

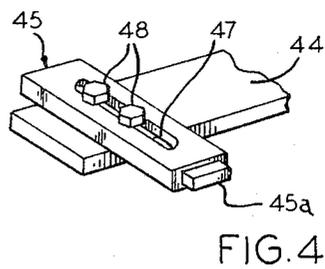
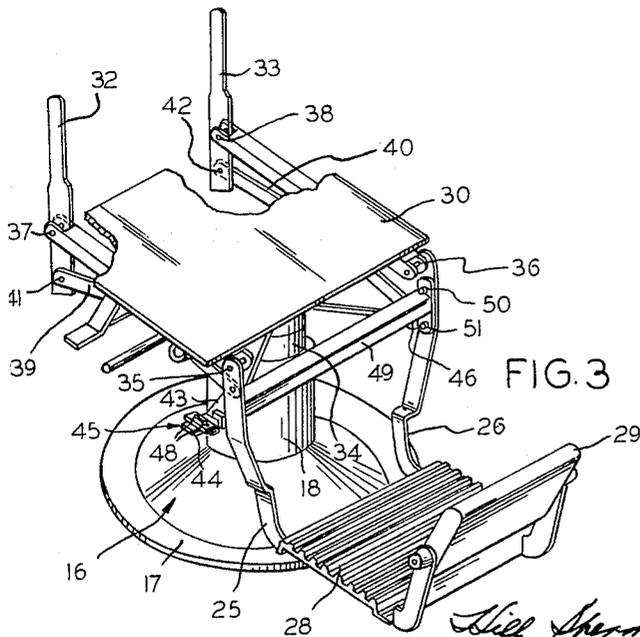
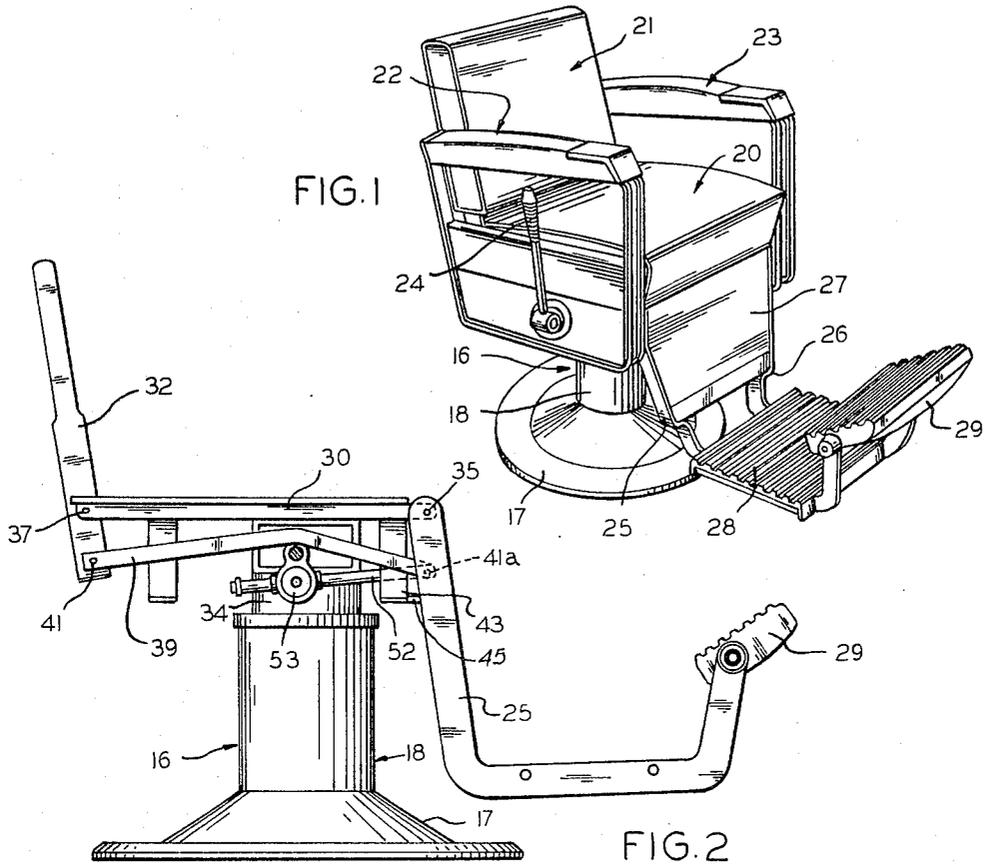
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BARBER CHAIR WITH ADJUSTABLE SEATING ANGLE

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BARBER CHAIR WITH ADJUSTABLE SEATING ANGLE

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The present invention relates to improvements in structures for barber chairs and the like.

