J. J. HOGAN.

ATTACHMENT FOR RECLINING CHAIRS.

APPLICATION FILED SEPT. 17, 1921.

1,427,292. Patented Aug. 29, 1922.

Fig. 1.

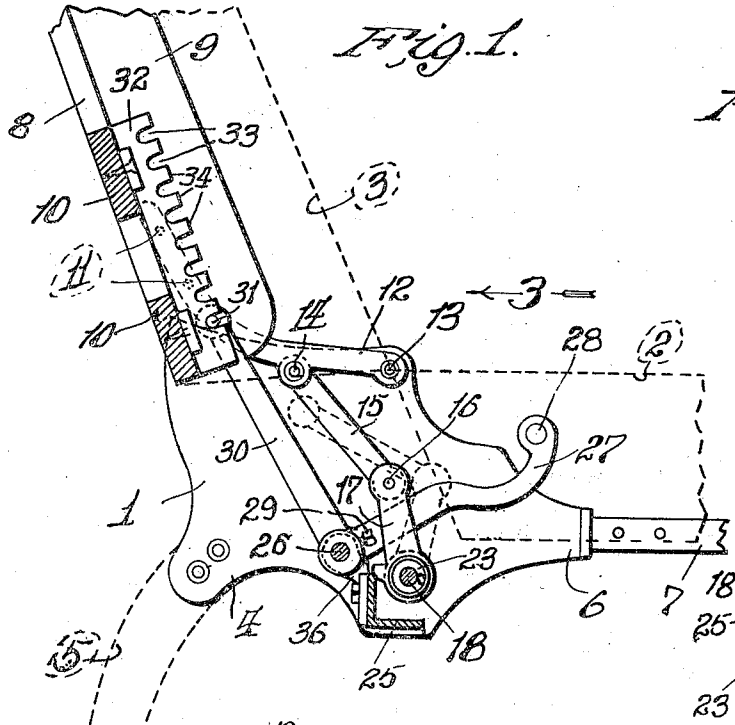
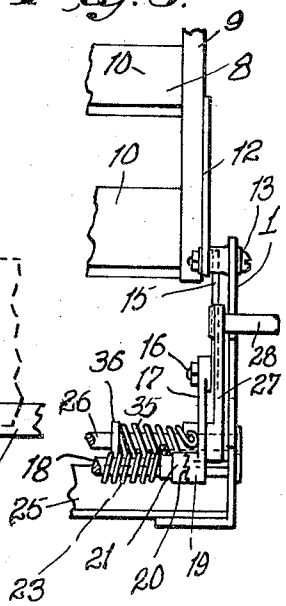



Fig. 3.



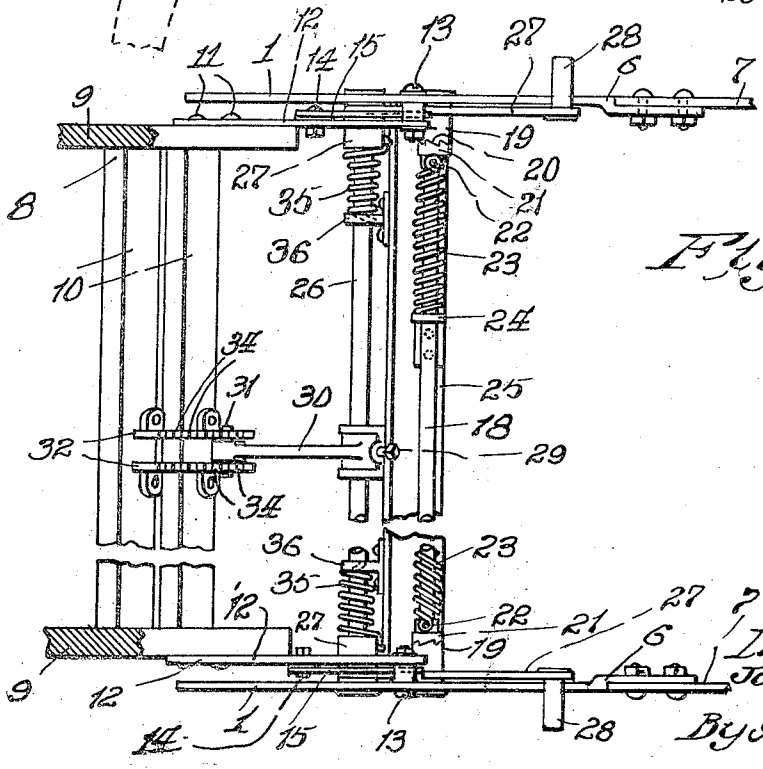




Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## ATTACHMENT FOR RECLINING CHAIRS.

1,427,292. Specification of Letters Patent. **Patented Aug. 29, 1922.**

Application filed September 17, 1921. Serial No. 501,350.

*To all whom it may concern:*

Be it known that I, JOHN J. HOGAN, a citizen of the United States of America, and a resident of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in an Attachment for Reclining Chairs, of which the following is a specification.

This invention relates to an attachment for reclining chairs, and has for its primary object the purpose of providing improved means for operating and adjusting the chair back or chair rest.

Another object of the invention is in providing improved means for applying spring pressure to the back rest.

A further object of the invention is in providing an improved swinging arrangement of the adjustable back rest relative to the seating cushion of the chair.

A still further object of the invention is to provide an improved arresting means for holding the adjustment of the back rest.

Other and further objects will appear in the specification and be specifically pointed out in the appended claims, reference being had to the accompanying drawings, exemplifying the invention, and in which:—

Fig. 1 is a longitudinal vertical section taken through a portion of a reclining chair, showing this improved attachment applied thereto.

Fig. 2 is a fragmentary, horizontal section of Fig. 1 having intermediate portions thereof broken away.

