This invention relates to adjustable chairs of the kind commonly referred to as "barbers' chairs", and particularly, barbers' chairs of the type in which the seat and back are combined in such a manner that the seat will shift longitudinally relatively to the seat frame of the chair when the position of the back is changed.

In one make of barbers' chairs of the general type mentioned that has heretofore been in use, the seat is combined with the back in such a way that the seat will shift forwardly when the back is lowered, and will shift rearwardly when the back is raised. In addition to producing a chair in which the seat shifts oppositely to the direction in which the occupant's back moves, during the operation of lowering the back of the chair to arrange the occupant in a reclining position, the above described method of combining the back and seat of the chair makes it necessary to provide the seat frame with upwardly-projecting supports for the pivots or fulcrums of the swinging levers that carry the shiftable seat, and makes it necessary to pivotally connect the seat to said swinging levers at points below the fulcrums of said levers, thus causing the seat to swing downwardly from a high point to a low point in passing from its extreme rearward position to its extreme forward position, and vice versa, and comes to rest in such a position that gravity exerts a force on the seat tending to move it towards an intermediate position.

One object of our invention is to provide an adjustable chair of the type that is equipped with a longitudinally shiftable seat, which is of such design and construction that it is not necessary to provide the seat frame of the chair with upwardly-projecting supports for the swinging levers or links that carry the shiftable seat, thereby reducing the cost of manufacturing the chair and producing a chair whose seat frame is symmetrical and devoid of brackets or similar projections.

Another object is to provide a barber's chair or the like of the general type mentioned, which is of such design that the seat of the chair will move rearwardly when the back of the chair is being lowered, and will move forwardly when said back is being raised.

Another object is to provide a chair of the general type mentioned, in which the seat and back are combined in such a way that when said parts are adjusted in their extreme positions, gravity causes the seat to exert pressure on the swinging levers which sustain it in a direction tending to hold said levers in the position into which they were moved.

And still another object of our invention is to provide a barber's chair or the like that is equipped with a novel means for detachably connecting a removable element, such as an upholstered seat or back, to the supporting structure that carries said element.

To this end we have devised a barber's chair or the like that comprises a seat frame supported by any suitable or preferred means, pairs of front and rear levers or swinging links pivoted directly to the said seat frame at points below the top edge of said frame, a longitudinally shiftable seat pivotally connected to said levers at points above their fulcrums or axes of movement, and a shiftable back carried by the rear levers. Usually, the chair will comprise an apron carried by the front levers, and arms pivotally connected to the upper ends of the front and rear levers in such a way that the operation of lowering the back depresses the arms, raises the apron and shifts the seat rearwardly, and the operation of raising the back elevates the arms, lowers the apron and shifts the seat forwardly.

Figure 1 of the drawings is a side elevational view of a barber's chair constructed in accordance with our invention, showing the back adjusted in its extreme upright position.

Figure 2 is a side elevational view of our improved chair, showing the back adjusted in its extreme lowered position.

Figure 3 is a top plan view of the chair, showing the parts adjusted in the position shown in Figure 1.

Figure 4 is a front elevational view of the chair, partly broken away, and showing the
parts adjusted in the position shown in Figure 1. Figure 5 is an enlarged detail view of some of the parts, broken away and in sections, so as to show how the swinging levers are pivotally connected to the seat frame and how the shiftable seat is pivotally connected to said levers; and

Figure 6 is a detail view, illustrating the detachable connection between the seat and its supporting levers which permits the seat to be easily disconnected from said levers.

Referring to the drawings which illustrate the preferred form of our invention, A designates the seat frame of the chair, B designates any suitable supporting or sustaining means for said seat frame, such, for example, as a pedestal, C designates the shiftable seat, D designates the shiftable back, E designates the apron and F designates the arms of the chair. The seat frame A may be of any preferred construction, but it preferably consists of a casting of rectangular shape in outline, whose side portions are hollow or provided with double walls 1 and 2, as shown in Figure 4, the outer walls 1 of said side portions being unbroken or continuous and merging into the front and rear members of the seat frame. The seat, back and apron of the chair are sustained by a pair of swinging front levers G and a pair of swinging rear levers G', and the arms F are pivotally connected to said levers G and G' so as to cause all of said elements to move in unison during the operation of lowering or raising the back.

The levers G and G' are pivoted directly to the seat frame A of the chair at points below the top edge of said frame, and in the preferred form of our invention herein illustrated each of said levers is provided with a laterally-projecting pivot or fulcrum pin 3 that projects into a hole in the inner wall 2 of one of the side members of the seat frame, as shown in Figure 4. The shiftable seat C is pivotally connected to the levers G and G' at points above the fulcrums or axes of movement of said levers. Preferably, the seat is detachably connected with the levers G and G' that sustain it in such a way that it can be disengaged from said levers and bodily removed therefrom without the aid of a tool or instrument, and the connecting means that we prefer to use for this purpose consists of clips 4 permanently attached to the opposite sides of the seat C and provided with elongated slots 5 that receive pins 6 which project inwardly from the seat sustaining levers. As shown in Figures 4, 5 and 6, each of the clips 4 is provided at its lower end with a part that bears against the side edge of the seat and which is permanently connected to same by fastening devices, or in any other suitable way. Above the point of connection between the clip and seat said clip is flared outwardly so as to form an upwardly-projecting portion in which the slot 5 is formed, the lower end of said slot 5 extending into the curved or outwardly flared, intermediate portion of the clip, and thus forming in effect a laterally-projecting member on the seat provided with a vertically-disposed slot whose upper end is closed and whose lower end portion is of such construction that the sustaining pin 6 with which said member cooperates will enter said slot when said laterally-projecting member is arranged above said pin in vertical alignment with same and then moved downwardly relatively to said pin. Likewise, the laterally-projecting member on the seat can be easily disconnected from the sustaining pin 6 with which it cooperates, simply by moving the seat upwardly, as to cause the pin 6 to pass out of the inwardly curved lower end portion of the vertically-disposed slot in said member. It is immaterial how the apron E is combined with the front levers G, but said levers will usually be arranged so that they embrace the side edges of said apron. The back D of the chair is preferably combined with the rear levers G' in a similar way, it being, of course, understood that said apron and back are permanently connected to their sustaining levers by fastening devices or other suitable means.

