March 18, 1958 A. A. MARTY 2,827,060

HAIR TREATMENT APPLIANCES

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Fig. 1.

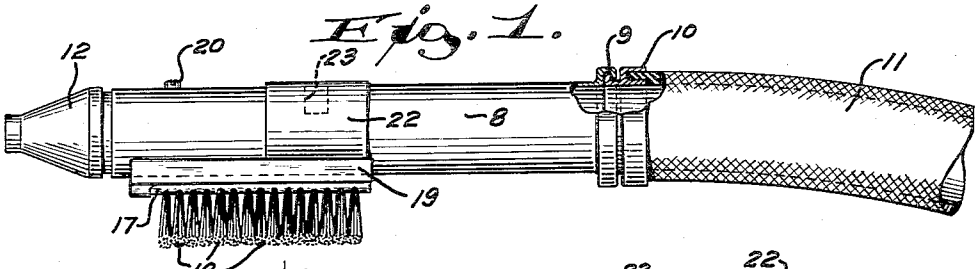


Fig. 2.

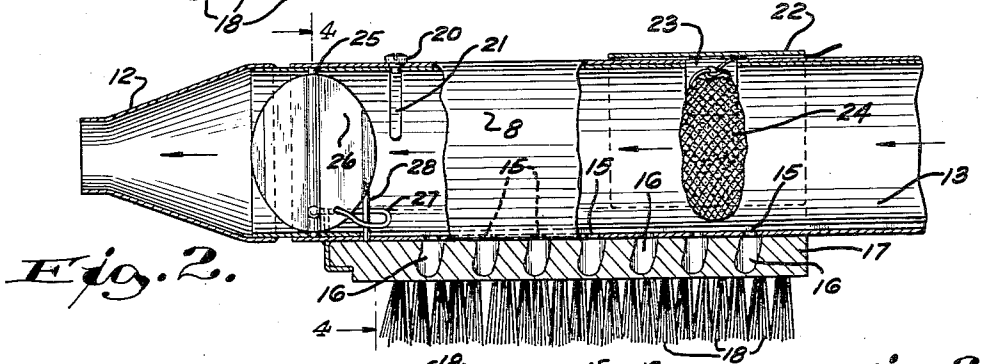


Fig. 3.

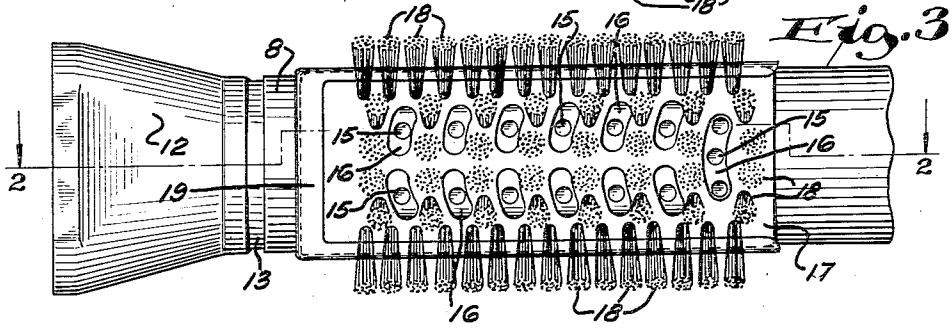


Fig. 4.

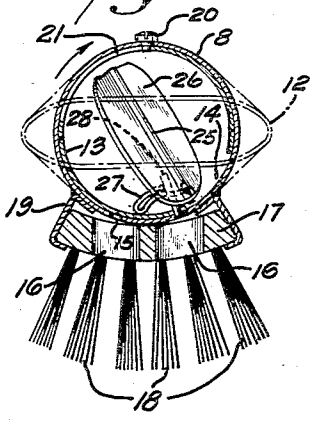
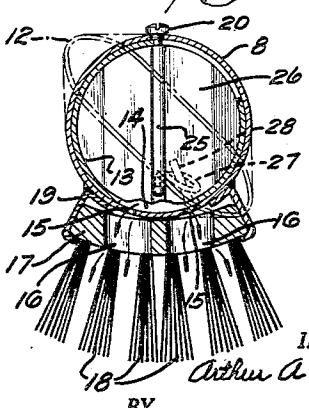


Fig. 5.



INVENTOR.
Arthur A. Marty,
BY
Morsell & Morsell
ATTORNEYS.

