Jan. 20, 1953 L. R. SLYTER ET AL 2,625,983

COMBINATION ROCKING AND SWIVELING CHAIR

Filed Sept. 21, 1949 2 SHEETS—SHEET 1

Fig. 1.

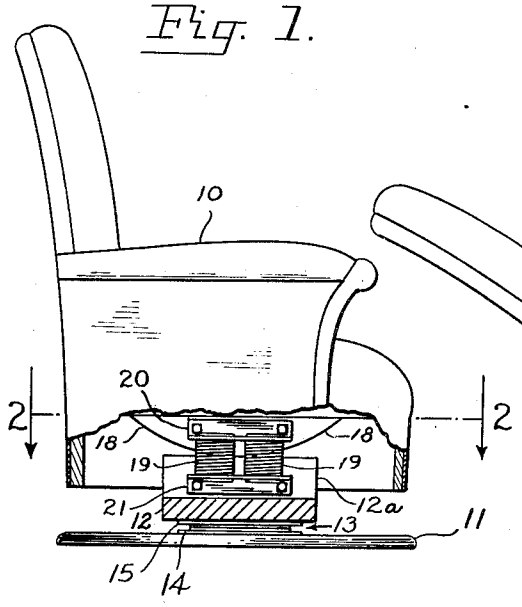


Fig. 8.

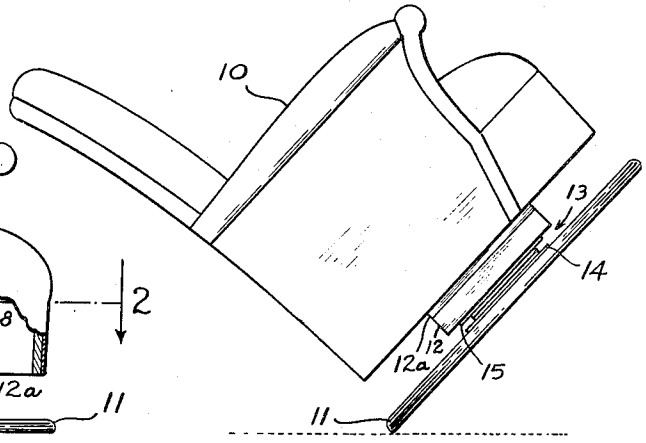
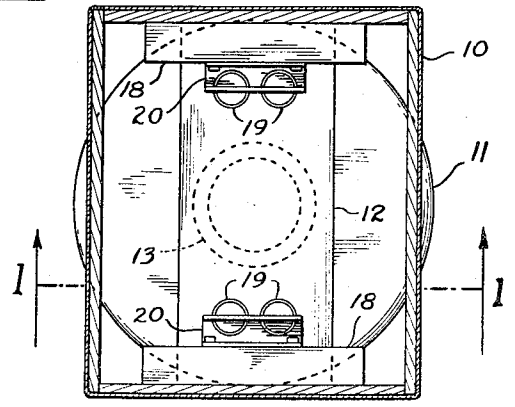


Fig. 2.



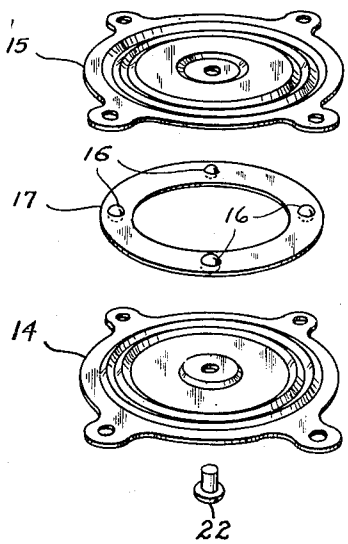


Fig. 3.

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Jan. 20, 1953 L. R. SLYTER ET AL 2,625,983

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Filed Sept. 21, 1949 2 SHEETS--SHEET 2

Fig. 4.

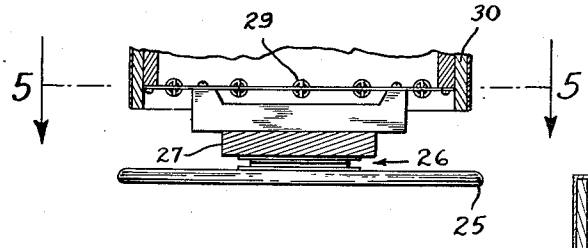


Fig. 5.

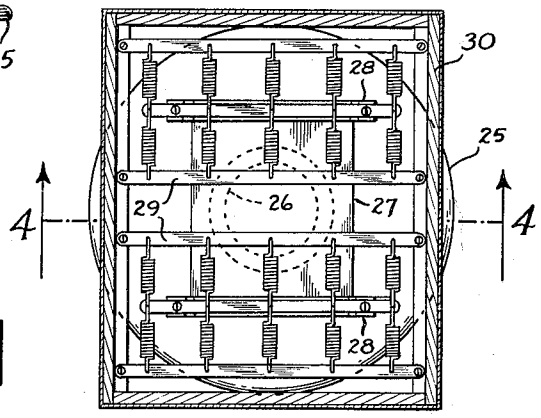


Fig. 6.

