June 11, 1935. W. MEYER 2,004,581

METHOD OF AND MEANS FOR SHAPING OR ARCHING EYEBROWS

Filed July 14, 1934

Fig. 1.

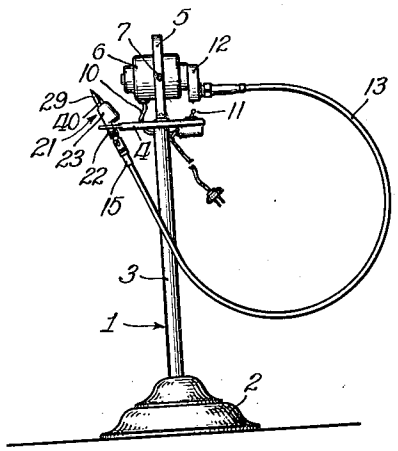


Fig. 2.

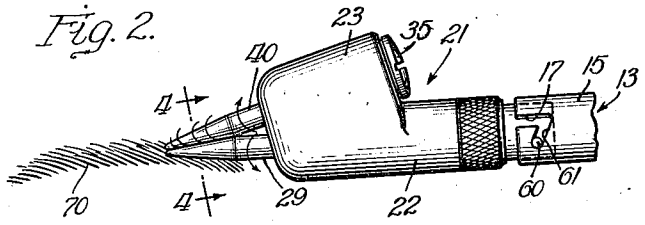


Fig. 3.

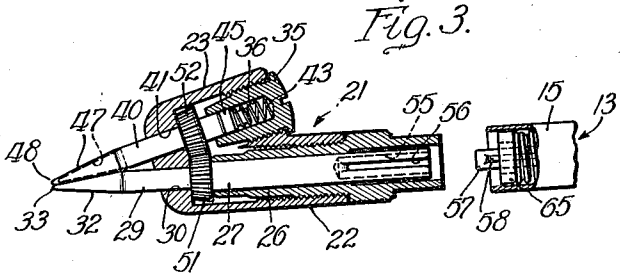
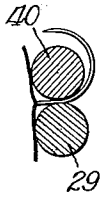


Fig. 4.



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METHOD OF AND MEANS FOR SHAPING OR ARCHING EYEBROWS

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17 Claims. (Cl. 128—355)

The present invention relates generally to devices for and methods of shaping or arching eyebrows by pulling out the hair outside of the portion from the eyebrow which it is desired to retain in order to bring the eyebrow to the proper or desired shape.

The principal object of the present invention is the provision of a method of removing the hairs outside of the eyebrow portion which is to remain by using rapidly rotating rolls which grasp the hair to be pulled out and withdraw the hair by an upward and lateral motion.

Another object of the present invention is the provision of an eyebrow shaping device which includes two rotatable rolls geared together and arranged so that the hair to be pulled out passes between the rolls, and the shape of the roll is preferably such that the hair is fed along the rolls as well as pulled upward from the skin.

Still further, another object of the present invention is the provision of conical pointed rolls which are so shaped as to provide for pulling the hair directly from the skin and, at the same time, causing the hair to be shifted along the rolls. By this means, the shaping of the eyebrow is quickly accomplished, since the hair enters the rolls in a successive manner without bunching, clogging, or other discomforting and troublesome disadvantages.

These and other objects and advantages of the present invention will be apparent to those skilled in the art after a consideration of the following detailed description of the preferred construction illustrated in the accompanying drawing.

In the drawing:

Figure 1 is a side view of a machine embodying the principles of the present invention;

Figure 2 is an enlarged view of the end piece which contains the hair pulling pointed rolls;

Figure 3 is a section taken through the device shown in Figure 2; and

Figure 4 is a section taken along the line 4—4 of Figure 2.

Referring now more particularly to Figure 1, the reference numeral 1 indicates a standard having a base 2 and an upright 3 at the upper end of which is disposed a head 4. The head 4 carries a swingably mounted yoke 5 in which an electric motor 6 is supported, as by a pair of trunnions 7 or the like. The motor 6 is provided with conduit means 10 controlled by an electric switch 11 of any suitable construction. The motor 6 includes a casing 12 containing gear reduction means of any suitable character, and the casing 12 supports the casing of a flexible connector 13 of well-known construction, such as one in the form of a flexible conduit enclosing a flexible wire or other drive transmitting means.

