

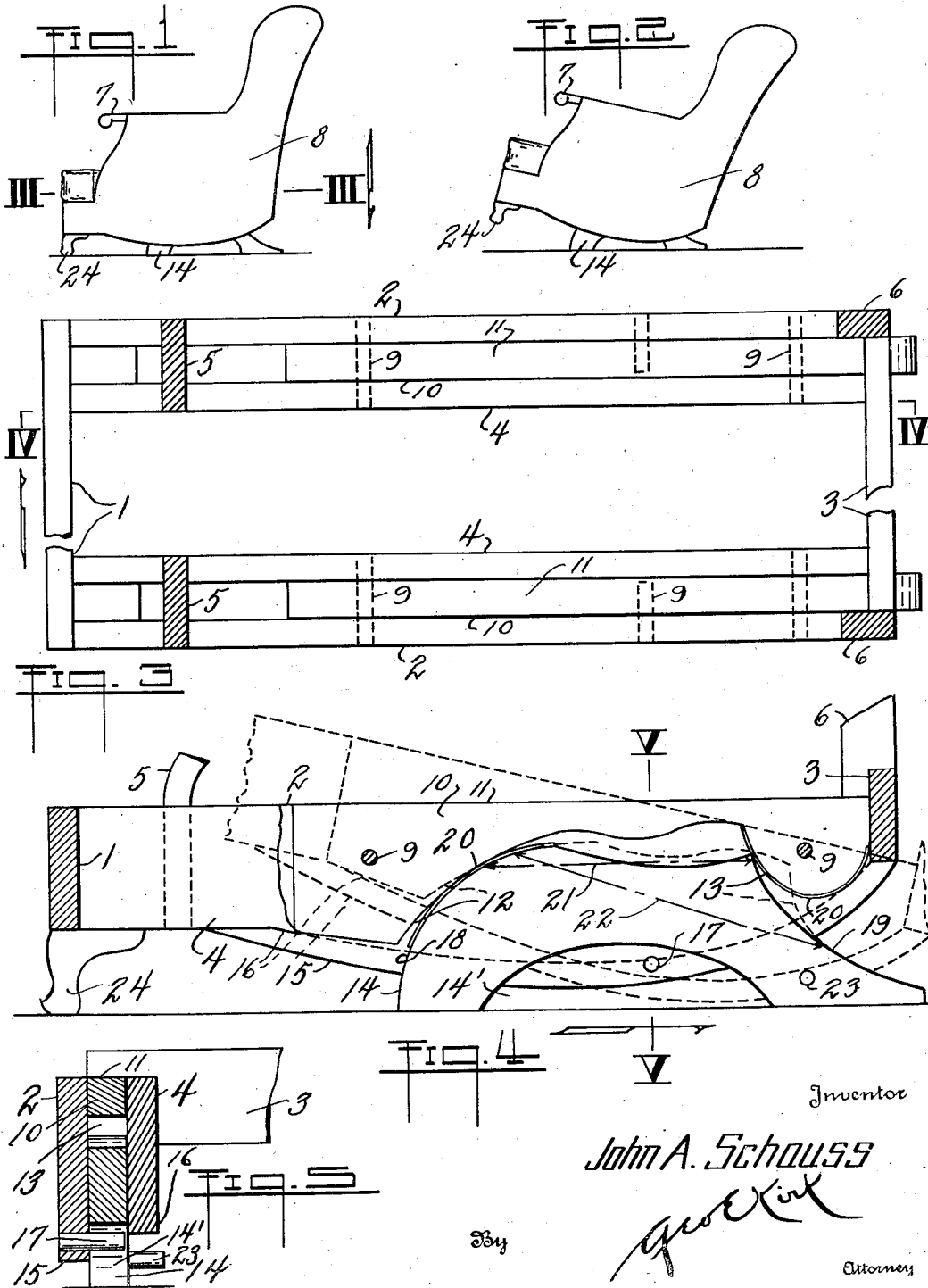
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RECLINING CHAIR

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RECLINING CHAIR

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8 Claims. (Cl. 155-77)

This invention relates to furniture.

This invention has utility when incorporated in a reclining chair.

Referring to the drawing:

Fig. 1 is a side view of a chair embodying the invention herein, said chair being in upright position;

Fig. 2 is a view similar to Fig. 1 with the chair in tilted or reclining position;

Fig. 3 is a plan view through the frame of the chair of Fig. 1, approximately along the line III—III, Fig. 1, looking in the direction of the arrow, parts being broken away;

Fig. 4 is a view on the line IV—IV, Fig. 3, looking in the direction of the arrow, parts being broken away; and

Fig. 5 is a view on the line V—V, Fig. 4, looking in the direction of the arrow.

The invention herein comprises an article of furniture which may be easily tilted from upright to reclining position by an occupant or the occupant may as readily bring the seat back to upright position. These movements are controlled solely by slight body movements of the occupant. Furthermore, due to the construction under the invention herein, the chair will maintain its position in either extreme or in any intermediate degree of tilt. The action is also controlled by a small or light weight occupant as well as by one of greater size and weight. An additional feature is the elimination of tilting about a fixed center, the movement herein being a tilt and rearward glide and in either direction a gradual decreasing speed, a movement free from jerks and bumps, pleasing to the occupant.

While the disclosure herein is directed primarily to a chair, such invention has utility in day beds, davenport and the like articles of furniture.

The seat portion of the article of furniture herein comprises a front rail 1, outer side rails 2, and rear rail 3. Spaced inwardly from each outer side rail 2 is an inner side rail 4 also extending from the front rail 1 to the rear rail 3. Upwardly extending from the forward portion of the side rails are members 5 and upwardly extending from the rear portion of the rails 2 are members 6. These members together with arm rest members 7 completes a frame to receive cover upholstery 8.

