

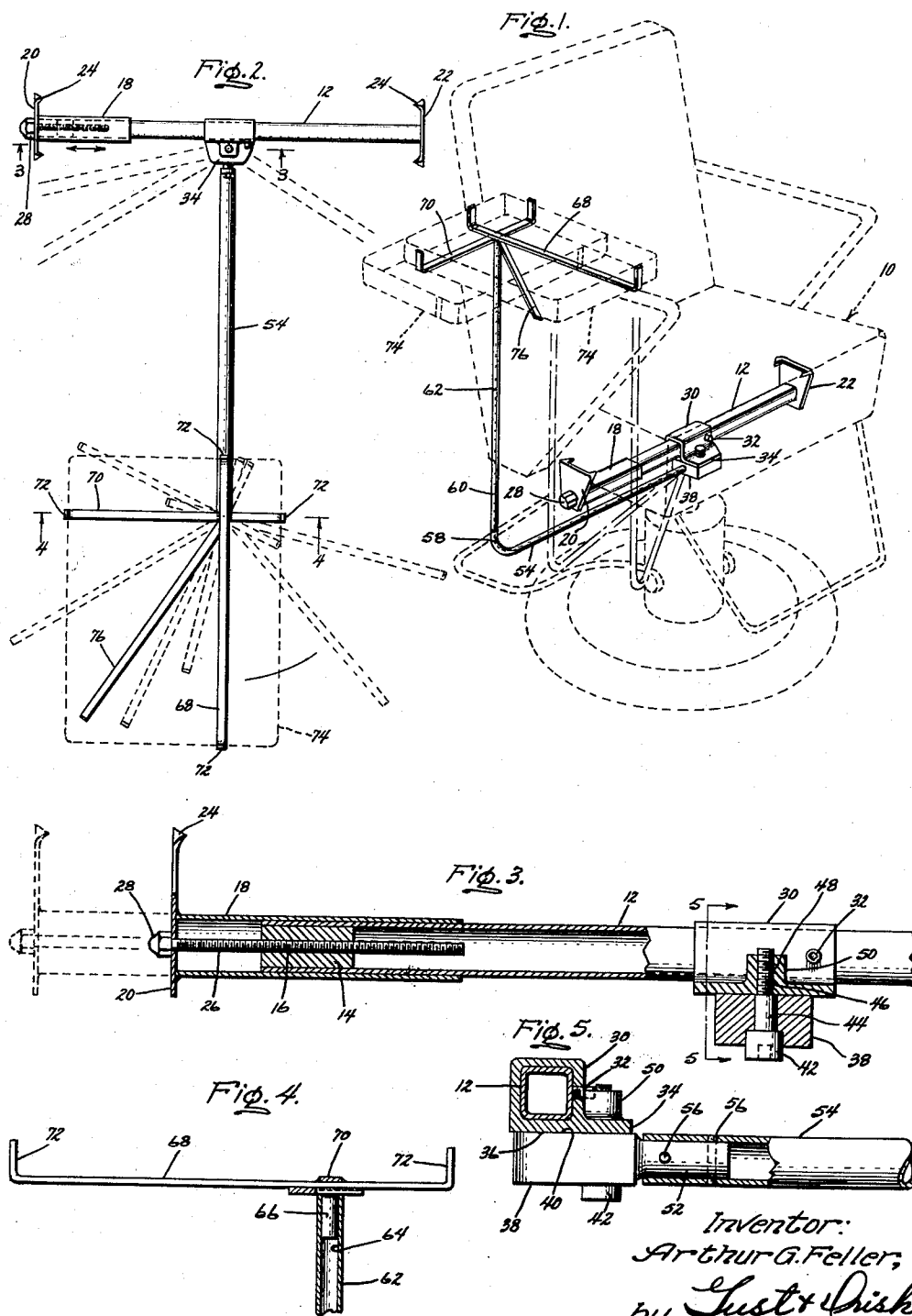
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TRAY MECHANISM FOR BEAUTY OPERATORS

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## TRAY MECHANISM FOR BEAUTY OPERATORS

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The present invention relates to a tray mechanism for beauty operators, and more particularly to a mechanism, attachable to a chair, having an elevated tray or tray support which is rotatable itself as well as swingable about the chair for convenient access by a beauty operator.