Fig. 3 is a front elevation of Fig. 1, taken in the direction of the arrow 3.

With reference to the accompanying drawings, a pair of side plates 1 are secured in opposing positions to a reclining chair adjacent the meeting portions of the seating cushion 2 and back rest cushion 3, each of said plates being provided with a portion 4 for securing a rear chair leg 5 thereto, and a portion 6 for securing to a horizontally extending member 7.

The back rest 8 of the chair is comprised of a pair of upwardly extending side members 9, and transversely extending connecting members 10; and secured to each of the side members 9 by rivets or bolts, such as 11, is an angularly extending member 12, each of said members being pivoted at 13 at the extremity of its extending end to a respective plate 1.

Pivotally secured at 14 to each of the members 12 intermediately thereof is the upper end of a link 15, the lower end of each link being pivotally secured at 16 to a respective upwardly extending lever 17, each of said levers being swingable on a shaft 18 which is horizontally supported by and between the plates 1.

The hub portion 19 of each of the levers 17 are provided with a series of clutch teeth 20, said teeth of each lever being co-operable with the matching teeth of a respective collar 21, said collar being mounted on the shaft 18, and secured at 22 to each of said collars 21 is one end of a coil spring 23, each of said springs at their opposite ends being secured to a bracket 24, said brackets 24 being borne by a horizontally extended angle bar 25, each end of said angle bar being supported from respective plates 1.

Arranged to one side of the shaft 18 and on a plane thereabove is a shaft 26, said shaft at its end being supported in respective side plates 1, and secured to said shaft adjacent each end is an operating lever 27, each of said levers having a hand engaging portion 28. Arranged intermediate of the ends of said shaft 26 and secured thereto by a set screw 29 is an arresting lever 30 bearing a transversely extended pin 31 at its upper end, said lever at its upper end being arranged between a pair of racks 32, which are secured to the connecting members 10 of the back rest 8, said racks having opposing recesses 33 thereby providing teeth 34, said pin 31 of the lever 30 adapted to be engaged within respective opposing pairs of recesses 33 of said racks 32.

Mounted on the shaft 26 adjacent each of the operating levers 27 is a coil spring 35, each of said springs at one end bearing against a respective lever; whereas the opposite end of each spring bears against a respective bracket 36, the tension of said springs tending to swing the levers 27 and arresting lever 30 rearwardly on account of their retracting action on the shaft 26.

In the operation of this improved attachment to a reclining chair, assuming that the occupant is seated on the cushion 2, and it is desired to elevate the back rest 8, the hand engaging portion 28 of either of the operating levers 27 is pressed downwardly thereby rocking the shaft 26 and swinging the arresting lever 30 upwardly in which the pin 31 will become disengaged from its reposed position within a pair of recesses

33, in which the racks 32 will be released therefrom and in which the springs 23 of the shaft 18 will become active on the levers 17 of said shaft towards swinging said levers rearwardly, and in which the rear movement of said levers will tend to force the respective links 15, which are pivoted thereto towards straightened or alining positions therewith, and on account of said links being pivoted at their upper ends to the back rest members 12, said members 12 will be forced upwardly on their pivots 13 so that the back rest 8 will be moved upwardly towards a vertical position.

If it is desired to lower the back rest 8 towards a reclining position upon the release of the pin 31 from engagement with the racks 32, the occupant of the chair will lean backwardly so that the weight thereto will force said back rest downwardly against the resistance of the coil springs 23 of the shaft 18, and when a desired lowered position of the back rest has been reached, the operating lever 27 is released so that the springs 35 of the shaft 26 will become active on the arresting lever 30, and in which the pin 31 of said lever will be engaged within an adjacent opposing pair of recesses 33.

On account of the disposition of the pivots 13 of the members 12 relative to the shaft 26 an arc described through the pin 31 of the arresting lever from the shaft 26 will cross an arc described through any of the pairs of recesses 33 of the racks 32 described from the pivots 13, such disposition of the pivots 13 and shaft 26 providing for a perfect lock between the arresting lever 30 and the back rest 8 in any disposed position of the pin 31 relative to the racks 32.

The action of the toggle movement provided by the links 15 and respective levers 17 on the back rest 8 creates a maximum lifting force from the spring 23 to the back rest said toggle movement also providing means for increasing the resilient tension of the springs 23 when the occupant moves the back rest towards a reclining position.

On account of the pivots 13 of the members 12 of the back rest 8 being in an approximately horizontal alinement with the upper surface of the seating cushion 2, the heretofore gap provided between the seating cushion and back rest cushion is eliminated.

What I claim is:

1. In a reclining chair, a back rest therefor, a pair of oppositely disposed members angularly extended from said back rest, each of said members being pivoted to the chair, a link connected to each of said members, a lever connected to each of said links, and resilient means co-operable with each of said levers.

2. In a reclining chair, a back rest therefor, a pair of oppositely disposed members angularly extended from said back rest, each of said members being pivoted to the chair, a link connected to each of said members, a lever connected to each of said links, resilient means co-operable with each of said levers, and a swingable arresting member co-operable with said back rest.

3. A reclining chair comprised of a swingable back rest, a link having one end permanently connected to said back rest, a spring actuated lever connected to the opposite end of said link, and an upwardly extending spring-actuated arresting member co-operable with said back rest.

4. In a reclining chair, a back rest therefor, a pair of oppositely disposed members angularly extended from said back rest, each of said members being pivoted to the chair, a link connected to each of said members, a lever connected to each of said links, resilient means co-operable with each of said levers, a pair of longitudinally extending spaced apart rack members borne by said back rest, and an upwardly extending spring actuated arresting member having its upper end engaged between and co-operable with said rack members.

JOHN J. HOGAN.