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HAIR TREATMENT APPLIANCES

Arthur A. Marty, Milwaukee, Wis.

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5 Claims. (Cl. 132—9)

This invention relates to improvements in hair treatment appliances, and more particularly to an air discharge nozzle and brush appliance for hair waving.

In the beauty parlor field an operator customarily applies waves to a customer's hair by manually applying a comb to various portions of the head of hair and introducing a jet of warm air into the hair where it has been arranged by the comb to form waves. It is also customary to alternate with the introduction of jets of warm air, brushing procedures until the hair is dry and the waves are thus formed and set.

According to conventional beauty parlor practices for hair waving the operator must hold a comb in one hand and use a warm air jet appliance with the other hand, and this necessitates periodically releasing the air jet appliance and picking up a separate brush for the intervening brushing operations, which is both inconvenient and time-consuming.

With the foregoing in mind, it is a primary object of the present invention to eliminate the aforesaid inconvenience and difficulty by the provision of a unitary brush and warm air jet nozzle attachment for a forced air conduit or tube which is manipulatable to permit the discharge of air jets through the nozzle tip and is adjustable to shut off the discharge of warm air from the nozzle tip and provide for the flow of warm air through a brush carried by the nozzle attachment, whereby the operator can at all times retain the nozzle in his hand while alternately introducing jets of warm air into the customer's hair or accomplish brushing operations wherein warm air flows through the brush bristles into the customer's hair.

A further object of the invention is to provide a hair waving warm air nozzle and brush appliance wherein the brush is readily removable from the nozzle for cleaning or replacement.

A further object of the invention is to provide a hair waving warm air nozzle and brush appliance wherein a manual manipulation of the nozzle tip will simultaneously operate a valve to shut off the flow of warm air through the tip and open air jets through the nozzle carried brush, and vice versa.

A further object of the invention is to provide a hair waving and brushing nozzle appliance in which a pad saturated with perfumery or the like may be removably located in the nozzle in the path of warm air to saturate the air being discharged from the nozzle with the perfume, whereby the customer's hair may be scented according to her particular taste in perfumery.

A further object of the invention is to provide a hair treatment appliance which is of very simple construction, which is easy and convenient to manipulate and adjust, which is efficient in operation, and which is well adapted for the purposes described.

With the above and other objects in view the invention consists of the improved hair treatment appliance, and its

parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawing, in which the same reference charcaters indicate the same parts in all the views:

Fig. 1 is a side view of the improved hair treatment appliance swivelingly attached to the outer end of a warm air conduit;

Fig. 2 is an enlarged view of the hair treatment appliance with parts broken away and in section, said view being taken approximately along the line 2—2 of Fig. 3;

Fig. 3 is an enlarged fragmentary bottom view of the hair treatment appliance;

Fig. 4 is a transverse sectional view taken along the line 4—4 of Fig. 2 with the valve controlling discharge through the nozzle tip open and the air discharge orifices in the brush back being closed; and

Fig. 5 is a similar transverse sectional view only showing the valve controlling discharge through the nozzle tip closed and the orifices for air discharge through the brush back being opened.

Referring now more particularly to the drawings, it will appear that the body of the nozzle comprises a hollow cylindrical member 8 preferably formed of metal and carrying at its inner end a collar 9 which is interiorly swivelingly engaged by the flange of a coupling 10 having a recess into which the outer end of a flexible air conduit or tube 11 is secured. Said flexible air conduit or tube 11 may extend to a source of forced air (not shown) which may be heated so that the air passing through the conduit 11 is discharged into the body 8 of the hair treatment appliance nozzle. Also the air supply conduit 11 may be suitably supported by counterbalancing means, and it is only necessary for the operator to manually engage the body portion 8 of the nozzle with one hand and to direct the nozzle tip 12 adjacent desired portions of a customer's hair. The nozzle may be conveniently manually turned or swiveled relative to the air tube or conduit 11.

