Aug. 10, 1943. H. C. NIMRICK 2,326,669

LIQUID WAX APPLICATOR

Filed Sept. 25, 1941

Fig. 4

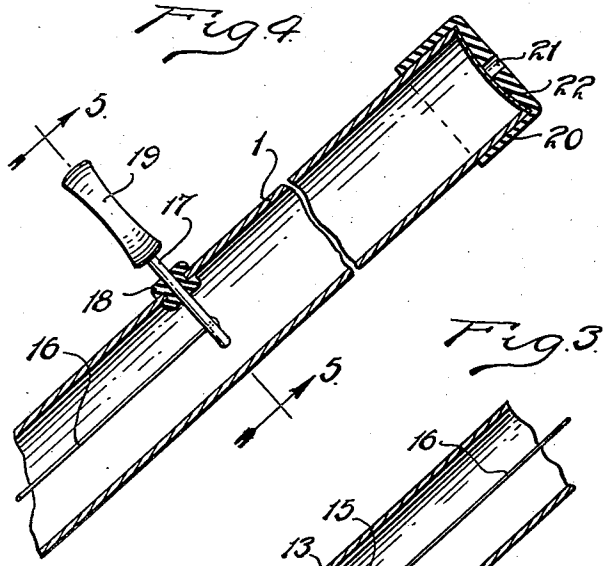


Fig. 1

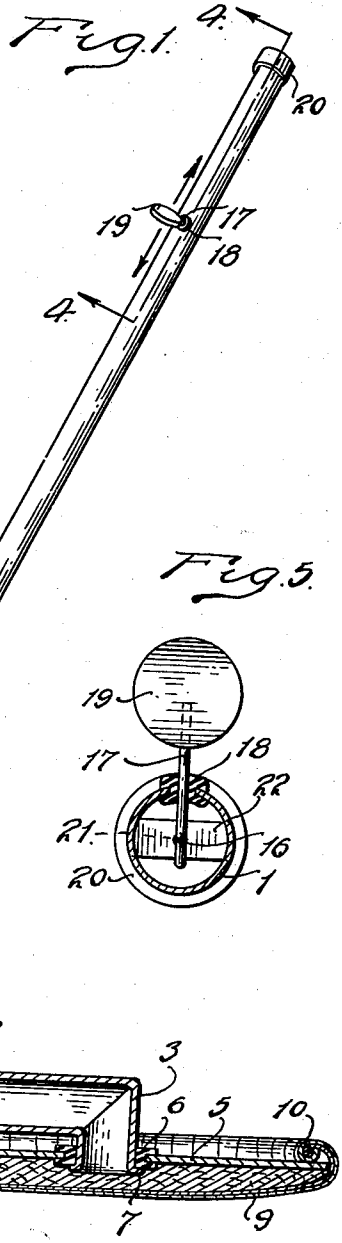


Fig. 3

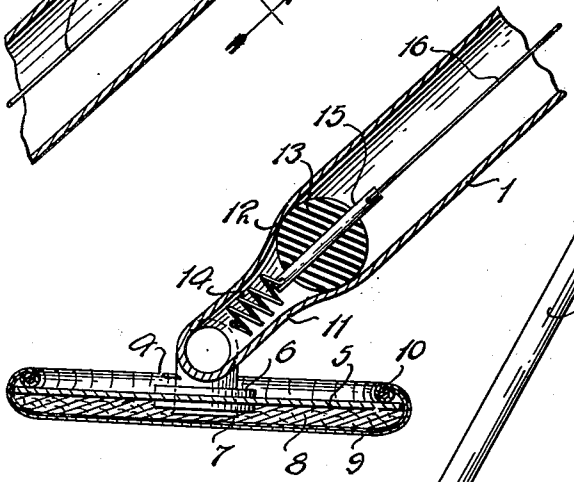


Fig. 5

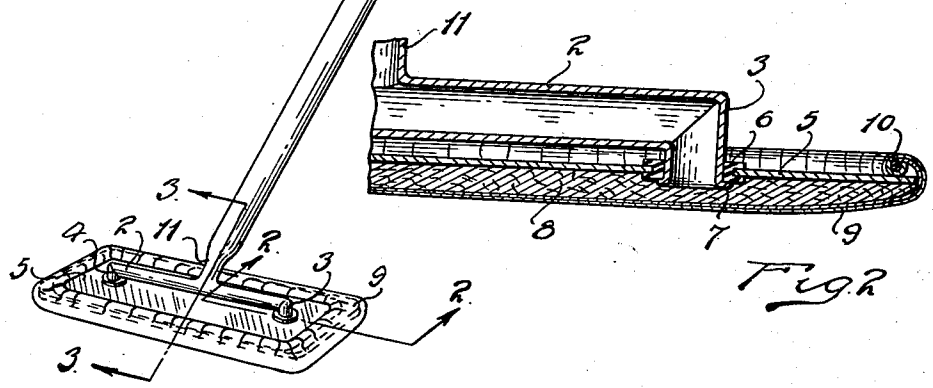


Fig. 2

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Patented Aug. 10, 1943

2,326,669

UNITED STATES PATENT OFFICE

2,326,669

LIQUID WAX APPLICATOR

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Application September 25, 1941, Serial No. 412,271

6 Claims. (Cl. 15—138)

This invention relates to liquid wax applicators the object being to provide a new and improved structure including a hollow handle and a spreader member having a pad like element supported by the spreader and to which the liquid wax may be supplied from the handle acting as a container therefor.

A further feature of the invention resides in the provision of a spreader member which comprises a substantially non-flexible plate to the under surface of which is secured an absorbent material to which the liquid wax is supplied and the wax passing into and through the absorbent material is spread in use of the device on a floor or floor covering after the manner in which an ordinary mop is used.

A feature of the invention is involved in forming a tubular handle member to the lower end of which is a tubular structure having one or more discharge portions opening through the plate and a flexible connection between the plate and the said portion, manually controlled valve means being provided to supply the liquid wax to the padding as occasion may require.

These and other objects and features of the invention are hereinafter more fully described and claimed and the preferred form of construction of a liquid wax applicator embodying my invention is shown in the accompanying drawing in which—

Fig. 1 is a perspective view thereof.

Fig. 2 is a half section taken on line 2—2 of Fig. 1 showing the manner of connection of the handle element with the applicator per se.

Fig. 3 is a section taken through the handle and the applicator on line 3—3 of Fig. 1.

Fig. 4 is a longitudinal section of the upper end of the handle element showing the valve controller and the means automatically functioning to supply air to the interior of the member as the liquid is dispensed therefrom to the pad.

