April 8, 1930. W. MEYER 1,753,470

BEAUTY PARLOR CHAIR

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Fig. 1.

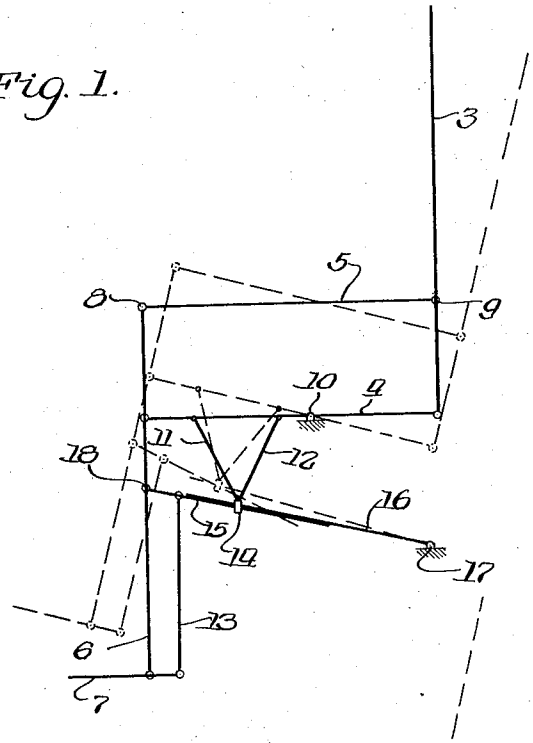
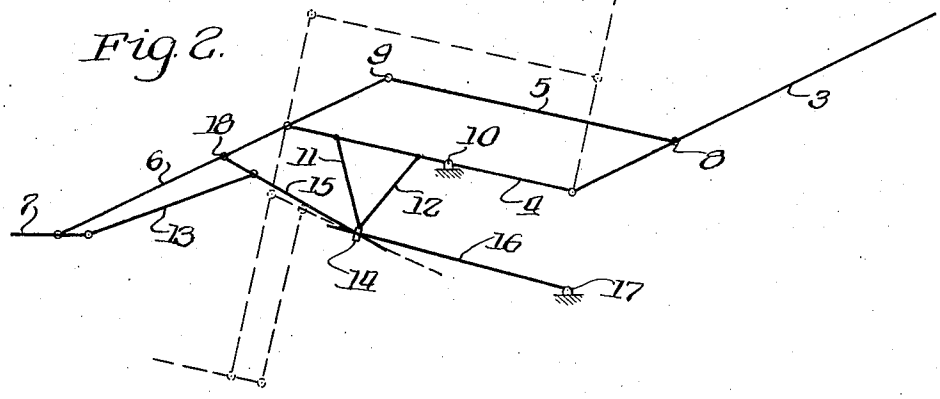


Fig. 2.



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Witness
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BEAUTY PARLOR CHAIR

