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[54] RECLINING CHAIR CONSTRUCTION

[72] Inventors: Douglas McClain, Houlika, Miss.;
Lemuel E. Osborn, Wheaton, Ill.

[73] Assignee: Relax-O-Lounger, Inc., Baldwyn,
Miss.

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Primary Examiner—Bobby R. Gay

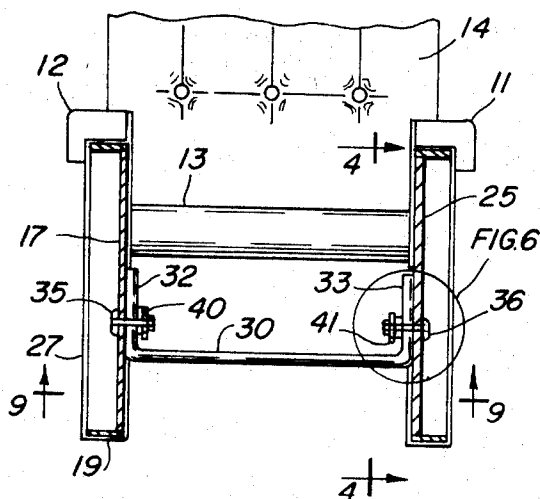
Assistant Examiner—Darrell Marquette

Attorney—Fidler, Patnaude, Lazo & Batz

[57] ABSTRACT

A reclining chair construction employs a basic frame comprising a pair of arm panels connected together by metal cross frames bolted to the panels.