Fig. 5 is a cross section of the handle taken on line 5—5 of Fig. 4 showing the valve operator.

It has heretofore commonly been the practice to apply liquid wax to a floor or floor covering by first pouring a quantity of the wax on the surface and then spreading the same as by means of a cloth or a mop and this operation requires to be repeated to cover successive small areas of the surface.

My improved liquid wax applicator contains a considerable quantity of the liquid wax and has what may be termed a mop like element (hereinafter more definitely described) to which the liquid wax may be applied at intervals thus enabling the entire surface to be waxed with considerably less manual effort than the usual means such as above described.

The preferred mechanical structure embodying my invention is of simple and inexpensive form and readily operable as will be understood from the following description. My improved liquid wax applicator comprises a hollow handle 1 the lower end of which is provided with a transverse, and preferably integral, tubular member 2 having downturned terminal portions 3 and 4 and to which the handle is centrally connected, it being understood however that any number of elements such as 3 and 4 may be used.

As shown in Fig. 2 each of these terminal portions extend through an aperture provided therefor in a plate 5 which is preferably of sheet metal but may be of any approved material preferably non-flexible under the pressure applied thereto in the act of waxing a floor or floor covering. In each of the apertures is a rubber or other flexible washer like element 6 peripherally grooved and fitting over the edges of the opening and also having a central aperture through which each of the members 3 and 4 respectively extend. These terminal portions 3 and 4 have a peripheral external flange 7 greater in diameter than the diameter of the opening in the flexible element 6. Thus the parts are secured together in a manner to prevent separation of the handle from the applicator in normal use of the apparatus and yet provides for a flexing of the portions 3 and 4 relative to the plate 5 thereby maintaining the face of the applicator parallel with the floor or other surface in the movement thereof by the handle toward and from the operator, in which movements the angular relation of the handle to the plate changes.