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Fig. 3

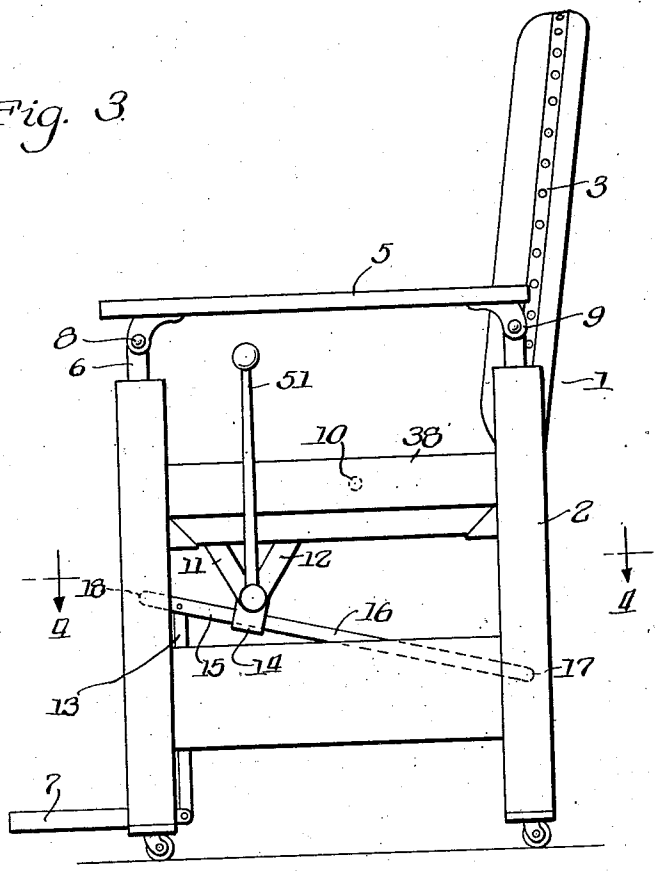
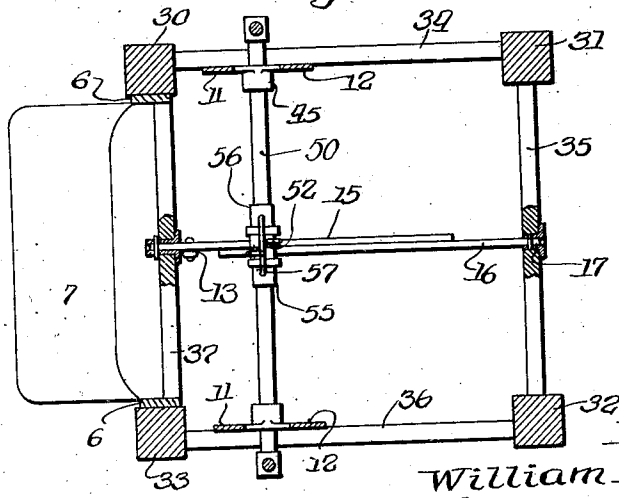


Fig. 4.



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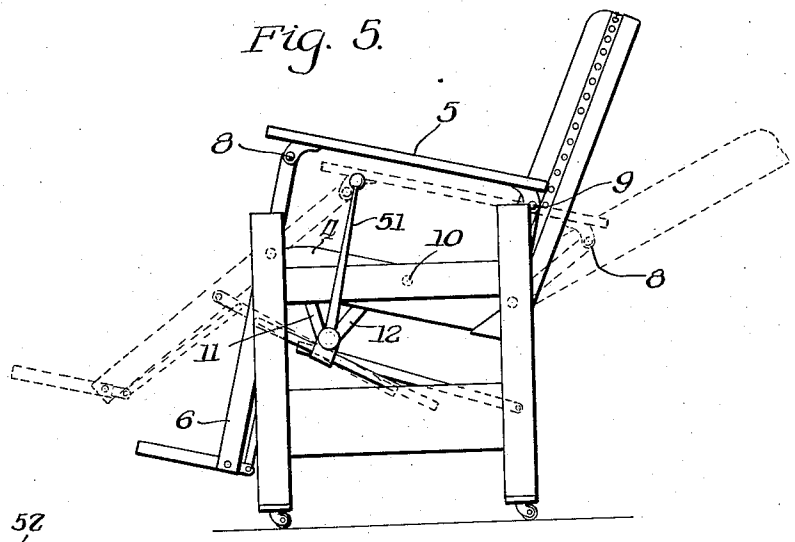
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BEAUTY PARLOR CHAIR

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Fig. 5.



