May 14, 1968 G. I. SPIER 3,382,876

ARTIFICIAL EYELASH CURLER

Filed March 23, 1966

Fig. 1.

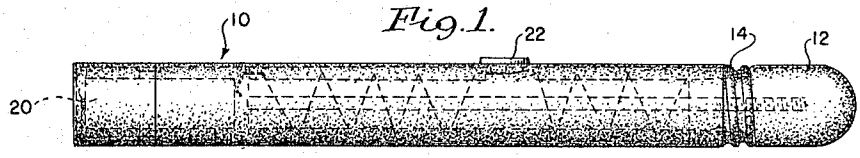


Fig. 2.

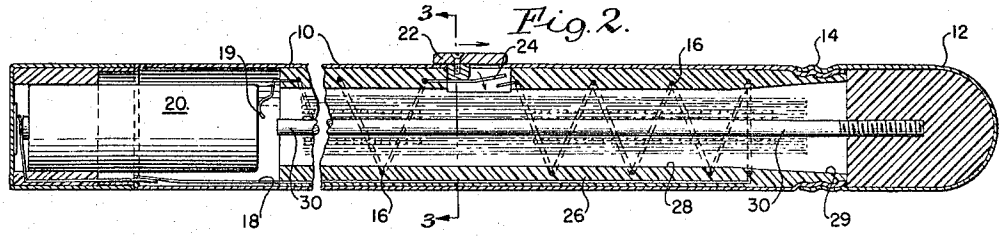


Fig. 4.

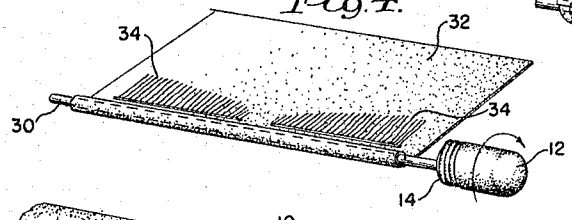


Fig. 5.

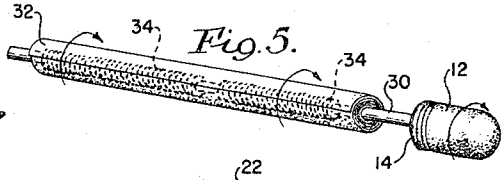


Fig. 3.

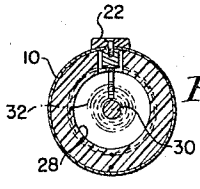


Fig. 6.

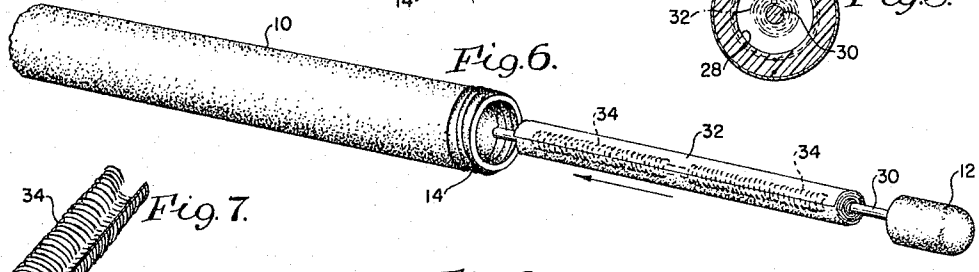


Fig. 7.

Fig. 8.

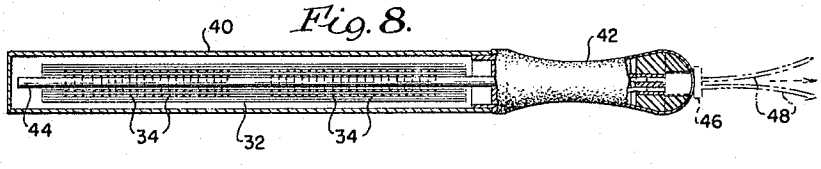
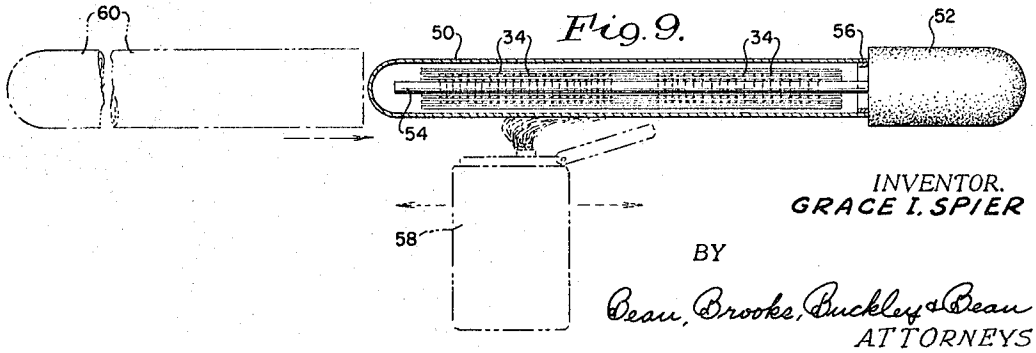


Fig. 9.



