May 22, 1928. 1,670,555

O. ULRICH

RECLINING CHAIR LOCK

Filed May 17, 1926 2 Sheets-Sheet 1

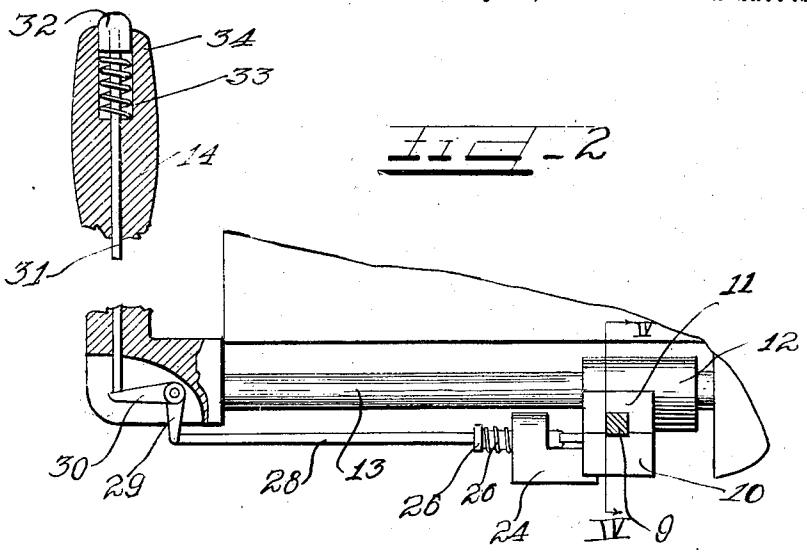


FIG. 2

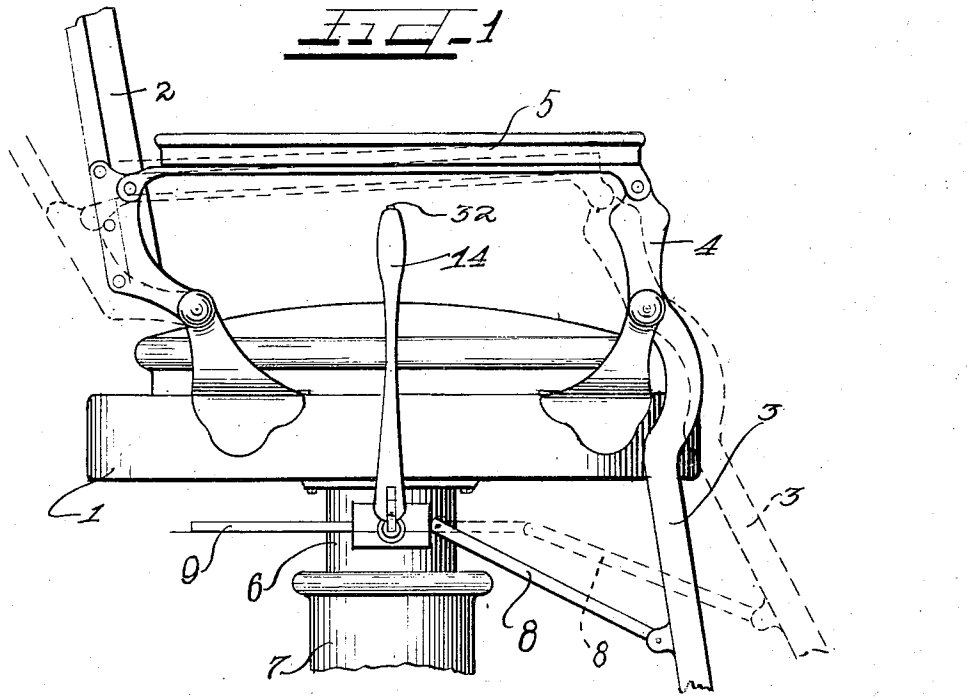


FIG. 1

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Fig. 3

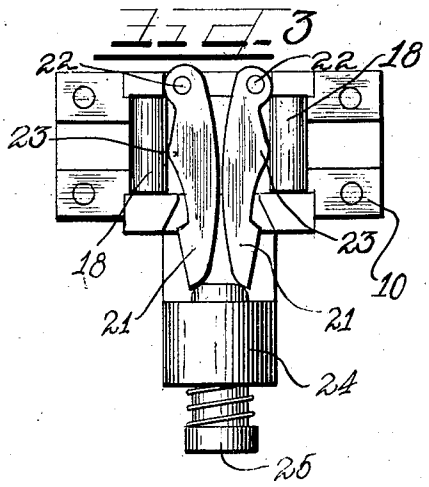


Fig. 4

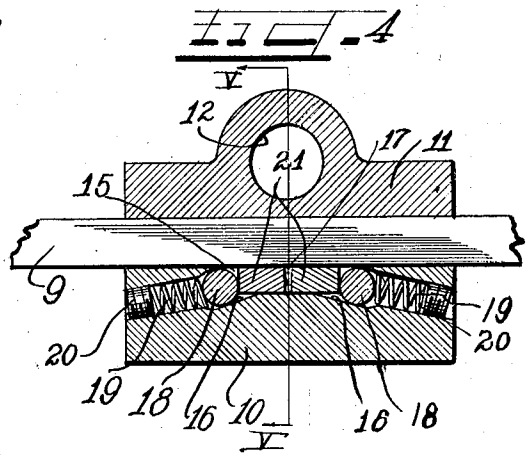


Fig. 5

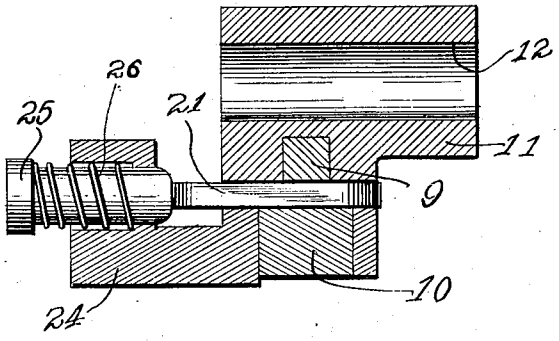
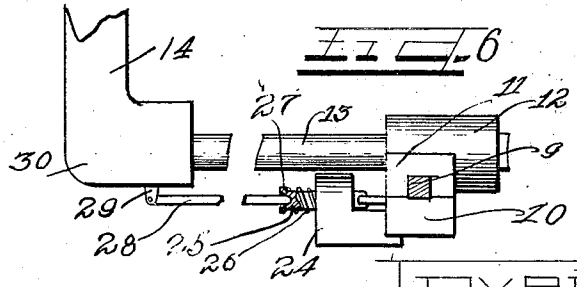


Fig. 6



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UNITED STATES PATENT OFFICE.

OSWALD ULRICH, OF CHICAGO, ILLINOIS, ASSIGNOR TO EMIL J. PAIDAR CO., A CORPORATION OF ILLINOIS.

RECLINING-CHAIR LOCK.

Application filed May 17, 1926. Serial No. 109,594.

This invention relates to locking mechanism for barber chairs.

Barber chairs as now constructed have tiltable backs and tiltable supports for the foot rests, which supports are connected for movement with the back. These parts are usually held in position by some locking or latching mechanism. In the past, such locking or latching mechanism has been more or less complicated, cumbersome, expensive, and inefficient. On account of its location and the fact that it had to be operated from the side of the chair, it has been difficult to provide a simple, cheap and efficient locking mechanism.

It is an object of this invention to eliminate the complicated and expensive locking mechanism heretofore used in the provision of simpler and less costly mechanism which is also more efficient and durable and more easily operated.

The invention comprises the novel structure and combination of parts hereinafter described and more particularly pointed out and defined in the appended claims.

In the accompanying drawings which illustrate a preferred form of this invention and in which similar reference numerals refer to similar features in the different views,

Figure 1 is a fragmentary elevational view of a barber's chair involving this invention and showing in dotted lines, certain parts in different positions.

Figure 2 is a part sectional and part elevational view illustrating certain mechanism that cooperates with my locking mechanism.

Figure 3 is an enlarged plan view of my improved locking mechanism.

Figure 4 is an enlarged sectional view upon the line IV—IV of Figure 2.

Figure 5 is a sectional view upon the line V—V of Figure 4.

Figure 6 is a view similar to Figure 2 with parts broken away.

Referring to the drawings, it will be noted that certain parts of a barber chair have been illustrated, especially those parts which co-act with or are desirable for explaining this invention. In the drawing, the reference numeral 1 denotes the seat of the chair, the reference numeral 2 denotes the back of the chair, and the reference numeral 3 denotes a support for the usual foot rest (not shown). The support 3 is connected to the back by means of the pivotally connected arms 4 and 5 as is usual in the art. From the bottom of the chair, there extends the usual plunger 6 which telescopes in the hydraulic casing 7.