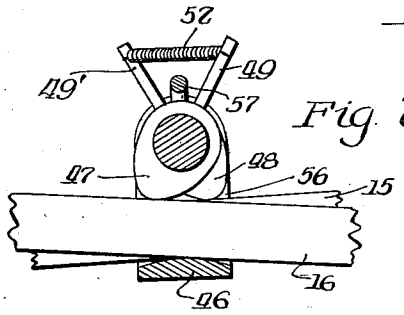
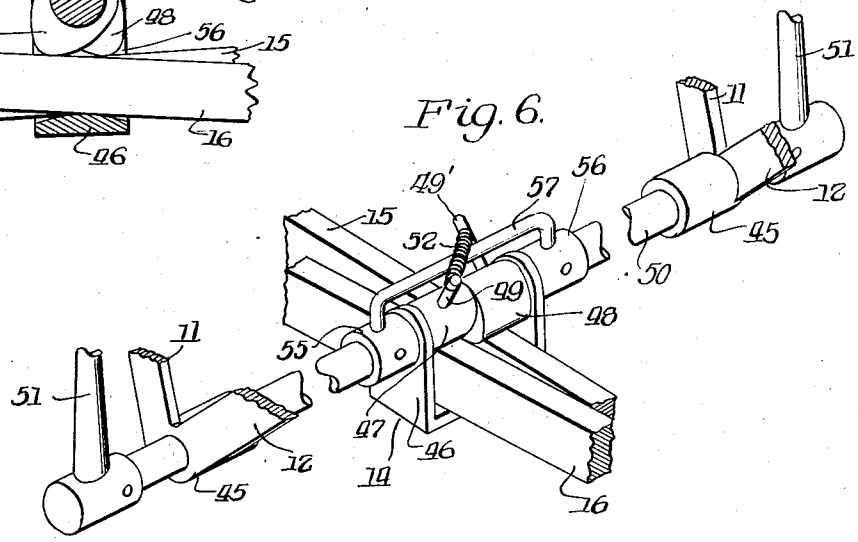


Fig. 7.

Fig. 6.



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UNITED STATES PATENT OFFICE

WILLIAM MEYER, OF CHICAGO, ILLINOIS

BEAUTY-PARLOR CHAIR

Application filed September 17, 1928. Serial No. 306,395.

This invention is an improvement on my pending application, Serial No. 298,483, filed August 9, 1928, which has matured into Patent No. 1,721,027, July 16, 1929, and relates to chairs of the kind used in beauty parlors, barber shops, dental offices and the like. It is an object of this invention to provide such a chair wherein the seat and the back may be pivoted as a unit about a horizontal axis and wherein the back may be further pivoted about a horizontal axis, while retaining the seat in its selected position.

It is an object of this invention to provide a chair of the character described, wherein the occupant may be seated in an upright position and which may be tilted back so that the occupant is in a substantially horizontal position or in any position intermediate the two. The chair is so constructed that, with the occupant in a position intermediate the upright position and the full horizontal position, the seat is not necessarily horizontal, the arrangement being such that for every position of the back portion of the chair the seat portion may be independently adjusted to such an angle with the horizontal as is most comfortable for the particular occupant.

It is a further object of this invention to provide a chair of the character described wherein a single operating lever controls the angular adjustment of the seat portion with respect to the back portion, as well as the adjustment of the entire chair as a unit about a horizontal axis.

The attainment of the above and further objects of the invention will be apparent from the following specification, taken in conjunction with the accompanying drawings forming a part thereof.

In the drawings:

Figure 1 is a schematic layout of the link work controlling the movement of my chair;

Figure 2 shows the position of the links as they are moved from the dotted line position shown in Figure 1;

Figure 3 shows the complete chair in the upright position, corresponding to the position shown in Figure 1;

Figure 4 is a sectional view taken on the line 4—4 of Figure 3;

Figure 5 shows the complete chair in a position corresponding to that shown in Figure 2;

Figure 6 is a perspective view, showing the locking control mechanism for controlling the movement of the chair; and

Figure 7 is a fragmentary sectional view, further showing the control mechanism shown in Figure 6.

Referring, first, to Figures 3 and 5, the chair comprises a frame supported from a base 2. The chair frame comprises a back rest 3, a seat portion 4, arm rests 5, a leg supporting apron 6 and a foot rest 7.