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ARTIFICIAL EYELASH CURLER

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4 Claims. (Cl. 132—31)

This invention relates to artificial eyelash curlers and more particularly to the provision of an improved device for the aforesaid purpose which is structurally compact and lightweight, and of externally smooth and ornamental configuration, thereby adapting it to be conveniently carried in a lady's handbag or the like so as to be readily available for use whenever needed.

One of the objects of the invention is to provide an improved device as aforesaid which is easily operated by any non-mechanical minded person, without fuss or untidiness incidental to the operation.

Another object is to provide an improved device as aforesaid which employs heat to set the eyelash in curled condition.

Another object is to provide an improved device as aforesaid wherein the heat source may be either self-contained within the unit or applied thereto from externally thereof.

Still another object of the invention is to provide an improved device as aforesaid which may be either electrically or chemically or pyrophorically powered or heated.

Other objects and advantages of the invention will appear from the specification hereinafter and the accompanying drawing wherein:

FIG. 1 is a side elevational view, showing by way of example, one physical embodiment of the invention;

FIG. 2 is a fragmentary, enlarged scale, longitudinal section through the device of FIG. 1;

FIG. 3 is a transverse vertical section taken as indicated by line 3—3 of FIG. 2;

FIG. 4 illustrates a first step in the process of preparing a pair of artificial eyelashes for the treatment by the device;

FIG. 5 illustrates the next step in the process of using the device of the invention;

FIG. 6 illustrates a still further step in the operation;

FIG. 7 shows an artificial eyelash subsequent to having been curled by the device of the invention;

FIG. 8 is a view corresponding to FIG. 2 but showing a modified form of device of the invention; and

FIG. 9 corresponds to FIGS. 2 and 8 but illustrates still another form of device of the invention.

As shown by way of example in the drawing herewith at FIGS. 1–6, inclusive, the invention may be embodied in a device having the external form of a smooth-surfaced cylinder, comprising essentially a cylindrical casing portion **10** and a complementary-shaped combination handle and end closure portion **12**. As indicated at **14**, the neck of the casing **10** and the conjoining portion of the handle member **12** may be formed with complementary screw-threaded portions, thereby enabling the device to be releasably locked in closed relation, whenever the device is not in use. Thus, it will be appreciated that the device may, with ease and facility, be carried in a handbag and/or otherwise handled between uses with utmost convenience.

As best shown in FIG. 2, the casing member **10** is provided to include some suitable means for heating it, for the purpose to be explained more fully hereinafter. For example, the heat supply means may comprise a resistance-conductor wire **16** helically wound and generally conforming to the inner contour of the casing **10**, and connecting at its opposite ends through lead wires **18**, **19**, to an electric battery **20** which is carried within the rear end of the container **10**. Operation of the heating unit is shown to be

controlled by a simple slide switch **22**, such as may be manually shiftable to the right from the position shown in FIG. 2, thereby closing the spring contact points **24** of the switch device. As indicated at **26**, the heating wire **16** is preferably embedded in a suitable heat conductive material such as a ceramic or the like, molded to provide a smooth inner bore as indicated at **28**. Preferably, the bore **28** is slightly funneled as indicated at **29** adjacent its open end to facilitate insertion of the eyelash carrying member as will be explained hereinafter.

Again referring specifically to FIGS. 1–6, the handle member **12** is shown to carry integrally therewith a mandrel **30**; and with each device of the invention the user is provided with a supply of thin paper sheets as illustrated at **32**, FIG. 4. To operate the device a sheet as shown at **32** is slightly dampened, such as with water or any other suitable volatile liquid, and then disposed to rest on a flat surface. A pair of artificial eyelashes as indicated at **34**, **34**, may then be laid flatwise on the sheet **32** as shown in FIG. 4. The mandrel **30** is then placed as shown against one edge of the sheet **32** and manually rotated by means of the handle **12** as indicated by the directional arrow at FIG. 4; thereby gradually rolling the paper sheet **32** in helical fashion about the mandrel, until the eyelashes are finally entrapped completely between the convolutions of the paper sheet as shown in FIG. 5. Thus, it will be appreciated that the eyelashes are now disposed within the paper wrapping in cylindrically curled condition; and that the mandrel and paper wrapping parts will be so dimensioned as to impart to the eyelashes the desired degree of curvature when subsequently removed therefrom.

