July 12, 1938. H. W. FERGUSON 2,123,566

HAIR WAVING APPARATUS

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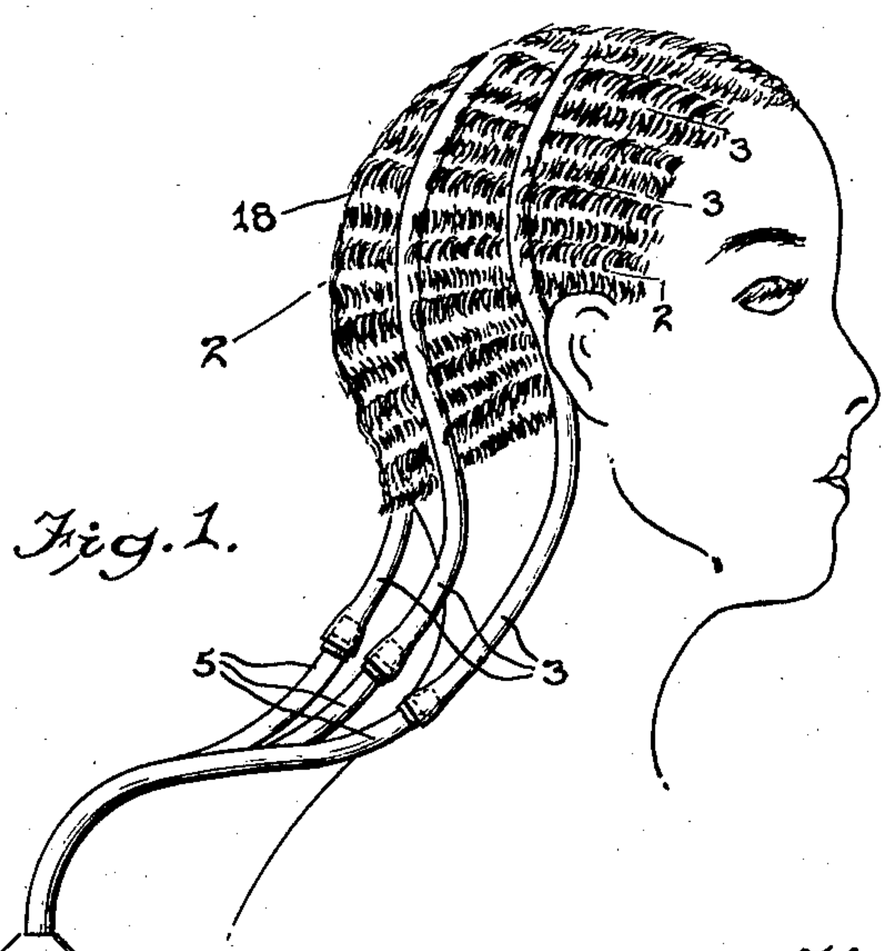


Fig. 1.

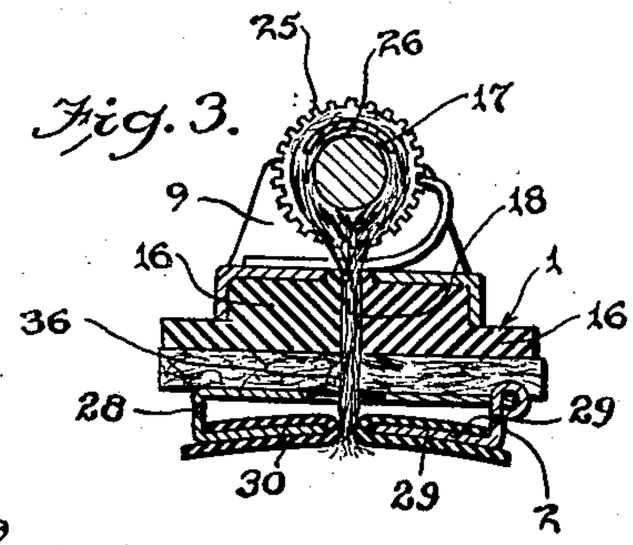


Fig. 3.

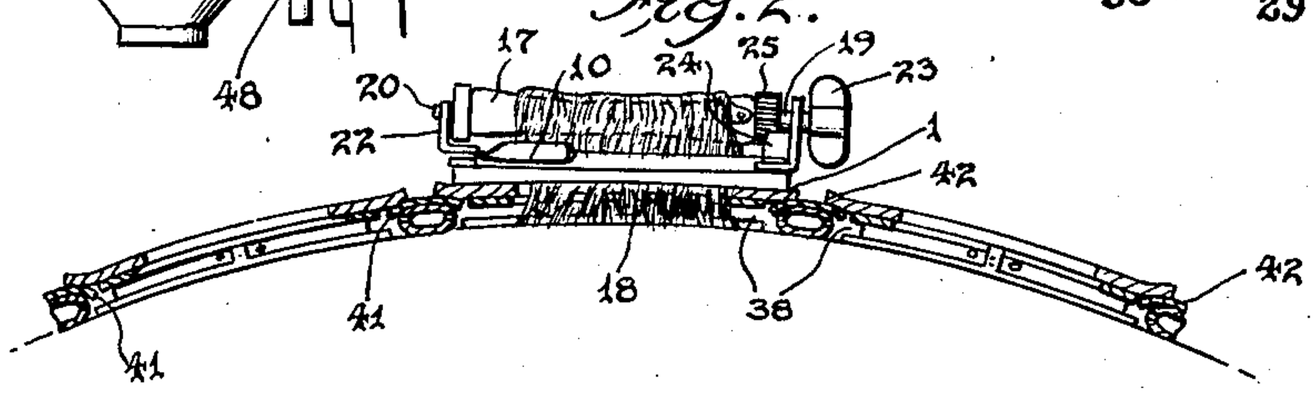
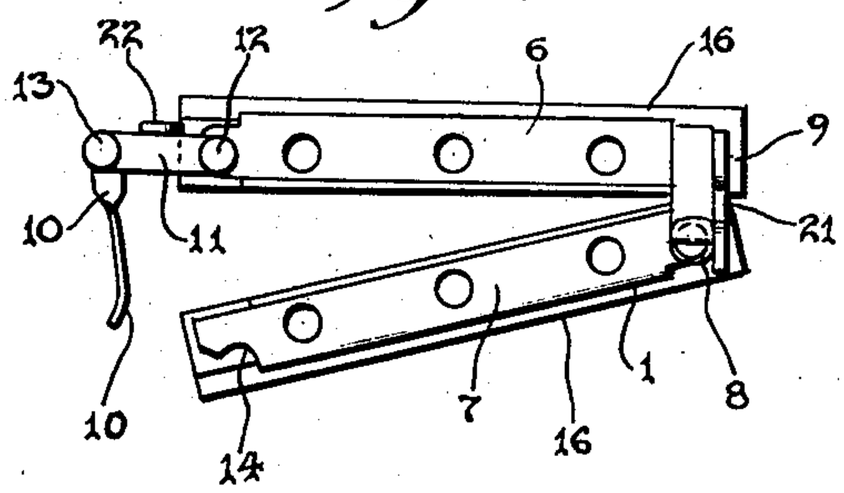


Fig. 2.