Referring, now, more particularly to Figure 1, showing in diagrammatic form the link work comprising the chair, the same is shown in the upright position in full lines and in the inclined position in dotted lines. The link 4 and the arm rest 5, which is pivoted at 8 and 9 to the upper portion of the link 6 and to the lower portion of the link 3 respectively form a parallelogrammatic frame which may be tilted as a unit about the stationary horizontal axis 10 when it is locked against collapsing. Further, with the link 4 held in any given position, the parallelogram may be collapsed to cause the link 5 to approach the link 4 while the back rest 3 is swung about the lower right hand end of the link 4 as a center and the apron 6 swung about the left hand end of the link 4 as a center. Under these conditions, the foot rest 7 is swung so as to approach alignment with the apron 6. The manner in which this is accomplished is as follows. Rigidly secured to the link 4 is the bracket 11—12 carrying at its lower end a locking sleeve 14 to be more fully described hereinafter. The link 16 is pivoted at the stationary pivot 17, while the link 15 is pivoted to the link 6 at the point 18. The links 15 and 16 extend through the locking member 14, said locking member being so arranged that it can be actuated to permit either the link 15 or the link 16 to freely slide therethrough while retaining the other against sliding movement. The arrangement is such that the locking member may lock

both of said links against sliding movement. To move the mechanism from the position shown in full lines in Figure 1, to the dotted line position, the locking mechanism 14 is actuated so as to lock the link 15 against sliding movement therethrough, while permitting the link 16 to slide through the locking mechanism. With the link 15 locked within the locking member 14, the entire mechanism shown in Figure 1, excluding the link 16, constitutes a rigid body pivoted upon the stationary horizontal pivot 10. The entire mechanism is rigid with respect to the link 4. The parallelogram of which the links 4 and 5 constitute a portion, is held against collapse by reason of the fact that the link 6 forming a portion of that parallelogram is held rigid with respect to the link 4 by the link 15 being retained in the locking member. The entire link work may now be rotated about the pivot point 10 as a center until any desired position is reached. This is assumed to be the dotted line position shown in Figure 1, although any other selected positions may be chosen. When this position is reached, the locking member 14 is actuated to permit sliding movement of the link 15 through the locking mechanism, but to lock the link 16 against sliding movement through the locking mechanism 14. Since the point 17 and the point 10 are fixed points, it may be seen that with the link 16 locked against sliding movement through the locking mechanism 14, the link 4 becomes fixed in space and cannot rotate about its axis 10. When the link 10 is in a fixed position, and the link 15 free to slide through the mechanism 14, the parallelogrammatic frame, of which the links 4 and 5 are a portion, may be collapsed to the right thereby causing the back rest 3 to approach a horizontal position and swinging the apron 6 upward, also towards a horizontal position. The link 13 causes a pivotal movement of the foot rest 7, whereby the same approaches alignment with the apron 6. This movement can be continued until the desired position of the chair is reached.

It is apparent from the description thus far given that the movement of the chair is controlled by the two links 15 and 16 and that when the link 15 is locked against sliding movement within the locking portion 14 while the link 16 is free to slide, the chair may be swung as a rigid unit about the horizontal axis 10, but the back rest 3 cannot move with respect to the seat portion 4. On the other hand, if the link 16 is held against sliding movement within the locking member 14 while the link 15 is unlocked, then the seat portion 4 is retained rigid in the particular position in which it was at the time of locking of the link 16, and the back rest 3, together with the apron 6 and the foot rest 7 may be swung about horizontal axes with respect to the seat section 4. It is also to be noted that when both the link 15 and the link 16 are locked against sliding movement within the locking member 14, then the entire chair is rigidly held in position and can neither pivot about the axis 10, nor can the back or leg supporting portions tilt in either direction.

