Jan. 11, 1944. I. N. DUNCAN ET AL 2,339,159

BEAUTY PARLOR CHAIR

Filed May 10, 1940 3 Sheets-Sheet 1

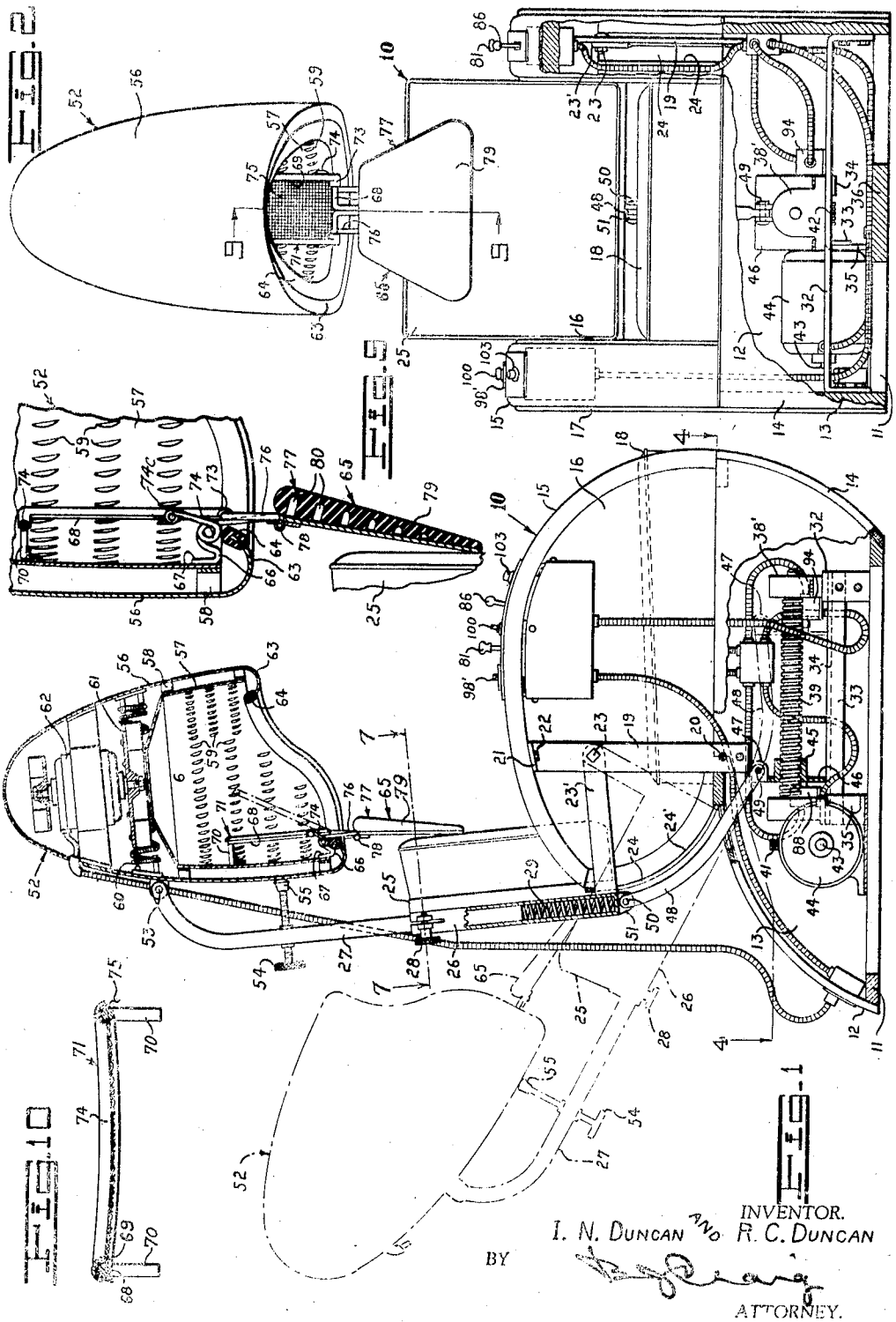

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FIG. 3

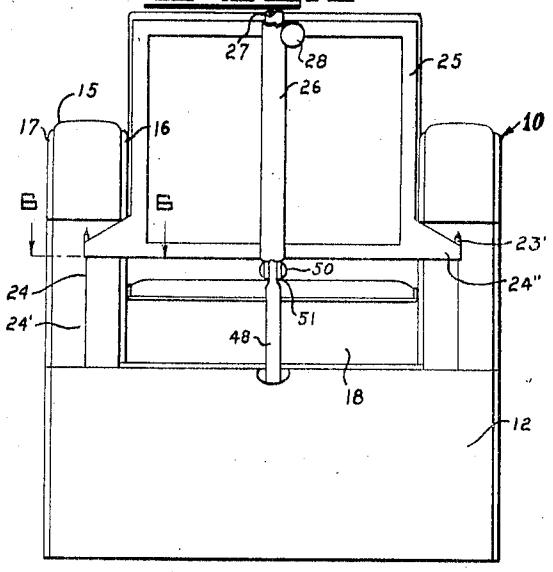


FIG. 5

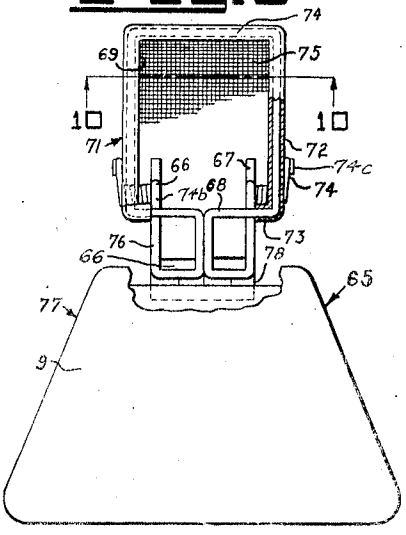


FIG. 4

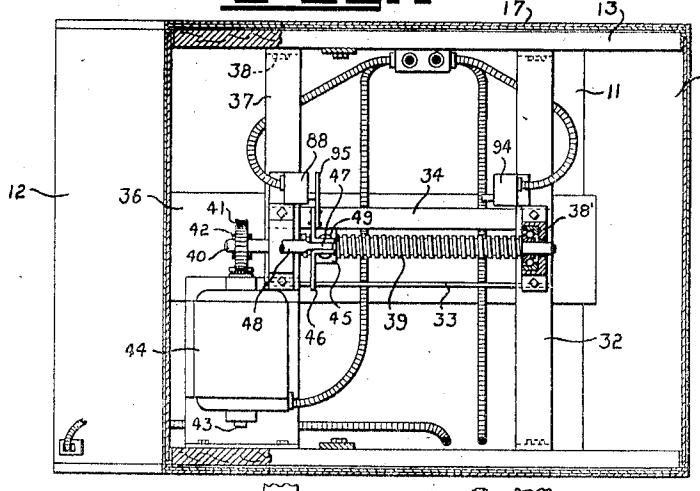


FIG. 6

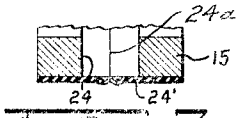


FIG. 7

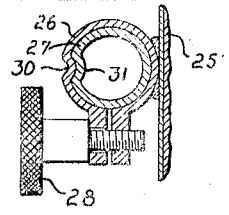