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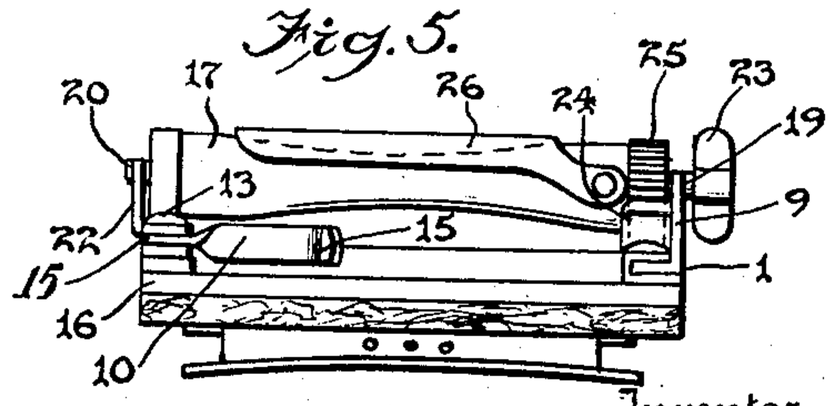

Fig. 5.

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HAIR WAVING APPARATUS

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Fig. 14.

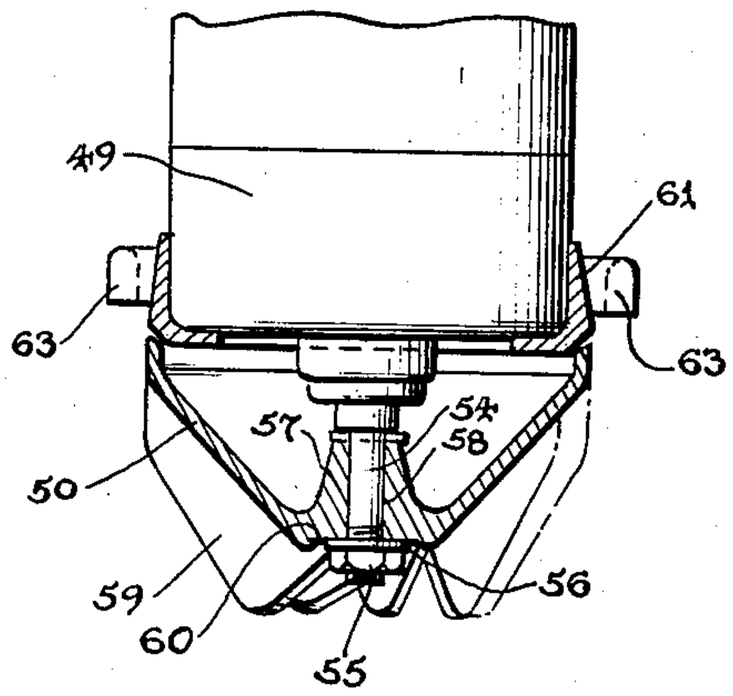

Fig. 15.

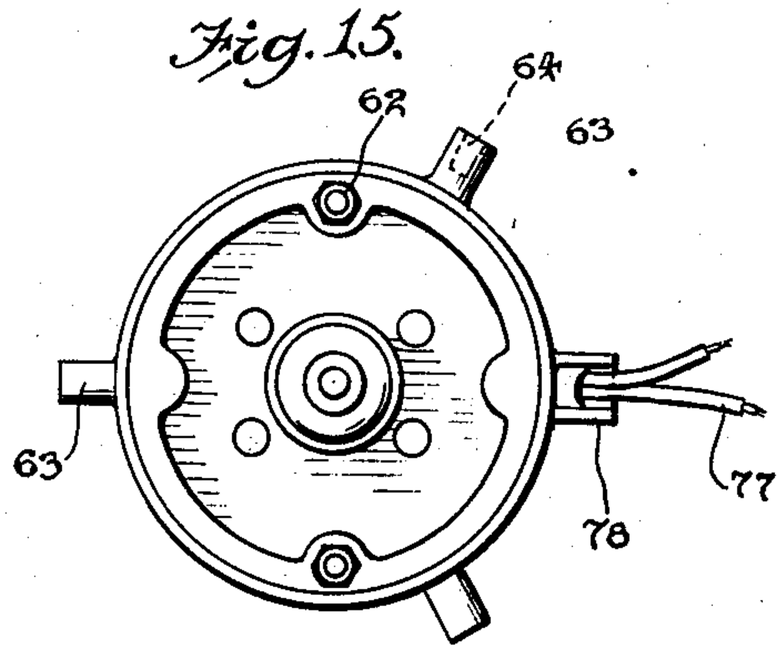

Fig. 6.

