

[54] **HAIR REMOVING APPLICATOR AND PROCESS**

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[58] Field of Search **401/1, 2, 180, 171-175; 128/355; 222/146 HE**

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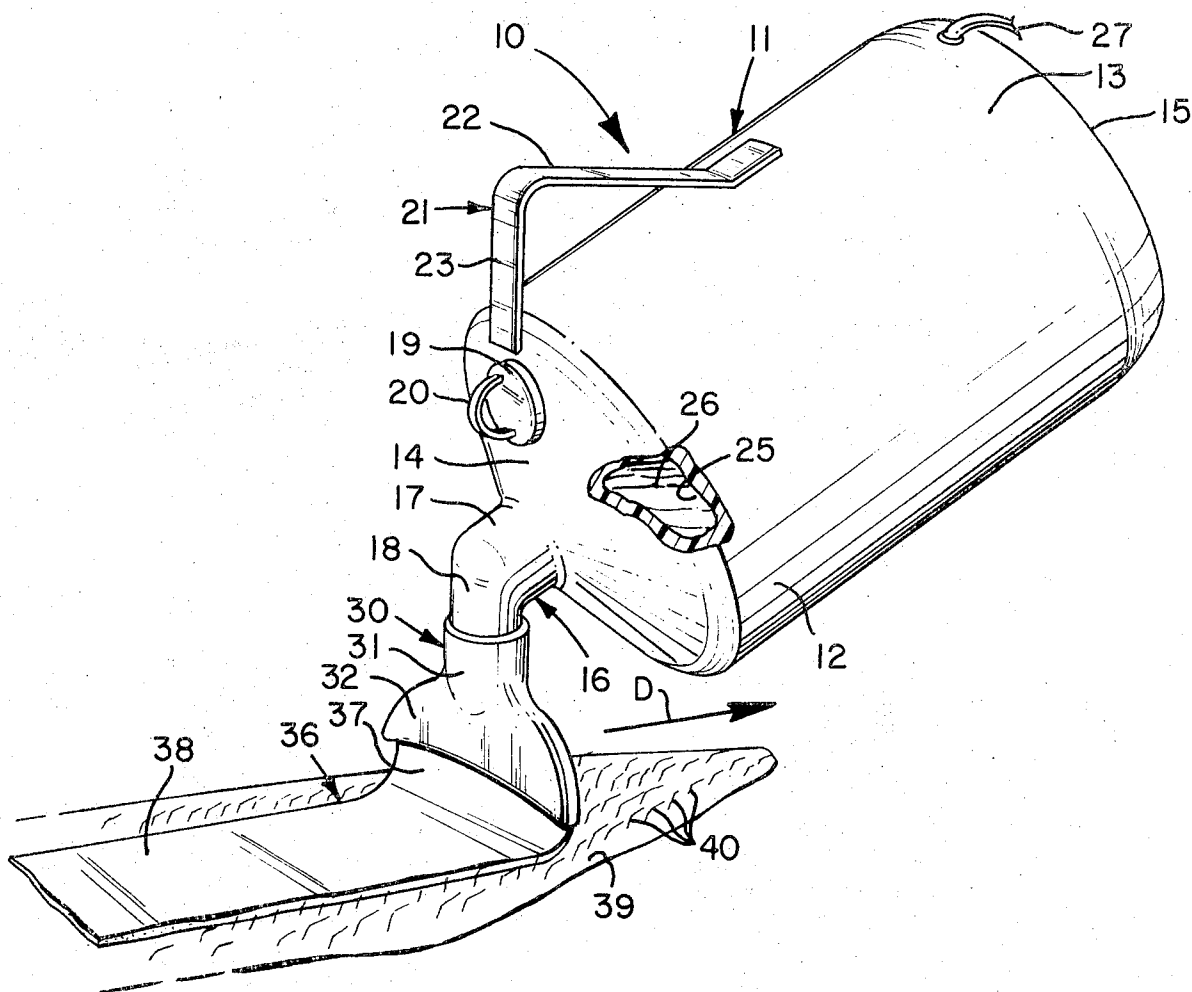
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[57] **ABSTRACT**

An applicator for dispensing and spreading hair remover adhesive such as beeswax includes a variable size chamber in which solid or semi-solid hair remover adhesive can be selectively heated to optimum extrudable conditions. The mass flow rate at which ribbons of hair remover adhesive is extruded onto a hair growth area, can be regulated by adjusting the biasing force exerted on a spring loaded piston. Application of the adhesive proceeds neatly and quickly.

