Nov. 14, 1950 W. B. KIRKWOOD ET AL 2,529,613

ROCKER SUSPENSION

Filed May 8, 1946

FIG. 1

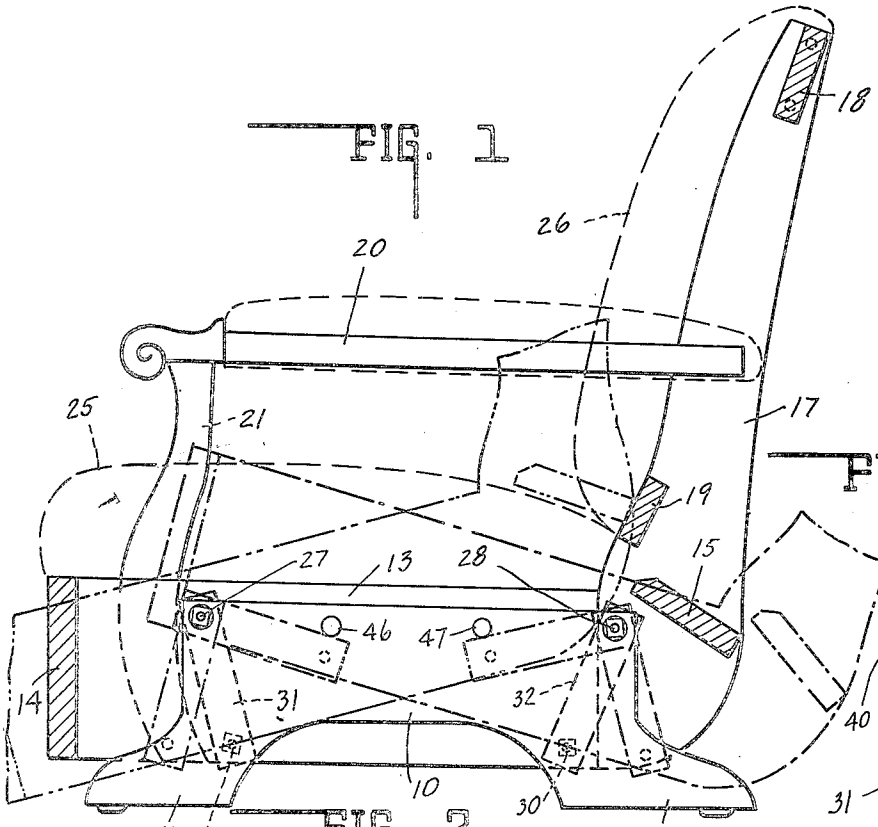


FIG. 3

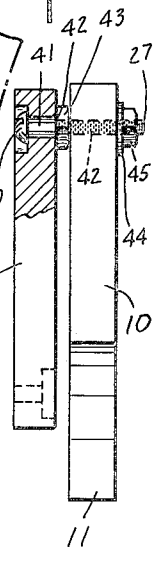
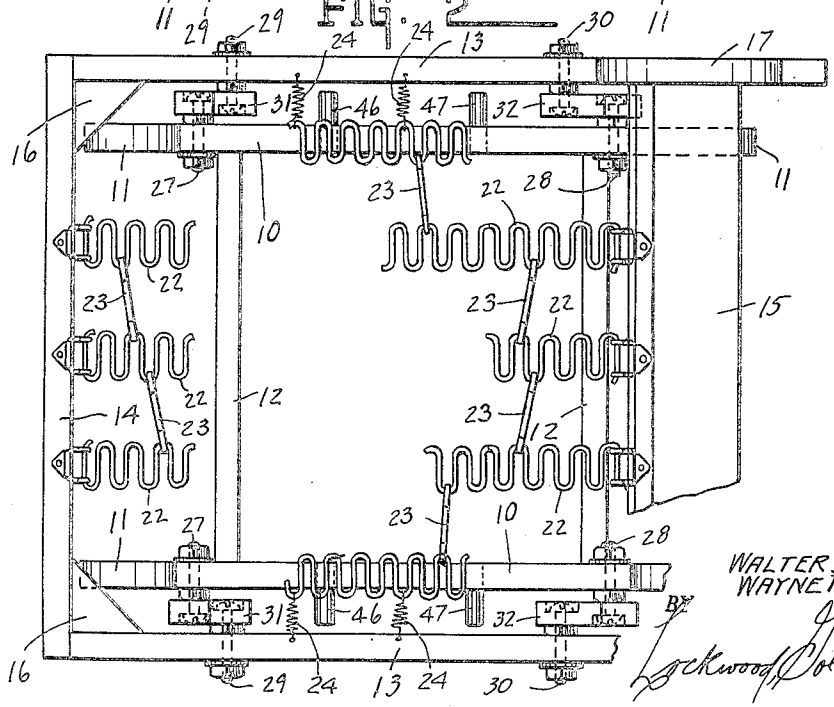


FIG. 2



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ROCKER SUSPENSION

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3 Claims. (Cl. 155—61)

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This invention relates to a rocker.

The chief object of this invention is to provide in a rocker a non-tipping structure which can be used for reclining purposes and which rocker comprises two main parts, same having relative gliding movement therebetween.

The chief feature of the present invention resides in providing a base and enveloping same by the chair proper, same being suspendingly supported by the base by links and having a gliding like motion or action.

Another chief feature resides in the provision of stop means for limiting forward and rearward extreme oscillation of the chair part.

A further chief feature resides in the combination pivot and anchor member and the formation of same.

