March 5, 1968 D. F. CALDEMEYER ET AL 3,371,958

COMBINATION RECLINING AND ROCKING CHAIR

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FIG. 2

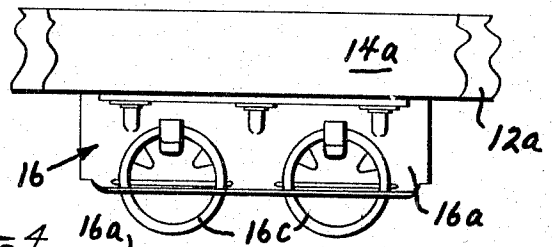


FIG. 3

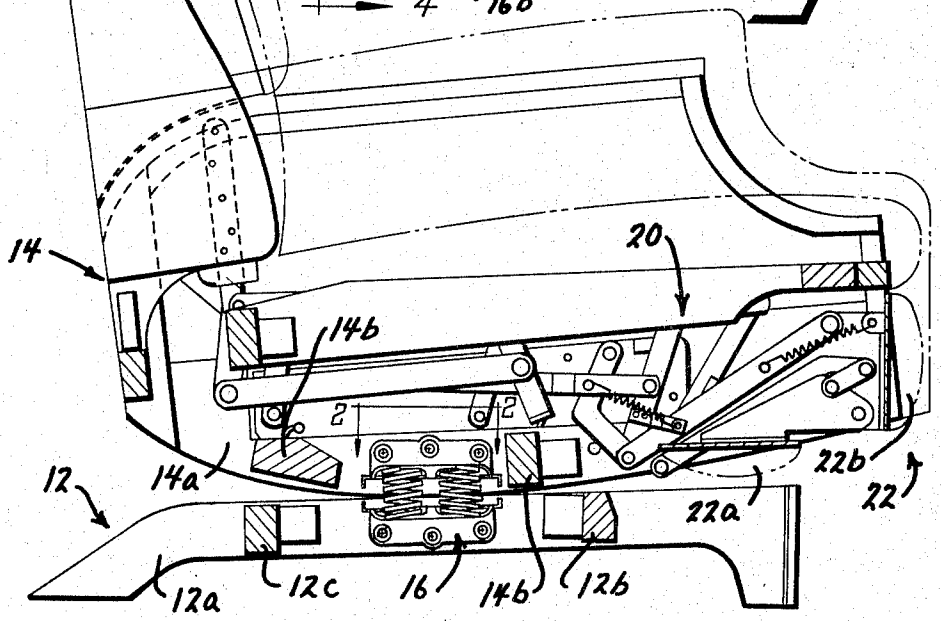


FIG. 1

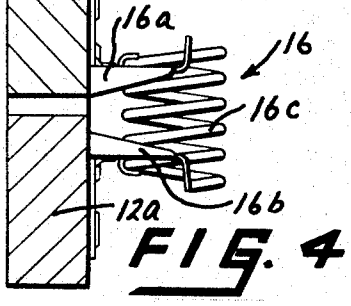


FIG. 4

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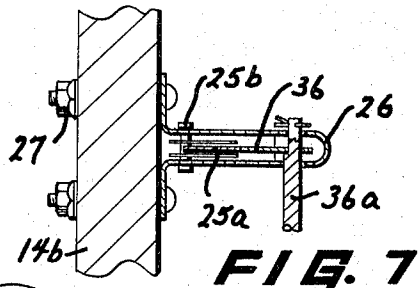