From the description thus far given, it is believed that the construction shown in Figures 3, 4, 5 and 6 will be apparent. The frame 2 is supported on suitable castors and comprises four vertical legs 30—33 suitably braced by cross braces 34—37. Two additional side braces, one of which is shown at 38 in Figure 3 are provided. The seat portion 4 (Figure 5) is suitably cushioned and is pivoted to the cross braces 38 at the pivot point 10. A bracket 11—12 is secured to each of the side portions of the seat frame 4. The brace 35, extending between the rear legs 31—32 furnishes the stationary pivot for the link 16. The link 15 extends through an elongated vertical slot in the cross bar 37 which connects the front legs of the chair 6. The link 15 is pivoted at the pin 41 and has an oscillating movement within a vertical plane about the pin 41 as an axis. The brackets 11—12 are secured to each of the side members of the seat portion 4 and carry a bearing 45 at the ends thereof. The rod 50 having two operating handles 51—51, one at each side of the chair, is mounted for rotary movement in the bearing 45. A U-shaped bracket 46 is mounted on the rod 50, the links 15 and 16 extending through the bracket and being freely slidable therethrough under the control of the cam 47—48. The cams 47—48 are mounted on the operating rod 50 between the ends of the brackets 46 and are freely rotatable about the rod 50. The cams 47—48 have outwardly extending arms 49—49′ secured together by a spring 51 under tension. The collars 55—56 are secured to the operating shaft 50 to rotate therewith, and are connected together by the member 57. Normally, the spring 52 draws the arms 49—49′ together into the position shown in Figure 7, causing the lower ends of the cams 47—48 to bite into the links 15—16, thereby locking them against the lower portion of the bracket 46. This effectively locks both of said levers against sliding movement within the brackets 46. Upon rotation of the operating handles 51, the member 57 is correspondingly rotated. As may be seen in Figure 7, there is a certain amount of lost motion before the member 57 encounters either the arm 49 or the arm 49′. Assume that the lever 51 is rotated in a clockwise direction, as is seen in Figures 6 and 7. When the member 57 encounters the arm 49, it swings the cam 47 in a clockwise direction against the action of the spring 51. This accomplishes two things, namely, it frees the lower end of the cam lever 47 from engagement with the link 16, thereby permitting the

sliding movement of the link 16 within the bracket 46, and further, the spring 51 forces the lower end of the cam 48 into firmer engagement with the lever 15, thereby more certainly securing said link against sliding movement within the bracket. The chair may now be tilted as a unit about the pivot 10. When the chair has been tilted to a sufficient degree, the lever 51 is rotated in a counter clockwise direction. As soon as the member 57 clears the arm 49, the spring 51 forces the cam 47 into firm engagement with the link 16, thereby rigidly securing said link against sliding movement. During the time that the member 57 is traveling from contact with the arm 49, to contact with the arm 49′, both of the cams 47—48 are in firm engagement with the respective links 15 and 16 and hold said links against sliding movement. When the member 57 rotates the arm 49′ in a counter clockwise direction, it frees the link 15 for sliding movement within the bracket and at the same time more firmly holds the link 16 in the manner previously described. The lost motion connection between the member 57 and the arms 49 and 49′ insures the positive control of the chair, for at no time are both links free to slide through the member 14. It is further to be noted that with the chair in any given position the levers 51 may be actuated to either tilt the back with respect to the seat portion, or to tilt the entire chair including the back and seat as a unit.

The chair shown in the accompanying drawings is particularly desirable for beauty parlor work. The position of the chair shown in full lines in Figure 5 is the hair dressing position and it is apparent that this position is reached by a single operation of the lever 51. It is further apparent that, if desired, the seat 4 need not be inclined to as great a degree as that shown, and the back rest may be further inclined, in order to suit the comforts of the particular occupant. The dotted lines in Figure 5 show the position of the chair when used for facial treatment and the like. It is apparent that in this position the back rest and the seat portions may also be adjusted to suit the comforts of the particular occupant.