In beauty parlors devoted to the care, treatment and styling of ladies' hair, it is customary for the beautician or operator to stand while working, the customer being seated in a fixed or swivel chair. Of the various types of services rendered by the beautician, hair waving and styling comprise a substantial portion of the work, hair waving of the so-called permanent type usually requiring a relatively long period of time, such as hours, to complete. Much equipment and many manual operations are involved in the rendering of a permanent wave, such equipment comprising, e.g., curlers and clips, dishes for solution, many pieces of cotton, curling papers, combs, hair pins, and the like. The operations comprise combing, trimming, styling, curling, and other sundry steps, the aforementioned equipment being used in such operations.

While innumerable waves are involved in the making of a complete permanent wave of a head of hair, the following resume of the steps involved in making a single wave serves to demonstrate the complexity of the procedure, as well as the relatively great length of time involved. The customer sitting in the chair is normally required to hold a stack of small papers which the operator uses in forming a curl. The chair is usually situated immediately adjacent to a counter on which all of the equipment and supplies are laid, as aforementioned. The operator, in forming a single curl, first combs a small segment of hair into a flat length approximately one to two inches wide, holding the hair and wetting the same with a piece of cotton taken from the counter, this cotton having been dipped in a permanent wave solution contained in a dish on the counter. Holding the stack of papers, the customer hands one of the papers to the operator, who folds it over the end portion of the tip of the combed length of hair and rolls the hair onto a conventional curler taken from the counter. This general procedure is repeated many times until all of the hair is so treated and wrapped onto respective curlers. This permanent waving procedure, which consumes a considerable period of time, requires that the customer assist the operator, the customer handing the papers and other equipment to the operator as he or she may request. Needless to say, this is somewhat burdensome to the customer and in many instances quite irritating, since it tends to exaggerate in the customer's mind the length of time actually required for completing the operation. Also, the operator is slowed if the customer is not adept in the cooperation required.

The present invention provides a mechanism whereby the equipment needed in making the permanent wave is always at the fingertips of the operator, the customer being free of any requirement to assist the operator. The customer can then pass the time by reading a magazine or the like or watch the operator in his or her work.

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It is therefore an object of this invention to provide a mechanism which contains and renders conveniently accessible to the operator all of the necessary equipment and supplies for making a permanent wave or performing some other desired treatment of the hair.

It is another object of this invention to provide a mechanism for positioning a tray in the immediate vicinity of a customer's hair, which tray may be manipulated about the customer's chair to suit the convenience of the operator.

It is still another object of this invention to provide a tray-supporting mechanism for a beauty operator which may be removably attached to a chair in which the customer sits while having the hair-treating procedures performed.

Other objects will become apparent as the description proceeds.

To the accomplishment of the above and related objects, my invention may be embodied in the forms illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that specific change may be made in the specific constructions illustrated and described, so long as the scope of the appended claims is not violated.

In the drawings:

Fig. 1 is a perspective illustration showing one operative embodiment of this invention as being attached to a conventional swivel chair, such chair being shown in phantom with different operating positions of the mechanism also being shown in phantom;

Fig. 2 is a top plan view of the mechanism itself, the phantom illustration showing several different operating positions of the mechanism;

Fig. 3 is an enlarged sectional illustration taken substantially along the section line 3—3 of Fig. 2;

Fig. 4 is an enlarged fragmentary view of the tray support, this view being partly in section taken along the section line 4—4 of Fig. 2; and

Fig. 5 is a fragmental sectional illustration taken substantially along the section line 5—5 of Fig. 3.

Referring to the drawings, the tray mechanism of this invention is shown as being clamped onto the seat portion of an ordinary swivel chair 10, as shown in Fig. 1. This tray mechanism comprises a hollow rod 12, shown as being of substantially square cross-section (Fig. 5), having a plug 14 secured in the left-hand end thereof. This plug has a threaded aperture 16 which extends in a direction substantially parallel to the longitudinal extent of the rod 12 for a purpose which will be explained hereinafter.

Telescopically received on the left-hand end of the rod 12 is a rod extension 18 which is also of square cross-section to prevent any relative rotation between the extension 18 and rod 12.

The rod 12 and extension 18 together provide an extensible rod having opposite ends, these opposite ends having affixed thereto two clamping plates 20 and 22, respectively. Both of these plates have interned lugs 24 which may dig into the side of the chair seat, as shown in Fig. 1. These clamping plates in combination with the respective lugs secure the extensible rod 12, 18 in position on the chair 10.