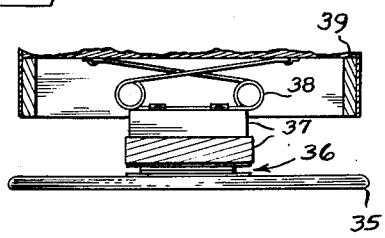
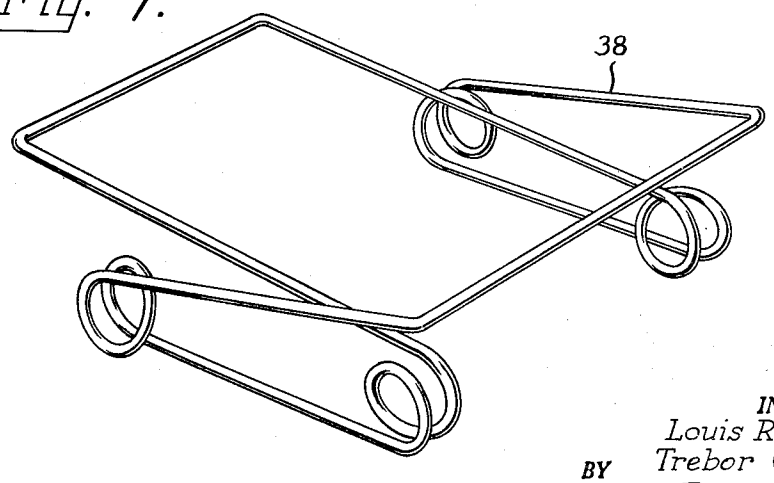


Fig. 7.



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COMBINATION ROCKING AND SWIVELING CHAIR

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Application September 21, 1949, Serial No. 116,884

5 Claims. (Cl. 155—54)

1

The present invention relates to a chair which may be rocked and swiveled to any desired position while maintaining positive control over the balance of the chair.

Other chairs have been devised heretofore which have been provided with means for rocking them and for swiveling them to various positions. The operation of such chairs has been erratic and unreliable, however, particularly when the chair has been of substantial size and weight as is the case with the large upholstered chairs in common domestic use. It is the primary object of the present invention to provide a chair having a rocking and swiveling supporting assembly by means of which it is possible to incline the seat of the chair at any desired angle, and to rotate the seat to any desired position.

It is another object of the present invention to provide a chair mounting which will make possible the rotation and rocking of the chair to any desired angle and position easily, positively, and with maximum safety.

Still another object of the present invention is the provision of a rocking and rotating chair provided with a round base which may be used as a wheel so that, upon tilting the chair, it may be rolled to a new position with a minimum of effort even though the chair is of substantial size and weight.

The manner in which the foregoing and other objects of the present invention are accomplished will be apparent from the following specification and claims considered together with the drawings wherein Figure 1 is a side elevation, partly in section, of the presently described chair, the section being taken along the lines 1—1 of Figure 2.

Figure 2 is a sectional view taken along the lines 2—2 of Figure 1;

Figure 3 is a detail, exploded view of the swiveling means used in the chair of Figure 1;

Figure 4 is a fragmentary view taken along the lines 4—4 of Figure 5, and illustrating an alternate, spring controlled, rocking assembly for use in the chair of the present invention;

Figure 5 is a plan view taken along the lines 5—5 of Figure 4;

Figure 6 is a fragmentary, sectional view of an alternate spring construction for use in the construction of the chair of the present invention;

Figure 7 is a perspective view of the spring employed in the construction of Figure 6; and

Figure 8 is a view in side elevation of the chair of the present invention illustrating the manner in which it may be moved from place to place.

2

Referring now more particularly to Figures 1 to 3:

The presently described chair is provided with a chair seat 10 which may be variously constructed and designed although, as illustrated, it preferably is of the substantial upholstered type in conventional use. The chair seat is mounted upon a rocking and swiveling supporting assembly comprising broadly means whereby the seat may be rocked, means whereby the seat may be swiveled, and spring means operatively associated with the rocking and swiveling means for controlling their action.

Thus the supporting assembly may comprise a substantially flat base member 11, which rests flat upon the floor and preferably is circular for a reason which will be developed more fully hereinafter. Interposed between the base 11 and an intermediate platform 12 are the swiveling means indicated generally at 13. Although as will be apparent to one skilled in the art, a variety of swiveling means of suitable construction may be employed, the construction selected for the purposes of illustration comprises (Figure 3) a lower plate 14 and an upper plate 15, the two plates having therebetween a plurality of ball bearings 16 contained in a ball bearing race 17. Plate 14 is affixed to base 11 and plate 15 to platform 12 by means of screws, bolts or the like. The two plates then may be fastened together by means of a bolt or rivet 22, thereby rotatably interconnecting the base and the platform on which the chair seat rests.