FIG. 7

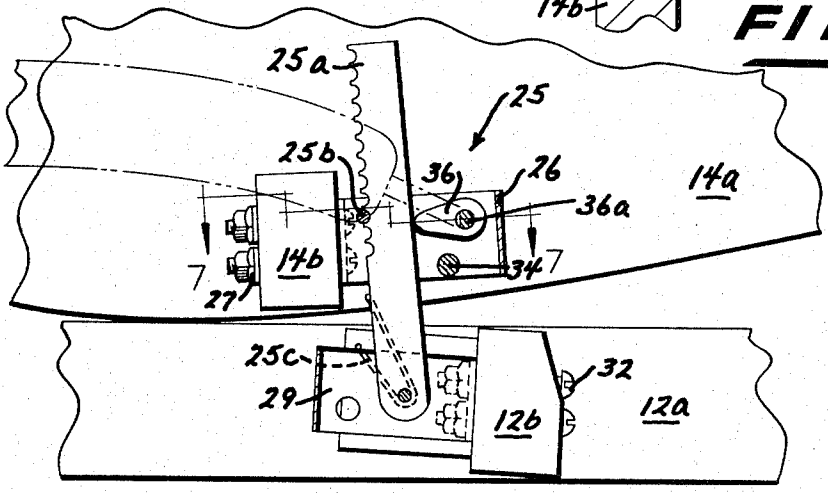


FIG. 5

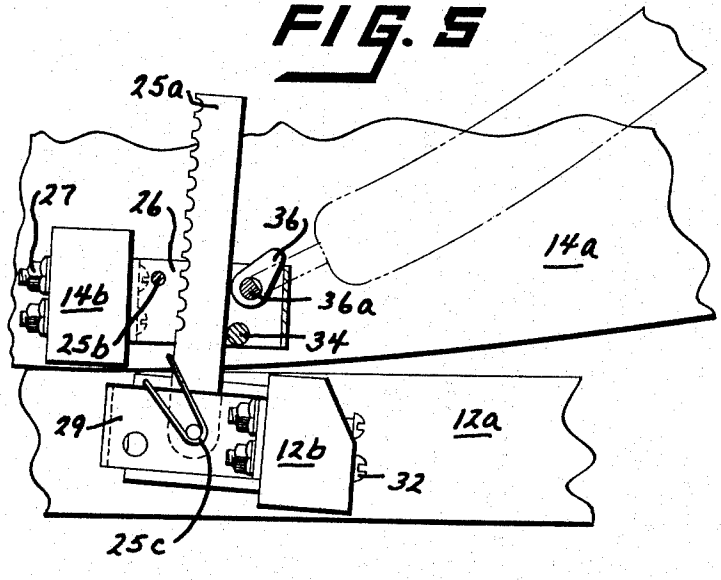


FIG. 6

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COMBINATION RECLINING AND ROCKING CHAIR

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4 Claims. (Cl. 297—269)

ABSTRACT OF THE DISCLOSURE

A combination reclining and rocking chair characterized by a movable seat and back carrying frame portion having side members directly mounted on the side members of a fixed base frame portion and including a concealable foot rest arrangement which permits high-legged styling.

The present invention relates to a combination reclining and rocking chair, and more particularly to a new and novel frame for such type of chair which provides advantages in production, styling, and user comfort not available heretofore.

As is known, combination chairs, i.e. the type which the user can move into reclining positions or, in the alternative, operate as a rocking chair, are currently manufactured. Many of such chairs, however, are disadvantageous in manufacturing and use, in that, for example, the center of balance is high, causing the possibility of tipping while in certain positions of use; the adjustment to a personal seating height is impossible; the chairs cannot lock as a reclinable lounge chair in all positions; a "health and beauty" position is mostly impossible to attain because of the use of certain mechanical stops; production is complex considering the many components typifying such type of chair; and, styling is limited to a great extent.

By virtue of the instant invention, the applicants herein have provided a new and novel combination reclining and rocking chair having a frame structure which is arranged to afford important advantages over the prior type chairs and to thereby assure an even increased popularity of this type of furniture item. The chair frame defining the invention at hand relies, in part, on the rocking of the seat and back carrying portion directly on the base frame, which together with a concealable footrest arrangement, permits high-legged styling for even more customer acceptance. Moreover, in that the applicants' chair can be locked into any desired position for sitting and, thereafter, reclining, a featured adjustment to the height of the person sitting in the chair can be effectively accomplished, unlike any prior chair structure.

As will become evident from the description herebelow, the instant invention affords many additional advantages, including, by way of example, the ability to assume a "health and beauty" position; the operation of the footrest through a range of adjustable positions; an improved locking mechanism which minimizes metal friction and eliminates wear; and, mechanical compactness which permits more latitude in styling than has been possible heretofore.

Accordingly, the principal object of the present invention is to provide a new and novel combination reclining and rocking chair.

Another object of the present invention is to provide a new and novel frame structure for a combination reclining and rocking chair.

A further object of the present invention is to provide a new and novel combination reclining and rocking chair

where the movable seat and back frame portion is directly positioned on the stationary base frame.

A still further and more general object of the present invention is to provide a new and novel combination reclining and rocking chair which is designed to provide high-legged styling, the latter importantly permitting compound curvature footrest design with deep tufted seat and no back limitation; which affords excellent user comfort through the provision of selective control to the user's height; and, where the operating mechanism is designed to provide even more ruggedness and durability.