If it is desired to lower the back D of the chair, the operator in charge of the chair merely swings the back downwardly from the position shown in Figure 1 into the position shown in Figure 2, which operation causes the seat C to shift rearwardly relatively to the seat frame A of the chair, due, of course, to the fact that the pivotal connections between the seat C and its sustaining levers G and G' are located above the fulcrums 3 or axes of movement of said levers. During the rearward movement of the seat, from its extreme forward position to its extreme rearward position, the seat rises slightly while the levers G and G' are passing through their dead center position, and then comes to rest in substantially the same horizontal plane which the seat occupies in its extreme forward position. Likewise, when the seat shifts forwardly from its extreme rearward position into its extreme forward position, it rises slightly and then returns to its normal level. Consequently, there is no tendency for the levers G and G' to shift accidentally from the position into which they were moved, when the seat C is in either its extreme forward position or its extreme rearward position, for at such times gravity exerts a force on the seat C which tends to cause said seat to hold the levers G and G' in the position into which they were moved. This feature or characteristic of our chair will be clearly apparent from an examination of Figure 2 of the drawings, wherein it will be noted that the seat is in its lowermost po-
position and is exerting pressure on the levers G and G' in a direction tending to swing said levers rearwardly so as to hold the back D in its extreme lower position. When the back D is swung upwardly from the position shown in Figure 2 into the position shown in Figure 1, the pivots 6 that constitute the connection between the seat C and the sustaining levers G and G' swing forwardly through a dead center position and come to rest in such a position that they exert pressure on the levers in a direction tending to swing the upper ends of said levers forwardly.

A barber's chair of the construction above described can be manufactured at a lower cost than chairs of this general type which have heretofore been in use, due to the fact that it is not necessary to equip the seat frame with upwardly-projecting supports or brackets for carrying the swinging levers that sustain the seat. It is more attractive in appearance, and is easier to keep clean and in a sanitary condition than prior chairs of the kind referred to, due, of course, to the elimination of brackets or similar projections on the seat frame, and it has the added advantage that the shiftable seat C moves in the same direction that the occupant's back moves when the back D of the chair is being lowered or raised. While it is not essential that the seat C be detachably connected to its supporting levers G and G', we prefer to connect said parts together in the manner described, so as to facilitate the cleaning of the chair, the clips 4 that are permanently attached to the side edges of the seat C being of such design that the seat can be quickly disengaged from its sustaining levers simply by bodily moving said seat upwardly so as to cause the pins 6 on the inner sides of the sustaining levers to pass out of the inwardly curved lower end portions of the slots 5 in the clips 4. Likewise, the seat can be quickly engaged with its sustaining levers, simply by positioning the seat above the pins 6, with the elongated slots 5 in the clips 4 in vertical alignment with said pins, and then moving the seat downwardly so as to cause the pins 6 to enter the inwardly curved lower end portions of the slots in the clips 4 and move upwardly through said slots into the position shown in Figure 5.

While we have herein illustrated our invention embodied in a chair of the kind known commercially as "barber chair", we wish it to be understood that our invention is applicable to other types and kinds of adjustable chairs.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a barber's chair or the like, a seat, clips attached to the side edges of said seat and provided with upwardly-projecting portions arranged in spaced relation to the seat that have elongated slots whose lower ends are open, a supporting structure, and pins on said supporting structure normally positioned in the slots in said clips but capable of being withdrawn from the lower ends of said slots by upward movement of said seat.

2. A barber's chair or the like, comprising a seat frame, a supporting means for said seat frame, a swinging structure permanently mounted on said seat frame, a removable seat arranged within said swinging structure, pivot pins for said seat carried by said swinging structure, and laterally-projecting brackets on said seat provided with vertically-disposed slots for receiving said pivot pins, said slots being closed at their upper ends and open at their lower ends whereby said seat may be removed by moving the seat upwardly relatively to said pivot pins.

3. A barber's chair or the like provided with a seat frame, said seat frame having side portions that comprise inner and outer walls, front and rear levers arranged within said frame, pivots for said levers carried by the inner walls of the side portions of said seat frame, and a seat pivotally connected to said front and rear levers at points above the fulcrums of said levers.

4. A barber's chair or the like provided with a cast metal seat frame having side portions that comprise inner and outer walls, front and rear swinging levers arranged within said frame and provided with outwardly-projecting pivot pins positioned in holes in the inner walls of the side members of the seat frame, a back carried by the rear levers, an apron carried by the front levers, and a seat connected to said front and rear levers by pivot pins located above the fulcrums of said levers.

5. A barber's chair or the like provided with a cast metal seat frame having side portions that comprise inner and outer walls, front and rear swinging levers arranged within said frame and provided with outwardly-projecting pivot pins positioned in holes in the inner walls of the side members of the seat frame, a back carried by the rear levers, an apron carried by the front levers, a removable seat, and co-acting pivot pins and slotted brackets on said lever and seat for detachably connecting the seat to said levers.

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