In compliance with the requirements of the patent statutes I have herein shown and described a preferred embodiment of my invention. The invention is, however, not limited to the precise construction shown, the same being shown merely by way of illustration. What I consider new, and desire to secure by Letters Patent is:

1. In a chair of the class described, the combination of a chair frame comprising substantially parallel longitudinal members and substantially parallel transverse members, said longitudinal and transverse members constituting links and being pin jointed together to form a parallelogrammatic frame, a base, one of the longitudinal members being pivoted on the base, means for holding the members in substantially fixed angular relation to each other while the chair frame as a whole is swung pivotally on the base, means for holding said one longitudinal member in substantially fixed angular position while said other members are swung angularly with respect thereto, and single means common to both said holding means for selectively controlling either of said two means at will from any of the positions of the chair frame.

2. In a chair of the class described, the combination of a chair frame comprising substantially parallel longitudinal members consisting of an arm rest and a seat frame and substantially parallel transverse members comprising a back frame and a leg frame, said longitudinal and transverse members constituting links and being pin joined together to form a parallelogrammatic frame, a base, one of the longitudinal members being pivoted to the base on a substantially horizontal axis, means for holding the members in substantially fixed angular relation to each other while the chair frame as a whole is swung pivotally on the base, means for holding said one longitudinal member in substantially fixed angular position with respect to the base while said other members are swung angularly with respect thereto, and single means common to both said holding means for selectively controlling either of said two means at will from any of the positions of the chair frame.

3. In a chair of the class described, the combination of a chair frame comprising substantially parallel longitudinal members and substantially parallel transverse members, said members being pin joined together to form a parallelogrammatic frame, a base, one of the longitudinal members being pivoted on a horizontal axis on the base, means for holding the chair frame as a whole against pivotal motion on said base frame, means for locking the parallelogrammatic frame members against pivotal motion with respect to each other, and single means common to both said holding means for selectively releasing either of said holding means at will in any position of the chair frame.

4. In combination, a base, a seat pivotally mounted thereon, means for locking the seat against pivotal movement, a back rest pivoted with respect to the seat, means for locking the back rest against pivotal movement with respect to the seat, and single means common to both said locking means for unlocking either of said locking means one at a time at will.

5. In combination, a base, a seat pivotally mounted thereon, means for locking the seat against pivotal movement, a back rest pivoted with respect to the seat, means for locking the back rest against pivotal movement

with respect to the seat, and single means operable at will for selectively unlocking either of said locking means and simultaneously restraining each locking means against unlocking by the unlocking of the other.

6. In a chair tiltable so that the occupant assumes either an upright position or a substantially horizontal position, a pivoted seat, a back rest pivoted with respect to the seat, means for locking the back rest with respect to the seat whereby the seat and back rest may be tilted as a unit, means for locking the seat and unlocking the back rest whereby the back rest may be tilted with respect to the seat, either of said means being selectively operable at will from any position of the chair and each being locked by the unlocking of the other and vice versa.

7. In combination, a supporting base, a seat pivotally mounted thereon, a back rest pivoted with respect to the seat, a pair of links for controlling the pivotal movement of the seat with respect to the base and of the back rest with respect to the seat respectively, selectively operated cam means for controlling said links, and a single hand operated lever for controlling said cam means.

8. In combination, a base, a seat pivotally mounted thereon, a back rest pivoted with respect to the seat, a pair of links for controlling the pivotal movement of the seat with respect to the base and of the back rest with respect to the seat respectively, a pair of cams for controlling the respectively links, a hand operated rod, and means including a lost motion connection between the rod and the cams whereby the rod operates the cams.

9. In combination with a base, a seat mounted on the base, a back rest pivoted with respect to the seat, a foot rest pivoted with respect to the seat, lever mechanism extending below the seat and mounted thereon to move therewith, means controlled by the lever mechanism for locking the back rest and foot rest with respect to the seat and permitting the turning of the seat and locked portions as a unit about a horizontal axis, and means for locking the seat with respect to the base while permitting the pivotal movement of the back and foot rests, either of said means being selectively operable one at a time at will by means of said lever mechanism and each being locked by the unlocking of the other and vice versa.

In witness whereof, I hereunto subscribe my name this 13th day of September, 1928.

WILLIAM MEYER.