

Feb. 27, 1934.

C. F. DORRELL

1,948,786

BARBER'S CHAIR

Filed March 27, 1933

2 Sheets-Sheet 1

FIG. 1.

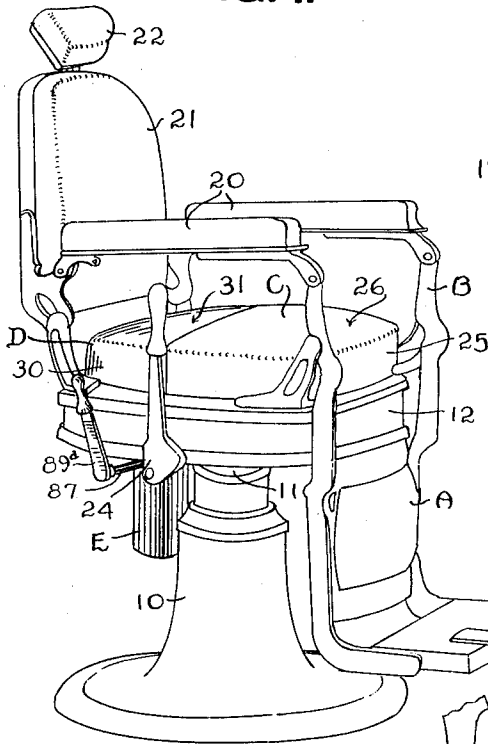


FIG. 3.

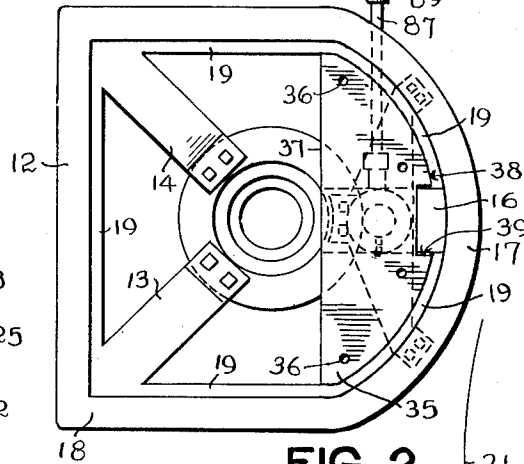


FIG. 2.

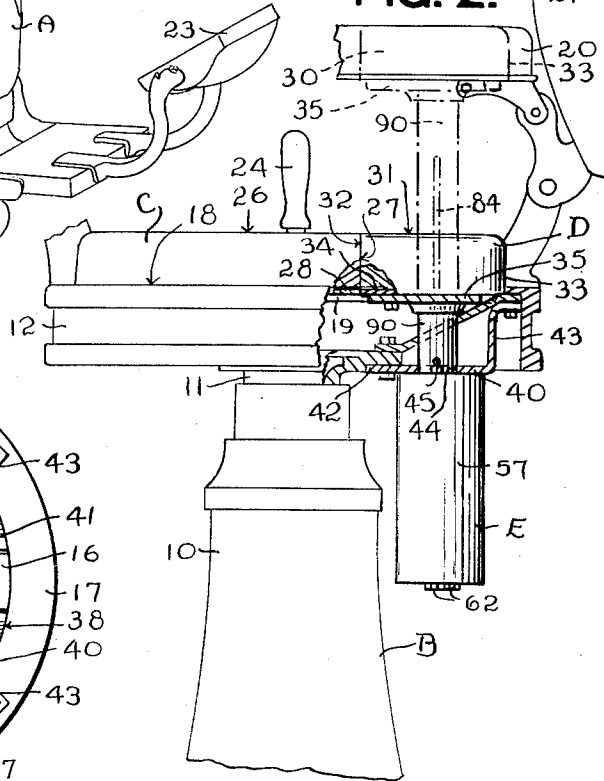
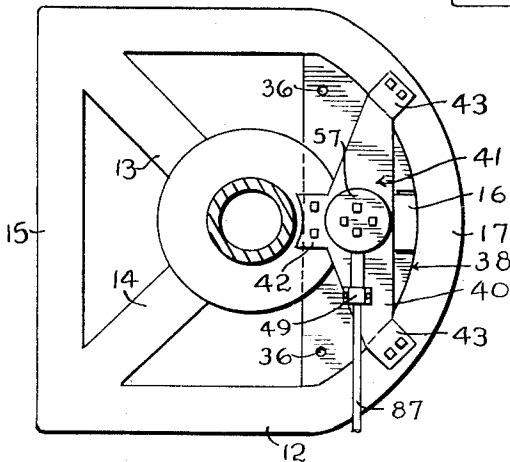


FIG. 4.