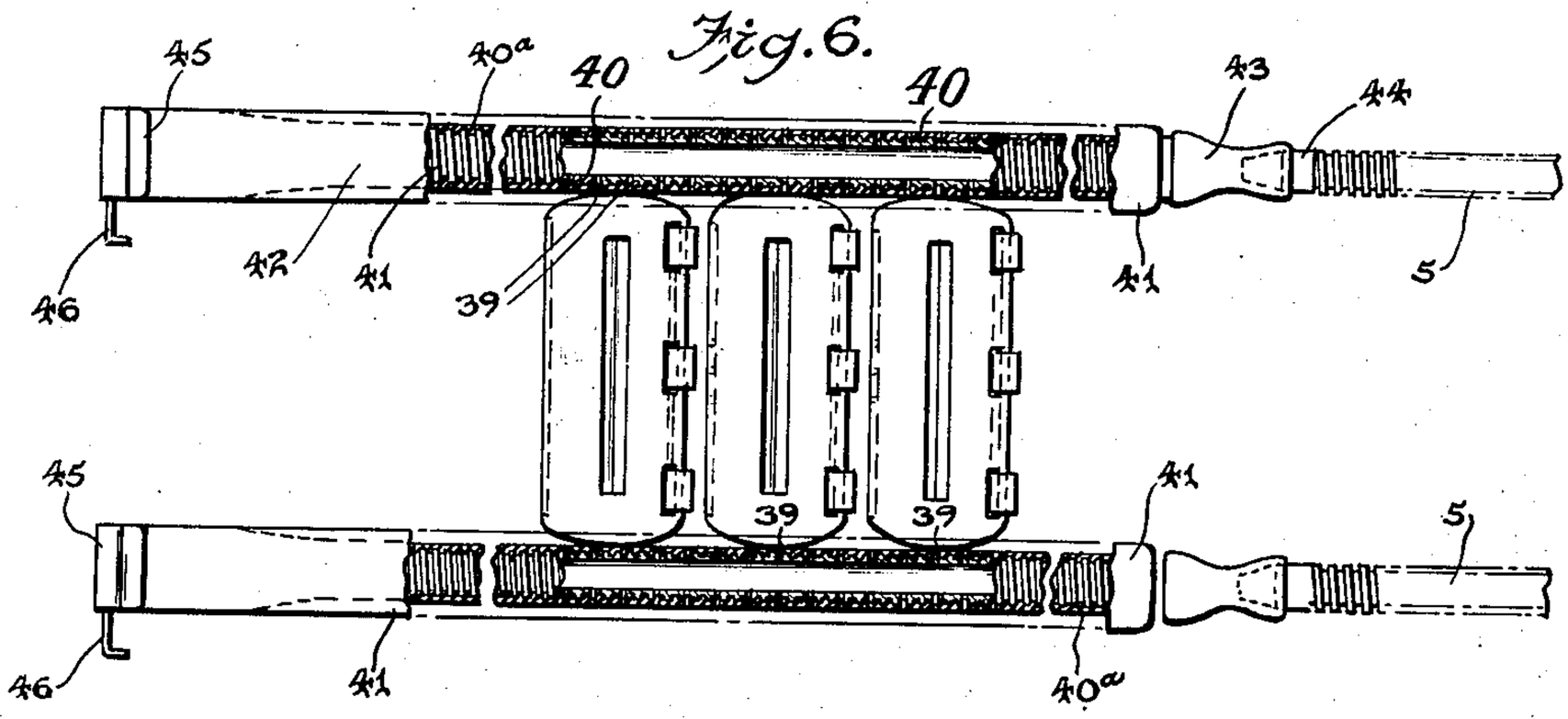

Fig. 7.

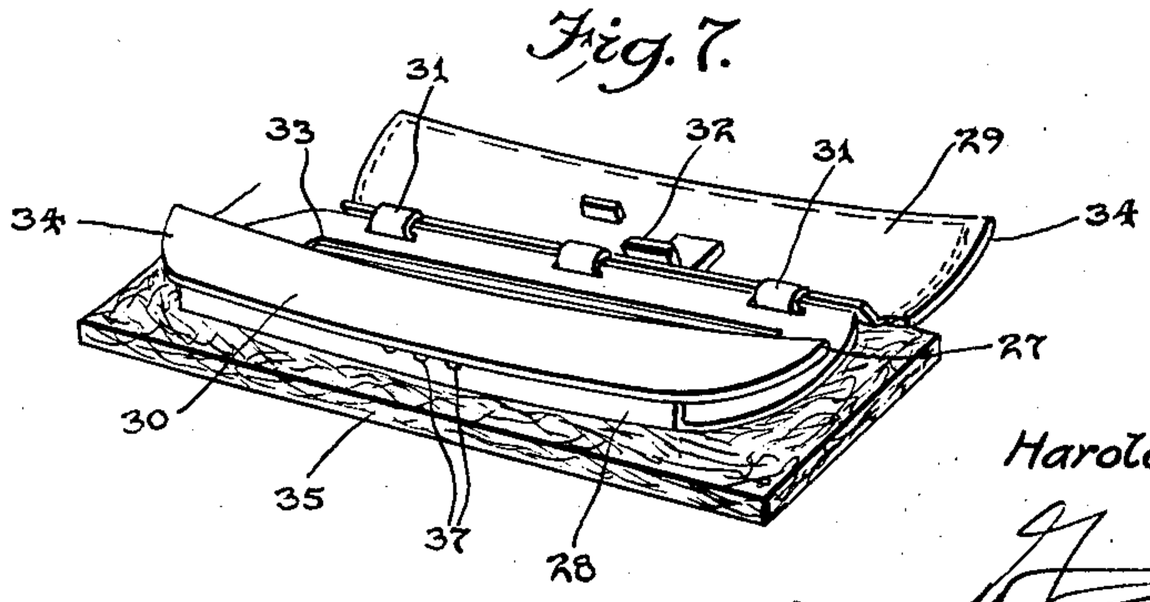

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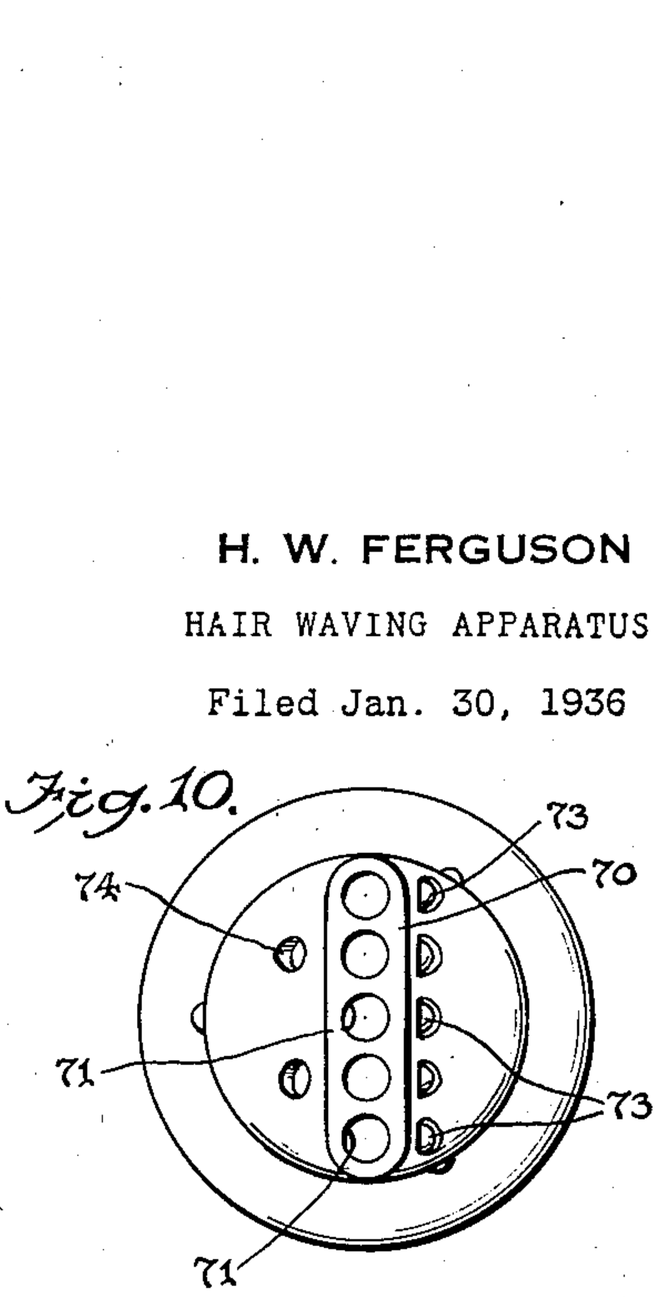
Fig. 10.