As shown in FIG. 6, the loaded mandrel is now slide-fitted into the casing **10**. The heat control switch **22** is then shifted to cause the casing to become heated; although it will of course be appreciated that the switch might be so adjusted at an earlier stage in the process so that the container will be up to the desired temperature when the loaded mandrel is first inserted. Thus the curled eyelashes are now subjected to sufficient heat to cause them to resiliently "set" in the desired configurations, such as illustrated for example at FIG. 7. The mandrel and wrapper unit is now withdrawn from the container and the paper wrapper unrolled; thus freeing the eyelashes for use.

It will of course be understood that in lieu of the battery and heating-wire arrangement as shown in FIGS. 1–2, any other suitable means may be employed to heat the lining of the container for the purposes explained hereinabove. Or, alternatively, as shown for example at FIG. 8, the main body or container portion may be constructed to comprise simply a cylindrical shell **40** and the handle **42** may be constructed to carry therethrough a pair of electrical conductors leading to a resistance wire (not shown) embedded inside of the mandrel **44**. Thus, in this case, the electric power for heating the mandrel may be provided either by a battery carried within the handle **42**, or by a plug-in connection as indicated at **46** whereby electrical extension wires **48** may be arranged to supply power from any conveniently located wall outlet or the like. In any case, it will be appreciated that the paper wrapper and eyelash unit so carried by the mandrel **44**, when slip-fitted into the casing **40**, may then be heated without danger of drying and unrolling of the paper wrapper, until the eyelashes have been sufficiently treated to impart to them the desired curl setting.

Still another form of the invention is illustrated at FIG. 9 wherein the main container **50** is shown to be of simple shell form, and the handle **52** carries a simple rod-shaped mandrel **54**. The container **50** and the handle **52** are arranged to slide-fit together as indicated at **56** after the eyelash-wrapper unit is wound about the mandrel **54**. Then,

an external supply of heat may be applied against the shell **50**, such as by holding it over a stove burner or a cigarette lighter (as indicated at **58** herein), or by any other suitable means. Thus, it will be appreciated that the eyelash-wrapper unit may thus be heated to the desired temperature for imparting to the eyelashes the desired curl settings. To facilitate interim handling of the device of FIG. 9, such as to make it feasible to carry it in a handbag or the like, I would prefer to also provide a second, larger diameter, casing as indicated at **60**. Thus, when the device is not in use the case **60** may be simply slip-fitted over the inner shell **50** to comprise (in combination with the handle **52**) a completely closed and externally clean and smooth and streamlined unit.

Whereas the drawing herewith shows the mandrel upon which the coiled assembly is mounted, to be of solid bar form; it will be understood that it may preferably be provided in the form of a hollow tube, perforated at intervals to provide for an improved heated vapor circulation throughout the unit while setting the curl. Furthermore, in lieu of the heat supply devices hereinabove illustrated and described, it will be understood that any other suitable means may be employed, of various types such as for example the "catalytic" type heater wherein a catalyst is employed to effect flameless combustion of a vaporized fuel; or any other suitable type of pyrophoric or chemical or thermo-electric heat supply device.

Therefore, whereas only a few forms of the invention have been illustrated and described in detail hereinabove, it will be understood that various changes may be made therein without departing from the spirit of the invention or the scope of the following claims.

I clam:

1. A device for curling artificial eyelashes comprising a tubular-shaped container open at one end, an end closure for said container of handle-like form, a mandrel carried by and extending from said closure member and receiving in coiled relation thereon a convolute assembly comprising a moistened sheet having an artificial eyelash wrapped therewithin, said mandrel-mounted convolute assembly being positioned in a slip-fitted relationship in said container, and means for heating said assembly in said container.

2. A device as set forth in claim **1** wherein said means for heating said assembly comprises an electrical heating element carried by said container.

3. A device as set forth in claim **1** wherein said means for heating said assembly comprises an electric heating element carried by said mandrel.

4. A device as set forth in claim **1** wherein said container is adapted to be heated from externally thereof, and wherein a casing member is provided to slip-fit over said container when not in use.

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