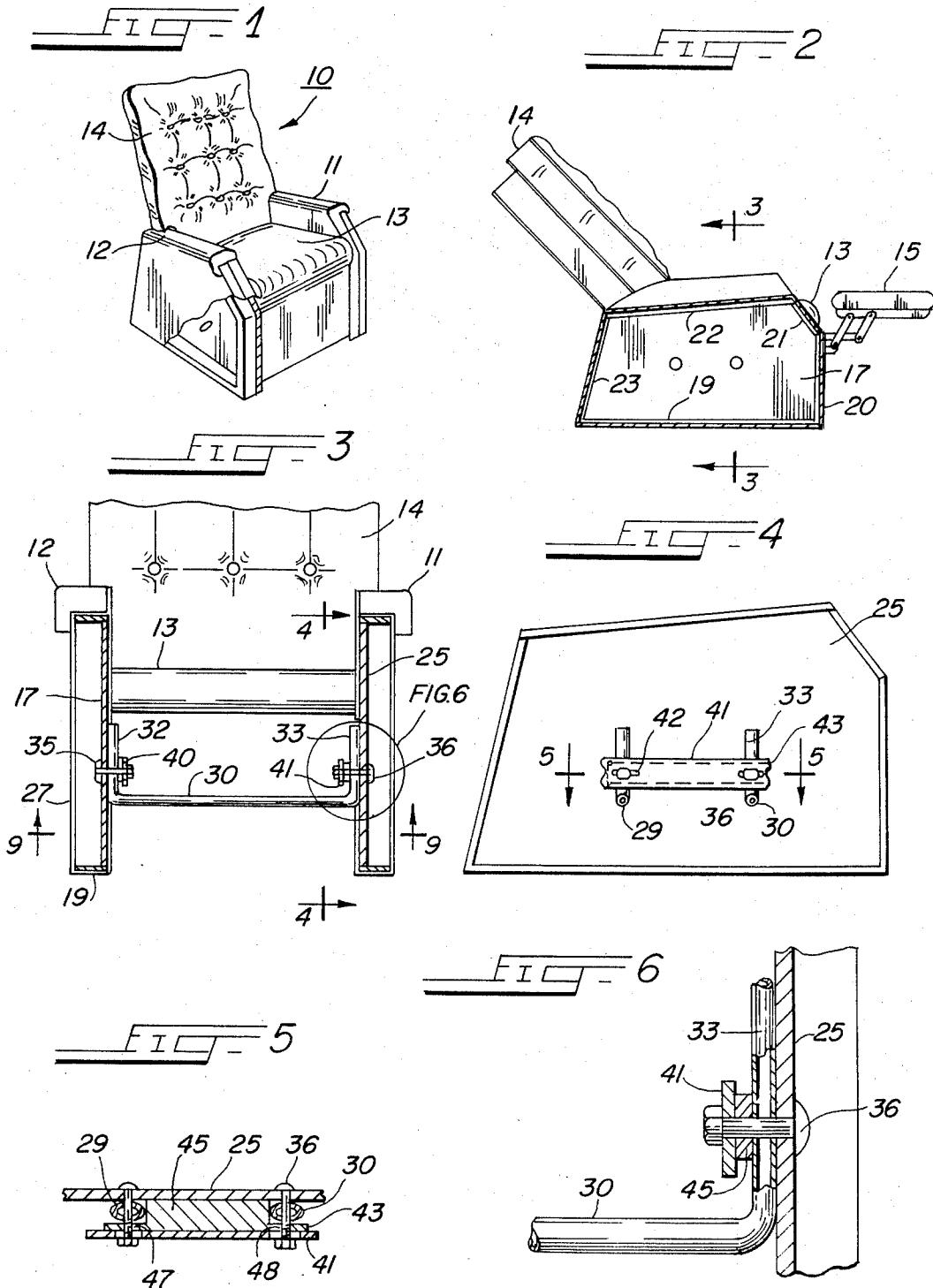
7 Claims, 9 Drawing Figures



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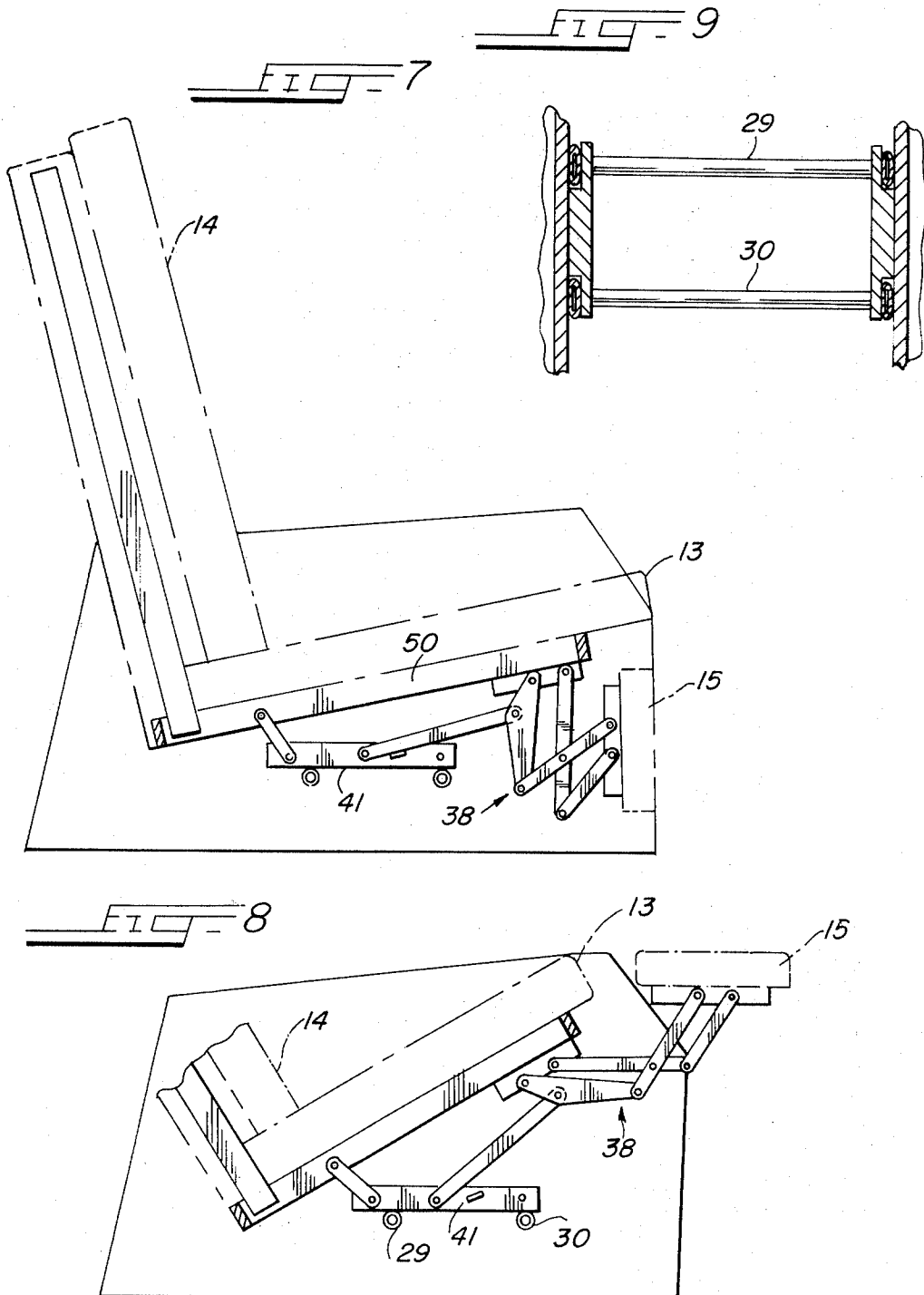
INVENTORS
DOUGLAS Mc CLAIN
LEMUEL E. OSBORN