Other objects and a better understanding of the present invention will become more apparent from the following description, taken in conjunction with the accompanying drawings, wherein

FIG. 1 is a view in vertical section, partly fragmentary, showing the frame structure for the new and novel combination reclining and rocking chair forming the instant invention;

FIG. 2 is a top plan view of one rocker spring which interconnects the movable portion of the frame and the fixed base of the frame, taken at line 2—2 of FIG. 1 and looking in the direction of the arrows;

FIG. 3 is a view in elevation of the rocker spring of FIG. 2;

FIG. 4 is an end view of the same structure, taken at line 4—4 of FIG. 3 and looking in the direction of the arrows;

FIG. 5 is a view in side elevation of the locking mechanism forming part of the chair structure, in a locked position;

FIG. 6 is another view in side elevation of the locking arrangement of FIG. 5, but in an unlocked position; and,

FIG. 7 is a top plan view of a detail of the locking arrangement of FIGS. 5 and 6.

For the purpose of promoting an understanding of the principles of the invention, reference will now be made to the embodiment illustrated in the drawings and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended, such alterations and further modifications in the illustrated device, and such further applications of the principles of the invention as illustrated therein being contemplated as would normally occur to one skilled in the art to which the invention relates.

Referring now to the figures, the applicants' new and novel combination reclining and rocking chair **10** comprises a fixed or stationary frame portion **12**, and a movable frame portion **14** mounted directly thereon. In this connection, and noting in particular FIG. 1 of the drawings, the stationary base frame portion typically comprises side members **12***a* (only one of which is shown) interconnected by cross members **12***b* and **12***c*. The bottom of the movable frame portion **14** is defined by side members **14***a* (only one of which is shown) and a plurality of cross members **14***b* for effecting a rigid over-all unit.

An important contribution of the invention is the positioning of the side members **14***a* of the movable frame portion **14** directly onto the side members **12***a* of the fixed base frame portion **12**, where the curvature of the engaging surfaces of the side members **14***a* of the movable frame portion **14** are critical insofar as user comfort and over-all chair design are concerned. The preceding arrangement provides a simplification of manufacturing procedure and the elimination of components over that in combination chairs in use heretofore.

FIGS. 1, 2, 3 and 4 illustrate the aforesaid direct positioning relationship, showing among other elements a rocker spring **16** between the movable frame portion **14**

and the fixed frame portion 12. In this connection, the rocker spring 16 is defined by an extending bracket 16*a* on the inner surface of each of the side frames 14*a* of the movable frame portion 14, and an extending bracket 16*b* on the inner surfaces of each of the side frames 12*a* of the bacse frame portion 12, positioning helical springs 16*c* therebetween. As should be apparent, the rocker spring 16 serves to positively assemble the direct mounting arrangement between the movable frame portion 14 and the fixed frame portion 12.

The aforedescribed direct mounting arrangement is particularly important insofar as available over-all space requirements are concerned for the instant combination reclining and rocking chair, in that the reclining mechanism, collectively identified by reference numeral 20, can now be more effectively positioned within the space defined at the bottom of the movable frame portion 14. In this regard, and as a matter of further contribution to the art, the invention is first to provide a sectionalized and articulated footrest 22 on such type of chair; one portion 22*a* of which, being mounted on the reclining mechanism 20, is adapted to be concealed beneath the seat in a non-extended position of the chair, and another portion 22*b* of which, also mounted on the reclining mechanism 20, remains in a substantially vertical plane at the same position. It might be noted that portions 22*a* and 22*b* of the footrest 22 are shown in phantom lines in the drawings for reasons of clarity in regard to the reclining mechanism 20.

In other words, previous chairs in non-reclining position typically have a one-piece footrest which extends mostly upwardly and downwardly, and which seriously controls any styling of the over-all unit. In this latter connection, the prior art type of footrest extended almost fully throughout the space between the bottom of the seat of the chair to the floor on which the chair was positioned. In contrast, and by way of patentable improvement, by using the sectionalized and articulated footrest 22, the aforesaid vertical dimension can be simply reduced, and, therefore, high-legged styling is readily achievable, giving the finished furniture article more desirable customer appeal. The subject new and novel footrest innovation is practical and, at the same time, aesthetically desirable.

The applicants' locking mechanism 25, generally of the type described in the Daniel F. Caldemeyer United States Patent No. 2,606,594, issued Aug. 12, 1952, and entitled, Combination Reclining and Rocking Chair Having a Fixed Base and Track, again makes the instant invention advantageous over prior forms of chair structures, importantly contributing to the attainment of the resulting novelty. As a matter of improvement, the ratchet bar 25*a* of such type of locking mechanism 25 is now coated, as, for example, with Teflon or the like, and co-operates with a plastic roller element 25*b* thereby minimizing metal friction and operating sounds to the advantage of the user.