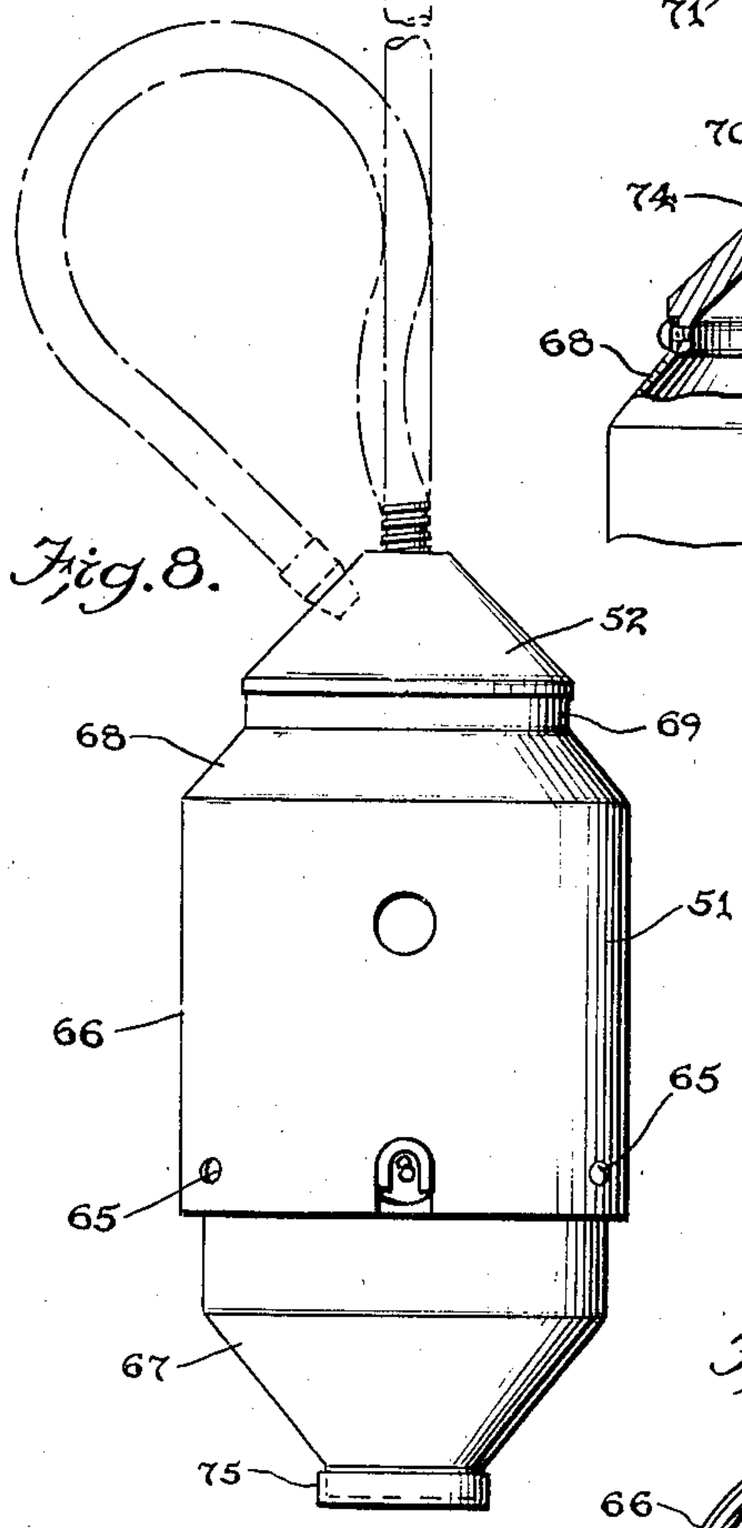


Fig. 8.

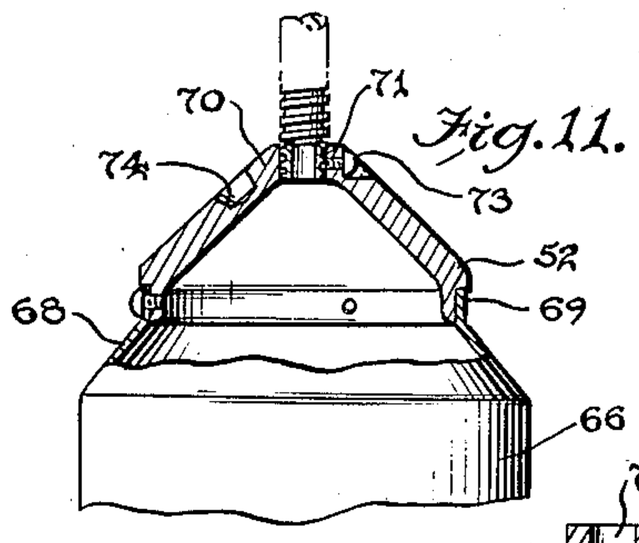


Fig. 11.

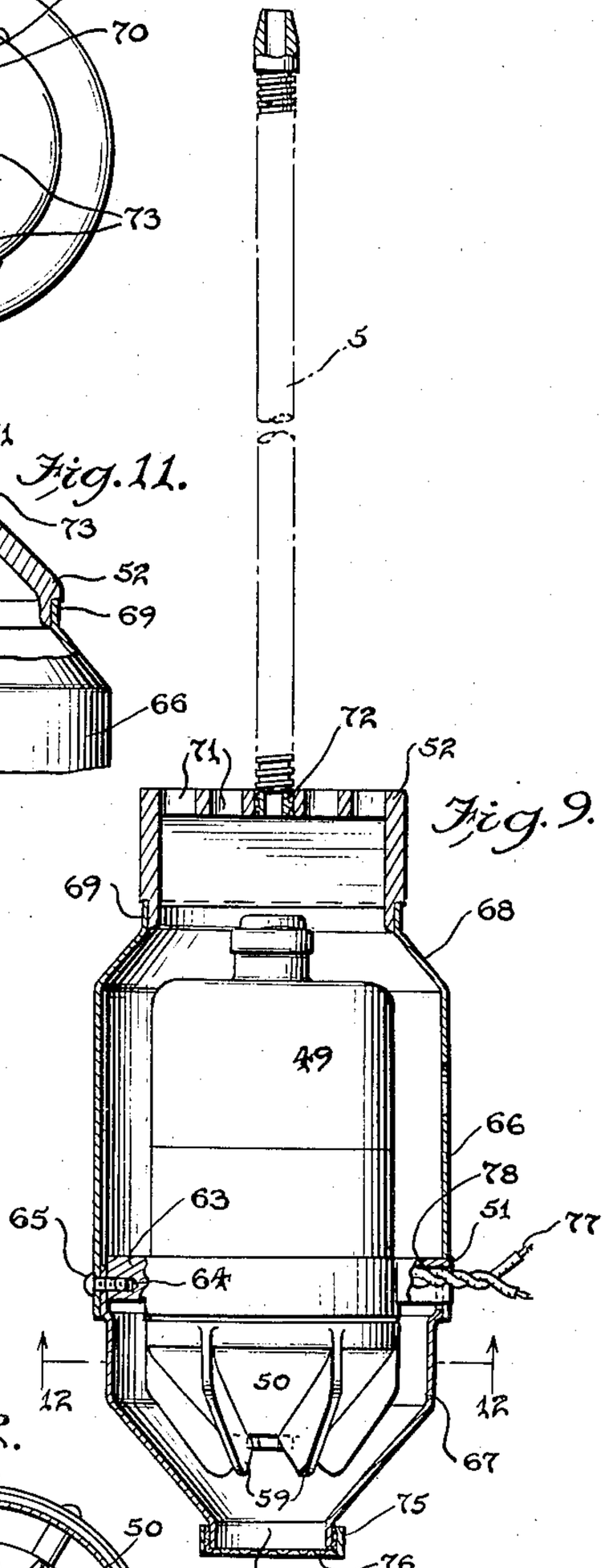


Fig. 9.

Fig. 12.

