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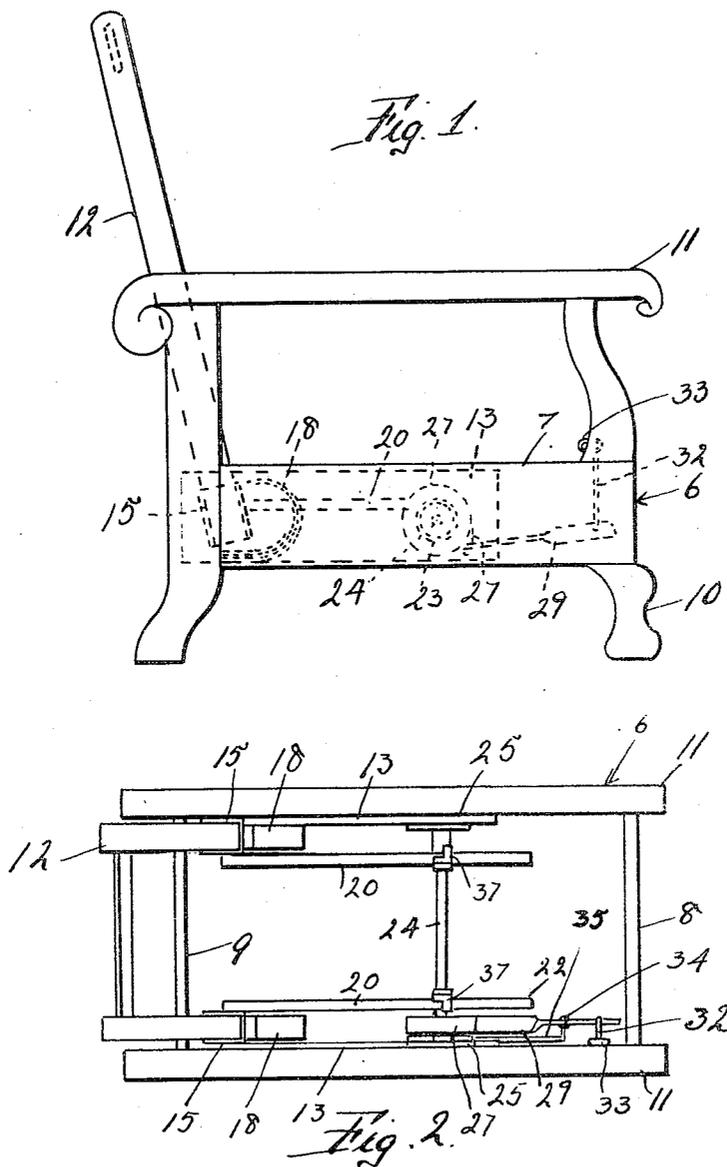
A. MYERSON