The platform 12 is provided with a pair of vertically extending side pieces 12a for supporting the rockers 18 which, in turn, are attached to the frame of the chair seat 10. The rocking motion of the rockers on the platform, as well as the swiveling motion of the chair about the swivel assembly 13, are controlled through spring means interconnecting the rockers and the platform. In the embodiment illustrated in Figures 1 to 3, inclusive, the spring means comprises a pair of coil springs 19, 19 associated with each rocker, and mounted by means of brackets 20, 20 attached to the rockers, and brackets 21, 21 attached to the platform.

Other forms of spring constructions may be employed, however, as alternates for the foregoing construction. For example, as shown in Figures 4 and 5, the spring and rocker means may be combined in a single spring rocker suspension. Thus the chair may be mounted on a base 25 to which is affixed swivel means 26 having a con-

struction similar to that of the swivel assembly **13** of Figures 1 to 3.

The platform **27** is attached to the swivel means **26** and also to the cross bars **28, 28** of the spring assembly **29** which, in turn, is attached to the frame **30** of the seat of the chair. Hence the chair seat is resiliently cushioned on the spring assembly so that it may be rocked back and forth under positive control at all times.

Still another spring means for supporting the seat of the chair of the present invention is illustrated in Figures 6 and 7. In this construction, the chair is mounted on the base **35**. Attached to the base is the swivel assembly **36**, the latter being attached to the platform **37**. As is apparent from Fig. 6, platform **37**, like platform **12** of the embodiment of Fig. 1, may be formed from a horizontal section having a pair of upstanding side pieces affixed one to each of its ends. Attached to the platform is the spring member **38** comprising two crossed U-shaped sections having their arms connected at their lower ends to parallel spaced sections by volute springs, the spaced sections being attached one to each of the side pieces of the rocker platform, and the U-shaped sections being attached to the chair seat **39**. Hence this spring means, like the spring means employed in the embodiments of Figures 4 and 5, serves to support the chair resiliently so that it may be rocked back and forth under the positive control of the springs.

The manner of use of the chair of the present invention in all of the above described embodiments is similar in that the chair may be placed conveniently to other articles of furniture, as a radio. The person sitting in the chair then may recline to any desired degree, the reclining motion being controlled through the spring construction employed in the supporting assembly. From this position, the chair is in perfect balance so that only slight pressure exerted by the foot against the floor is sufficient to rotate the chair until it faces in a different direction. The degree of rotation may be controlled perfectly and there is no hazard of becoming overbalanced in the chair during the swiveling action as is the case where the chair is not provided with spring means for controlling the rocker and swiveling. Furthermore, when it is desired to move the chair from one place to another, all that is necessary is to tilt it back on the edge of its circular base so that, by the application of only a slight force, the chair may be moved to another place, the circular base cooperating with the swivel and acting as a wheel during this operation. In this manner, there is provided a chair construction having maximum comfort, safety, adjustability to any desired sitting position, and transportability to any desired location.

Having now described our invention in preferred embodiments, we claim as new and desire to protect by Letters Patent:

1. A rotary rocking chair comprising a circular substantially flat base member adapted to rest flush with the floor, a rocker platform, the rocker platform having on opposite sides thereof a pair of upstanding side pieces, a first swivel plate attached to the upper side of the base member, a second swivel plate attached to the under side of the platform, a bearing race interposed between the first and second swivel plates, means for rotatably interconnecting the swivel plates, a pair of rockers resting one on each of the rocker platform side pieces, a chair seat, and means for attaching the chair seat to the rockers.

2. A rotary rocking chair comprising a circular substantially flat base member adapted to rest flush with the floor, a rocker platform, the rocker platform having on opposite sides thereof a pair of upstanding side pieces, a first swivel plate attached to the upper side of the base member, a second swivel plate attached to the under side of the platform, a bearing race interposed between the first and second swivel plates, means for rotatably interconnecting the swivel plates, a pair of rockers resting one on each of the rocker platform side pieces, a chair seat, means for attaching the chair seat to the rockers, and resilient means for resiliently interconnecting the rocker platform and the rockers.

3. A rotary rocking chair comprising a circular substantially flat base adapted to rest flat on the floor, a rocker platform, the rocker platform having on opposite sides thereof a pair of upstanding side pieces, a first swivel member attached to the upper side of the base, a second swivel member attached to the under side of the platform, a bearing race interposed between the first and second swivel members, means for rotatably interconnecting the swivel members, rocker means resting on the rocker platform side pieces, a chair seat, and means for attaching the chair seat to the rocker means.

4. The rotary rocking chair of claim 3 wherein the rocker means comprises a frame, a plurality of coil springs mounted across the frame means connecting the coil springs to the frame, and a pair of cross bars attached to and suspended by the springs, the frame being connected to the chair seat and the cross bars to the side pieces of the rocker platform.

5. The rotary rocking chair of claim 3 wherein the rocker means comprises a spring assembly comprising two crossed U-shaped sections having their arms connected at their lower ends to parallel, spaced, horizontal, base sections by volute springs, the base sections being attached one to each of the side pieces of the rocker platform, and U-shaped sections being attached to the chair seat.

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