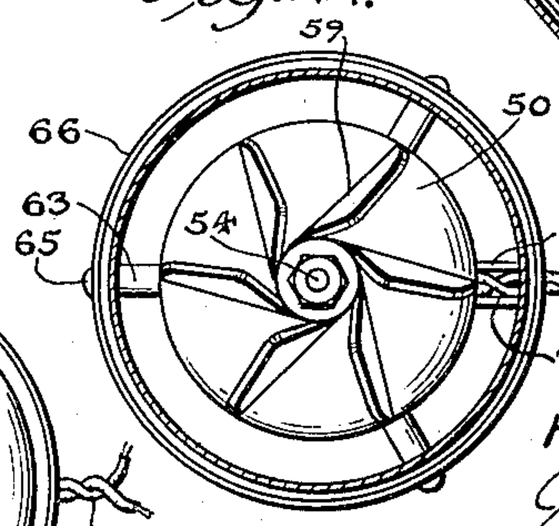
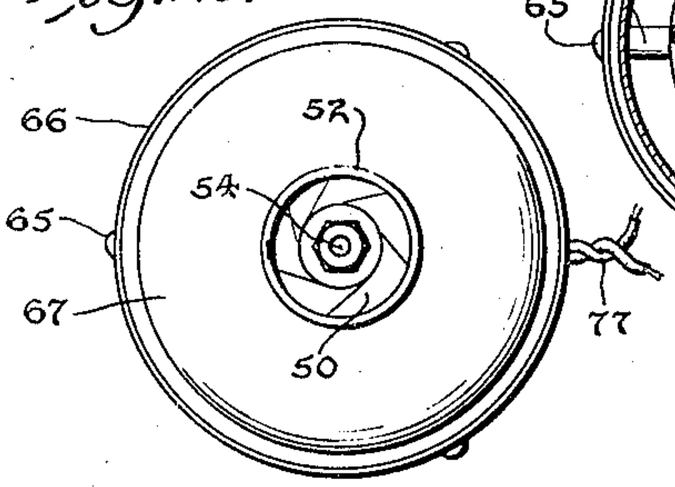


Fig. 13.



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UNITED STATES PATENT OFFICE

2,123,566

HAIR WAVING APPARATUS

Harold W. Ferguson, Rochester, N. Y.

Application January 30, 1936, Serial No. 61,590

25 Claims. (Cl. 132—36)

The invention relates to a hair waving apparatus.

An object of the present invention is to provide for use in connection with Croquignole hair waving clamps a protector designed to take the place of the felt of ordinary hair waving clamps and adapted to permit the strands of hair to be pulled up through its center in such a manner as to be held compactly in a perpendicular line with relation to the scalp and thus permit the flow of air around the hair strand underneath the Croquignole hair waving clamp and the heating element thereof for cooling the head and protecting the scalp.

A further object of the invention is to provide a protector adapted to receive air from scalp cooling tubes and to be arranged on the head of a person beneath hair waving clamps so as to allow air to pass over the scalp beneath the clamps and having ports at the sides for supplying air to the spaces between the clamps whereby the scalp of a person is cooled and protected both beneath the hair waving clamps and at the sides thereof. The protector confines the flow of air around the hair strand and over the scalp directly beneath the clamps and heating elements thereof and at the same time allows a substantial amount of air to pass out at the sides of the protector in escaping therefrom as a result of the circulation of air produced by currents of air continuously supplied by the scalp cooling tubes which discharge air into the protector at each end thereof.

A further object of the invention is to provide strong and durable flexible metallic tubing in the air cooling tubes insulated exteriorly for conveying air from a blower to the protectors, which tubes will be adapted to permit a maximum amount of flexibility and capable of flexing sufficiently to conform to the head of a person and permit the hair waving clamps and protectors to be disposed in the desired arrangement on the head of a person.

Another object of the invention is to provide a protector adapted to present a curved surface to the head of a person to fit and conform to the configuration of the same and at the same time present a flat upper surface for supporting the hair waving clamp and its heating element and adapted to afford the very desirable feature of allowing the hair waving clamp to be arranged a minimum distance from the head and thereby more effectively wave the hair.

It is also an object of the invention to provide an automatically opening protector adapted to be maintained closed when in position on the head of a person and capable when open of affording access to its interior to facilitate the passing of strands of hair through the protector to the hair waving clamp and enable the opening in the top of the protector for the passage of the hair to be securely sealed by tight packing of the hair so as to exclude steam from the interior of the protector and prevent steam from seeping through the top opening of the protector and reaching the scalp of a person.

A further object of the invention is to provide a protector adapted to permit the hair waving clamps to be placed end to end as closely as desired and capable of use in connection with any suitable air supplying means and of also furnishing adequate protection without a blower and provided with means for engaging the scalp cooling tubes of a blower to assist in holding said tubes in position on the head of a person.

Another object of the invention is to provide a simple and efficient blower having a manifold adapted to supply air to a plurality of scalp cooling tubes and provided with means for enabling one or more unused tubes to be plugged to prevent the escape of air from such tubes.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended, it being understood that various changes in the form, proportions and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:

Figure 1 is a side elevation of a hair waving appliance constructed in accordance with this invention and shown applied to the back of a chair and illustrating the arrangement of the hair waving clamps, protectors and scalp cooling tubes on the head of a person.

Figure 2 is a longitudinal sectional view of a hair waving and scalp protecting means taken substantially on the line **2—2** of Figure 1.

Figure 3 is a detail transverse sectional view on the line **3—3** of Figure 1.

Figure 4 is a plan view of one of the hair waving clamps in an open position.

Figure 5 is a side elevation of a hair waving clamp and protector.

Figure 6 is an enlarged detail plan view illustrating the arrangement of the scalp cooling

tubes and the protectors, the hair waving clamps being omitted.

Figure 7 is a detail perspective view of one of the protectors shown open and in an inverted position.

Figure 8 is an elevation of the blower.

Figure 9 is a vertical sectional view of the same, the motor being shown in elevation.

Figure 10 is an end view of the blower, showing the upper end thereof with the tubes omitted.

Figure 11 is a detail vertical sectional view of the upper portion of the blower taken at right angles to Figure 9.

Figure 12 is a transverse sectional view taken on the line 12—12 of Figure 9 and looking in the direction indicated by the arrows.

Figure 13 is an end view of the blower showing the lower end thereof.

Figure 14 is a detail vertical sectional view through the fan, a portion of the motor being shown in elevation.

Figure 15 is an end view of the motor, illustrating the construction of the attaching band for securing the motor.

