Nov. 14, 1950 N. PERRY 2,530,264

ADJUSTABLE BACK RECLINING CHAIR

Filed March 17, 1947 2 Sheets-Sheet 1

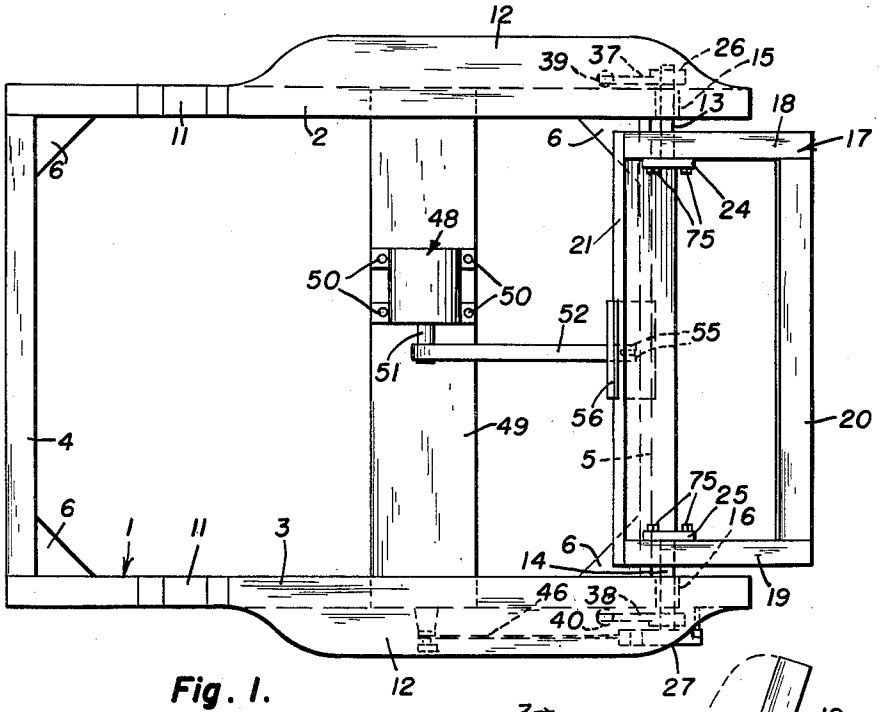


Fig. 1.

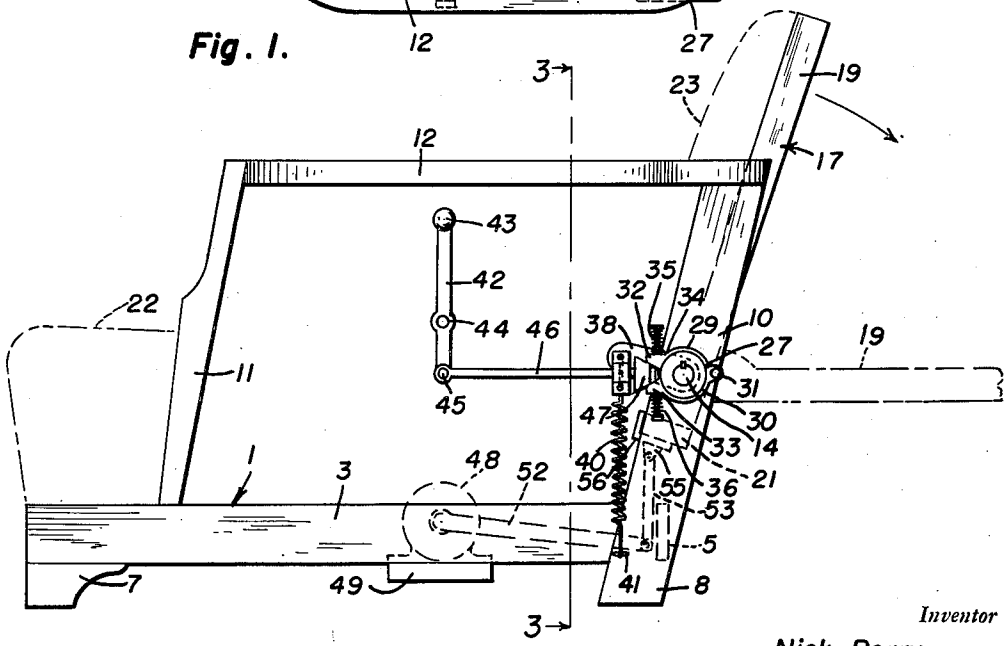


Fig. 2.