5 Claims, 2 Drawing Figures



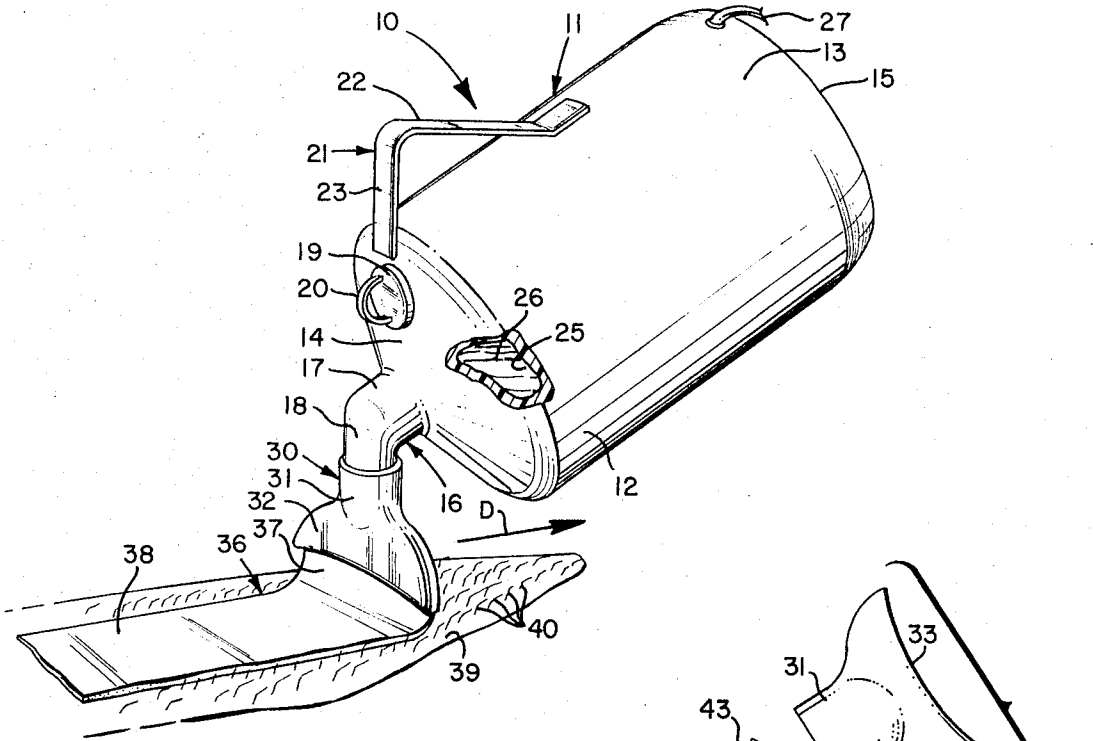


FIG. 1

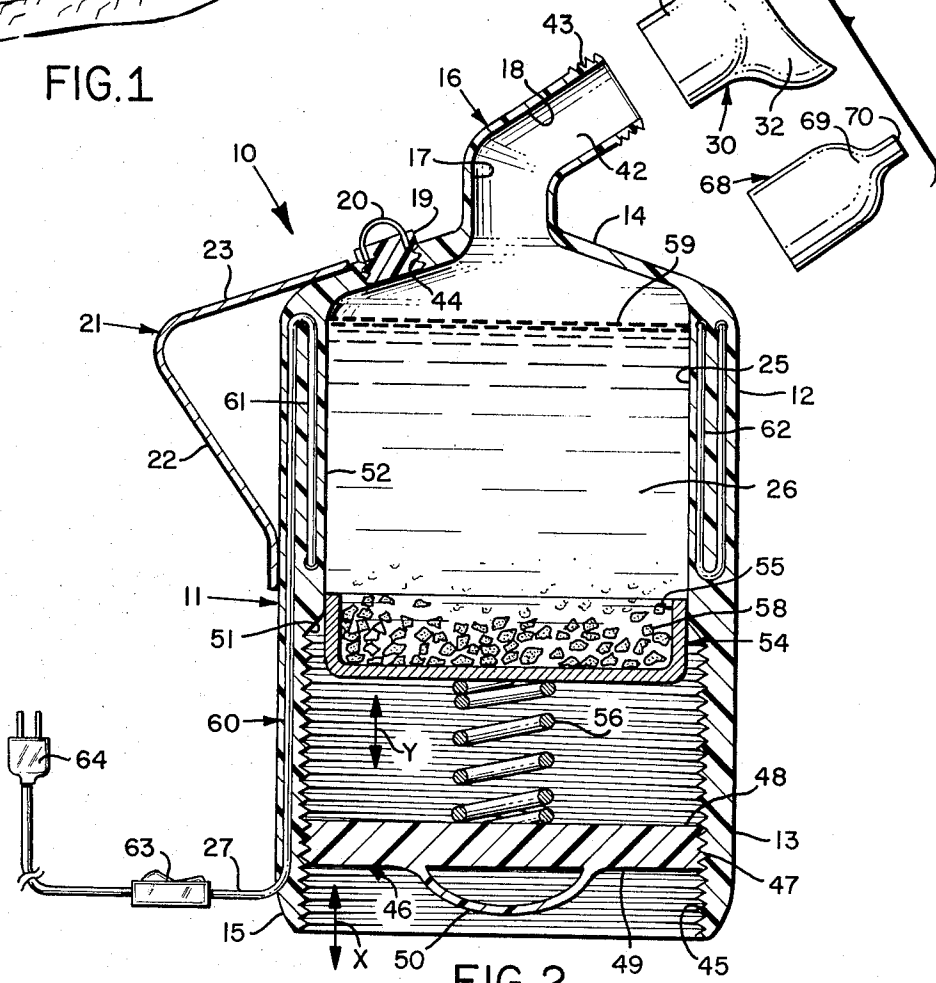


FIG. 2

HAIR REMOVING APPLICATOR AND PROCESS

BACKGROUND OF THE INVENTION

This invention generally relates to techniques for the removal of hair from hair growth areas and more specifically pertains to the removal of human hair from arms and legs for example, through the application and stripping away of some suitable hair remover adhesive such as beeswax.

Customary methods for removing hair from human limbs at beauty salons for example are generally untidy, time consuming and cumbersome.

The person is positioned on an underlying disposable sheet such as wax paper. Hair remover adhesive which is ordinarily beeswax is heated in a relatively large container on a stove or hot plate and then a portion of the heated beeswax is deposited into a smaller portable container and permitted to cool. In the meanwhile the person has her hair growth area of interest braced and prepared by powder or oil.

When the beauty salon operator determines that the beeswax is cool enough than a pan of melted adhesive is held in one hand while a spoon, paddle or spatula is held in the other hand. Melted adhesive is dripped or deposited onto the customer's hair growth area while the spoon, etc., is used to simultaneously spread the adhesive into an overlying layer. If the layer is too thin then it will chip when attempts are made to remove it. If the layer is spread too thick then beeswax is wasted and it becomes extra time consuming to await for the beeswax to properly set.

When the layer of beeswax has properly cooled and set then it is stripped away by the beauty salon operator along with the imbedded hairs which thereby become torn away and removed.