In the accompanying drawings in which is illustrated the preferred embodiment of the invention, the hair waving apparatus comprises hair waving clamps 1 designed to be arranged on the head of a person in groups or rows as illustrated in Figure 1 of the drawings and supported by hollow protectors 2 which are illustrated in detail in Fig. 7 of the drawings, and which are preferably supplied with continuous currents of air by scalp cooling tubes 3 connected with a blower 4 by conecting tubes 5. The hair waving clamps, which may be positioned on the head of a person in any desired arrangement, are preferably disposed in transverse rows and independently extend longitudinally of the head as shown, that is, the rows of hair waving clamps which are separated by the tubes 3 extend across the head from one side to the other while each individual hair waving clamp has its greater dimension extending longitudinally of the head at right angles to the direction in which the rows extend. The hair waving clamp which is of the ordinary Croquignole type comprises in its construction a pair of clamping bars 6 and 7 connected at one end by pivots 8 to a bearing bracket 9 and detachably connected at the other end by a locking device. The locking device consists of a cam lever 10 and spaced link plates 11 arranged at the upper and lower faces of the adjacent ends of the clamping bars or members 6 and 7 and connected at one end to the clamping bar 6 by a pivot 12. The pivot 12 passes through the link plates at one end thereof and the cam lever 10 is fulcrumed between the other ends of the link plates by a pivot 13. The clamping bar 7 which is engaged by the locking device is provided at the outer side with a segmental recess 14 which receives the cam portion 15 of the cam lever 10 when the clamping bars are locked in their closed position. The cam portion 15 extends from the cam lever approximately at right angles thereto, so that when the parts are locked, the cam lever extends along one side of the clamping bar 7. The clamping bars when locked are slightly spaced at their inner edges and are provided at their lower faces with combined insulating and clamping strips 16 of rubber or other suitable material adapted to yieldably clamp a strand or tress of hair and form a seal between the heating element, not shown, which, when the apparatus is in use, surrounds the curling rod 17. The hair 18 is tightly wrapped around the curling rod 17, which is provided at its ends with trunnions 19 and 20, the trunnion 19 being arranged in a bearing recess 21 of the bearing bracket and the trunnion 20 being arranged adjacent a bearing lug 22 carried by the upper link plate 11 and located at one end of the curling rod adjacent the trunnion 20 when the parts are assembled. The extended trunnion 19 is provided with a suitable grip 23 for enabling it to be conveniently rotated for winding the hair tightly around the curling rod, and the latter is locked against retrograde rotation by a spring pawl 24 secured to the bearing bracket and engaging a ratchet wheel 25 formed integral with the curling rod. The curling rod is provided with the usual pivoted clamp 26 for clamping the hair to prevent the same from slipping while winding the hair on the curling rod.

The heating element preferably consists of an electric heater of the well-known type used in connection with the conventional type of Croquignole hair waving clamp. As the construction and arrangement of the heating element is well known, illustration thereof is deemed unnecessary.

The hair waving clamp protector, which is constructed of sheet metal or other suitable material to form a rigid structure, is substantially oblong and hollow, being composed of a flat top wall 27, spaced side walls 28, and a bottom wall composed of two spaced leaves or sections 29 and 30 which are slightly curved transversely to enable the protector to present a transverse concave lower face to conform to the configuration of the head of a person. The sections 29 and 30 of the bottom wall are formed integral with the side walls 28, and one of the side walls is integral with the top wall. The other side wall is hinged at 31 to the top wall, and the side of the protector formed by the bottom section 29 and the adjacent wall 28 is adapted to be opened automatically by a spring 32 when it is free to move. The spring 32, while having sufficient strength to open the hinged side automatically, is sufficiently light to permit the hinged side 29 to be maintained closed when the protector is in position on the head of a person and the hair waving clamp is arranged upon the protector. The hinged leaf or section 29 when in its closed position as illustrated in Fig. 3 of the drawings abuts against the contiguous side edge of the top wall which forms a stop and enables the hinged section in its closed position to form a rigid support for that side of the protector. The top wall of the protector which presents a flat surface to the hair waving clamp is provided with a central, relatively narrow, longitudinal opening 33, and the inner adjacent edges of the sections 29 and 30 are spaced slightly from each other when the hinged side of the protector is closed.

A strand or tress of hair is adapted to be passed through the opening 33 in the top of the protector and to be pulled up perpendicular to the scalp. The hinged side affords access to the interior of the protector and facilitates more compacting of the hair in the opening 33 and the sealing of the top of the protector by the hair at the scalp side to prevent the possibility of steam escaping to the scalp along the hair strands. After the strand or tress of hair is passed through the opening 33 in the top of the protector and while the protector is spaced from the scalp, the hinged bottom section or leaf 29 is closed and the protector is moved downwardly

on the strand or tress of hair and is fitted against and placed in proper position on the scalp. The section or leaf **30** which is formed integral with the contiguous side wall and the top wall of the protector cooperates with the side partition to form a rigid structure at that side of the protector. The bottom sections **29** and **30** are provided with a heat insulating coating **34** of rubber or other suitable material, and a sheet **35** of felt or other suitable material is secured to the top wall of the protector exteriorly thereof and is provided with a slit **36** through which the hair passes from the protector to the hair waving clamp. The sheet **35** of felt is adapted to fit tightly against the hair which is pulled up through the central opening **33**, and the said sheet **35** assists in sealing the protector at the top thereof and in preventing the passage of steam to the interior of the protector. The side walls **28** are provided centrally thereof with groups of holes **37** forming ports for the discharge of air from the protector into the spaces at the sides of the protector between the same and adjacent protectors for cooling the scalp at the sides of the protector.

The ends of the protector are open and the spaced top and bottom walls of the protector project beyond the ends of the side walls and provide recesses **38** to receive the side portions of the scalp cooling tubes **3** which extend across the head **2** of a person between the rows of hair waving clamps and protectors, as clearly shown in Figure 1 of the drawings. The scalp cooling tubes which are substantially elliptical in cross section have their side portions arranged in the recesses **38** of the protectors and are provided at the protectors with nozzle or jet holes **39** forming ports for the discharge of air into the protectors. The scalp cooling tubes which are arranged at both ends of the protectors and discharge air into the protectors from each end thereof are designed to supply air for cooling the scalp directly beneath the hair waving clamps and also for cooling the scalp at the sides of the protector. The scalp cooling tubes supply continuous currents of air, and the protector which takes the place of ordinary felt usually employed in connection with hair waving clamps of the Croquignole type permits a flow of air around the hair strands beneath the clamp. It confines the flow of air around the hair strand and over the scalp directly beneath the protector and the heating device of the hair waving clamp and at the same time allows a substantial amount of air to pass out at the sides of the protector for cooling the scalp between the protectors.

While the protector is illustrated in the drawings as provided with a hinged side to afford access to the interior of the protector to facilitate the passing of the hair through the protector and the sealing of the protector at the top thereof, it will, of course, be understood that the hinged connection may be omitted if desired and the protector may also be employed without scalp cooling tubes arranged to discharge air into the protector, as the protector will afford complete protection for the scalp beneath the clamps and the heating elements and permit air to circulate around the strands of hair. The hollow protectors **2** may be used in conjunction with any nozzle type blower which will circulate air through them, and it is not necessary that the fit between the scalp cooling tubes and the ends of the protector be tight when a scalp cooling tube is arranged at each end of the protector, as a flow of air through the protector will produce the desired effect and will circulate air around the strand of hair and will also furnish sufficient air to cool the scalp at the sides of the protector. The scalp cooling tubes may be provided at the spaces between the protectors with nozzle or jet openings **40** for the discharge of air into said spaces for cooling the scalp. As the upper walls of the protectors overlap the side portions of the scalp cooling tubes, the latter will be maintained in place on the head of a person when arranged between the ends of the adjacent rows or groups of protectors.