BY *Fidler, Bradley, Patande & Togo*
FBL

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INVENTORS.
DOUGLAS Mc CLAIN
LEMUEL E. OSBORN

BY *Fidler, Bradley, Patmore & Tapp*
ATTORNEYS

RECLINING CHAIR CONSTRUCTION

The present invention relates in general to the construction of a chair of the type known in the furniture art as a recliner, and it relates in particular to a new and improved frame in which the seat, back, and footrest are movably mounted.

Recliners of the general type with which this invention is concerned have been known in the art for many years. Basically, they have included a hardwood frame in the shape of the letter H, a pair of open, rectangular frames fastened to the H-frame to form the arms, additional hardwood boards fastened to the H-frame for mounting the recliner mechanism, and seat, back and footrest assemblies secured to the recliner mechanism for controlled, interdependent movement. Although recliners have had good consumer acceptance, their manufacturing cost has been relatively great and they have been more susceptible to damage than other types of furniture of similar quality. For example, a considerable amount of work and skill are required to build the H-frame and the associated arm frames and reclining mechanism supports. Moreover, lifting such prior art recliners by the arms has frequently broken the arms loose from the H-frame.

Therefore, an object of the present invention is to provide a new and improved recliner which is more durable in construction and lighter in weight than prior art recliners, and which can be manufactured at a lower cost than recliners built in accordance with the prior art.

Briefly, the above and further objects may be realized in accordance with the present invention by providing a recliner construction in which the main frame in which the seat, back and footrest are movably mounted includes a pair of arms forming panel members and a metal cross frame bolted thereto. The recliner mechanism is secured to the panel members to movably support the other parts of the recliner therebetween. Since the panel members constitute the arms as well as the support for the recliner mechanism, the arms are an integral part of the basic frame assembly and cannot be broken loose without substantial destruction of the entire chair. Moreover, the use of hardwood is unnecessary since the panels may be cut from plywood, chipboard or the like, thereby substantially reducing the weight of the recliner.

The invention, both as to its organization and method of operation, together with further objects and advantages thereof, will best be understood by reference to the following detailed description taken in connection with the accompanying drawings, wherein:

FIG. 1 is a perspective view of a recliner embodying the present invention, portions thereof being broken away to show the internal frame;

FIG. 2 is a side elevational view, partially sectioned, of the recliner of FIG. 1;

FIG. 3 is a sectional view taken along the line 3—3 of FIG. 1;

FIG. 4 is a sectional view taken along the line 4—4 of FIG. 3;

FIG. 5 is an enlarged sectional view taken along the line 5—5 of FIG. 4;

FIG. 6 is an enlarged, partially sectioned view of the portion of the recliner identified by the circle labeled FIG. 6 in FIG. 4;

FIG. 7 is an elevational view showing the recliner mechanism in a retracted condition;

FIG. 8 is a view showing the recliner mechanism in an extended condition; and

FIG. 9 is a bottom plan view of the recliner shown in FIG. 1.

Referring now to the drawings, and particularly to FIG. 1 thereof, there is shown a reclining chair 10 including a pair of arms 11 and 12, a seat 13, a backrest 14, and a footrest 15. The seat 13, the backrest 14 and the footrest 15 are all movable within the arms 11 and 12, these movable parts being shown in FIG. 1 in a retracted position. When in an extended position as shown in FIG. 2 the footrest 15 is positioned forwardly of the seat in a generally horizontal position. It may thus be seen that the seat 13, the back 14 and the footrest 15 as well as the person sitting in the chair are supported between the arms 11 and 12. In the prior art construction, the main support for this movable mechanism was a relatively planar framework located at the very bottom of the chair adjacent to the floor.

In accordance with an important feature of the present invention the arms 11 and 12 are of the same construction, being mirror images of one another, and the arm 12 comprises, as best shown in FIGS. 2 and 3, a panel member 17 cut in the shape of the desired profile of the arm. This panel may be cut from plywood, chipboard or other suitable material and to the edges thereof a plurality of boards 19, 20, 21, 22, and 23 are suitably fastened such as by nailing or stapling. It will be noted that the bottom board 19 extends below the bottom edge of the panel 17. In like manner, the arm 11 is formed by a panel member 25 to the edges of which boards identical to the boards 19, 20, 21, 22, and 23 are similarly fastened. A fabric or leather cover 27 encloses the frame of the arms.