The foregoing steps must sometimes be repeated on the same hair growth area if prior treatments have been partially unsuccessful. If chips or chunks of beeswax cannot be stripped away then they must be removed by a suitable wax solvent. The procedure is messy and annoying for both the operator and customer.

This invention relates to the foregoing type of hair removing practices but differs in a number of practical and unique aspects.

SUMMARY OF THE INVENTION

Briefly stated this invention concerns an applicator constructed so as to greatly facilitate applying melted beeswax onto the hair growth area of a person with greatly minimized messiness and annoyance. The procedure of removing hair employing the applicator of this invention is relatively quick, dependable and easy to perform.

The hair removing applicator of this invention generally operates to dispense and also spread hair remover adhesive onto the hair growth area of a person such as a person's limbs. A container has an upper portion formed with a dispensing neck and a lower portion which is generally open and formed with internal threads. A piston is slidably positioned within the container and is arranged for movement along the longitudinal axis of the container.

A variable chamber for holding hair remover adhesive such as beeswax is formed or constituted by coacting surfaces of the container and the piston. A plunger has external threads that are interengaged with the internal threads of the container lower portion. The

plunger can be selectively advanced towards the container upper portion or retracted towards the container bottom end. Biasing means is interposed between and engages both of the piston and plunger so that pressure exerted on the piston by the biasing means can be selectively increased or decreased by advancing and retracting the plunger respectively.

Heating means is located within the container upper portion adjacent the variable chamber to melt the hair remover adhesive to a suitable temperature and consistency. A dispensing head is removably coupled to the dispensing neck in order to dispense and spread melted hair remover adhesive onto the hair growth area. Melted adhesive may be extruded through the dispensing head under pressure from the piston or pressure from both the piston and gravitational force.

From a process standpoint, this invention involves a procedure for removing hair from a hair growth area of a certain width and includes the step of depositing solid or semi-solid pieces of hair remover adhesive into a chamber of the applicator. A dispensing head is selected with an exit slit length substantially equal to the given or certain width of the hair growth area to be treated. The solid or semi-solid pieces of hair remover adhesive are heated in the chamber to a melted condition and optimum temperature.

Thereafter the applicator is traversed along the hair growth area and a ribbon of melted hair remover adhesive is extruded in a constant width through the dispensing head exit slit and onto the hair growth area.

After the ribbon of adhesive has cooled sufficiently then the ribbon is stripped away along with the adhered and imbedded hairs in order to remove all or some of the hairs from the hair growth area.

Preferably the hair remover adhesive is beeswax. Pressure on the melted hair remover adhesive may be increased and decreased in order to increase and decrease respectively the mass flow rate of the adhesive ribbon being extruded.

BRIEF DESCRIPTION OF THE DRAWINGS

The numerous benefits and unique aspects of the present invention will be fully understood when the following detailed description is studied in conjunction with the drawings in which:

FIG. 1 is a perspective partly schematic view showing a hair remover applicator constructed in accordance with this invention being used to dispense adhesive onto a hair growth area;

FIG. 2 is a longitudinal sectional view of the applicator and an exploded view showing alternative dispenser heads.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now primarily to FIG. 1 a hair removing applicator 10 is shown which includes a relatively large container 11 having an upper portion 12 and a lower portion 13. Container 11 has a closed and slightly sloped top wall 14 and a generally open bottom 15.

The container upper portion 12 terminates in a dispenser neck 16 having an erect portion 17 and an offset portion 18 inclined relative to the longitudinal axis of the container 11. A removable cap 19 is secured within an opening formed in the top wall 14 of the container upper portion 12. The cap 19 has a finger grip 20 to facilitate removing the cap from its closed position and

allow new charges of hair remover adhesive to be deposited into the container 11 for a purpose that shall be explained.

Attached to a side of container 11 is a handle 21 having a relatively long bar 22 for grasping by a person and another bar 23.

A variable sized chamber 25 formed within container 11 holds a supply of hair remover adhesive 26 which is preferably beeswax. An electrical cord 27 supplies current from an external source to a heating means within container 11.