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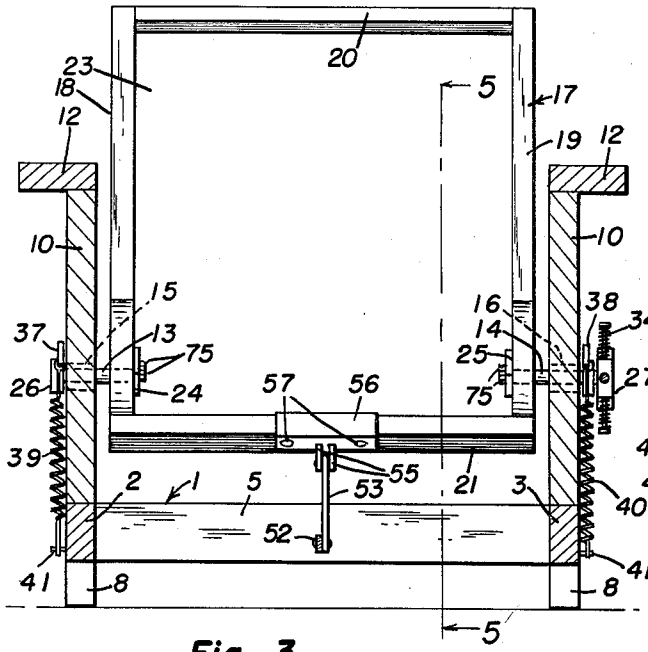


Fig. 3.

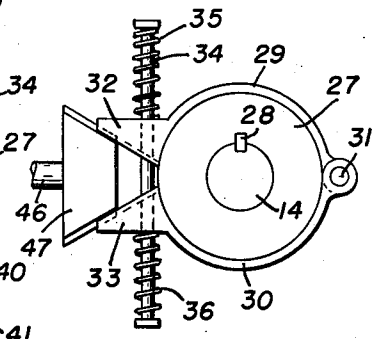


Fig. 4.

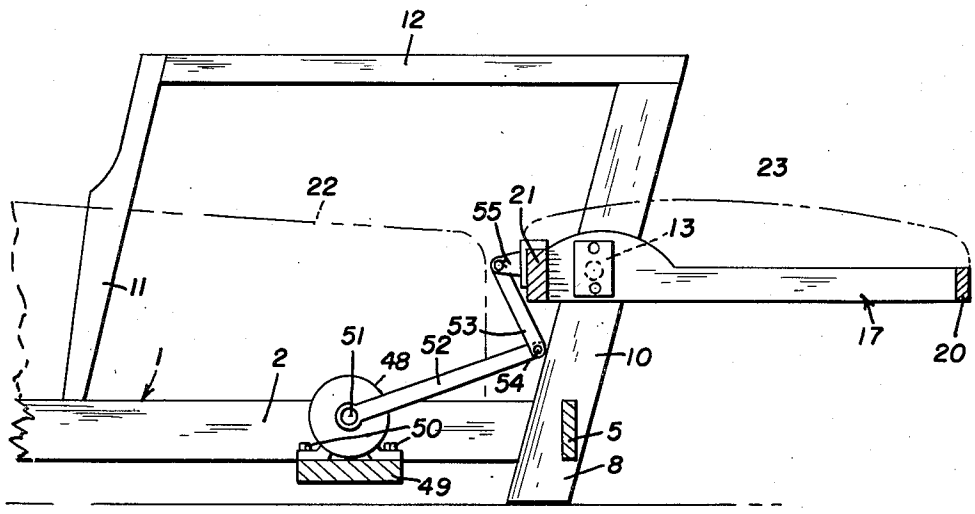


Fig. 5.

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UNITED STATES PATENT OFFICE

2,530,264

ADJUSTABLE BACK RECLINING CHAIR

Nick Perry, Chicago Heights, Ill.

Application March 17, 1947, Serial No. 735,067

2 Claims. (Cl. 155—160)

1

This invention relates to improvements in hydraulic back supporting reclining chairs.

An object of the invention is to provide an improved hydraulic back supporting reclining chair which will positively support the chair back whether in raised or lowered position, or at any angular inclination therebetween.

Another object of the invention is to provide an improved hydraulic back supporting reclining chair having occupant controlled means for lowering the chair back to any desired angle between its vertical and horizontal positions, and automatic means for slowly returning the chair back to its raised or vertical position when the occupant sits up in the chair after having reclined therein, or when the occupant leaves the chair.

A further object of the invention is to provide an improved hydraulic back supporting reclining chair which will be highly efficient in operation, and relatively inexpensive to manufacture and produce.

Other objects will appear as the description proceeds.

In the accompanying drawings which form a part of this application,

Figure 1 is a plan view of the improved hydraulic back supporting reclining chair showing the back in raised position;

Figure 2 is a side elevation of the improved hydraulic back supporting reclining chair showing the back in broken lines in its lowered or reclining position;

Figure 3 is a sectional view taken on the line 3—3 of Figure 2;

Figure 4 is an enlarged detail side elevational view of the resilient tensioning means for the back of the reclining chair, and

Figure 5 is a sectional view taken on the line 5—5 of Figure 3.

Like characters of references are used throughout the following specification and the accompanying drawings to designate corresponding parts.

In carrying out the invention, there is provided an improved hydraulic back supporting reclining chair having a substantially rectangular shaped chair seat frame generally designated by the reference numeral 1 formed by the opposite side rails 2 and 3, and the front and rear walls 4 and 5, respectively. Corner braces 6 of triangular shape are positioned in the corners of the frame 1 for reinforcing and strengthening the same.