INVENTOR.

Clarence Frederick Dorrell

BY

Lancaster, Allum and Rommel
ATTORNEYS.

Feb. 27, 1934.

C. F. DORRELL

1,948,786

BARBER'S CHAIR

Filed March 27, 1933

2 Sheets-Sheet 2

FIG. 5.

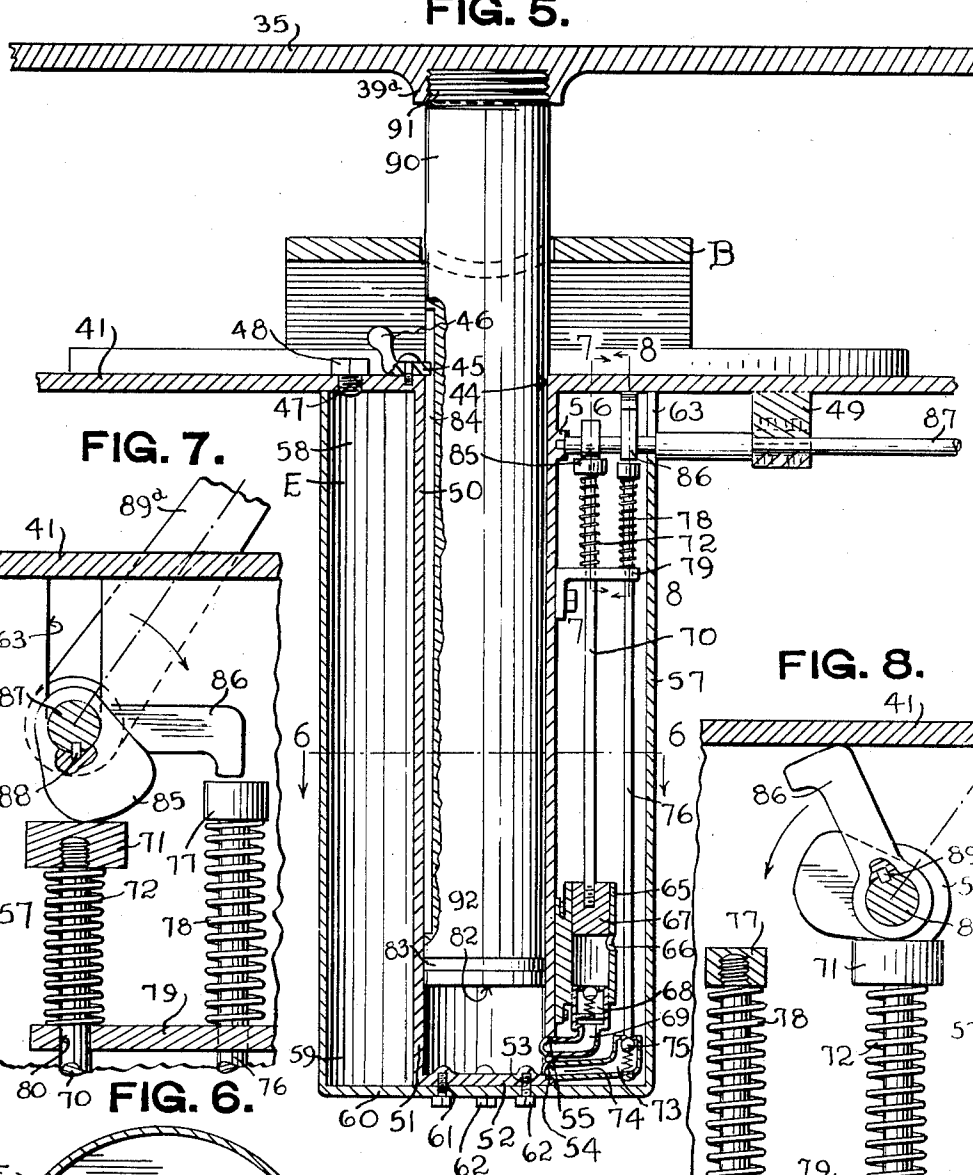


FIG. 7.