Removably coupled to dispenser neck 16 is a dispenser head 30 which has a coupling portion 31, and a relatively large flaring nozzle 32.

Applicator 10 is shown being maneuvered in a direction indicated by directional arrow D while extruding a ribbon 38 of beeswax onto a hair growth area 39. A relatively wide band 37 of beeswax is shown being extruded from dispensing head 30 and deposited or laid as a ribbon 38 of constant width onto the hairs 40 of the hair growth area 39. To deposit relatively narrower or wider strips of beeswax 36 onto the hair growth area 39, a person may select one of a group of dispensing heads.

Referring now primarily to FIG. 2, the dispensing neck 16 defines a discharge passageway 42 which leads to the dispenser head coupled to the externally formed threads 43 on the offset portion 18. A hole 44 in top wall 14 is threaded to receive and seal removable cap 19. The removable cap 19 could alternatively be a cork plug.

The internal wall of container lower portion 13, inwardly of bottom rim 15, is formed with threads 45. A disk shaped plunger 46 is formed with external threads 47 shaped to interengage with mating threads 45. Plunger 46 has an inner or concealed face 48 and an outer or generally exposed face 49 formed with a hand grip 50 that may be manipulated clockwise or counterclockwise to drive the plunger axially as indicated by directional arrow X. Rotation of plunger 46 in one direction advances it towards container top wall 14 while rotation in the opposite direction retracts plunger 46 outwardly or towards bottom wall 15.

The side walls of container 11 are formed internally with an annular shoulder 51 defining the bottom region of a relatively enlarged or thick upper wall segment 52 having a smooth bore interior wall.

Arranged between container top wall 14 and plunger 46 is a piston 54 having a slightly cupped shape constituted by side wall 55 that is sized and positioned for slidable engagement over and along the smooth bore segment 52 which is fully within variable chamber 25. A suitable biasing means 56 is interposed between and engaged by both of the plunger 46 and piston 54. The biasing means is shown in the form of a high energy coil spring 56 whose opposite ends are in contact with the center regions of plunger 46 and piston 54. Piston axial movement is indicated by directional arrow Y.

By twisting hand grip 50 to advance plunger 46, spring pressure exerted on piston 54 is increased to cause a correspondingly increased pressure on the beeswax 26.

Initially the hair remover adhesive or beeswax 26 is dropped into variable chamber 25 through hole 44 in the form of pieces or chunks 58. Thermal action by the heating means 60 causes at least some of the beeswax 26 to become melted beeswax 59.

The heating means 60 is partially imbedded or mounted within the structure of container 11 and includes an electrical resistance heating coil wound sinusously throughout at least the upper region of container upper portion 12. For illustration purposes a coil segment 61 is shown on one side connected to electrical cord 27 and another coil segment 62 is shown on the other side of container upper portion 12. The external electrical cord 27 is coupled through an on/off switch 63 to an electrical plug 64. Switch 63 includes heat control means such as a thermostat.

The operator, prior to applying beeswax to a hair growth area may choose a dispenser head 30 with a relatively wide exit slit 33 or may select a different dispenser head 68 with a converging nozzle 69 and a relatively narrow exit slit 70.

The handle 21 is constructed so that when the bar 22 is maintained substantially horizontal then the dispensing neck offset portion 18 will be held relatively vertical to better aim and spread extruding beeswax.

OPERATION

Keeping the above construction in mind it can be understood how previously described disadvantages of conventional hair removing techniques are overcome or substantially eliminated by this invention.

Initially the beauty salon operator or the like selects a dispenser head 30 or 68 for example with an exit slit having a width suitable to accommodate the hair growth area 39 to be treated. Due to the size of the hair growth area 39 or other considerations it may be desirable to apply a relatively narrow ribbon of hair remover adhesive, in which case dispenser head 68 would be chosen, or a relatively wide ribbon of hair remover adhesive, in which case dispenser head 30 would be selected.