More particularly the invention pertains to a barber chair having an upright base with an elevatable chair frame supported on the base for being raised and lowered with a backrest and a footrest supported on the frame and the backrest and footrest each having pivotally supported side arms. The footrest and backrest move through a plurality of pivotal positions to accommodate the comfort of the occupant of the chair and accommodate the functions which the barber is performing on the occupant. For obtaining a long useful life of the chair and retaining the comfort of the occupant the chair must be stable in all positions and must not become loose or wobbly. Considerable stress is placed on the parts particularly when the occupant steps into the chair as it is conventional for him to mount the chair by stepping on the footrest and at that time a force having a cantilever action is being applied to the pivotal joints connecting the footrest to the chair.

An important object of the present invention is to provide a chair structure wherein the pivotal positions of the parts are positively interrelated and stress between the parts is maintained at a minimum particularly when the footrest is in the lowered position and the chair occupant is mounting the chair by stepping on the footrest.

Another object of the invention is the provision of mechanism wherein the angle of the chair parts and particularly of the chair backrest and foot plate for the chair can be adjustably determined without introducing stress on parts.

Yet another object of the invention is to provide an improved chair structure wherein the parts are interrelated for long wear and maximum service and stress is reduced when the parts are rapidly and firmly moved to a neutral position wherein the chair footrest is lowered.

Other objects, advantages and features will become more apparent with the teaching of the principles of the invention in connection with the disclosure of the preferred embodiment thereof in the specification, claims and drawings, in which:

FIGURE 1 is a perspective view of a barber chair constructed and operating in accordance with the principles of the present invention;

FIGURE 2 is a side elevational view with portions removed to show the inner framework of the chair;

FIGURE 3 is a perspective view with portions removed for clarity of the chair frame; and

FIGURE 4 is a fragmentary enlarged perspective view of a portion of the chair frame.

On the drawings:

As shown in FIGURE 1, a barber chair includes a generally upright base 16 with a flat lower steel platform 17 which rests on a floor in an upright column 18. The column is provided with the usual elevating and lowering mechanism for raising and lowering the chair to conveniently position the chair occupant in accordance with the barber's needs.

At the top of the elevating column 18 is a chair frame which is rigidly positioned so that the chair parts are supported thereon. The chair frame rotates and elevates and lowers so that all functional parts of the chair must move with it and be rigidly related to it in any operating position.

The chair frame supports a seat 20 with a backrest 21 which is pivotally supported at the rear of the frame. At the sides are arm rests 22 and 23. A control handle 24 functions to raise or lower the chair or apply a brake to lock it in an adjusted position.

At the front of the chair frame is a footrest having side footrest arms 25 and 26 with a board or apron extending therebetween. A foot plate 28 extends between the arms in a generally horizontal position and the chair occupant will step on this foot plate 28 when mounting the chair and when leaving the chair. A pivotal foot support 29 is also mounted at the ends of the footrest arms 25 and 26 for the occupant to rest his feet in extended position.

Positive rigidity must be afforded the footrest in the lowered position, which is the position shown in FIGURE 1, so that when the cantilever force which is applied to the chair as the occupant mounts the plate occurs, the parts do not twist or bend to cause wear or maladjustment. Further this position is important since for the major portion of operations, and particularly haircutting, the parts are in the upright position shown (with the footrest lowered) and the backrest 21 and footrest apron 27 must be in a comfortable location. Since this position requires strength for the occupant mounting the chair, and is in the position that the parts occupy for the major time that the chair is used, the present invention provides a great stability in this position.

The appearance of the internal parts of the chair is shown in FIGURES 2 and 3. The chair is a frame 30 which is rigidly mounted at the top of the lift column 34. The column 34 is provided with bearings, not shown, which maintains it vertical in elevating and lowering and in rotating. The frame 30 is rigidly horizontal although it lowers and elevates and rotates.