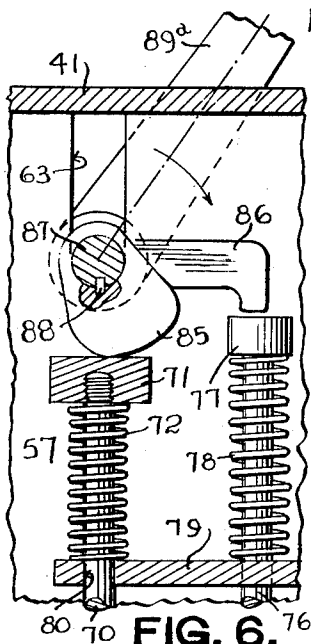


FIG. 6.

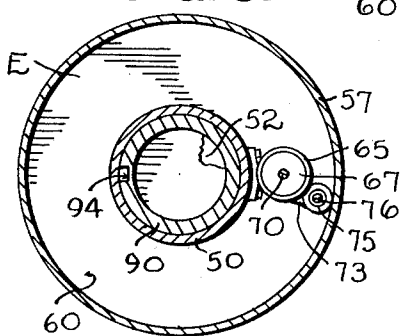
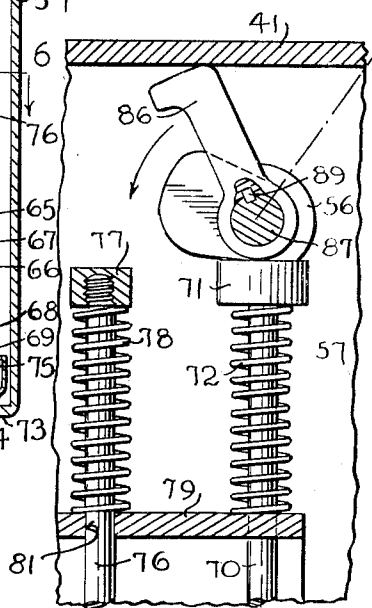


FIG. 8.



INVENTOR.
Clarence Frederick Dorrell

BY *Lancaster, Allwin and Commel*
ATTORNEYS.

UNITED STATES PATENT OFFICE

1,948,786

BARBER'S CHAIR

Clarence F. Dorrell, Treece, Kans.

Application March 27, 1933. Serial No. 663,015

6 Claims. (Cl. 155—132)

This invention relates to chairs and more particularly to a chair having a major and a minor seat portion.

Attempts have been made to adapt the conventional barbers' or dentists' chairs, particularly, for the seating of children as well as adults, but the adaptations have not been generally successful. Where an auxiliary seat has been provided, bridging and resting upon the rear portions of the arms of the chair, this seat, unless especially secured, was inclined to slip, was cumbersome, not adjustable, marred the surface of the arms, and if upholstered, raised the child too high.

The principal object of this invention is to provide a novel chair, particularly adapted for use by barbers and dentists operating upon children, and which chair is provided with a major seat portion and a minor seat portion to the rear of the major seat portion, both capable of being jointly raised and lowered by means of the conventional jack associated with such chair, or the minor seat portion capable of being raised or lowered independently of the major seat portion.

Another object is to provide such a chair in which the conventional back rest thereof may be used by the child and in which no supplementary foot rest is necessary.

Still another object is to provide a chair of this kind having no portion of the seat frame of the minor seat portion projecting forwardly beyond its seating surface, so that there is no frame interfering with the legs of the child.

Another object is to provide such a chair to accommodate either adults or children since many children seem to prefer to use a grown up's chair rather than the novel chairs provided particularly for their use in barber shops and the like.

Still another object is to provide such a chair which makes provision for the easy and quick lowering or raising of the minor seat portion so that it is not necessary for the operator to manually detach and remove the minor seat portion in order to again adapt the chair for adult use.

Another object is to provide a minor seat portion which may be installed as a part of a conventional barber's or dentist's chair with only minor alterations to the conventional chair.

Still another object is to provide a sturdy, steady and relatively inexpensive minor seat portion to be installed as described in the preceding paragraph.

Another object is to provide a novel jack for raising and lowering this minor seat portion.

Other objects and advantages of this invention will be apparent during the course of the following detailed description, taken in connection with the accompanying drawings, forming a part of this specification and in which drawings:—

Figure 1 is a perspective view of a conventional barber's chair provided with the novel major and minor seat portions.

Figure 2 is a side elevation of the same, with parts broken away to better illustrate portions of the construction.

Figure 3 is a top plan view of the chair frame with the minor seat portion in place.

Figure 4 is a bottom plan view of the construction shown in Figure 3.

Figure 5 is a vertical section through a portion of the chair showing the elevating and lowering means for the minor seat portion.

Figures 6, 7 and 8 are views substantially on their respective lines in Figure 5.

