LAW WAX APPLICATORS


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2 Claims. (Cl. 15—131)

My invention relates to a new and useful liquid wax applicator and one of the objects of the present invention is to combine several novel features with the structure disclosed in my prior patent dated April 4, 1950, No. 2,502,900.

Another object of this invention is to provide a holder or tray including a valve guide at one end centrally thereof and having a handle unit pivoted thereon, said holder or tray having a liquid container or receptacle remotely mounted between the resilient side walls which also temporally hold the applicator unit in place having a longitudinal sliding connection.

Another object of the invention is to produce the holder or tray of the appliance from sheet metal fashioned to provide a bottom wall having an opening for the reception of a portion of a valve, a pair of convergent resilient side walls to detachably retain a liquid receptacle or container within the tray and an applicator unit on the exterior thereof, and a pair of end walls to which a handle unit is pivoted, one of said end walls having intertured wings to form a valve guide.

Another object of the invention is to construct the handle unit with a bow or yoke having a resilient finger thereon for actuating the valve whenever the handle structure is moved from either side into a substantially vertical position.

Another object of the present invention is to provide, in a liquid wax applicator, a receptacle cap or closure with a valve housing having air vents, a relatively large inlet and an outlet surrounded by a valve seat, a plunging rod slidably mounted in the housing and having a valve plug on the lower end, a vent closure intermediate the ends and located within the housing and a button on the upper or outer end, said plunging rod and its components being spring pressed in a direction to close both the outlet and vent openings.

A further object of this invention is to provide an applicator unit including a slide and a pad of absorbent material fixed to the underneath side of said slide and both being apertured to provide a passageway for the liquid wax released by the valve.

A still further object of the invention is to so construct the various elements that the container or receptacle and the valve structure will be within the confines of the handle unit bow or yoke when the parts are in operative positions.

With the above and other objects in view this invention consists of the details of construction and combination of elements hereinafter set forth and then designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same I will describe its construction in detail referring by numerals to the accompanying drawing forming a part hereof, in which:

Fig. 1 is a perspective view of the liquid wax applicator constructed in accordance with my invention, a portion of the handle being broken away.

Fig. 2 is a section on the line 2—2 of Fig. 1 and showing in dotted lines another position of the handle unit with the valve depressed.

Fig. 3 is a perspective view of the holder or tray by itself and a portion of the handle unit broken away.

Fig. 4 is a fragmentary perspective view of the applicator unit.

Fig. 5 is a fragmentary sectional view of the holder or tray on the line 5—5 of Fig. 3.

In carrying out my invention as herein embodied represents the holder or tray produced from suitable material, such as metal, and including a flat bottom, duplicate longitudinal side walls projecting in a generally upward and inward direction at suitable angles to said bottom whereby said side walls are convergent, and opposed end walls and likewise projecting upwardly from and substantially perpendicular to said bottom.

The end wall has a valve guide which formed therewith by providing an upwardly projecting extension having a pair of suitably spaced intertured side wings and in line with said valve guide is a hole in the bottom wall of 11, Fig. 5, to receive the end of a valve to be presently described.

To the end walls, 13, 14 are pivotally connected at 19 the outer ends of the legs 20 of the yoke or bow of the handle unit 21, said yoke or bow also including a cross bar 22 having a socket 23 for a handle 24. On the cross bar 22 so as to swing therewithin an arc above the valve guide 15 is a trigger 25 including a resilient tongue 26 to engage the operating means of a valve in the valve guide as the handle unit is swung from either side of the appliance towards the vertical central or perpendicular position.

The applicator unit 27 includes a trough-shaped slide including a bottom wall and upwardly projecting or convergent side walls, the ends of the latter being bevelled or cut back at 30. On the underneath face of the bottom wall of the slide is fixedly secured a pad of appropriate absorbent material, such as cellulose or a suitable fabric to retain a quantity of liquid wax being applied to a surface. The bottom wall of the slide has an opening 32 at one end thereof, which is the forward end as the applicator is being assembled, and the pad 31 has a corresponding opening 33 to permit free flow of liquid wax to the surface being treated. The space between the inside surfaces of the side walls of the slide is the same as the distance between the outside surfaces of the side walls of the holder whereby the applicator unit may be slid endwise onto the outside of the holder and temporarily held in place the outside of the holder and temporally clamp said container in the holder.

The container can be a conventional receptacle in which liquid wax is sold to customers or it can be one of the elements of the appliance to be filled from another receptacle. In either instance the container has the usual threaded neck to receive a screw cap 35 which, in the case of a conventional receptacle in which the product is sold, replaces the original screw cap or closure. If the screw cap has a flared edge the latter will fit into a slot 36, Fig. 5, provided for this purpose although the receptacle neck...
can be of reduced diameter to bring the cap within the outside diameter of the receptacle body. The valve structure including a housing 37 is mounted on the outside of the end wall of the screw cap and the interiors are in communication through a liquid inlet passageway 38, Fig. 2, provided by a slot in the cap end wall and a similar slot in a side of the valve housing. The lower end of the valve housing projects beyond the perimeter of the screw cap for insertion in the hole 18 and said lower end is provided with a liquid outlet 39 surrounded by a valve seat 40 while the upper end of said valve housing has one or more air inlet or vent openings 41.