To the under surface of the plate a pad 8 is provided which is of an absorbent and fibrous material and the terminal portions 3 and 4 discharge liquid thereinto. The pad is held in place by a cloth 9 which extends over the entire surface of the pad and the edge of the cloth is secured over a flexible element 10 which may be of rubber or a coiled spring of small diameter which serves to draw the fabric portion 9 comparatively taut across the surface of the pad 8. Thus the edges of the plate are covered by some of the absorbent material and the fabric 9 as shown more clearly in Fig. 2. This not only serves to detachably secure the absorbent material and fabric in place but also covers the edges of the metal plate thereby preventing contact

of the plate with furniture or baseboards at the wall of the room in which it is used. It is to be observed that the fabric and pad are readily removable for cleaning or replacement and that while the liquid may be applied to the absorbent material at several specific points by the tubular portions 3 or 4, the movement of the applicator across the surface serves to spread the liquid wax practically uniformly thereover.

As previously stated the handle element is hollow and preferably the lower end 11 thereof is contracted to a less diameter practically equal to the diameter of the portion 2 having the outlets 3 and 4. By thus reducing the diameter of the lower end of the handle proper there is provided the outcurved wall 12 which forms a circular seat for a ball valve 13. This ball may be of rubber or other desirable material and, when seated on the cylindrical curved portion 12 as shown in Fig. 3, the liquid in the handle portion 1 is prevented from flowing to the portion 11 and thence through the tubular portion 2 to the discharge portions 3 and 4.

It is desirable that the ball be normally seated on the seat portion 12 of the handle. For this purpose I provide the coiled spring 14 which is preferably attached to a bar 15 extending diametrically therethrough on the axis of the tubular handle. A wire 16 is connected to the bar 15 and extends upwardly of the handle and is attached at its upper end to a bar 17 extending at a right angle thereto and through an aperture provided therefor in the tube 1. This aperture in the handle has a rubber insert 18 through which the bar 17 extends and the insert is peripherally grooved providing a central portion fitting the aperture in the handle 1 and flanges engaging over opposite sides of the handle at the aperture. At the outer end of the arm 17 I preferably provide a disc like portion 19 by which the bar 17 may be turned in either direction as indicated by the arrows shown in Fig. 1. The flexible washer like element 18 permits sufficient rocking of the arm 17 to raise the ball 13 from its seat and permit liquid to flow to the pad and the spring 14 returns the ball to its seat.

In the use of the device the cap 20 is removed from the open end of the tubular handle 1 and a quantity of liquid wax poured thereinto and the cap then returned to position shown in Fig. 4. On operation of the lever 19 the ball valve is raised to allow a small quantity of liquid to flow into the pad and on release of the lever the ball seats and stops the flow of liquid to the pad.

In order that liquid may readily flow into the pad through the tubular portions 2, 3 and 4 air must be supplied to the upper end of the hollow handle. For this purpose I provide an aperture 21 preferably centrally of the base of the cap 20 and I further provide a thin flexible rubber strip 22 which is attached at its ends portions to the inner face of the cap. With this arrangement as liquid flows from the handle air may seep into the upper end of the handle member due to reduced pressure within the handle. This arrangement prevents loss of liquid through the aperture 21 in the event the handle lies on a flat surface or is upended for any reason and by this arrangement liquid will flow readily to the pad on the raising of the ball valve 13 from its seat. While I have shown and described a ball valve other adaptable valve structures may be utilized.

From the foregoing description it is believed evident that the various objects and features of the invention are attained by the arrangement of parts as described and that various changes may be made in the construction and arrangement of the several parts without departing from the spirit and scope of the invention as set forth in the appended claims.