In the drawings, wherein for the purpose of illustration is shown only a preferred embodiment of the invention, the letter A may designate generally the chair as a whole, B the conventional portions thereof, including the major seat portion C, and the letter D the minor seat portion and E the jack for elevating and lowering the minor seat portion.

The chair A is such as may be employed by barbers and dentists, particularly where the customers and patients are, in part, children.

The conventional portions B of the chair include an open ended, hollow, preferably bell-shaped base portion 10 resting upon the floor and housing a conventional jack, such as are employed in such chairs, including a plunger 11 slidable into and out of the upper end of the base portion. Carried by this plunger 11 is a seat frame 12 which is supported upon the upper end of the plunger by means of upwardly and outwardly extending arms or brackets 13 and 14 which connect the forward portion 15 of the seat frame 12 to the plunger 11, and a bracket 16 connecting the back portion 17 of the seat frame 12 to the plunger 11.

The upper face 18 of this seat frame 12 may be provided with a shoulder 19 about the inner edges of the frame, upon which the cushion or seat portion is adapted to rest. Secured at the front end of this upper face of this frame 12 are a pair of spaced apart conventional arm rests 20 and the rear ends of these arm rests are preferably secured to a conventional back rest 21 which may carry a head rest 22 at its upper end.

A conventional foot rest 23 is preferably carried at the front of the chair for the use of adults. A lever arm 24 projects upwardly at one side of the chair and is provided for controlling the raising and lowering of the chair, as is well known in the art.

The major seat portion C preferably includes a resilient cushion 25 which is carried by the forward portion 15 of the seat frame 12. The seating or upper surface 26 of this cushion is preferably substantially horizontal and the rear face 27 of the cushion is preferably substantially vertical and smooth. The cushion 25 may have a base 28.

As for the minor seat portion D, it includes a resilient cushion or seat 30 which is located to the rear of the resilient cushion 25. The seating or upper surface 31 of the cushion 30 is preferably substantially horizontal and in the same plane as that of the upper surface of the cushion 25 when the two cushions are in their normal positions for seating adults. The front face 32 of the cushion is preferably substantially vertical and normally confronts the face 27 of the cushion 25. It will be noted from Figure 2, where the raised portion of the cushion 30 is shown in dots and dashes, that the rear face 33 of the cushion 30 is quite close to the front face of the back rest 21, thus providing a combination which insures a comfortable seat for the child, since the back rest is near enough the cushion 30 so that the child may lean back against the back rest without a big gap between the cushion 30 and the back rest 21. This cushion 30 may be provided with a base portion 34 and this base portion is suitably secured to a preferably flat seat or cushion support member or plate 35. Spaced apart perforations 36 are provided in the plate 35 for accommodating suitable fasteners for that purpose. This plate 35 has a preferably straight forward edge 37 and an arcuate rear edge 38. The cushion 30 is normally carried by the back portion 17 of the frame 12 upon the shoulders 19 since the plate 35 is of a length and width to clear the shoulders 19 as shown in Figure 3, whereby the bottom of the cushion 30 overhangs the plate 35. So as to accommodate the end of the bracket or arm 16, the rear portion of the plate 35 is provided with a shallow slot or recess 39 upon its lateral medial line. The under surface of the plate 35 is provided with an internally screw threaded collar 39a for a purpose later described.

This plate 35 when elevated is carried by the plunger of the jack E, as will be more fully described. The jack E is preferably carried by the chair A by means of a bracket 40 which includes a flat elongate portion 41 having an arm 42 extending forwardly from substantially its lateral medial line and secured to the plunger 11. Preferably two L-shaped arms 43 connect the portion 41 to the rear portion 17 of the frame 12. This portion 41 is provided with a substantially central circular aperture 44 to slidably accommodate the plunger of the jack E. Carried by the upper face of the portion 41 is a dog 45 which is projectable at one end slightly into the plane of the aperture 44 and is pivoted to the portion 41, having a thumb hold 46 at its other end for manually operating the dog. The function of this dog will be later described in detail. This portion 41 is also provided with a preferably screw threaded aperture 47 adjacent the aperture 44 and a suitable cap or plug for the aperture 47. Welded or otherwise suitably secured to the under side

of the portion 41 is a bearing 49 for a purpose later described.