Mounted by pins 9 between each pair of side rails is a block 10 whose upper face is flush with the upper edges of the side rails. Such upper faces furnish an ample platform to which the webbing of the seat structure may be attached.

The lower face of each block 10 is contoured to provide a major or greater general radii concave bearing or slide surface 12 and a minor or less general radii convex bearing or slide surface 13. These surfaces may be on individual blocks or even on the side rails but for the additional strength in commercial production such are shown here as on single or integral blocks 10.

The base portion of this article of furniture comprises a pair of blocks 14 extending upwardly from the floor between the side rails 2, 4, such side rails 2, 4, having depending skirts 15, 16, not only providing steadying means for the blocks 14, but nearly housing such blocks for a more sightly appearance. The outer skirts 15 are of greater extent for shielding the blocks 14 but they also provide mounts for pins 17 which extend into cut-out regions 14' of the blocks 14. When the chair is shifted or lifted, the pins 17 engage the blocks 14 and thereby retain proper assembly of the base members with the seat portion.

The upper faces of the blocks 14 are contoured to provide minor convex bearing or slide surfaces 18 having a lesser general radii and major concave bearing or slide surfaces 19 having greater general radii. The concave seat bearing surface 12 contacts and rests on the convex base bearing surface 18 but in that the general radii of the face 12 are greater than the face 18 there is but tangential contact. The convex seat bearing surface 13 contacts and rests on the concave base provided bearing surface 19 and in that the general radii of the surface 19 is greater than the surface 13, here also there is but tangential contact.

The faces of one of each pair of contacting bearing surfaces may be provided with a metal facing 20 of bronze or other suitable metal for a smoother glide. The opposing faces may be lubricated to also add to the ease of operation. The design of the bearing surfaces is such, however, that an extreme minimum of lubricant is necessary.

When the chair is in upright position, the distance 21 between the bearing face contact points is considerably less than the distance 22 when the seat is in inclined position. This is due to the particular contour of the bearing faces which may be true arcs of circles in certain sizes of units or vary therefrom in arcuate curves of more or less general radii designed to provide the maximum ease of movement in the particular size or pattern of chair or other article of furniture.

Due to the change in distance between the bearing contact points, the chair's initial movement rearwardly is rather rapid as the rear end starts in a nearly straight downwardly direction but as such progresses, the bearing points glide into an increasingly horizontal direction thereby serving to brake any sudden jar of the skirt 16 against the limit stop 23. In the reverse direction, the same is true, as the initial movement is more horizontal, gradually moving into an upwardly direction or incline to thereby brake the glide of the rear end and gradually slowing much as the front legs 24 come into floor contact as forward limit stops.

There is thus provided a chair having an easily controlled and pleasant movement free from limit bumps and jars, which chair is constructed with a minimum of parts.

What is claimed and it is desired to secure by United States Letters Patent is:

1. In an article of furniture, a base providing a pair of arcuate slide bearing surfaces, one convex and the other concave, and a seat providing a pair of friction-slip coacting arcuate slide bearing surfaces, one convex and the other concave, the arcuate extent of the base and seat surfaces differing to provide a shiftable and differential intermediate length tangential contact in relative movement therebetween.
2. In an article of furniture, a base providing a pair of arcuate slide bearing surfaces, one convex and the other concave, and a seat providing a pair of friction-slip coacting arcuate slide bearing surfaces, one convex and the other concave.
3. In an article of furniture, a base providing a pair of arcuate slide bearing surfaces, one convex and the other concave, and a seat providing a pair of friction-slip coacting arcuate slide bearing surfaces, one convex and the other concave, the seat provided convex surfaces being of less general radii than the concave surfaces.
4. In an article of furniture, a base providing a pair of arcuate slide bearing surfaces, one convex and the other concave, and a seat providing a pair of friction-slip coacting arcuate slide bearing surfaces, one convex and the other concave, the seat provided convex surface coacting with the base provided concave surface, and

the concave seat provided surface coacting with the convex base provided surface.

5. In an article of furniture, a base providing a pair of arcuate slide bearing surfaces, one convex and the other concave, a seat providing a pair of friction-slip coacting arcuate slide bearing surfaces, one convex and the other concave, the seat provided convex surface coacting with the base provided concave surface, the concave seat provided surface coacting with the convex base provided surface, and the concave seat provided surface being of greater general radii than the base provided convex surface.

6. In an article of furniture, a base providing a pair of arcuate slide bearing surfaces, one convex and the other concave, a seat providing a pair of friction-slip coacting arcuate slide bearing surfaces, one convex and the other concave, the seat provided convex surface coacting with the base provided concave surface, and the concave seat provided surface coacting with the convex base provided surface, and the seat provided convex surface being of less general radii than the base provided concave surface.

7. In an article of furniture, a base providing a pair of arcuate slide bearing surfaces, one convex and the other concave, a seat providing a pair of friction-slip coacting arcuate slide bearing surfaces, one convex and the other concave, the seat provided convex surface coacting with the base provided concave surface, the concave seat provided surface coacting with the convex base provided surface, the concave seat provided surface being of greater general radii than the base provided convex surface, and the seat provided convex surface being of less general radii than the base provided concave surface.

8. In a reclining chair, a seat portion having a front rail and a rear rail, and outer side rails extending from the front rail to the rear rail, an inner side rail spaced inwardly from each outer side rail, a block mounted between each inner and outer side rail providing a first convex and concave slide bearing surface, and a base member comprising a block extending upwardly between said side rails to provide a second concave and convex slide bearing surface in contact with the first concave and convex bearing surface.

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