FIG. 11

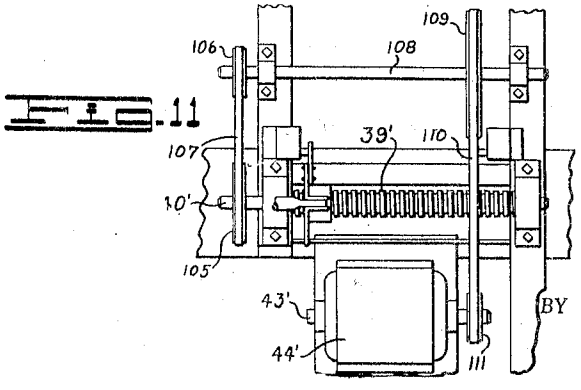
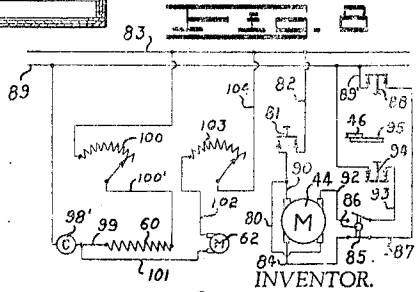


FIG. 8



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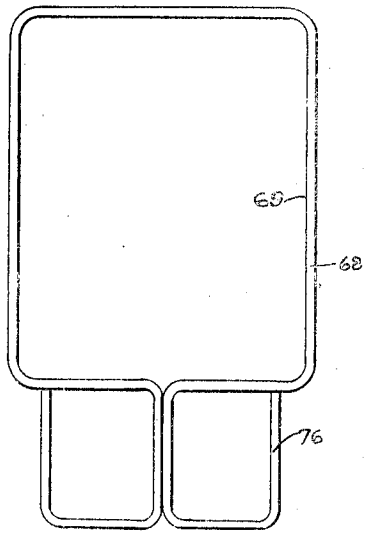

Fig. 12

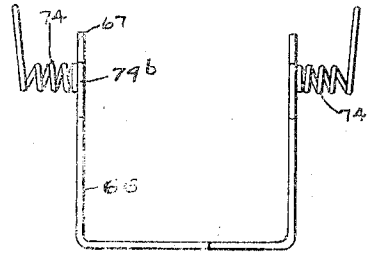

Fig. 13

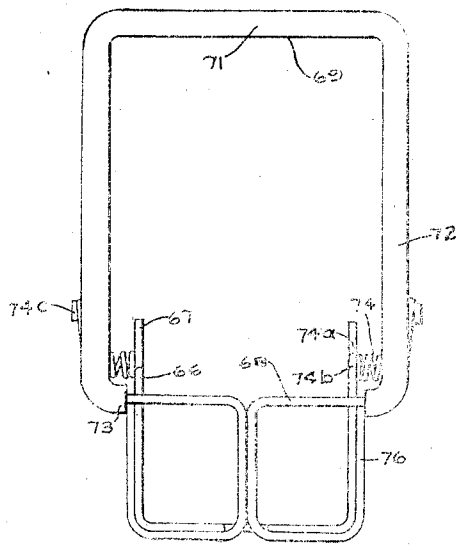

Fig. 14

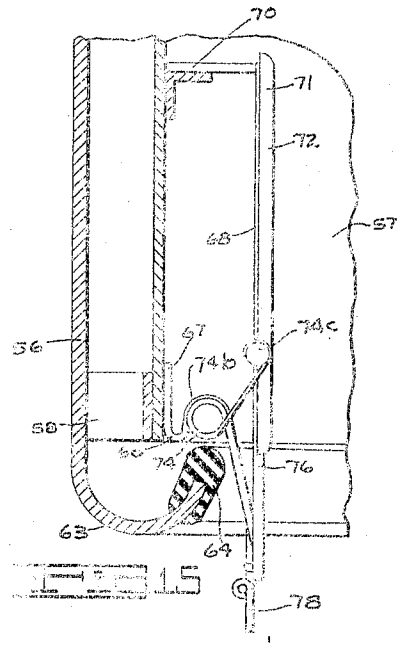

Fig. 15

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UNITED STATES PATENT OFFICE

2,339,159

BEAUTY PARLOR CHAIR

Irene N. Duncan and Roswell C. Duncan,
Whittier, Calif.

Application May 10, 1940, Serial No. 334,380

3 Claims. (Cl. 155—152)

This invention relates to improvements in beauty parlor chairs.

The general object of our invention is to provide an improved reclining chair for use in beauty parlors.

A more specific object of the invention is to provide a novel operating mechanism for a reclining beauty parlor chair.