The scalp cooling tubes which are preferably constructed of metal are sufficiently flexible to enable them to conform to the configuration of a head of a person and they are preferably insulated against the conduction of heat by a coating **40a** of rubber or other suitable material and they are preferably provided with deflectors **41** for directing downwardly against the scalp the air discharged at the sides of the scalp cooling tubes. The deflectors **41** preferably consist of flaps and may be conveniently formed by a strip of rubber **42** or other suitable material secured to the scalp cooling tubes and extending longitudinally of the same and projecting at opposite sides thereof. The strips **42** may be secured to the tubes in any desired manner, and each tube has an inner reduced cylindrical terminal portion **43** which fits in cylindrical coupling portions **44** of the connecting tubes **5** of the blower **4**. The outer ends **45** of the scalp cooling tubes are closed and are provided with laterally extending hooks **46** which are adapted to engage with the hair of a person to assist in maintaining the scalp cooling tubes in position and to prevent the same from being accidentally withdrawn from the head of a person. While the laterally extending hooks are shown at one side only of the closed ends of the scalp cooling tubes, they may, of course, be arranged at both sides of the same if desired.

Also, instead of arranging the scalp cooling tubes transversely of the head of a person as illustrated in Figure 1 of the drawings, they may be arranged longitudinally of the head with the tubes **3** extending from the back of the head to the front thereof instead of across the head from one side of the same to the other side thereof as heretofore explained. The blower **4**, which is designed, in one use, to be secured to the back **47** of a chair, or it may be otherwise mounted, in a vertical or other position by a suitable clamp or bracket **48**, consists of an electric motor **49**, a motor actuated fan **50** and a casing **51** receiving the motor and the fan and arranged in spaced relation with the same and provided at the top with an air distributing head or manifold **52** and having an air intake opening **53** at the lower end. A motor shaft **54** extends downwardly from the lower end of the motor which is of cylindrical form, and the fan consists of a conical shell secured to the motor shaft **54** by a nut **55**, a suitable spring locking washer **56** being preferably interposed between the nut and the fan as clearly illustrated in Figure 14 of the drawings. The conical shell of the fan **50** is provided at the apex with a hub portion **57** having a central opening **58** through which the motor shaft **54** passes. On its exterior, the conical shell of the fan **50** is provided with an annular series of fan blades **59** having a longitudinal inclination and a slight lateral inclination and tapered upwardly as shown.

The fan is provided at its apex portion with a

circular recess 60 forming a seat for the spring locking washer 56. The upper edge of the conical shell of the body portion of the fan is arranged adjacent a circular band 61 approximately L-shaped in cross section and fitting the lower end of the motor 49 and secured to the same by bolts 62 or other suitable fastening devices. The band 61 which supports the motor and the fan within the blower casing is provided with radial lugs 63 having threaded sockets 64 for the reception of screws 65 for securing the band to a central main section 66 of the casing 57 of the blower.

The casing 57 of the blower consists of the substantially cylindrical central section 66, a lower section 67 and the air distributing head or manifold 52 which constitutes a top section of the blower casing. The main intermediate section 66 which is secured to the back of the chair has a tapered upper end 68 which terminates in a cylindrical flange or portion 69 into which the distributing head extends. The distributing head, which has a circular lower portion to fit the flange 69, is secured to the same by suitable fastening devices, and it is tapered upwardly to provide sloping sides and an approximately horizontal top portion 70 which is provided with a series of air outlet openings 71 forming sockets for the reception of one end 72 of the connecting tubes, the other end of the connecting tubes being coupled to the scalp cooling tubes as heretofore explained. The connecting tubes 5 are detachably secured in the outlet openings of the air distributing head by clamping screws 73 which pierce the upper portion 70 of the distributing head at one side thereof, as clearly illustrated in Figure 10 of the drawings. The distributing head is also provided at one side with a plurality of sockets 74 closed at the bottom and adapted to receive outer ends of one of more unused connecting tubes for plugging the same to prevent the escape of air therefrom. Any number of the sockets 74 may be provided and, while five of the air outlet openings 71 are shown in the air distributing head, any desired number may, of course, be provided to suit the capacity of the blower.

The lower section 67 of the blower casing, which is secured to the intermediate section by the fastening devices 65 of the motor supporting band, consists of a cylindrical upper portion and a tapered lower portion having the air intake 53. The lower section 67 is provided at the air intake 53 with a cylindrical flange or portion for the reception of a cap 75 for securing a suitable air filtering material 76 over the air intake for excluding dust and the like from the blower.

Leads 77 for supplying the motor of the blower with electric current extend through a hollow radial lug 78 formed integral with the attaching band 61 and extending from the band to the blower casing as clearly illustrated in Figure 9 of the drawings.

What is claimed is:

1. In a hair waving appliance, a hollow scalp protector having sufficient rigidity to removably support without collapsing a separate detachable hair waving clamp and provided with an opening for the passage of hair to the clamp and having walls forming an air chamber and conduit the full width of the protector to permit circulation of air around the hair between the clamp and the scalp, said protector being open ended to permit free passage of air at each end of the protector.

2. In a hair waving appliance including a hair waving clamp, and air supplying means, a scalp protector through which hair passes to the clamp, said protector being hollow and open ended throughout its entire width for receiving air freely at either end from the air supplying means and causing the air to circulate around the hair between the clamp and the scalp.

3. In a hair waving appliance, a hollow protector of a size to be located beneath a separate detachable hair waving clamp and having sufficient rigidity to support the same without collapsing and provided with an opening for the passage of hair to the clamp, said protector being open ended and adapted to permit air to enter freely at either end of the protector and flow around the hair and over the scalp directly beneath the clamp throughout substantially the entire area thereof.

4. In a hair waving appliance, a hollow protector of a size to be located beneath a hair waving clamp and provided with an opening in its top for the passage of a strand of hair to the clamp, said hollow protector being adapted to confine a flow of air around the hair strand and over the scalp and having side ports for the escape of air for cooling the scalp at the side of the protector, the ends of the protector being open substantially the entire width of said protector for the passage of air.

5. In a hair waving appliance, a hollow scalp protector of a size to be arranged beneath a hair waving clamp and provided with an opening for the passage of a hair strand to the clamp and having a substantially horizontal top for supporting the clamp and having a concave bottom to fit the head of a person, said hollow protector forming a space around the strand of hair for the circulation of air between the clamp and the head of a person and being open at the ends throughout substantially its entire width to permit a free flow of air at either end of the protector.

6. In a hair waving appliance, a scalp protector of a size to be arranged beneath a hair waving clamp and having an opening for the passage of a strand of hair to a clamp and consisting of a conduit having top, bottom and side walls and open at the ends to permit free passage of air at either end of the protector and adapted to permit a circulation of air around the hair, the top and bottom walls being extended beyond the side walls and forming a recess, and a scalp cooling tube fitting in the recess and having a nozzle opening for discharging air into the protector, said scalp cooling tube being retained in position by the adjacent extended top portion of the protector.

7. In a hair waving appliance, a hollow scalp protector of a size to be arranged beneath a hair waving clamp comprising a top wall having an opening for the passage of a strand of hair to the clamp, side walls and a bottom wall composed of sections spaced apart for the passage of the hair through the protector, said protector forming an air conduit for permitting the circulation of air around the hair strand and being open at each end to permit free flow of air through either end of the protector.