An elongated clamping bolt 26 passes through the clamping plate 20 to be received by the threaded aperture 16 of the plug 14. This bolt is provided with a head 28 which bears against the clamping plate 20 so that as the bolt 26 is turned into the threaded aperture 16, the plate 20 and its extension 18 will be forced farther onto the rod 12. As will now be apparent, the bolt 26 provides the means by which the two clamps 20 and 22 may be securely mounted onto the chair, as shown in Fig. 1.

Slidably received on the rod 12 is a sleeve 30, the open-

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ing in the sleeve conforming to the shape and size of the rod 12 so as to prevent any relative rotation between the sleeve and rod. The sleeve is free to slide on the rod 12; however, in order to hold the sleeve against such sliding motion, a set screw 32 is provided. Once the sleeve is adjusted to its desired position, the set screw 32 is turned inwardly until it forcefully engages the rod 12.

The sleeve 30 is provided on its underside with a forwardly extending flange 34, this flange on its underside merging into a substantially flat surface 36 on the sleeve 30.

A pivot member 38 provided with a flat surface 40 on its upper side is pivotally mounted on the sleeve 30 by means of a pivot pin 42, the two surfaces 36 and 40 being contiguous. The shank 44 of the pin is rotatably received in a companion aperture in the pivot member 38 while the threaded end 46 is screwed into a threaded opening 48 in the sleeve boss 50. The flat surfaces 36 and 40 are thereby held against each other, the pivot pin 42 being adjusted so as to permit frictional pivoting action of these two surfaces with respect to each other.

By providing two, extended flat surfaces 36 and 40 on the sleeve and pivot member, respectively, the pivot member 38 is held against any relative rotational or pivotal movement about the sleeve 30.

Extending forwardly of the pivot member 38 is a mounting stub 52 upon which is telescoped an elongated, tubular arm 54 which is secured to the stub 52 by means of suitable pins or rivets 56. Other means of securing the arm 54 to the stub 52 may be used without departing from the spirit and scope of this invention, such means including welding, bolting and riveting. The outer end of the arm 54 is upturned at 58 (see Fig. 1) to provide a socket into which the reduced diameter end 60 of an elongated strut 62 is inserted and held. This strut 62, as shown in Fig. 4, may be of tubular construction, the upper end of the strut providing a socket 64 adapted to receive a short, stub shaft 66. This socket 64 serves as a bearing in which the stub shaft 66 may freely rotate. The lower end 60 of the strut 62 preferably is adapted to be removably inserted in its companion socket in the upper end of the arm 54. Shorter or longer lengths of struts 62 may thereby be interchangeably used in the combination as desired.

On the upper end of the stub shaft 66 are secured, by welding or the like, two crossed braces 68 set at right angles to each other and preferably fabricated of flat steel strips. The ends of these two braces 68 and 70 are upturned at 72, thereby providing a retainer into which a tray or pan, such as the one 74 shown in Figs. 1 and 2 in phantom, may be inserted. A third arm or brace 76 may also be secured to the upper end of the stub shaft 66 to extend outwardly at an angle in between the other two braces 68 and 70, this brace 76 serving to stabilize the corner of a pan or tray which is set in place.

These braces 68, 70, 76 are positioned to lie in a substantially horizontal plane when the strut 62 is vertically upright. Also, the flat surfaces 36, 40 are positioned in a horizontal plane when the mechanism is properly mounted on a chair, as shown in Fig. 1.

In use, the tray mechanism is mounted on the underside of the swivel-chair seat, as shown in Fig. 1, by first loosening the bolt 26 in the extensible rod to a point at which the two plates 20 and 22 overlie the sides of the chair seat. The bolt 26 is tightened until the two clamps 20 and 22 as well as the inturned lugs 24 are forcefully engaged with the seat sides to hold the extensible rod 12, 18 in place. Following this, the sleeve 30 is adjusted on the rod 12 to a position which will permit the upturned end 58 on the laterally extending arm 54 to clear the sides and back of the chair in one continuous swinging motion, the set screw 32 being tightened when this adjustment is achieved.

With the tray 74 as shown in the dashed lines in Figs. 1 and 2 positioned in the tray retainer composed of the

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crossed braces 68, 70 and 76, the tray itself may be swung around the chair to any position convenient to the operator. Also, since the tray retainer is capable of rotating with respect to the upright strut 62, the tray itself may be rotated to any convenient position. Different positions of the tray rotated on the strut 62 are shown in both Figs. 1 and 2, as are different positions of the arm 54 with respect to the chair and extensible rod 12, 18. These alternative positions are shown in phantom.