The flexible connector 13 terminates in a head or sleeve 15, and in Figures 2 and 3 it will be noted that the sleeve is provided with a notched slot 17.

Secured to the sleeve 15 is an operating head or casing 21 having a cylindrical portion 22 and an enlarged angularly disposed portion 23. One end of the cylindrical casing section 22 is open and is threaded to receive an elongated sleeve 26 (Figure 3) in which a shaft 27 is journaled. This shaft has a reduced end 29 extended through an opening 30 in the other end of the cylindrical casing section 22. The extended end 29 of the shaft 27 is made conical or tapered, as at 32, and has a tip 33 which may be rounded, as shown, pointed or otherwise formed for a purpose which will be described later.

The angular section 23 of the casing 21 is also provided with a threaded opening in which is disposed a short bushing 35 having a bore 36 therein. A second shaft 40 is journaled within an opening 41 formed in the angularly disposed casing section 23 and in the bore 36 of the bushing 35. The inner end of the second shaft 40 is received a short distance within the bore 36, and a spring 43 is disposed within the bore 36 and bears directly against a stud or thrust pin 45 which, in turn, bears directly against the inner end of the second shaft 40. The outer end of the shaft 40 is disposed exteriorly of the angularly disposed casing section 23 and is also formed with a conical or tapered end 47 and a rounded or pointed tip 48.

The angular relation between the shafts 27 and 40 and the taper of the ends 32 and 47 are such that the conical ends of the shaft are adapted to have substantially rolling contact with each other when the shafts are rotated. The shafts 27 and 40 are geared to rotate in opposite directions by a pair of small bevel gears 51 and 52, these gears being disposed within the casing 21. The gear 51 is mounted on the shaft 27 at the junction between the rear enlarged portion and the forward reduced portion 29. Both gears 51 and 52 are rigidly mounted on their respective shafts, it being observed from Figure 3 that there is a space between the inner end of the bushing 35 and the gear 52 to provide for an axial retraction of the shaft 40 against the tension of the spring 43 under conditions which will be referred to later. The bevel gear 51 is disposed between

the forward wall of the casing 21 and the forward end of the elongated bushing 26. Since the gear 51 is securely fastened to the shaft 29, the latter is by this means held against axial displacement in the casing 21.

The shaft 27 forms the driving shaft of the rotatable roll assembly, and to this end the rear portion of the shaft 27 is hollowed out, as at 55, and is slotted as at 56 for the purpose of receiving the end of a driving pin 57 having a feather 58 adapted to enter the slot 56. The driving pin 57 is operatively connected with the flexible driving means enclosed within the conduit 13.

The rearmost end of the sleeve 26 carries a pin 60 which is adapted to be received within the laterally angled portion 61 of the slot 17, this means thereby forming a bayonet joint between the head 15 of the driving conduit and the casing or operating head 21. The conduit sleeve 15 carries a spring-pressed plunger 65, and when the head 21 is inserted with the pin 60 entering the slot or notch 17, against the tension of the spring-pressed plunger 65, the pin is adapted to enter the angular notch 61, whereby the head 21 is secured to the conduit casing, and at the same time the feather 58 enters the slot 56 in the driving shaft 27. Hence the actuation of the electric switch causes the motor 6 to drive the rolls or shafts 29 and 40 at a considerable speed and in the direction of the arrows shown in Figure 2.

In Figure 2 I have shown the position of the device when the same is in operation in shaping or arching an eyebrow, indicated by the reference numeral 70. The rounded or pointed ends 33 and 48 facilitate the entrance of a hair between the rotating rolls 29 and 40, and as soon as the hair is seized by the rolls, rotating in the direction indicated in Figure 2, the hair is rapidly withdrawn from the skin by being pulled upwardly and backwardly therefrom. The backward pull is the result of the tendency of the hair to travel toward the casing 21 as it enters between the rolls, this travel being the result of the tendency of the hair to travel toward the larger diameter portions of the rolls in much the same manner in which a belt tends to travel toward the larger diameter of a "crown" pulley.