8. In a hair waving appliance, a hollow scalp protector of a size to be arranged beneath and support a hair waving clamp and comprising a top wall having an opening for the passage of hair to the clamp, side walls and a bottom wall composed of sections extending inwardly from the side walls and spaced apart for the passage of hair through the protector, one of the side walls being hinged at its upper edge to the top

wall and adapted to swing on a substantially horizontal axis outwardly with the adjacent bottom section for affording access to the interior of the protector to facilitate sealing of the top opening with the hair against the entrance of steam, said protector being open at its ends substantially throughout its entire width to permit free flow of air through either of its ends.

9. In a hair waving appliance, a hollow scalp protector of a size to be arranged beneath and support a hair waving clamp and comprising a top wall having an opening for the passage of hair to the clamp, side walls and a bottom wall composed of sections extending inwardly from the side walls and spaced apart for the passage of hair through the protector, one of the side walls being hinged at its upper edge to the top wall and adapted to swing on a substantially horizontal axis outwardly with the adjacent bottom section, and yieldable means for automatically opening the scalp protector, said yieldable means permitting the hinged side of the protector to remain closed when the protector is in position for use on the head of a person, said protector being open at its ends substantially throughout its entire width to permit free flow of air through either of its ends.

10. A hair waving appliance including spaced rows of hair waving clamps, hollow protectors arranged end to end beneath the clamps and open at the ends throughout substantially the entire width of the protector to permit free flow of air through either end of the protector, and scalp cooling tubes of a size to be arranged directly upon the head of a person between the rows of clamps and protectors at the open ends of said protectors and having nozzles arranged to discharge air into the open ends of the hollow protectors.

11. A hair waving appliance including spaced rows of hair waving clamps, hollow protectors arranged end to end beneath the clamps and open at the ends throughout substantially the entire width of the protectors, and scalp cooling tubes arranged directly upon the head of a person between the rows of clamps and protectors at the open ends of said protectors and having nozzles arranged to discharge into the open ends of the protectors and also into spaces between the individual clamps and protectors for cooling the scalp directly beneath the clamps and at the sides of the protectors.

12. A hair waving appliance including a plurality of rows of spaced clamps, hollow protectors located beneath the clamps and having open ends provided with recesses and scalp cooling tubes extending along the rows of clamps and protectors and arranged in the recesses of the protectors and across the open ends of the latter and having openings for the discharge of air into the open ends of the protectors.

13. A hair waving appliance provided with longitudinally flexible permanently substantially cross-sectionally elliptical non-collapsible metallic scalp cooling tubes having an exterior coating of heat insulating material and provided at the sides with openings for the discharge of air, the elliptical shape of the scalp cooling tubes serving to locate the discharge openings close to the scalp of a person and at the same time prevent rolling of the tubes whereby the discharge openings are maintained permanently in proper position.

14. A hair waving appliance including a plurality of scalp cooling tubes, a blower for supplying air to the tubes, said blower comprising a motor, a fan driven by the motor and a casing receiving the motor and the fan and provided with an air intake and having a distributor head provided with a plurality of outlets, and means for connecting the scalp cooling tubes with the distributor head.

15. A hair waving appliance including hair waving clamps, hollow protectors, a blower including a motor, a fan driven by the motor, a casing receiving the motor and the fan and provided with an air intake and having a distributor head, and scalp cooling tubes connected with the distributor head of the blower and provided with outlets for the discharge of air.

16. A hair waving appliance including scalp cooling tubes, a vertical blower for supplying air to the scalp cooling tubes comprising a motor, a fan driven by the motor and a vertical casing receiving the motor and the fan and provided at the bottom with an air intake and having a distributor head at the top, said distributor head being provided with a plurality of outlets and having a socket closed at the bottom, and connecting tubes secured at one end in the outlets of the distributor head and adapted to be detachably connected at the other end with the scalp cooling tubes for supplying the same with air, said socket being adapted to receive an unused connecting tube for plugging the same to prevent the escape of air when a connecting tube is not in use.

17. A hair waving appliance including a blower for supplying air for cooling the head of a person, said blower comprising a vertical motor having a motor shaft at its lower end, a fan consisting of a substantially conical shell mounted on the motor shaft and tapered downwardly and provided on its exterior with inclined blades having an upward taper and a housing receiving the motor and the fan and provided with an air intake at the bottom and having a distributor head at the top.

18. A hair waving appliance including a blower for supplying air for cooling the head of a person, said blower comprising a motor, a shaft driven by the motor, a casing receiving the motor and the fan and provided with an air intake and having a distributor head and an attaching band mounted on the motor and provided with a plurality of lugs extending outwardly from the band to the casing and secured to the latter whereby the motor and fan are maintained in spaced relation with the casing and are supported by the same.

19. A scalp cooling device for use in hair treatments comprising a hollow open-ended member provided with openings intermediate the ends thereof, the open ends of the hollow member permitting free flow of air through the hollow member.

20. A scalp cooling device for use in hair treatments comprising a hollow open-ended member including a hinged portion, the hollow open-ended member having openings in the side walls thereof, the openings of the ends of the hollow member extending substantially entirely across the same and permitting free flow of air at each end of the hollow member.

21. A scalp cooling means for use in hair treatments comprising a plurality of spaced hollow open-ended members, the open ends of the members permitting free flow of air through them and providing end openings of the full width of the hollow members, means detachably fitted to the ends of said members and communicating

therewith for the supply of air under pressure to said members, the latter each having openings for the discharge of air therefrom under pressure over the scalp to cool the latter.

22. A scalp cooling device for use in hair treatments comprising a hollow open-ended member provided with openings in the side walls thereof and having a hinged portion adapted to be opened to afford access to the interior of the hollow member, the open ends of the member providing openings the full width of the member for the free flow of air.

23. A scalp cooling means for use in scalp treatments comprising a plurality of spaced hollow open-ended members provided with openings in the side walls thereof, the open ends of the members providing end openings of substantially the full width of the members to permit free passage of air at each end of the members, and means detachably fitted to the ends of said members and communicating therewith for the supply of air under pressure to said members, the latter having openings for the discharge of air from said members under pressure over the scalp to cool the latter.

24. A scalp cooling device for use in hair treatments comprising a hollow open-ended member provided with longitudinally extending upper and lower projecting portions and having openings in the side walls thereof, the open ends of the member providing openings substantially the full width of the member for the unobstructed passage of air, means detachably fitted to the ends of said hollow member between the upper and lower projecting portions at the ends of the latter and communicating with the tubular member for the supply of air under pressure to said member, the openings intermediate the ends of the hollow member permitting discharge of air therefrom under pressure over the scalp to cool the latter.

25. A scalp cooling means for use in scalp treatments comprising a plurality of spaced hollow open-ended members, each provided with openings in the side walls thereof, the open ends of the members providing openings substantially the full width of the members for the unobstructed passage of air, and means including flexible tubular members detachably fitted to and extending across the ends of said members and communicating therewith for the supply of air under pressure to said members, the said openings in the side walls of the tubular members permitting of the discharge of air under pressure from said members over the scalp to cool the latter.

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