Front legs 7 are provided at the front of the

2

chair frame 1, and rear legs 8 are formed by the depending or lowermost ends of the rear arm supporting members 10, which are secured to the seat frame 1.

Front arm supporting members 11 are secured to the forward and upper edges of the side frame rails 2 and 3 of the seat frame 1, and horizontally disposed widened arm rests 12 are connected to the upper ends of the members 10 and 11.

Oppositely disposed inwardly extending stub shafts 13 and 14 are rotatably supported in the metal bearing collars 15 and 16 extending through the rear arm supporting members 10 adjacent the central portions thereof.

A substantially rectangular shaped back frame 17 includes opposite side rails 18 and 19 which are enlarged at their lower ends, and connecting top and bottom rails 20 and 21 respectively. The stub shafts 13 and 14 are extended through the enlarged lower ends of the side rails 18 and 19 of the back frame 17, for providing pivotal movement for the back frame 17. Suitable upholstering for the seat frame and back frame is designated by the reference numerals 22 and 23, respectively.

Heads 24 and 25 are formed on the inner ends of the stub shafts 13 and 14 and are attached to the side rails 18 and 19 of the back frame 17 by bolts 75, while their cylindrical bearing spools or blocks 26 and 27 are formed on their outer ends, being secured by the keys 28 to the said stub shafts.

The arcuate metal braking or clamping bands 29 and 30 are hinged upon the hinge pin 31, and terminate at their forward ends in the angled bearing heads 32 and 33 which are bored to slidably support the vertical rods 34 upon which the coil springs 35 and 36 are mounted respectively upon the upper and lower ends of said rods between the same and said heads 32 and 33. The coil springs 35 and 36 serving to close the heads 32 and 33 toward each other to provide a resilient clamping action by the bands 29 and 30 upon the bearing spools or blocks 26 and 27.

The forwardly extending arms 37 and 38 are secured to the stub shafts 13 and 14 and support the upper ends of the coil springs 39 and 40, whose lower ends are attached to the eyes 41 secured to the rear outer surfaces of the seat frame side rails 2 and 3.

An operating lever 42 is provided with a handle knob 43 on its upper end, and is pivoted upon a pivot pin 44 suitably mounted on the chair arm, and has its lower end pivotally connected at 45 with the rearwardly extending actuating or re-

leasing rod **46** upon which the brake releasing wedge head **47** of triangular shape, is secured for slidably engaging between the angled surfaces of the bearing heads **32** and **33** for separating and releasing the same when said handle knob **43** is moved forwardly, thus permitting the chair back to be pushed to horizontal position or to any angle between its raised and lowered position.

A hydraulic cushioning or closing device **48** is attached to the cross rail **49**, disposed between the side rails **2** and **3** of the chair seat frame **1**, by means of the bolts **50**, and is provided with a central shaft **51** upon which a rearwardly extending operating arm **52** is mounted. A connecting link **53** is pivoted at **54** to the rear end of the arm **52**, and is connected at its opposite end between the ears **55** on the bracket **56** attached by means of the screws **57** to the bottom rail **21** of the chair back frame **17**.

The action of the hydraulic cushioning and closing device will be unrestricted as the back of the chair is moved to horizontal or reclining position, at which time the uphlostering **22** for the chair seat may be moved forwardly slightly to provide a substantially horizontally disposed cushioned reclining surface.

As soon as the occupant of the chair moves from reclining position to sitting position, or when leaving the chair, the hydraulic cushioning and closing device with the assistance of the stretched coil springs **39** and **40** will automatically and slowly raise the seat back to its upright position.

From the foregoing description, it will be apparent that there has been devised and provided a highly efficient form of hydraulic back supporting reclining chair, which will be relatively inexpensive to manufacture and produce.

While the preferred embodiment of the instant invention has been illustrated and described, it will be understood that it is not intended to limit the scope of the invention thereto, as many minor changes in detail of construction may be resorted to without departure from the spirit of the invention.

Having thus described my invention what I

claim as new and desire to secure by Letters Patent of the United States is:

1. An adjustable back reclining chair comprising a seat frame, chair side arms supported thereby, a chair back pivotally supported between said chair side arms, braking means associated with the chair back pivoting means for supporting said back at the desired angular inclination with respect to the chair seat including a cylindrical member rotated when the back is pivoted and a spring biased brake band on said cylindrical member, and a manually operated wedge member mounted for insertion between the ends of said brake band to release said brake when desired.

2. An adjustable back reclining chair comprising a seat frame, chair side arms supported thereby, a chair back having pivotal support means for mounting the chair back between said chair side arms, braking means associated with said pivotal support means to retain said back at the desired angular inclination with respect to said chair seat, and manually controlled means associated with said braking means for releasing said braking means when it is desired to change the inclination of the back with respect to the chair seat, said support means including trunnion-like stub shafts on said chair back, said braking means including braking bands clamping one of said shafts and having bearing heads in spaced opposed relation, and said manually controlled releasing means including a brake releasing wedge head slidably engaged between said bearing heads.

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The following references are of record in the file of this patent:

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