Having thus fully described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is:

1. A liquid wax applicator comprising a hollow handle having an outer open end, a removable cap therefor, a tubular element at the opposite inner end of the handle, a plate carried by the said opposite end through which the tubular end extends, a flexible rubber washer having spaced flanges on opposite sides of the plate providing a flexible connection between the plate and the said tubular element, a pad on the side of the plate opposite that from which the handle extends, the hollow handle providing a means for carrying a supply of liquid wax, and manually operable valve means providing for flow by gravity of a desired quantity of the liquid from the handle to the pad.

2. A liquid wax applicator comprising a hollow handle having a filling opening, a plate carried by the opposite end of the handle and through which the handle opens, the plate having an opening to receive the said opposite end of the handle, a hollow flexible member through which the end of the handle extends, said hollow member having spaced parallel flanges of a flexible material providing for limited change in angular relationship between the handle and the plate in moving the device across the surface to be waxed, the hollow handle providing a means for carrying a supply of liquid wax, and a manually operable valve adjacent the end of the handle attached to the plate, a liquid absorbent pad removably supported on the side of the plate opposite that from which the handle extends and to which liquid is supplied from the handle.

3. A liquid wax applicator comprising a hollow handle having an open outer end, a removable cap for said outer end, a tubular element at the opposite inner end of the handle extending at a right angle to the handle and having a number of projecting tubular portions open at the outer end, a plate carried by the said projecting portions and through which the same extend, a pad carried by the plate into which liquid is discharged from said tubular portion, a flexible connection between the plate and the said projecting portion permitting the handle to change in angular relationship to the plane of the plate in the movement of the device in applying the wax to a floor surface, said flexible connection comprising a tubular element having spaced externally positioned flexible rubber flanges respectively engaging opposite sides of the plate, said hollow handle providing a means for carrying a supply of liquid, manually operable valve means providing for flow by gravity of a quantity of liquid from the handle to the pad, a valve means carried by the cap opening by influence of flow of liquid from the handle to permit air to flow thereinto in replacement of the liquid flowing therefrom.

4. A liquid wax applicator comprising a hollow handle having open outer ends, a tubular element integral with the opposite end of the handle and extending at a right angle thereto, said tubular element having a number of projecting tubular portions at a right angle to the tubular element and having open outer ends, a plate carried by the said projecting tubular portion and through which

the same extends, a pad on the surface of the plate opposite that to which the tubular portion extends, a retainer therefor detachably carried by the plate, a flexible connection between the plate and the said tubular projecting portion permitting change in angular relationship of the handle relative to the plate in the movement thereof in applying wax to a floor surface, said flexible connection comprising a centrally apertured rubber element to receive the handle and spaced parallel flanges to receive the plate, a spring seated valve at the lower end of the handle adjacent the point of attachment of the said tubular element thereto, a pivotally supported lever adjacent the free end of the handle, a connector between the inner end of the handle and the valve whereby the valve may be opened against the tension of the spring, and automatic means providing for ingress of air to the interior of the hollow handle by reduction of air pressure within the handle to discharge the liquid to the pad.

5. In a liquid wax applicator, a hollow handle for carrying a supply of liquid, a liquid applicator comprising a plate to which the handle is flexibly connected to permit a limited change in angular relationship of the handle and plate, said flexible connection comprising a hollow rubber element having parallel spaced external flanges to receive the plate and said handle having a portion extending through the flexible element and the plate, a pad on the side of the plate opposite the handle, a woven cloth element of a bag like form through the open end of which the plate may be introduced, a flexible element secured to the open end of the fabric member tending to contract the same and thereby detachably secure the pad in position on the surface of the plate opposite that from which the handle extends.

6. In a liquid wax applicator, a hollow handle for carrying a supply of liquid, a manually controlled valve means for regulating the volume discharged from the handle, said handle including an open inner end portion, a plate tiltably supported thereon to provide for variation in the angular relationship of the plate and handle in the use of the device, means for tiltably supporting the plate on the handle comprising a flexible element having a central opening to receive the handle and spaced parallel flanges to receive the plate, a pad on the side of the plate opposite that to which said handle end projects, a pad on the under side of the plate detachably supported in position and to which the liquid wax is applied, a valve means manually operable to discharge a quantity of liquid therefrom to the pad, an automatic relief valve for supplying air to the outer end of the handle on reduction of pressure therewithin due to discharge of liquid to the pad.

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