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RECLINING CHAIR

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2 Sheets-Sheet 1



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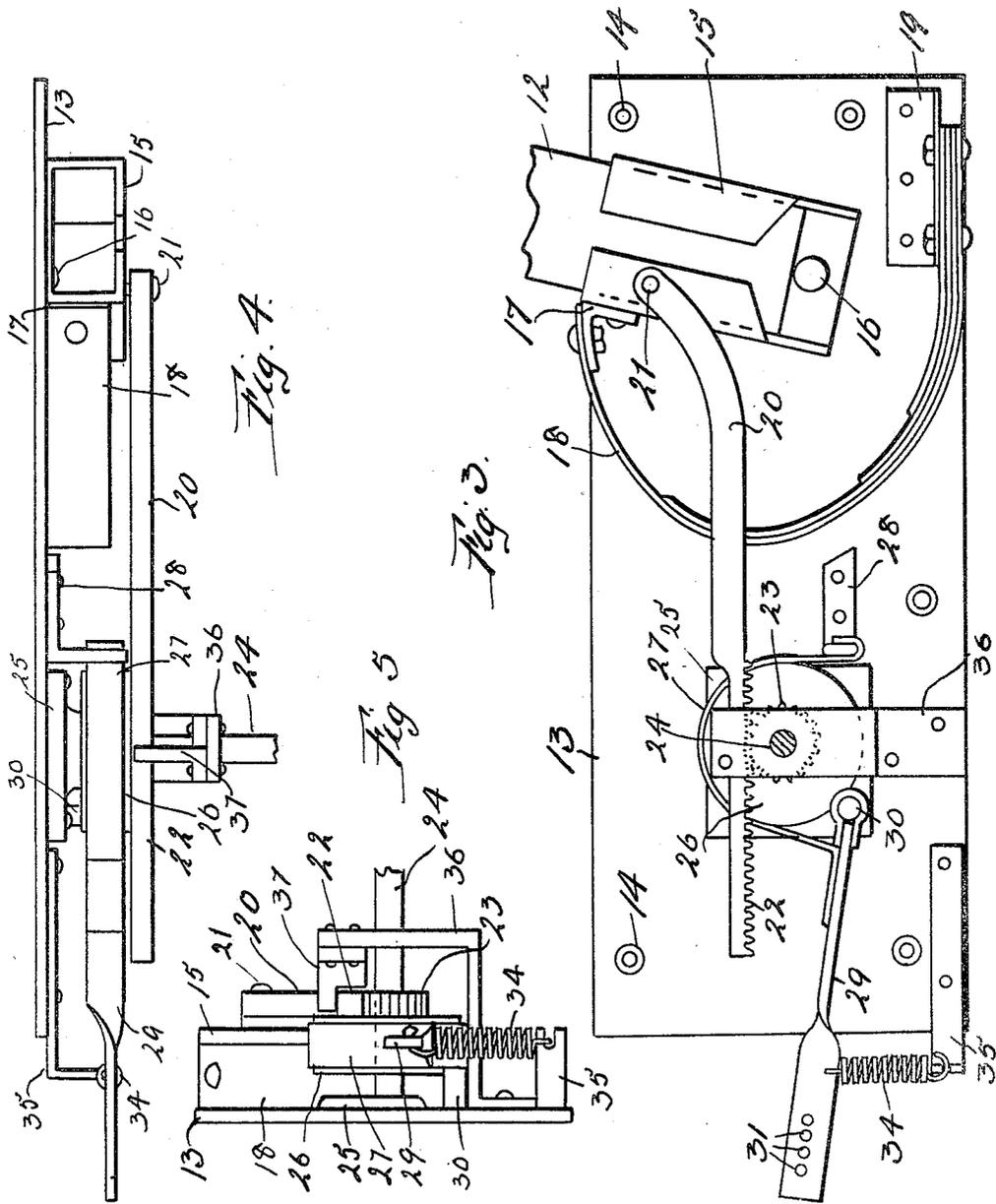
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UNITED STATES PATENT OFFICE

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RECLINING CHAIR

Application filed January 8, 1930. Serial No. 419,288.

My invention relates to new and useful improvements in a reclining chair, and has for one of its objects to generally improve the construction, and more particularly with the operating mechanism, of articles of furniture of this character.

Another object of the invention is to provide a reclining chair including a body frame and a pivoted back, the latter being normally moved forward on toward an upright position by a leaf spring or the equivalent while said back is controlled or held in different adjusted positions by a brake mechanism under the control of the person using the chair.

A further object of the invention is to provide a mechanism of the kind described for use in pairs, each member of the pair comprising a plate having a socket pivoted thereon normally moved in one direction by a leaf spring and adapted to be moved in the opposite direction by a force applied to the chair back by the user thereof, a brake connected with a shaft journaled in both plates of a pair, said shaft carrying gears which mesh with racks pivotally connected to the sockets, and a lever spring actuated in one direction for controlling the brake.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawings forming a part of this application, in which:—

Fig. 1, is a side elevation of a reclining chair embodying my invention with the upholstery removed.

Fig. 2, is a top plan view thereof.