More particularly in this connection, and referring to FIGS. 5, 6 and 7 (not shown in FIG. 1 for reasons of clarity), the instant locking mechanism 25 typically comprises a bracket 26 mounted, as by screw means 27, on a cross member 14*b* extending between the side frame members 14*a* of the movable frame portion 14 of the chair. Another bracket 29 is mounted by screw means 32 on cross member 12*b* extending between the side frame members 12*a* of the fixed frame portion 12 of the chair, where such bracket 29 positions the aforesaid ratchet bar 25*a* which is continually urged into a non-locking position, i.e. away from the cooperating roller element 25*b* on the bracket 26, through a spring member 25*c*.

A stop 34, also disposed on the bracket 26, limits the movement of the ratchet bar 25*a*. A cam 36 mounted on a shaft 36*a* and controlled by a handle (shown in phantom lines in FIGS. 5 and 6) serves to move the ratchet bar 25*a* to a locking position with roller element 25*b* (FIG. 5) and to release same to a non-locking position (FIG. 6).

FIGS. 5 and 6 further illustrate the direct mounting relationship between the movable frame portion 14 and the fixed frame portion 12 of the instant chair invention, where the aforedescribed locking arrangement lends itself to permit the ready and positive locking of the movable frame portion 14 with relation to the fixed frame portion 12 at any desired position. In other words, through the instant locking arrangement, the combination chair at hand can lock as a lounge chair in any position and adjust to the height of the person sitting in the chair, unlike other chairs available in today's market, and further includes rocking action in a "TV" position with footrest extended and adjustable, i.e. when the back and the seat of the movable frame portion 14 of the chair are still in their initial lounge chair position, i.e. before there is any angular change therebetween.

From the preceding, it should be apparent that the applicants herein have invented a new and novel combination reclining and rocking chair having advantages not at all present in chairs of this type already on the market. Through the direct mounting relationship provided between the movable frame portion and the fixed frame portion, and with the use of a sectionalized and articulated footrest which is partially concealed when in a full position of non-use, high-legged styling is readily achieved, with additional benefits insofar as production and component elimination.

Furthermore, the locking arrangement employed as a part of the instant combination reclining and rocking chair serves to provide advantages not at all present in the prior art in connection with such a dual functioning item of furniture. The combination reclining and rocking chair described herein is, of course, susceptible to various changes within the spirit of the invention, and for this reason, the above description should be considered illustrative and not as limiting the scope of the following claims.

We claim:

1. A combination reclining and rocking chair comprising a fixed base frame portion having side members and cross members interconnecting said side members, a movable seat and back carrying frame portion having side members and cross members interconnecting said side members, said side members of said movable frame portion having a curved edge directly mounting on said side members of said fixed base frame portion, a locking mechanism interconnecting said fixed base frame portion and said movable frame portion selectively workable to effect a fixed relationship at any desired position between said movable frame portion and said fixed base frame portion or a rocking relationship between said movable frame portion and said fixed base frame portion, and a reclining mechanism mounting a footrest having a first portion and a second portion and movable from a non-extended position to an extended position, said first portion of said footrest being exposed and said second portion of said footrest being concealed when said footrest is in a non-extended position.

2. The combination reclining and rocking chair of claim 1 where said locking mechanism comprises a ratchet bar pivotally positioned on a cross member interconnecting said side members of said fixed base frame portion, a locking element positioned on a cross member interconnecting said side members of said movable frame portion and adapted to be selectively engaged by said ratchet bar, spring means urging said ratchet bar away from said locking element, and hand operated cam means selectively pivoting said ratchet bar into engagement with said locking element against the force of said spring means.

3. The combination reclining and rocking chair of claim 2 where said ratchet bar is coated and said locking element is defined as a plastic roller.

4. A combination reclining and rocking chair comprising a fixed base frome portion having side members and cross members interconnecting said side members, a movable seat and back carrying frame portion having side members and cross members interconnecting said side

members, said side members of said fixed base frame portion directly mounting said side members of said movable frame portion, a locking mechanism selectively workable to effect a fixed relationship at any desired position between said movable frame portion and said fixed base frame portion or a rocking relationship between said movable frame portion and said fixed base frame portion, said locking mechanism comprising a coated ratchet bar pivotally mounted on a cross member interconnecting said side members of said fixed base frame portion cooperable with a plastic roller element mounted on a cross member interconnecting said side members of said movable frame portion, and a footrest having a first portion and a second portion, said second portion of said footrest being disposed beneath said seat when said footrest is in a position of non-use.

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