Another object of the invention is to provide a reclining chair having a seat and a back and having a hair dryer thereon and wherein novel means is provided to cause the distance between the seat of the reclining chair and the hair dryer to remain substantially constant in all positions of the chair back.

Another object of the invention is to provide novel control means for controlling the operating mechanism of a reclining chair back.

Other objects and the advantages of this invention will be apparent from the following description taken in connection with the accompanying drawings, wherein:

Fig. 1 is a side elevational view of a beauty parlor chair embodying the features of our invention with the side covering removed and with parts broken away to more clearly show details;

Fig. 2 is a front elevational view of the beauty parlor chair with parts broken away;

Fig. 3 is a rear elevational view of the beauty parlor chair;

Fig. 4 is a section taken on line 4—4, Fig. 1;

Fig. 5 is an enlarged plan view of a combination head and shoulder rest with parts broken away;

Fig. 6 is a fragmentary enlarged section taken on line 6—6, Fig. 3;

Fig. 7 is a fragmentary enlarged section taken on line 7—7, Fig. 1;

Fig. 8 is a wiring diagram;

Fig. 9 is an enlarged fragmentary section taken on line 9—9, Fig. 2;

Fig. 10 is an enlarged fragmentary section taken on line 10—10, Fig. 5;

Fig. 11 is a fragmentary view similar to Fig. 4 showing a modification of our invention;

Fig. 12 is a plan view of the frame member;

Fig. 13 is a plan view of the support member;

Fig. 14 is a plan view showing the frame and support members assembled and with the clamp member mounted thereon, and

Fig. 15 is an enlarged sectional detail with parts in elevation and showing the hair net support assembly.

Referring to the drawings by reference characters we have shown our invention as embodied in a beauty parlor chair which is indicated generally at 10. As shown the chair includes a base 11 having a rear portion 12, sides 13 and a front 14. From the sides 13 arms 15 extend upwardly. The arms 15 are hollow and are provided with suitable inside and outside upholstered panels 16 and 17, the latter of which extend downwardly to cover the sides 13 of the base. The base supports a seat member 18 which is suitably upholstered.

Mounted within each arm we show a vertically extending support member 19 secured at its lower end to the side members 13 as by bolts 20. Each support member at its upper end includes a bent end portion 21 secured by bolts 22 to the arms 15.

Pivotally mounted on a pin 23 on each support 19 we show a rearwardly extending link 23'. Each link passes through a slot 24 in the back of the arms 15. Each slot 24 is covered with a soft rubber closure member 24' (see Fig. 6) which is slitted as at 24a. The sides of the slits 24a are normally in engagement but since the rubber is soft the links 23 may move in their associated slots. Each slot thus remains closed preventing ready insertion of objects therethrough. The links 23' at their ends remote from the support 19 are connected to flanges 24'' on a chair back 25 which is suitably upholstered. The chair back includes a tubular support 26 in which a hair dryer tubular supporting rod 27 is slidably mounted and is held in adjusted position by a thumb nut 28. A spring 29 serves to counterbalance the weight of the rod 27 and the hair dryer which will be presently described. The support 26 includes a longitudinal groove 30 which matches with a groove 31 on the rod 27 so that rotation of the hair dryer in the tubular support 26 is prevented.

Mounted within the base 11 we show a transverse support 32. Secured to the support 32 we provide rearwardly extending supports 33 and 34. The support 33 is disposed in a vertical plane and at its rear end is secured to a foot member 35 arranged on a member 36 mounted in the base and secured to the front and rear of the base.

The support 34 is horizontally disposed and at its rear end engages a transverse member 37 secured at one end as at 38 to one side of the base. The other end of the transverse member 37 is integral with the foot member 35 previously mentioned.

The transverse members 32 and 37 support

bearings 38' for an elongated screw 39 which includes a cylindrical portion 40 projecting at one end beyond the transverse member 37. The portion 40 receives a worm wheel 41 which meshes with worm gear 42 on the armature shaft 43 of a reversible electric motor 44, and the construction is such that when the motor is operated the screw 39 will be driven.