Plunger 46 is rotated in a direction towards dispenser neck 16 causing coil spring 56 to compress and exert progressively greater force against piston 54.

Electrical switch 63 is turned on to thereby energize heating means 60 which eventually causes at least some of the beeswax 59 to become melted or at least transformed into a semi-liquid-plastic flow state. As a result of the compressive force transmitted to the melted or semi-liquid beeswax 59 by piston 54, the beeswax commences being extruded through the dispenser neck 16 and associated dispenser head 30 for example. Beeswax 37 is extruded through the narrow exit slit 33 and onto the hair growth area 39 in the form of a ribbon 38 of constant width.

To maintain a desired mass flow rate the operator may periodically rotate plunger 46 to achieve a relatively steady pressure on the melted beeswax in variable chamber 25. The mass flow rate of the extruding beeswax 37 may be regulated by manipulating plunger 46 to increase or decrease pressure.

The applicator 10 is traversed across the hair growth area 39 with a steady motion. The beeswax satisfactory or optimum temperature for application to the hair growth area may be in the range of between 115°-130°.

After the ribbon 38 of beeswax has cooled, in 15 to 25 seconds for example, then the beauty salon operator may peel off the ribbon or strip 38 of beeswax which will simultaneously remove hairs 44 adhesively imbedded within the mass of beeswax.

As the operator terminates extruding beeswax and prepares to complete the hair removing procedure, she may rotate the plunger 46 in an opposite direction to

relax pressure on the beeswax 26. Any excess beeswax within head 30 and dispensing neck 16 will be permitted to drain backwardly into chamber 25 for reuse. This will prevent beeswax from hardening and clogging within the passageways.

From the forgoing it will be evident that the present invention has provided a hair removing applicator and process in which all of the various advantages are fully realized.

What is claimed is:

1. An applicator for dispensing and spreading hair remover adhesive onto a hair growth area, comprising:
 - a. a container having an upper portion formed with a dispensing neck and a lower portion that is generally open and formed with internal threads;
 - b. a piston slidably positioned within the container and arranged for movement along the longitudinal axis of the container;
 - c. a variable chamber formed by the container and the piston;
 - d. a supply of hair remover adhesive in the variable chamber;
 - e. a plunger with external threads inter-engaged with the internal threads of the container lower portion, so the plunger may be selectively advanced towards the container upper portion or retracted;
 - f. biasing means interposed between and engaging both the piston and the plunger so that pressure exerted on the piston by the biasing means may be selectively increased or decreased as the plunger is advanced and retracted respectively;
 - g. heating means in the container upper portion adjacent the variable chamber in order to melt the hair remover adhesive, the heating means including an electrical wire wound substantially throughout a segment of the container upper portion to fully sur-

- round a segment of the variable chamber, and, a switch connected to the electrical wire so heating may be selectively initiated and terminated;
 - h. a dispensing head removably coupled to the dispensing neck for dispensing and spreading melted hair remover adhesive onto a hair growth area when melted hair remover adhesive is extruded through the dispensing head under pressure from the piston and/or gravitational force;
 - i. an outermost part of the dispensing neck offset and inclined away from the axis of the container; and
 - j. a handle connected to a side of the container and having a grasping bar arranged in a manner so that when held substantially horizontal it serves to maintain the dispensing neck outermost part in a substantially erect position for best dispensing and spreading melted hair remover adhesive.
2. The structure according to claim 1 wherein: the biasing means is a coiled spring extending approximately between the centers of the plunger and piston.
 3. The structure according to claim 2 wherein: the inner face of the plunger is attached to the coiled spring and the outer face of the plunger is formed with a hand grip to facilitate advancing and retracting the plunger.
 4. The structure according to claim 1 including: a removable cap secured within an opening in the container upper portion, through which new pieces or charges of hair remover adhesive may be deposited into the variable chamber.
 5. The structure according to claim 1 wherein: the dispensing neck bears threads to removably hold one of multiple and selectively interchangeable dispensing heads.

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