This invention concerns itself more directly with releasable locking means for controlling the positions of the parts 2 and 3. To this end, a link 8 is pivotally connected at one end to the support 3. The other end of this link is pivotally connected to a slidable rod 9 supported between a pair of bearing blocks 10 and 11, the latter of which is provided with a suitable groove for receiving the rod. These blocks may be suitably secured together; the upper block 11 is provided with a journal bearing 12 for receiving the usual operating shaft 13 which controls the raising and lowering of the chair and which is provided with the handle 14.

In referring to Figure 4, it will be observed that the aforementioned block 10 is provided with a cavity or recess 15 extending inwardly from its upper end. This recess is provided with a pair of downwardly inclined surfaces 16 which merge into a relatively horizontal surface 17 therebetween. A roller 18 is positioned upon each inclined surface, and a coil spring 19 confined in a groove beyond each roller tends to force its roller into frictional locking engagement with the bar 9. The grooves that confine the springs 19 are preferably closed at their outer ends by removable plugs 20 which may also be used for adjusting the tension of the springs 19.

Upon the horizontal portion 17 of the aforementioned recess are a pair of dogs 21 which are pivoted at their rear ends to the top of the block 10, as indicated at 22 (Fig. 3). These dogs are positioned side by side between the rollers 18, and upon the outer edge of each dog, there is a convex hump 23 for coaction with the adjacent roller. The inner edges of the dogs slope outwardly at their front ends to provide an entering wedge-shaped recess therebetween for a purpose that will appear later.

An L-shaped bearing 24 extends from the block 10. A headed plug 25 is slidably mounted in the foot of said L-shaped bearing. The bearing aperture for said plug is slightly enlarged inwardly of its outer end for receiving a spring 26 which is confined between the head on the plug and the annular shoulder formed by said enlargement

of the bearing aperture. The inner end of the plug 25 is slightly convex or wedge-shaped in order that it may readily enter the wedge-shaped recess between the dogs 21 for separating the same and shifting the rollers 18 to inoperative position.

The outer end of the plug 25 is provided with a socket 27 (Figure 6) for receiving one end of an actuating rod 28. The other end of this actuating rod is pivoted to one arm 29 of a bell crank lever pivoted at its apex in a recess in the handle 14. The other arm 30 of the bell crank lever is adapted to be operated by a thumb rod 31 which is slidably mounted in the handle 14. The upper end of the rod 31 is provided with a finger piece 32 which fits in a suitable socket 33 in the top of the handle 14. A coil spring 34 which rests upon the bottom of said socket, bears against said finger piece 34 for normally elevating the rod 31.

In operating the structure involving this invention, the operator with one hand pushes downwardly upon the finger piece 32 for actuating the bell crank lever in a counter-clockwise direction. Such actuation of the bell crank lever will force the rod 28 against the plug or plunger 25, causing the same to slide against the tension of the spring 26 for actuating or separating the dogs 21. As the dogs 21 are separated or swung outwardly upon their pivot points, the rollers 18 will be shifted downwardly and out of contact with the bar 9 releasing the same. The operator may then tilt the back of the chair with the other hand, since the bar 9 is now released for sliding movements, as shown in dotted lines in Figure 1. Of course, the support 3 which is connected to the back will be simultaneously adjusted. When the proper inclination of the back has been effected, the operator will release the finger piece 32, whereby the springs 19, 26 and 34 will restore the parts to normal position, the rollers 18 being forced to frictionally lock the bar 9 through the force of the aforementioned springs 19.

From the foregoing, it will be apparent that a very simple and easily operated locking mechanism has been provided which automatically locks the parts in adjusted position as soon as the lock actuating means is released, and the greater the pressure on the tiltable part the more effective will the locking mechanism become. In other words, the rollers will bind more tightly against the shiftable bar.

I am aware that many changes may be made, and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon, otherwise than necessitated by the prior art.

I claim as my invention:

1. In a barber chair having tiltable parts, an adjustable member connected to said parts, rolling means for locking said member, a pair of dogs for shifting said rolling means, an element slidably engageable between said dogs for shifting the same in opposite directions, and means for sliding said element.

2. In a barber chair having tiltable parts, an adjustable device connected to said parts, a pair of rolling members for locking said device, a pair of dogs between said rolling members and pivoted to swing in opposite directions, a shiftable element for swinging said dogs in opposite directions, said element having a socket, a rod engaging in said socket, and means for shifting said rod.

3. In a barber chair having a tiltable part, a member connected to said part, a pair of rollers for locking said member, a pair of dogs pivoted between said rollers, and an operated member adapted for engaging between said dogs for separating the same for shifting said rollers to unlocking position.

In testimony whereof I have hereunto subscribed my name.

OSWALD ULRICH.