess, a seat member having elongated slots extending forwardly from its rear edge to receive portions of the supporting member to the rear of their rearwardly extending slots and portions forward of said seat member slots that fit in the rearwardly extending slots of the supporting members, said seat member having rear edge portions engaging in said horizontal recess in the front face of the back member, and a shelf member having elongated slots extending rearwardly from its front edge to receive portions of the supporting members forward of their forwardly extending slots and portions rearward of said slots that fit in the forwardly extending slots of the supporting members, said shelf member having forward edge portions engaging in said horizontal recess in the rear face of the back member.

2. An article of furniture such as defined in claim 1 in which said supporting members, back member, seat member and shelf member are each formed of sheet material and are of uniform thickness.

3. An article of furniture such as defined in claim 1 in which the back member has recesses in its front face to receive portions of the rear edge of the seat member disposed outwardly of the slots of the seat member and in which the back member has recesses in its rear face to receive portions of the front edge of the shelf member disposed outwardly of the slots of the shelf member.

4. An article of furniture such as defined in claim 1 including two arm-rest members slotted lengthwise and fit on the top edge of each supporting member.

5. An article of furniture comprising laterally spaced substantially identical upright supporting members, each having an elongated slot extending rearwardly from its front edge and an elongated slot extending downwardly from its top edge near the rear end thereof, a back member fitting in said downwardly extending slots of the supporting members and having upwardlying extending slots to receive portions of the supporting members below the downwardly extending slots thereof, said back member having a horizontal recess in its front face, and a seat member fitting in said rearwardly extending slots of said supporting members and having slots extending forwardly from its rear edge to receive portions of said supporting members to the rear of the rearwardly extending slots thereof, said seat member having a rear edge portion fitting in said horizontal recess in the front face of said back member.

6. An article of furniture such as defined in claim 5, in which said supporting members, said back member and said seat member are each formed of sheet material and of uniform thickness.

7. An article of furniture such as defined in claim 5, in which the rearwardly extending slots of the supporting members are inclined rearwardly and downwardly at a slight inclination to the horizontal, and said downwardly extending slots of the supporting member are inclined downwardly and forwardly at an inclination to the vertical.

8. An article of furniture comprising laterally spaced upright supporting members, each having an elongated slot extending rearwardly from its

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front edge and an elongated slot extending downwardly from its top edge near the rear end thereof, an intermediate supporting member having a top edge substantially in the plane of the bottoms of the rearwardly extending slots of said 5 end supporting members and an upward extension at its rear end provided with a front edge substantially parallel to the rear sides of the downwardly extending slots of said end supporting members, a back member fitting in the down- 10 wardly extending slots of the end supporting members and having slots extending upwardly from its bottom edge to receive portions of said supporting members below the said downwardly extending slots, a longitudinal bracing member 15 joined to said end and intermediate supporting member forwardly of said back member and having a top edge flush with the bottoms of the rearwardly extending slots of the end supporting

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member and with the top edge of the intermediate supporting member, and a seat member fitting in said rearwardly extending slots of said end supporting members and having slots to receive portions of the end supporting members beyond the ends of the rearwardly extending slots thereof, said seat member resting on the top edges of the intermediate supporting member and bracing member.

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