Welded or forming an integral part of the bracket 40 is a preferably elongate tubular member 50 depending substantially centrally from the under side of the portion 41. One end of this tubular member 50 surrounds the aperture 44 and while this end is open, the opposite or lower end 51 is closed as at 52 and provided with a plurality of screw threaded sockets 53. Adjacent this lower end 51 is a screw threaded opening 54 and slightly above or adjacent the same is a second preferably screw threaded opening 55. Adjacent the opposite end of the tubular member 50 is an exterior bearing 56 welded to or forming a part of the member.

About this tubular member 50 is a preferably elongate, upstanding tubular housing 57, larger in circumference than the tubular member 50, so that the walls of each are spaced apart when assembled. This housing is open at its upper end 58 with the edge thereof in contact with the under surface of the portion 41 of the bracket 40. The opposite end 59 of the housing 57 is closed as at 60 and has a plurality of perforations 61 disposed about its axis and aligning with the sockets 53 to accommodate the shanks of screws 62 or the like which couple the member 50 and the housing 57 together as shown in Figure 5. The open upper end 58 of the housing is provided with a slot 63 for a purpose later described. The closed end 59 is raised a very appreciable distance above the plane of the bottom of the base portion 10, as may be seen from Figure 1 and may be appreciated by a comparison of Figure 2 with Figure 1.

Means is provided for discharging fluid contained between the walls of the tubular member 50 and the housing 57 into the tubular member 50. This means includes a pump embodying a hollow cylinder 65 secured to the outer surface of the tubular member adjacent the bottom thereof. The cylinder has a suitable intake port 66. A piston 67 reciprocates within this cylinder. At the lower end of the cylinder is a suitable check valve 68 disposed to prevent the flow of fluid from the tubular member 50, and a hollow elbow 69 is connected between the opening 55 and the valve 68. This piston 67 is provided with a piston rod 70 extending upwardly between the walls of the tubular member 50 and the housing 57. The free end of this rod is preferably provided with an enlarged head 71 and a coil spring 72 below the head, and encircling the rod. This coil spring has sufficient strength to support the rod and piston in a position so that the piston is normally at the beginning of the stroke and so that the spring may restore the piston from the end to the beginning of the stroke.

Means is also provided for discharging fluid from the tubular member 50 to the housing 57, including an L-shaped tube 73 connected to the tubular member 50 at its screw threaded end 74 at the opening 54. This tube 73 is provided with a ball check valve 75 disposed to normally prevent the flow of fluid from the housing to the tube 73 into the tubular member.

Disposed so as to contact with the ball of this last named check valve 75 is a stem 76 extending upwardly between the walls of the tubular member 50 and the housing 57. The upper end of this stem is preferably provided with an enlarged head 77 and a coil spring 78 below the head, encircling the stem. This coil spring has sufficient strength to support the stem so that

it will not normally depress the ball of the check valve 75.

One end of each coil spring bears against the head of the member it encircles and the opposite end bears against a suitable bracket 79 extending radially from the outer surface of the tubular member 50. This bracket has a pair of spaced apart perforations 80 and 81, one slidably accommodating the rod 70 and the other the stem 76.

Contacting with the head 71 of the rod 70 is a cam 85 and to strike the head 77 of the stem 76 is a striker 86. These are mounted upon a shaft 87, as by keys 88 and 89, and spaced apart as shown in Figure 5, while the relationship of the two (cam and striker) is shown particularly in Figure 7. This shaft 87 is accommodated at its inner end in the bearing 56 and projects through the slot 63 and is then carried by the bearing 49, through which it projects and extends beyond the frame 12 where it is provided with a suitable handle 89^a. By referring to Figure 8, it will be seen that the longitudinal medial line of the handle 89^a (represented by the dot and dash line) is disposed so that the handle will be held in an inclined position by the free end of the striker 86 coming in contact with the under side of the bracket 41. Thus the striker retains the handle from seeking a downwardly extending position.

From Figure 7, which shows the position of the rod 70 when the piston is at the end of its stroke, it can be seen that further movement of the cam 85 will not depress the piston further but will cause the striker 86 to hit the head 77 of the stem 76 and thus depress the ball of the check valve 75. Thus it can be seen that rocking of the handle 89^a in a prescribed arc will pump fluid into the tubular member and a further movement of the handle in one direction (that of the arrow in Figures 7 and 8) will open the valve so that fluid will flow from the tubular member into the housing.

The plunger 90 which slides within the tubular member 50 is connected at its upper or screw threaded end 91 to the plate 35 at the screw threaded collar 39^a. The opposite end 82 of the plunger 90 clears the bottom of the tubular member so that the intake port of the tubular member is never closed by the plunger. The plunger is provided with a suitable packing 83 and by a longitudinal slot 84 above the packing which may be engaged by the end of the dog 45, thus preventing rotation of the plunger and minor seat portion.