The backrest includes pivotal arms 32 and 33 which are pivotally supported on hinges or brackets 37 and 38 at the rear edge of the frame 30. The frame 30 is shown in the form of a plate adapted for supporting the seat 20; although it may take other forms, as will be appreciated by those versed in the art.

The footrest arms 25 and 26 are pivotally supported on hinges or pivots 35 and 36 at the front edge of the frame 30.

For positively relating the pivotal positions of the backrest and footrest, side rods or bars 39 and 40 extend longitudinally of the chair with the interconnecting bars being pivotally connected at 41 and 42 to the backrest arms. The front ends of the bars are pivotally connected to the individual footrest arms 25, as shown at 41a in FIGURE 2.

At a lowered position the footrest arms 25 and 26 engage stop members 45 and 46. The stop members are rigidly related to the frame 30 by being mounted on a downwardly extending rigid brace 43. The stop members have a forward engaging projecting abutment surface 45a which may be of nylon or rubber to offer a slight resiliency and assimilate the shock if the footrest arms are rapidly brought against the stop members.

The stop members have elongated slots such as shown at 47 and bolts 48 extend upwardly from the brace 44 through the slots so that when the bolts are tightened the stop members are locked in position. The stop members thus are individually adjustable, and stop member 46 is provided with the same construction and the same relationship to the brace 44.

Thus, the stop members can be adjusted longitudinally to the chair and to the frame 30 to determine the angle of the footrest and backrest 21 when the footrest is in the lowered position.

The relative angle between the footrest arms 25 and 26 is fixed by the foot plate 28 and by a cross bar 49. The cross bar 49 is provided with ears at its ends having holes to receive bolts 50 and 51 which secure the ends

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to the footrest arms. The bolts 50 and 51 secure the bar 49 to the arm 26, and a similar structure which need not be shown in detail is provided at the other end of the bar 49 to attach it to the arm 25. This bar is removably attached so that during assembly the relationship of all of the parts may be established before they are tightened. The arms 32 and 33 at each side of the backrest and the arms 25 and 26 at each side of the footrest preferably are at the same angle for comfort and strength, and this can be established by adjustment of the stop members 45 and 46. By rigidly attaching the cross bar 49 and the foot plate 28 at this angular position of the arms their relative position will be established and this will hold the relative position of the arms 32 and 33 for the backrest inasmuch as they are each positively related to the footrest arms by the rods 39 and 40.

In operation the angle of the back is established by adjusting both of the stop members 45 and 46. The rigidity of the unit is established by adjusting the stop members 45 and 46 relative to each other. This also accommodates minor inaccuracies in construction of the frame 30 and of the brace 43.

Thus, it will be seen that I have provided an improved chair structure which meets the objectives and advantages above set forth and which avoids weaknesses and yieldability of parts of chair structures heretofore available.

The drawings and specification present a detailed disclosure of the preferred embodiments of the invention, and it is to be understood that the invention is not limited to the specific forms disclosed, but covers all modifications, changes and alternative constructions and methods falling within the scope of the principles taught by the invention.

I claim as my invention:

1. A barber chair comprising in combination, an upright base, an elevatable chair frame supported on the base for being raised and lowered, a backrest pivotally supported on the rear of said chair frame and including a pair of arms each pivotally supported and located at the sides of said backrest, a footrest including a pair of arms each pivotally supported on the front of said frame and located at the sides of said footrest and being movable between a lowered and a raised position,

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a rigid bar on each side connecting each of the footrest arms to each of the backrest arms, stop members at each side of the frame positioned to be engageable by said footrest arms,

and means for varying the location of said stop members independent of each other for individually limiting the pivotal position of their respective footrest arms in lowered position so that each side of the footrest and the backrest is rigidly related to said frame in said lowered position and the angle of said backrest is controlled,

said stop members being positioned to each assume an equal portion of the force of the footrest and backrest so that each footrest arm carries an equal portion of the force.

2. A barber chair in accordance with claim 1 wherein said stop members are located below the frame and are carried on brace means secured to the frame.

3. A barber chair in accordance with claim 1 wherein said stop members are supported on brace means and have a longitudinal slot extending toward the footrest arms with bolts in the brace means extending through the slots to be tightened to hold the stop members in their adjusted position.

4. A barber chair in accordance with claim 1 wherein each of the stop members has a resilient element between it and the footrest arms so that the shock of engagement between the footrest arms and stop member is reduced.

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