Fig. 3, is an enlarged inner face view of one of the operating mechanisms.

Fig. 4, is an upper edge or top plan view thereof.

Fig. 5, is an outer or forward end view of the same.

In carrying out my invention as herein em-

bodied, 6 represents the body frame of the chair including side rails 7, front and back rails 8 and 9 respectively, legs 10 and arms 11, while 12 denotes the movable back frame. It is to be understood that these parts may be of any suitable or desirable shape, size and configuration so long as they are suited for the application of the operating mechanism to be presently described.

On the inside of each side rail of the chair body is mounted a supporting plate 13 having holes 14 for the reception of suitable fastening devices, such as screws so that the plate may be properly positioned and secured in place.

To the rear end of the supporting plate is pivoted a socket 15, preferably near its lower end as at 16 while to the upper end is secured an angle 17 having one end of a spring 18 fastened thereto while the other end of said spring is secured to an angle 19, the latter being fastened to the plate, preferably below the socket and at a point to the rear of the pivot point of said socket. Said spring 18 preferably comprises a number of leaves of different lengths, as clearly shown in Fig. 3, and this spring normally tends to move the socket or particularly the upper end thereof forward relative to the chair.

It might be well to state at this point that the sides of the movable back frame are mounted in the sockets of the operating mechanisms at both sides of the chair body and that said mechanisms while being used in pairs are arranged so that one is used on the left side and the other on the right hand side of the chair body.

The socket 15 has the rear end of a rack bar 20 pivoted thereto adjacent its upper end as at 21 and the rear end is preferably curved upwardly as illustrated while the forward end is provided with a rack 22 meshing with a gear 23 mounted on a shaft 24 which extends across the chair body frame and has its ends journaled in the bearing blocks 25 carried by the two co-operating supporting plates.

On the shaft 24 adjacent one of the plates 13 and preferably between a gear 23 and the adjacent bearing block is mounted a brake

drum 26 with which is associated a brake band 27 having one end anchored to a clip 28 carried by the supporting plate 13 while the other end is attached to a lever 29, the inner end of said lever being journalled on a trunion 30 projecting from the inner face of the plate 13 while the other end of said lever has a number of apertures 31 therein for the reception of a lever pull or strap 32 which may carry a ring 33 or other suitable hand hold to be gripped by the user for releasing the brake. The outer end of the lever 29 is normally drawn downward in order to hold the brake band tight against the brake drum by means of a spring 34 having one end attached to the lever 29 while the other end is anchored to a bracket 35 projecting from the supporting plate 13. It is to be understood that the brake and component and associated parts thereof are only on one side of the chair or in other words, there is but one brake while all the rest of the mechanism is in duplicate.

The shaft 24 may be further supported by a bracket 36 secured to the supporting plate and projecting outwardly and then upwardly some distance beyond the gear 23 and to this bracket is secured a keeper or guide 37 to limit the transverse and vertical movements of the rack in order to prevent the latter from becoming disengaged from the gear.

Each mechanism unit, such as shown in Figs. 3 to 5 inclusive may be made up practically complete and ready for installation in a chair and when a pair of them are mounted in the chair, one on each side rail of the body frame with the shaft 24, all parts of the mechanism units will be properly positioned for co-ordination. Upon mounting the movable back in the sockets 15, the chair will then be ready for operation.

When the chair is in use and the person using the same desires to recline, it is only necessary to move the lever 29 upward against the action of its spring 34 through the medium of the pull or strap 32, thus releasing the brake band 27 from the drum 26 whereupon the person occupying the chair may lean backward and the weight and pressure of such person upon the chair back will move said back rearward against the action of the spring 18 and as soon as the proper position is obtained, the pull or strap 32 may be released so that the spring 34 will exert its tension upon the lever 29 and draw the brake band 27 firmly against the brake drum 26 thereby holding the movable chair back in such position through the medium of the shaft 24, gears 23 and rack bars 20.