Oscillatably mounted within the cylindrical body 8 of the nozzle is a sleeve 13 which is split, as at 14 (see Figs. 4 and 5), which split portion coincides with a lower side wall portion of the cylindrical body 8 in one position of adjustment of the nozzle, and with a substantial bottom wall portion of the body cylinder of the nozzle in another position of adjustment. In the last-mentioned position of adjustment the split in the sleeve coincides with and uncovers a series of orifices 15 in the bottom wall of the body cylinder 8 which registers with air discharge ports 16 formed in the concavo-convex rigid base 17 of a brush which also includes series of outwardly projecting bristles 18. It will also be observed that the body cylinder 8 of the nozzle appliance, near the tip end thereof, has secured thereto an open frame 19 having channeled side guides for removable engagement with the base 17 of the bush which is removable from the open frame by sliding movement longitudinally (toward the right, relative to Figs. 1, 2 and 3).

Projecting through the top of the body cylinder 8, inwardly of the outer end thereof, is a stud 20 whose shank portion extends into an arcuate slot 21 within the oscillatable sleeve 13, which arrangement serves to limit the turning movements of the sleeve within the body cylinder 8 in either direction. Longitudinally slidably mounted on an intermediate portion of the body cylinder 8 is a cover plate 22 which normally closes a slot 23 in the body cylinder 8. Said cover plate 22 may, however, be slid longitudinally on the body cylinder 8 to expose the slot 23 which gives access to the interior of the appliance. When desired, a mesh bag 24 (see Fig. 2) containing cotton, a pad or the like which is saturated with perfume, may be dropped into the nozzle

through the slot 23 so as to be within the path of warm air travelling through the nozzle appliance. The pad or material within the bag 24, which is removable, may be saturated with perfume as desired by the customer and the warm air passing through the nozzle appliance will absorb some of this perfume as it is forced through the bag 24, with the result that the warm air being delivered into the customer's hair either from the open end of the nozzle tip 12 or from the brush orifices, will scent the customer's hair according to her particular desire and preference.

The nozzle tip 12 is shaped as shown with a circular inner end and a somewhat flattened outer discharge end. The circular inner end thereof has a force fit on the outer end of the inner sleeve 13 which projects beyond the outer end of the appliance body 8. By manually turning the nozzle tip 12 in one direction or the other, the split inner sleeve 13 is caused to be turned in one direction or the other, as limited by the pin 20 riding in the slot 21. Within the outer end of the sleeve 13 on a diametrically extending shaft 25 is a disc gate 26. The inner end portion of a looped connector 27 is attached to the shaft portion 25 of the gate or valve 26 and the outer looped end portion of the connector 27 engages an inwardly extending pin 28 whose lower end portion is secured to a bottom wall portion of the cylindrical body 8 of the appliance within the split or slotted portion 14 of the oscillatable sleeve 13. The result of this arrangement is that a manual turning movement of the nozzle tip from the broken line position of Fig. 4 to the broken line position of Fig. 5 is effective to cause an oscillation of the sleeve 13 within the cylindrical body 8 which, through the pull effected on the connector 27 by the fixed pin 28, causes a pivotal movement of the gate 26 within the sleeve 13 from the open position of Figs. 2 and 4 to the closed position of Fig. 5. In the position of Fig. 4 wherein the valve controlling flow through the nozzle tip 12 is open, the sleeve 13 is in a position to cover the orifices 15 to the brush discharge ports 16. Conversely, in the arrangement shown in Fig. 5 the movement of the sleeve has directed the split therein over the orifices 15 and brush base discharge ports 16 so as to permit air flow therethrough, but the action of the sleeve in moving, through the connector 27 and pin 28 has caused the gate or valve 26 to be swung to the sleeve closing position blocking air flow through the nozzle tip 12.

In the use of the improved hair treatment appliance the hose or conduit 11 is, of course, connected with a source which is delivering therethrough warm air under pressure. The operator may hold in one hand, for instance, a comb to form waves in the hair of the customer and with the other hand the operator conveniently grasps the body cylinder 8 of the appliance and directs the open end of the nozzle tip 12 against the desired area of the customer's hair. If the nozzle tip has first been adjusted so as to open the valve 26 and close off the air orifices 15 for the brush, there will be a forceful delivery of warm air through the nozzle tip onto the desired portions of the customer's hair. Then, without releasing the appliance, the operator may manipulate the tip end so as to close the valve 26 and open the orifices to the brush and utilize the brush portion of the appliance for brushing portions of the customer's hair. The brushing operation is novel in that warm air is passed through the brush into the customer's hair while it is being brushed, and this is particularly effective in aiding the drying of the hair and also it facilitates and renders more effective the application of lotions or creams to the hair and scalp. During the hair waving procedure the operator may, without releasing or depositing the nozzle appliance, readjust the nozzle tip and vice versa. It is also possible, as was heretofore mentioned, to have the discharged air, either from the nozzle tip or brush, saturated with perfume of a desired scent by means of passing the air through the perfume-saturated bag and pad 24 within the body of the appliance.