When a suitable quantity of fluid, such as oil, is poured into the housing through the opening 47 and the jack is operated by oscillation within a defined arc of the handle 89^a, the oil will be pumped into the tubular member 50 below the end of the plunger 90 thus elevating the plunger carrying the plate 35 and cushion 30. Further movement of the handle in the direction of the arrows in Figures 7 and 8 will cause the means provided to discharge fluid from the tubular member to the housing to function and the weight of the plunger and its load will cause the oil to again enter the compartment between the walls of the tubular member and the housing.

Thus, it will be seen that the minor seat portion may be raised independently of the major seat portion so that a child may be elevated above the major seat portion with the child's head resting comfortably on the head rest 22 and the child's back against the back rest 21 and his feet resting upon the major seat portion. A

movement of the handle 89^a will then lower the minor seat portion and the chair is ready for an adult.

In the construction disclosed, major and minor seat frames only are not provided but distinctive major and minor cushioned seats, which may be employed together or separately with none of the bother and inconvenience attending the use of an auxiliary seat laid across the arms of the chair.

The compact arrangement of the jack E, with the disposition of the elevating and lowering means within the space between the tubular member and the housing, permits its use where space is at a premium and the few parts employed insure low cost and little expense due to repairs.

The working parts of the jack are easily uncovered, since removal of the screws 62 will permit the housing to be detached from the tubular member and the pumping and fluid discharging means carried thereby. The housing 57 will then carry the fluid and may be lowered upon its bottom to the floor, catching drip from the pumping and fluid discharge means which means are thereby wholly exposed for inspection, since these means are carried by the tubular member 50.

Various changes may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the claims.

What is claimed is:

1. In a chair, a major seating portion, a minor seating portion, and means for moving the minor seating portion in a vertical plane independently of the major seating portion and clear of the vertical plane of said major seating portion.

2. In a chair, a seat frame, a major seating portion rigidly secured to said frame, a minor seating portion to the rear of the major seating portion, and means for moving the minor seating portion to various vertical planes above said seat frame independently of the major seating portion and clear of the vertical plane of said major seating portion.

3. In a chair, a back rest, a major seating portion and a minor seating portion to the rear thereof and close adjacent said back rest, each portion having a cushioned seating surface in normally the same substantially horizontal planes and a substantial vertical face confronting each other, and means for moving the said surfaces out of their aligning horizontal planes and for moving said face of said minor seating portion in a plane paralleling at all times the vertical plane of said face of said major seating portion and out of confronting relation with said face of said major seating portion.

4. In a chair, a seat frame, a cushion rigidly secured upon the front portion of said frame, a separate cushion for the rear portion of said frame, means for moving and retaining said separate cushion into various horizontal planes above and substantially paralleling the seating surface of said first named cushion, for moving said separate cushion along the same vertical plane at all times during said horizontal movement thereof and for retaining said separated cushion in any of said various horizontal planes and outside the vertical plane of said first-named cushion, and means for supporting said last named means on said frame.

5. In an elongate minor seating portion for barbers' chairs and the like, a flat seat-supporting member, a bracket below said member with

- the major portion thereof in a horizontal plane substantially paralleling the horizontal plane of said seating portion, means carried by said bracket, including a plunger connected to said member at substantially the lateral medial line thereof, for moving said member into various horizontal planes, and means carried by said plunger and bracket to prevent rotation of said member and plunger when being so moved.
6. In a barber's chair, the combination with a base portion, a seat frame mounted thereon and a cushion support portion movably carried upon said seat frame, of a tubular member carried by and depending from said seat frame and offset laterally with respect to said base portion, a housing having a closed bottom wall, means detachably securing said housing about said tubular member with said bottom wall raised an appreciable distance above the plane of the bottom of said base portion, a plunger slidable within said tubular member, depending from and secured to said cushion support portion, means carried by said tubular member for discharging fluid from said housing into said tubular member below said plunger, and means carried by said tubular member for discharging fluid from said tubular member into said housing, whereby said housing may be detached and lowered, carrying therewith said fluid and free of said two means and said tubular member.
- CLARENCE F. DORRELL.
- 20
- 25
- 30
- 35
- 40
- 45
- 50
- 55
- 60
- 65
- 70
- 75
- 80
- 85
- 90
- 95
- 100
- 105
- 110
- 115
- 120
- 125
- 130
- 135
- 140
- 145
- 150