The screw 39 receives a nut 45 which is elongated and which at one end is provided with a flange 46. This flange 46 (Figs. 1 and 4) includes spaced ears 47. The ears 47 are pivoted to one end of an arm 48 by a pin 49. The other end of the arm 48 is pivoted on a pin 50 which is supported in ears 51. The ears 51 are mounted on the back 25 at the lower end of the tubular support 26.

When the motor 44 is operated the screw 39 will be rotated and the nut 45 will be moved along the screw thus moving the arm 48 and causing the back to be swung about the axis of the pins 23 so that as the nut is reciprocated the back is raised or lowered depending upon the direction of rotation.

The axis of the pins 23 is disposed approximately in alignment with the axis of the pelvis of a person seated on the seat 18 so that as the back is moved the head of a person in the (hair dryer) to be presently described will remain substantially in the assumed position in the hair dryer.

A hair drying unit 52 is pivotally supported at 53 on the upper end of the rod 27 which is adjustably supported in the tubular support 26 secured to the back portion 25 previously described. For further adjustment of the drying unit 52 we provide a thumb screw 54 threadedly engaging the arm 27 and which includes a rubber covered inner end 55 engaging the hair dryer.

The drying unit 52 includes an outer shell 56 (Fig. 1) having an inner lower shell 57 spaced therefrom and supported thereon by brackets 58. The inner shell 57 is provided with vents or louvers 59 through which air, warmed by a heating element 60 and blown by a fan or blower 61 driven by a motor 62 may flow. In order to further direct the air over the hair the outer shell 56 is provided with an inwardly and upwardly directed circumferential flange 63 which is preferably covered with a protecting rubber strip 64.

Mounted in the dryer 52 we show our new combination shoulder and head rest 65 which includes a U-shaped support member 66 provided with a foot portion 67. A substantially rectangular frame member 68 is superimposed on the member 66 and is held in place thereon by welding portions 76 (which are continuations of the frame 68) to the member 66. The frame 68 includes a central aperture 69 and is further provided with leg members 70.

A clamp member 71 which includes sides 72 is pivotally connected at 73 to the frame and the underside of the clamp is grooved as shown in Fig. 10. The clamp member is normally urged against the frame by springs 74. Each spring 74 includes an end 74*a* secured to a looped portion 74*b* on the member 66. The other end of each spring is secured as by a rivet 74*c* to the outer edge of the clamp member 71. When the clamp member is raised the springs 74 are tensioned so that the clamp member 71 is urged into engaged position by the springs.

When the clamp member 71 is in the broken line position shown in Fig. 1 a hair net 75 or the like may be placed thereon. After the hair net is in place the clamp member is allowed to swing down to engage the frame 68 to thereby tightly secure the net in place as shown.

The portions 76 on the lower end of the frame 68 support a hinge 78 and this hinge in turn supports a shoulder rest 77 which includes a cushion 79 of rubber or other suitable soft material which serves to support the shoulder of a person in the chair. The shoulder rest cushion 79 tapers in thickness downwardly and is provided with suitable apertures 80 to provide increased resiliency.

In use the legs 70 on the frame engage the inner shell 57 of the hair dryer so that it is held in position. The foot portion 67 of the U-shaped member 66 also engages the inner shell 57 of the drying unit. The legs 70 and foot portion 67 are preferably so arranged as to support the head rest on the inner shell of the drying unit entirely free from contact with the rubber 64 on the flange 63.

The construction of the beauty parlor chair 11 is such that when the back portion 25 is lowered to the broken line position shown in Fig. 1, the back portion and hair drying unit remain in the same relative position due to the fact that the movement is about the axis of the pivot 23 which axis corresponds substantially to the axis of the pelvic joint of the occupant of the chair so that the shoulder and head of a patron engaging the shoulder rest 77 does not shift along the rest as the back moves up or down.