The casing 21 is used as a hand piece in the operation of the device. The spring pressing of the roll 40 provides for accommodation of the hair or hairs in between the conical ends 32 and 47 of the rolls 29 and 40, that is, as a hair enters between the rolls the spring 43 will allow slight shifting of the roll 40, as exaggerated in dotted lines in Figure 3, and this shifting of the roll 40 will provide the space necessary to accommodate the hair between the rolls. At the same time, the spring 43 holds the gear 52 yieldably in engagement with the gear 51. As soon as the hair being plucked is well between the conical ends 32 and 47, there is a tendency for the hair to work rearwardly as the rolls rotate, and it is engaged and plucked by this upward and backward action of the rolls.

In the operation of the device the motor 6 is energized and the hand piece or casing 21 is held in the position shown in Figure 2. Then the device is moved progressively along the eyebrow, as to the left, in Figure 2, so that the hairs to be removed are directed into the space between the tips 33 and 48. The rapidly rotating rolls withdraw the hairs, and the latter are at the same time shifted rearwardly to permit the entrance of other hairs, as just explained, so that the eyebrow may be quickly and conveniently shaped by a uniform movement of the hand piece 21.

While I have described above the preferred structure in which the principles of the present invention have been embodied, it is to be understood that my invention is not to be limited to the specific details shown and described above, but that, in fact, widely different means may be employed in the practice of the broader aspects of my invention.

What I claim, therefore, and desire to secure by Letters Patent is:

1. The method of plucking hair which comprises holding the pointed end of a rotating roll endwise adjacent the hair, pressing the hair against the pointed end of the roll which is moving away from the skin to impart an outward pull upon the hair and simultaneously to move the hair backwardly along the surface of the roll.

2. The method of shaping eyebrows which comprises holding the pointed end of a rapidly rotating roll endwise along the eyebrow and transversely of the hairs to be plucked, pressing each hair to be plucked against the pointed end of the rotating roll which moves away from the skin, and simultaneously shifting each hair along said pointed end in an axial direction relative to the roll.

3. A device for shaping eyebrows comprising a pair of rolls having pointed ends held in engagement and adapted to grasp hairs individually and generally endwise therebetween, and bearing means for said rolls, said bearing means being disposed entirely away from the pointed ends of the rolls.

4. A device for shaping eyebrows comprising a pair of rotatable rolls having pointed ends in substantially rolling contact and adapted to grasp the hairs of the eyebrow individually therebetween, and bearing means for said rolls, said bearing means being disposed entirely away from the pointed ends of the rolls.

5. A device for shaping eyebrows comprising a handle casing, a shaft journaled for rotation therein and having a pointed end extending therefrom, a second shaft journaled for rotation in said casing and having a pointed end disposed in rolling contact with the pointed end of first shaft, means for driving said first shaft, means for driving the second shaft from said first shaft and in a direction opposite thereto, and bearing means for said shafts, said bearing means being disposed entirely away from the pointed ends of the shafts.

6. A device for shaping eyebrows comprising a handle casing, a shaft journaled for rotation therein and having an extended conical end exposed exteriorly of said casing, a second shaft journaled for rotation in said casing and exposed from said casing at an angle to said first shaft, said second shaft also having a conical end and being disposed at such an angle to the first shaft that the conical ends of said shafts are adapted to have rolling contact, said contacting conical ends being engageable endwise and individually with the strands of hair, means for driving said shafts, and bearing means for said shafts, said bearing means being disposed entirely away from the outer exposed ends of said shafts.

7. A device for shaping eyebrows comprising a handle casing, a shaft journaled for rotation therein and having an extended conical end exposed exteriorly of said casing, a second shaft journaled for rotation in said casing and ex-

posed from said casing at an angle to said first shaft, said second shaft also having a conical end and being disposed at such an angle to the first shaft that the conical ends of said shafts are adapted to have rolling contact, said conical ends being engageable endwise and individually with the strands of hair, spring means biasing said second shaft for movement relative to the casing to bring its conical end into rolling engagement with the conical end of said first shaft, and bearing means for said shafts, said bearing means disposed entirely away from the outer exposed ends of said shafts.

8. A device for arching eyebrows comprising a casing, a pair of shafts journaled therein and having pointed ends extending from the casing and disposed in rolling contact for engagement endwise and individually with the strands of hair, gear means disposed within said casing for causing said shafts to rotate in opposite directions, and bearing means for said shafts, said bearing means being disposed entirely away from the pointed ends of the shafts.