A valve stem 42 is slidably mounted in the valve housing 37 for longitudinal vertical movements and the lower end of said stem projects through the liquid outlet opening. Said lower projecting end carries a valve plug 43 for coaction with the valve seat to control the output of fluid from the container 34. A second valve 44, preferably in the form of a disc or washer, is mounted on the valve stem intermediate its ends with a friction fit and may be adjustable lengthwise of said valve stem. This second valve is located inside of the valve housing and is adapted to engage the inner surface of the upper end of said valve housing to normally close the air inlet or vent openings 41. Said valves are to close their respective openings simultaneously and by adjusting the fastening the valve 44 on the stem 42 said valve 44 can be properly regulated and, if necessary, adjusted to make up for wear on the valve plug 43.

The valves are urged towards their closed positions by a spring 45 surrounding the upper, outer projecting end of the valve stem with one end of said spring engage the upper end of the valve housing and the other end in contact with the head or button 46. This head or button is separate from the valve stem and secured in place after the valve plug and stem are assembled.

After the screw cap 35 has been drawn tight on the container 34 the latter is forced in between the opposed resilient walls 12 of the holder 10 in order to temporarily clamp said container in the holder. To so assemble the container, the valve structure is aligned with the valve guide 15 in order to pass between the wings 17 thereof and finally as the container is seated the lower end of the valve housing will project through the hole 18 in the bottom of the holder and the head or button 46 will be positioned in the path of travel of the resilient tongue 26 of the trigger carried by the cross bar 22 and, for purposes of illustration, said trigger is shown secured in place by a screw 47. The applicator unit 25 may be assembled to the holder 10 at any time by sliding the trough-shaped slide element lengthwise said holder from one end thereof and if the valve structure is in the holder the apertured end of the applicator unit must be initially engaged with the end of the holder opposite the valve guide. When the end wall of the opening or aperture 32 contacts the protruding lower end of the valve housing the attaching movements of the applicator will be stopped thus providing a free passage for the liquid wax.

In practice the apparatus is placed upon a surface, for example a floor, with the applicator pad 31 resting flat on said surface. Then by holding the handle at an angle, on either side of the perpendicular, the trigger will be spaced from the valve button 46 and the device may be moved to and fro for rubbing the surface on which the pad is placed. As the liquid in the container 34 is required for application to the surface being treated, the handle unit is moved towards and to the perpendicular position to cause the trigger to engage and depress the button 46 against the action of the spring. This will open the valves 43 and 44 and allow the liquid contained to flow through the liquid outlet 39 and air to pass through the air inlets 41.

When the desired amount of liquid has run out and passed through the opening 33 onto the surface, the handle is drawn back to permit the spring 45 to close the valves and the applicator is moved about for properly distributing the liquid, such as a liquid wax, over the surface being treated. It is to be noted that the valve structure is held in an upright position by the valve guide and therefore will not be dislodged by contact of the trigger with the valve head or button as said trigger is moved from either side of the perpendicular center of the valve structure.

There may be a number of applicator units for interchangeable use on the holder for different purposes or replacement when one becomes soiled or worn.

Of course I do not wish to be limited to the exact details of construction herein shown and described as these may be varied within the scope of the appended claims without departing from the spirit of my invention.

Having described my invention what I claim as new and useful is:

1. A liquid wax applicator comprising a holder including a bottom wall having an outlet opening therein, perpendicular end walls and convergent resilient side walls, a container forcibly assembled in the holder and temporarily clamped between the resilient side walls thereof, a cap on said container, a valve structure mounted on the end of said cap including a housing having the interior thereof in communication through a lateral opening with the inner side of the cap, said housing further provided with air inlets at one end and an outlet at the other end, a valve seat surrounding the outlet, a valve plug for cooperation with said seat, a valve rod on the valve plug and projecting through the end of the housing opposite the outlet and protruding an appreciable distance, a button on the protruding end of said valve rod, a second valve on the rod to close the air inlets and a spring surrounding the protruding end of the valve stem and engaging the opposed valve housing and button to urge the valves toward closed positions, a handle structure pivotally connected with the end walls of the holder, means on the handle structure for cooperation with the button when the handle is moved from either side towards and to the perpendicular for releasing liquid contents from the container which contents will flow through said outlet opening in the holder bottom wall, and an applicator unit removably mounted on the bottom of the holder.

2. The liquid wax applicator according to claim 1, wherein the means to actuate the valves is a trigger mounted on the handle structure and including a resilient tongue either end of which is engageable with valve button.

3. The liquid wax applicator according to claim 1 wherein the applicator unit is comprised of a trough-shaped slide including a bottom wall having an aperture for the passage of wax from the valve structure and convergent side walls slidably engaging the exteriors of the holder side walls for detachably joining said applicator unit to the holder, and an applicator pad fixedly secured to the exterior of the slide bottom wall.

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