The improved hair treatment appliance is of very simple construction, is unitary, greatly facilitates the hair waving process, is convenient and time-saving for the operator, and is well adapted for the purposes described.

What is claimed as the invention is:

1. In a hair treatment appliance having a tubular nozzle attachable to the delivery end of a forced fluid conduit with a wall portion of said nozzle being formed with fluid discharge orifices and having a brush formed with a ported back carried externally by said wall portion of the nozzle with the ports thereof registering with the fluid discharge orifices in the nozzle wall, the improvement comprising a curved plate forming a sleeve turnably mounted within said nozzle to cover or uncover said orifices, a valve operatively mounted within the sleeve plate adjacent the discharge end of the nozzle, a nozzle tip secured to the outer end of the sleeve plate through which fluid is discharged when said valve is open, said nozzle tip being turnable relative to the nozzle, and co-operating connections between the nozzle and the valve whereby a turning movement of the nozzle tip will turn the sleeve plate within the nozzle to open or close the valve and cause the sleeve plate to cover or uncover the nozzle orifices.

2. A hair treatment appliance, comprising a tubular nozzle attachable to the delivery end of a forced fluid conduit, a wall portion of said nozzle being formed with fluid discharge orifices, a curved plate forming a sleeve within said nozzle and oscillatable therewithin to cover or uncover said orifices, a disc valve pivotally mounted within the sleeve plate adjacent the discharge end of the nozzle, a nozzle tip secured to the outer end of the sleeve plate through which fluid is dicharged when said valve is open, said nozzle tip being turnable relative to the nozzle, and an operating connection between the nozzle and the valve effective upon a turning movement of the sleeve plate through manipulation of the nozzle tip to open or close the valve and cause the sleeve plate to cover or uncover the nozzle orifices.

3. A hair treatment appliance, comprising a tubular nozzle attachable to the delivery end of a forced fluid conduit, a wall portion of said nozzle being formed with fluid discharge orifices, a curved plate forming a sleeve within said nozzle and turnable therewithin to cover or uncover said orifices, a valve operatively mounted within and carried by the sleeve plate adjacent the discharge end of the nozzle, a nozzle tip secured to the outer end of the sleeve plate through which fluid is discharged when said valve is opened, said nozzle tip being turnable relative to the nozzle, a turning movement imparted to the nozzle tip causing the sleeve plate within the nozzle to cover or uncover the nozzle orifices, and means connected to the valve and operated by a turning movement of the sleeve plate for opening or closing the valve.

4. A hair treatment appliance, comprising a tubular nozzle attachable to the delivery end of a forced fluid conduit, a wall portion of said nozzle being formed with fluid discharge orifices, a perfume carrier within the nozzle in the path of fluid flowing therethrough, a valve operatively mounted within said nozzle to cover or uncover said orifices, a second valve operatively mounted within the discharge end of the nozzle to control fluid discharge, a rotatable nozzle tip associated with the outer end of the nozzle through which fluid is discharged when said second valve is open, and means affected by a turning movement of said nozzle tip for jointly operating both of said valves.

5. In a hair treatment appliance having a tubular nozzle attachable to the delivery end of a forced air conduit with a wall portion of said nozzle being formed

with fluid discharge orifices and having a carrier for perfumery or the like removably mounted within the nozzle in the path of air flowing therethrough and having a brush formed with a ported back removably carried externally by said wall portion of the nozzle with the ports thereof registering with the fluid discharge orifices in the nozzle wall, the improvement comprising a curved plate forming a sleeve within said nozzle and turnable therewithin to cover or uncover said orifices, a valve pivotally carried by the sleeve plate adajcent the discharge end of the nozzle, a nozzle tip secured to the outer end of the sleeve plate through which fluid is discharged when said valve is opened, and co-operating connections between the nozzle and the valve whereby a turning movement

of the nozzle tip will turn the sleeve plate within the nozzle to open or close the valve through said connection and simultaneously cause the sleeve plate to cover or uncover the nozzle orifices.

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