With the tray positioned as shown in Fig. 1, all of the equipment and materials needed to make a permanent wave, for example, may be placed in the tray which is at the fingertips of the operator and close to the customer's hair. As the operator moves around the customer's head to work on different portions of the hair, the tray may be conveniently positioned always to be at the fingertips of the operator, thereby reducing stretching and straining on the operator's part to a minimum as well as relieving the customer of the necessity of holding any of the equipment used during the procedure, such equipment, for example, being the papers used in making the permanent wave.

What is claimed is:

1. In combination, a hollow elongated supporting rod of square cross-section, a hollow rod extension telescoping over one end portion of said supporting rod, a plug fixed in said one end portion and having a threaded aperture therethrough extending in a direction substantially parallel to the longitudinal extent of said rod, two end plates on the opposite ends of said rod and extension respectively, a clamping bolt rotatably received through the end plate on said extension and extending through the latter to be received by said threaded aperture, said bolt having a head bearing against the outer surface of said extension end plate, both said end plates having inwardly projecting lugs thereon, a sleeve having a square opening therethrough slidably received on said rod, the size of said square opening conforming to that of said rod for holding said sleeve against rotation on said rod, a set screw in said sleeve engageable with said rod for securing said sleeve in position on said rod, a flat surface on the underside of said sleeve, a pivot having a flat surface, the flat surfaces of said pivot member and said sleeve engaging each other, a pivot pin extending in a direction normal to the plane of said surfaces pivotally connecting said sleeve to said pivot member, an elongated arm secured at one end to said pivot member and being upturned at the other end, said other end having a first socket therein, an elongated strut having opposite ends, one strut end being removably fitted into said first socket and having a second socket in its other end, a stub shaft rotatably received by said second socket, and two transverse braces secured at the crossing thereof to said stub shaft, said braces lying in a plane normal to the length dimension of said strut and having outer ends which are upturned thereby providing a tray retainer which may be rotated with respect to said strut.

2. In combination, a hollow elongated supporting rod of square cross-section, a hollow rod extension telescoping over one end portion of said supporting rod, a plug fixed in said one end portion and having a threaded aperture therethrough extending in a direction substantially parallel to the longitudinal extent of said rod, two end plates on the opposite ends of said rod and extension respectively, a clamping bolt rotatably received through the end plate on said extension and extending through the latter to be received by said threaded aperture, said bolt having a head bearing against the outer surface of said extension end plate, both said end plates having inwardly projecting lugs thereon, a sleeve having a square opening therethrough slidably received on said rod, the size of said square opening conforming to that of said rod for holding said sleeve against rotation on said rod, a flat surface on the underside of said sleeve, a pivot having a flat surface, the flat surfaces of said pivot member and said sleeve

engaging each other, a pivot pin extending in a direction normal to the plane of said surfaces pivotally connecting said sleeve to said pivot member, an elongated arm secured at one end to said pivot member and being upturned at the other end, said other end having a first socket therein, an elongated strut having opposite ends, one strut end being removably fitted into said first socket and having a second socket in its other end, a stub shaft rotatably received by said second socket, and two transverse braces secured at the crossing thereof to said stub shaft, said braces lying in a plane normal to the length dimension of said strut and having outer ends which are upturned thereby providing a tray retainer which may be rotated with respect to said strut.

3. In combination, a hollow elongated supporting rod of square cross-section, a hollow rod extension telescoping over one end portion of said supporting rod, two end plates on the opposite ends of said rod and extension respectively, both said end plates having inwardly projecting lugs thereon, a sleeve having a square opening therethrough slidably received on said rod, the size of said square opening conforming to that of said rod for holding said sleeve against rotation on said rod, a flat surface on the underside of said sleeve, a pivot having a flat surface, the flat surfaces of said pivot member and said sleeve engaging each other, a pivot pin extending in a direction normal to the plane of said surfaces pivotally connecting said sleeve to said pivot member, an elongated arm secured at one end to said pivot member and being upturned at the other end, said other end having a first socket therein, an elongated strut having opposite ends, one strut end being removably fitted into said first socket and having a second socket in its other end, a stub shaft rotatably received by said second socket, and two transverse braces secured at the crossing thereof to said stub shaft, said braces lying in a plane normal to the length dimension of said strut and having outer ends which are upturned thereby providing a tray retainer which may be rotated with respect to said strut.