9. A device for shaping eyebrows comprising a handle casing, a shaft journaled for rotation therein and having an extended conical end exposed exteriorly of said casing, a second shaft journaled for rotation in said casing and at an angle with respect to said first shaft, said second shaft also having a conical end exposed exteriorly of said casing and adapted to have rolling contact with the conical end of said first shaft, said conical ends being engageable endwise and individually with the strands of hair, gear means for causing said shafts to rotate together, spring means associated with one of said shafts for urging that shaft for movement toward the conical end of the other shaft, and bearing means for said shafts, said bearing means being disposed entirely away from the outer exposed ends of said shafts.

10. A device for shaping eyebrows, a stand, a motor supported thereon, a housing, a pair of rotatable shafts journaled for rotation in said housing in opposite directions, said shafts having pointed ends in rolling contact and engageable generally endwise and individually with the strands of hair, a flexible coupling connecting said casing with said motor and serving to drive at least one of said shafts, and bearing means for said shafts, said bearing means being disposed entirely away from the pointed ends of the shafts.

11. A device for shaping eyebrows comprising a shaft, a motor having a casing supported by said shaft, a handle casing, a pair of rotatable shafts journaled therein and having pointed ends arranged to have rolling contact and engageable generally endwise and individually with the strands of hair, a flexible casing connecting the motor casing with said handle casing, driving means disposed within said flexible casing and connecting said motor with one of said shafts, and bearing means for said shafts, said bearing means being disposed entirely away from the pointed ends of the shafts.

12. A device for shaping eyebrows comprising a handle casing, a driving shaft journaled for rotation therein and having a conical end extending outside said casing, said casing being provided with an enlarged section, a second shaft journaled in said enlarged section and disposed at an angle to the axis of said first shaft, said second shaft also having a conical end adapted to have relatively wide rolling contact with the conical section of said first shaft and engageable generally endwise and individually with the strands of hair, bevel gear means carried by each of said shafts in said casing for causing the shafts to rotate together in opposite directions, a threaded sleeve having a bore and disposed in said enlarged casing section, spring means disposed in said bore and adapted to urge said second shaft for movement toward engagement with said first shaft, and bearing means for said shafts, said bearing means being disposed entirely away from one and the same end of said shafts.

13. A device for shaping eyebrows comprising a pair of coacting rotatable rolls for plucking the strands of hair of the eyebrow by their rolling coaction, said rolls having pointed ends in close rolling coaction and engageable generally endwise with the hair for picking up and feeding individually the strands of hair endwise and individually between the rolls, and bearing means for said rolls, said bearing means being disposed entirely away from the pointed ends of said rolls.

14. A device for shaping eyebrows comprising a pair of coacting tapered rolls having coacting pointed ends engageable generally endwise and individually with the strands of hair, means for turning the rolls in opposite directions to feed the strands of hair between the rolls individually and generally longitudinally thereof and to pull the hair from the skin, and bearing means for said rolls, said bearing means being disposed entirely away from the pointed ends of said rolls.

15. A device for shaping eyebrows upon the human skin comprising a pair of coacting tapered rolls having coacting pointed ends engageable generally endwise and individually with the strands of hair and generally laterally and directly with the adjacent skin, means for turning the rolls in opposite directions to feed the strands of hair between the rolls individually and generally longitudinally thereof and to pull the hair from the skin, the generally lateral engagement of the ends of the rolls with the skin holding the skin down during the pulling of the hair, and bearing means for said rolls, said bearing means being disposed entirely away from the pointed ends of said rolls.

16. The method of shaping eyebrows which comprises introducing the strands of hair individually between pointed ends of coacting tapered rolls in a generally longitudinal direction with respect to said rolls and from the ends thereof, and turning the rolls in opposite directions to feed the strands of hair between the rolls individually and generally longitudinally thereof and to pull the hair from the skin.

17. The method of shaping eyebrows upon living human skin which comprises engaging coacting pointed ends of coacting tapered rolls generally endwise and individually with the strands of hair and generally laterally and directly with the adjacent skin, and turning the rolls in opposite directions to feed the strands of hair between the rolls individually and generally longitudinally thereof and to pull the hair from the skin, and by the lateral engagement of the ends of the rolls directly with the skin, holding the skin down during the pulling of the hair therefrom.

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