In the chair construction of the present invention the panels 17 and 25 form basic parts of the frame of the chair and are connected together by means of a pair of identical cross frame members 29 and 30. The front frame member 30 is best shown in FIGS. 3 and 6. It is a metal tube having upturned vertically disposed ends 32 and 33 which are flattened and provided with horizontal holes for receiving a pair of bolts 35 and 36. As best shown in FIG. 6, the vertical portion 33 has a substantially planar vertical surface which lies against the panel 25 to minimize relative movement between the panels and the cross frame members after they are bolted together.

For convenience and in order to reduce the cost and weight of the recliner 10, the bolts which secure the cross frame members to the arm panels also secure the recliner mechanism 38 (best shown in FIGS. 7 and 8) to the arm panels 17 and 25. As best shown in FIGS. 3, 4, 5, and 6, the recliner mechanism includes a pair of mounting plates 40 and 41 each provided with a pair of mounting slots 42 and 43 through which the bolts 35 and 36 extend. A pair of spacer blocks 45 are positioned between the panels 17 and 25 and the mounting plates 41 to maintain parallelism between the mounting plates 41 and the arm panels 17 and 25. Moreover, the blocks 45 have apertured end flanges 47 and 48 which provide a large area of contact with the cross frame members to further prevent relative movement between the cross frame members and the panels 17 and 25.

The recliner mechanism 38 is of the basic prior art construction and the plates 41 are connected by a plu-

ality of linkages to the footrest 15 and to a frame 50 for the seat and back 13 and 14. In some recliner constructions, the seat frame and the back frame are separately connected to the recliner mechanism so as to be relatively movable. Since, however, the construction of the recliner mechanism itself does not constitute a part of the present invention for purposes of simplicity the recliner mechanism 38 shown is for use with a simple type of recliner wherein the back and seat are fixedly connected together.

While the present invention has been described in connection with a particular embodiment thereof, it will be understood that many changes and modifications may be made without departing from the true spirit and the scope of the present invention. It is intended, therefore, to cover all such changes and modifications in the appended claims.

WHAT IS CLAIMED IS:

1. A reclining chair construction of the type including a pair of fixedly positioned arms, seat and back members movably mounted between said arms, and a footrest movable from a vertical position at the front of said arms below said seat to a generally horizontal position forwardly of said arms and said seat, the combination comprising

- a pair of horizontal elongated foot members disposed in spaced apart parallel relationship,
- a pair of vertically disposed panel members mounted over and secured to respective ones of said foot members,
- a pair of cap members secured to the top portions of respective ones of said panel members,
- each of said panel members and the horizontal foot and cap members connected thereto forming one of said arms,
- a pair of substantially horizontal cross frame members each having apertured, vertically extending end portions respectively lying against the inner faces of said panel members intermediate the front and rear edges of said panel members,
- The lengths of said cross frame members exceeding the width of said seat,
- means extending through said apertures for fixedly securing said cross frame members to said panel members, and
- a recliner mechanism connected between said seat,

back and footrest and mounted by said panel members.

2. A reclining chair construction as set forth in claim 1 wherein said panel members are formed of plywood.

3. A reclining chair construction as set forth in claim 2 wherein

said panel members have a profile of substantially the same shape as said arms.

4. A reclining chair construction as set forth in claim 10 2 wherein

said cross frame members are metal, and

said means for securing said cross frame members to said panel members are bolt and nut assemblies.

5. A reclining chair construction as set forth in claim 15 4 wherein

said bolt and nut assemblies also connect said recliner mechanism to said panel members.

6. A reclining chair construction as set forth in claim 4 wherein

said seat and back members are fixed together in a manner preventing relative movement therebetween.

7. An H-frame for a reclining chair of the type having a seat and back tiltable between a pair of arms, comprising

a pair of vertically disposed, unitary panel members forming said arms and arranged in parallel, spaced apart relationship,

a pair of tubular metallic cross frames extending between said panel members intermediate the ends thereof and each having a horizontal intermediate portion and upturned end portions

said end portions extending parallel to said panels and each having a substantially flat outer surface lying against the opposing inner face of the adjacent panel member,

a pair of spacer members each disposed over the adjacent end portions of said frames and being provided with grooves to receive said end portions and retain said cross frames in fixed relative relationship, and

a plurality of bolts extending through aligned apertures in said panels, said spacer members and said cross frames for fixedly securing said cross frames and said panels into a rigid frame for supporting said seat and said back.

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