4. In combination, a hollow elongated supporting rod, a hollow rod extension telescoping over one end portion of said supporting rod, two end plates on the opposite ends of said rod and extension respectively, both said end plates having inwardly projecting lugs thereon, a sleeve slidably received on said rod, means holding said sleeve in position on said rod, a flat surface on the underside of said sleeve, a pivot having a flat surface, the flat surfaces of said pivot member and said sleeve engaging each other, a pivot pin extending in a direction normal to the plane of said surfaces pivotally connecting said sleeve to said pivot member, an elongated arm secured at one end to said pivot member and being upturned at the other end, said other end having a first socket therein, an elongated strut having opposite ends, one strut end being removably fitted into said first socket and having a second socket in its other end, a stub shaft rotatably received by said second socket, and two transverse braces secured at the crossing thereof to said stub shaft, said braces lying in a plane normal to the length dimension of said strut and having outer ends which are upturned thereby providing a tray retainer which may be rotated with respect to said strut.

5. In combination, an elongated supporting rod, a sleeve slidably received on said rod, means holding said sleeve in position on said rod, a flat surface on the underside of said sleeve, a pivot member having a flat surface, the flat surfaces of said pivot member and said sleeve engaging each other, a pivot pin extending in a direction normal to the plane of said surfaces pivotally connecting said sleeve to said pivot member, an elongated arm secured at one end to said pivot member and being upturned at the other end, said other end having a first socket therein, an elongated strut having opposite ends, one strut end being removably fitted into said first socket and having a second socket in its other end, a stub

shaft rotatably received by said second socket, and two transverse braces secured at the crossing thereof to said stub shaft, said braces lying in a plane normal to the length dimension of said strut and having outer ends which are upturned thereby providing a tray retainer which may be rotated with respect to said strut.

6. In combination, a hollow elongated supporting rod, a hollow rod extension telescoping over one end portion of said supporting rod, a plug fixed in said one end portion and having a threaded aperture therethrough extending in a direction substantially parallel to the longitudinal extent of said rod, two end plates on the opposite ends of said rod and extension respectively, a clamping bolt rotatably received through the end plate on said extension and extending through the latter to be received by said threaded aperture, said bolt having a head bearing against the outer surface of said extension end plate, both said end plates having inwardly projecting lugs thereon, a sleeve slidably received on said rod, a flat surface on the underside of said sleeve, a pivot member having a flat surface, the flat surfaces of said pivot member and said sleeve engaging each other, a pivot pin extending in a direction normal to the plane of said surfaces pivotally connecting said sleeve to said pivot member, an elongated arm secured at one end to said pivot member and being upturned at the other end, said other end having a first socket therein, an elongated strut having opposite ends, one strut end being removably fitted into said first socket and having a second socket in its other end, a stub shaft rotatably received by said second socket, and two transverse braces secured at the crossing thereof to said stub shaft, said braces lying in a plane normal to the length dimension of said strut and having outer ends which are upturned thereby providing a tray retainer which may be rotated with respect to said strut, means holding said sleeve in position on said rod, an elongated arm transversely extending from said rod and having a pivotal connection with said sleeve, means holding said arm against rotation about said rod, said arm being upturned at its outer end, and a tray retainer mounted for rotation on the upper end of said arm.

7. In combination, an upright support, a tray support, means rotatably connecting said tray support to the upper end of said upright support, an extensible horizontally disposed rod having opposite ends, two clamping plates on said opposite ends respectively, said plates lying in planes which are substantially parallel and transverse to the longitudinal extent of said rod, means included in said rod for forcing said plates toward each other, an arm pivotally connected to said rod for swinging movement in a plane parallel to said rod, means holding said arm against swinging movement about said rod, the lower end of said upright support being connected to the outer extremity of said arm, and means for adjustably moving said outer extremity horizontally with respect to said rod.

8. In combination, an elongated supporting rod, an elongated horizontally extending arm having inner and outer ends, a pivot member adjustably mounted on and movable along the length of said rod, said pivot member being pivotally connected to said inner end to provide for swinging movement of said arm with respect to said rod, an elongated upright strut having opposite ends, one strut end being detachably secured to the outer end of said arm, and a horizontally disposed tray support, said tray support being rotatably connected to the other end of said strut for swinging movement about a vertical axis.

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