When the user of the chair desires that the movable back be positioned in a lesser inclined position or in the upright position, the brake is again released as above stated and if weight and pressure has been removed from the movable back, the springs 18 will return the sockets and consequently the mov-

able back to or toward a vertical position where it will be held by the brakes as previously set forth.

Of course I do not wish to be limited to the exact details of construction as herein shown, as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is:—

1. In a reclining chair, the combination with a chair body and separate back, of supporting plates mounted on the inner faces of the side rails of the chair body, sockets pivoted adjacent their lower ends to said supporting plates and holding the chair-back, means to normally move the upper ends of the sockets forward, a shaft journalled in the supporting plates, brake mechanism associated with said shaft to hold the same in different positions, gears on said shaft and rack bars pivoted to the sockets and meshing with the gears whereby the sockets and shaft are actuated in unison.

2. A reclining chair comprising a body frame, supporting plates mounted on the inner faces of the side rails of said body frame, sockets pivoted adjacent their lower ends to the supporting plates, plural leaf springs attached to the supporting plates and connected with the upper ends of their respective sockets for normally moving said sockets inward, a chair-back mounted in the sockets for movement therewith, a shaft extending across the interior of the chair body and having its ends journalled in the supporting plates, gears on said shaft, a rack connected with each socket and meshing with one of the gears, a brake drum fixed on said shaft adjacent one end thereof, a brake band coacting with the brake drum and having one end anchored to a supporting plate, a lever having its inner end pivoted on a supporting plate and connected with the free end of the brake band, means normally moving said lever in a direction for holding the brake band snugly against the brake drum, and means connected with said lever whereby it may be manually actuated to release the brake band from the drum.

3. A reclining chair comprising a body frame, plates secured to the side rails of said body frame, sockets pivoted adjacent their lower ends to said plates, angles secured to the sockets, other angles secured to the plates adjacent said sockets, plural leaf springs connected with said angles for normally moving the upper ends of the sockets inward, a shaft journalled between the plates and extending across the interior of the body frame, gears fixed on said shaft, racks pivoted to the sockets adjacent the upper ends of the latter and meshing with the gears on the shaft whereby motion is transmitted from the sockets to said shaft, brackets secured to the plates and projecting inwardly and upwardly beyond

the gears, keepers or guides carried by said brackets and co-operating with the racks to limit the transverse and vertical movements of said racks, a brake drum fixed on the shaft adjacent one end thereof and contiguous one
5 of the plates, a clip mounted on the plate in proximity to the brake drum, a trunnion also mounted on the plate in proximity to the brake drum but on the opposite side to the
10 clip, a lever journalled on the trunnion, a brake band anchored to the clip and connected with the lever, a bracket carried by the plate adjacent the lever, a spring anchored to said bracket and connected with
15 the lever for normally moving it in a direction to hold the brake band tight against the brake drum, and a strap connected with the lever whereby said lever may be operated in the opposite direction to release the brake
20 and permit the leaf springs to move the sockets or to permit said sockets to be moved against the action of said springs through the medium of the chair-back by an outside force applied to said chair-back.

4. A control and operating mechanism unit
25 for reclining chairs comprising a plate for securement to a side rail, of a chair body frame, a socket pivotally connected to the plate and adapted to receive a portion of a
30 chair-back, a plural leaf spring having one end attached to the plate and the other end to the upper end of the socket, a shaft, a gear mounted on said shaft, a rack having one end pivoted to the upper end of the socket and
35 the other end meshing with the gear, and means to retain the rack in alignment.

5. The structure set forth in claim 4 in
40 combination with a brake drum mounted on said shaft, a brake band associated with the brake drum and having one end anchored to the plate, a lever pivoted on said plate and connected with the other end of the brake
45 band and a spring having one end anchored on the plate and the other end connected with the lever to normally move said lever in a direction to hold the brake band tight against the brake drum.

In testimony whereof, I have hereunto
50 affixed my signature.

ADOLPH MYERSON.

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