Referring to the wiring diagram in Fig. 8 motor 44 includes a lead 83 which communicates with a push button or circuit closure 81 located on one of the arms 15 and which in turn has a lead 82 communicating with a suitable source of power 83. The motor includes a second lead 84 which communicates with a reversing switch 85 which is operated by a finger tip control 86 located on one arm 15 of the chair. When the switch is in the position shown in Fig. 8, the lead 84 communicates through a lead 87 with a switch 88 which is normally closed and communicating with a suitable source of current 89 through a lead 89'.

A third lead 90 from the motor 44 also communicates with the circuit closure 81 previously mentioned. A fourth lead 92 from the motor communicates with the switch 85. When the switch 85 is reversed, a lead 93 affords communication with a switch 94 which is normally closed and communicating with the source of current 89.

In operation the operator sets the switch 85 for forward or reverse depending on whether the back 25 is to be raised or lowered. For raising the back 25 the switch 85 would be set in the forward position as shown in Fig. 8, then when the push botton 81 is pressed causing the nut 45 to move rearwardly it raises the back 25. The motor will continue to run as long as the button 81 is held down or until a spring 95 on the nut 45 contacts the switch 88 and breaks the circuit.

For lowering the back 25 the switch 85 is reversed from the position shown thus when the button 81 is pressed, the motor will be driven in reverse causing the nut 45 to move in the opposite direction to lower the back 25. The screw will continue to move as long as the button 81 is held down or until the spring 95 contacts the switch 94 and breaks the circuit. As soon as the spring 95 moves from engagement with either the

switch 88 or the switch 94 the switch from which the spring moves will immediately be moved by a spring (not shown) to closed position.

It will be noted that the operator may reverse the direction at any point, if desired, by reversing the switch 85.

A lead 98 connects a time actuated circuit closing clock 98' on one of the arms 15 with the supply of current 83 and in turn communicates with the heating element 60 through a lead 99. The heating element 60 is in turn connected by a lead 100' to a heat regulator 100 which is connected to the source of power 83. The lead 99 is further connected to the fan motor 62 by a lead 101. The motor includes a second lead 102 connected to speed regulator 103 on one of the arms 15 which is in turn connected by a lead 104 to the source of supply 83.

In use the operator sets the clock control 98' to the time the fan and heater is to run and then the intensity of the heat from the heating element 60 is regulated by the regulator 100 and the speed of the fan motor 62 regulated by the regulator 103.

In Fig. 11 is shown a modification of our invention wherein a screw 39' similar in all respects to the screw 39 is provided and wherein the cylindrical portion 40' has a pulley 105 keyed thereon and driven by a second pulley 106 through a V-belt 107. The pulley 106 is keyed to a shaft 108 which has a third pulley 109 keyed thereon. The pulley 109 is driven through a V-belt 110 from a fourth pulley 111 keyed on an arbor shaft 43' of a motor 44'.

From the foregoing description it will be apparent that we have invented a novel beauty parlor chair which can be economically manufactured and which is highly efficient in use.

Having thus described our invention we claim:

1. In a beauty parlor chair, a base, a seat on said base, a pair of hollow arms on said base, a support in each arm, a back for said chair, a forwardly extending link rigid on each side of said back, each arm having a slot therein, each link extending through one of said slots, and means to pivot each of said links to said support.

2. In a beauty parlor chair, a base, a seat on said base, a pair of hollow arms on said base, a support in each arm, a back for said chair, a forwardly extending link rigid on each side of said back, each arm having a slot therein, flexible closure means for each slot, each link extending through a slot, means to pivot each of said links to the associated support, the axis of said pivots corresponding substantially to the pelvic joint of the occupant of the chain, and means to raise and lower said back.

3. In a beauty parlor chair, a base, a seat on said base, a pair of hollow arms on said base, a support in each arm, a back for said chair, a forwardly extending link rigid on each side of said back, each arm having a slot therein, each link extending through one of the slots, means to pivot each of said links to said support, and the axis of said pivots corresponding substantially to the pelvic joint of an occupant of the chair.

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ROSWELL C. DUNCAN.