Other objects and features of the invention will be set forth more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings

Fig. 1 is a vertical sectional view through a rocker embodying the invention, dotted lines indicating the cushion and/or upholstering thereof, dot and dash lines indicating extreme positions of oscillation.

Fig. 2 is a top plan view of at least the base and base enveloping portion of the chair part and the suspension support therebetween and of the rocker.

Fig. 3 is an enlarged transverse sectional view of a connecting link, an associated rocker part, and the combination pivot and anchor construction, the pivot member thereof being shown in elevation.

In Figs. 1 and 2 of the drawings, 10 indicates a pair of side members of a base, same having downwardly and outwardly extending feet portions 11 fore and aft for chair clearance and greater effective bearing area. Connected at opposite ends to members 10 and bridging same to form an open box rectangular or square frame are front and back members 12.

Positioned outside of member 10 are the chair side members 13 having their forward ends connected together by bridging front member 14. At the rear end is rearwardly and downwardly inclined bridging member 15. Corner blocks such as illustrated at 16 may be employed whenever and wherever desired or required.

Extending upwardly from the rear end of each outside member 13 is the portion 17. These are

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connected at the upper ends by cross member 18 and adjacent member 15 is upwardly and rearwardly directed cross member 19. Arm 20 is secured at its rear end to the adjacent upright 17 and is supported near its forward end by depending member 21 secured at its lower end to side member 13.

Bridging the members 14 and 15 and secured at opposite ends thereto are the sinuous spring members 22 connected laterally by wire links 23 and tied down by side helicals 24.

In a like manner the back structure may be anchored to cross-members 18 and 17. Thereon are the upholstered and/or cushion mats 25 and 26 respectively.

Except for the feet 11 the base is substantially enveloped by the chair proper. Herein near the upper edge of each base side member 10 are pivots 27 and 28. Adjacent same in chair side member 13 are parallel pivots 29 and 30. Substantially equal length links 31 and 32 are connected with pivots 27 and 29 and 28 and 30 respectively for swingingly supporting the chair from and by the base.

In Fig. 3, 10 indicates the base side member, 27 the front pivot member and 31 the link member. Since all eight pivots are identical a description of one should suffice for all.

Herein a screw slotted head 40 bears directly upon link 31 although countersunk and seated thereon. Shank 41 is cylindrical and has a shoulder 42. The pivot includes threaded extension 42 of appreciable length. A nut 43 is threaded thereon and is stopped by shoulder 42. The shank extension passes through side member 10 and mounts washer 44 and nut 45. Thus the pivot member is rigidly clamped to the base side member but is loosely mounted with respect to link 31.

Thus each link has a non-clamped pivotal or free pivotal support upon the base and chair and without "cramping" of the link.

As a result the chair can be swung forwardly, see double dot and dash lines, and rearwardly in a sliding or gliding like fashion, to wit, more or less to and fro substantially rectilinearly rather than oscillate on an arc as in the case of runner type rockers. Not the base pivots are positioned above the chair pivots and are farther apart, fore and aft, than the chair pivots. Thus the links at either side are normally directed in a converging manner from top to bottom.

Also stops 46 and 47 on member 10 constitute stops which are selectively engaged by the links

31—32 for limiting the extreme movements of the chair. Thus the chair is prevented from overturning rearwardly, especially when tilted backward sufficient for reclining purposes, see single dot and dash lines.

In either extreme position, that is, forward or rearward, the rearward or forward links respectively are disposed approximately transversely of the forward or rearward links respectively, in other words, the links are not connected in parallel motion attaining arrangement so that resulting chair movement is a composite or hybrid of a parallel motion and a conventional rocking motion.

Except for the upholsery and the springs, metal ties or clips and the pivot structure, the chair frame base and linkage therebetween is all of wood.

While the invention has been illustrated and described in great detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The modification described herein as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. In a rocker, spaced parallel chair and base members each provided with spaced parallel laterally disposed openings, a pair of links interposed between said members and each having laterally extending pivot openings near their ends to align respectively with the openings of said members, pivot members in said aligned openings, each pivot member comprising a straight shank having a reduced threaded portion to pass through one of the openings in said chair or base members and an enlarged bearing portion to seat in one of the openings in one of said links, a head at the outer end of each of said enlarged portions to engage with a face of said link, a shoulder at the juncture of the reduced and enlarged portions, the said shoulder of each pivot member terminating substantially flush with a side of said link when the said head is engaged with the opposite face thereof, a spacing member enclosing said reduced portion

and engaged at one side with said shoulder and at its opposite side with the adjacent chair or base member, and a nut engaged with each threaded portion to clamp the adjacent chair or base members against said spacing member.

2. In a rocker having a chair member and a base member, each having spaced parallel sides, adjacent sides of said members being disposed in close proximity to each other, the combination therewith of a pair of substantially equal length links disposed between each pair of such sides and of a thickness approximately half the distance therebetween, and oppositely directed pivot members carried by each link and near the ends thereof and rigid with the adjacent chair and base members, the ends of the pivot members associated with the links being suitably countersunk in the links, and a link spacing and clamping nut upon each pivot member between the link and associated member side.

3. In a rocker having a chair member and a base member, each having spaced parallel sides, adjacent sides of said members being disposed in close proximity to each other, the combination therewith of a pair of substantially equal length links disposed between each pair of such sides and of a thickness approximately half the distance therebetween, and oppositely directed pivot members carried by each link and near the ends thereof and clamped to the adjacent chair and base members, the ends of the pivot members associated with the links being suitably countersunk in the links, each pivot member including a shoulder immediately contiguous to the face of the link confronting the face of the adjacent member side to which said pivot member is clamped.

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