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WAX APPLICATOR

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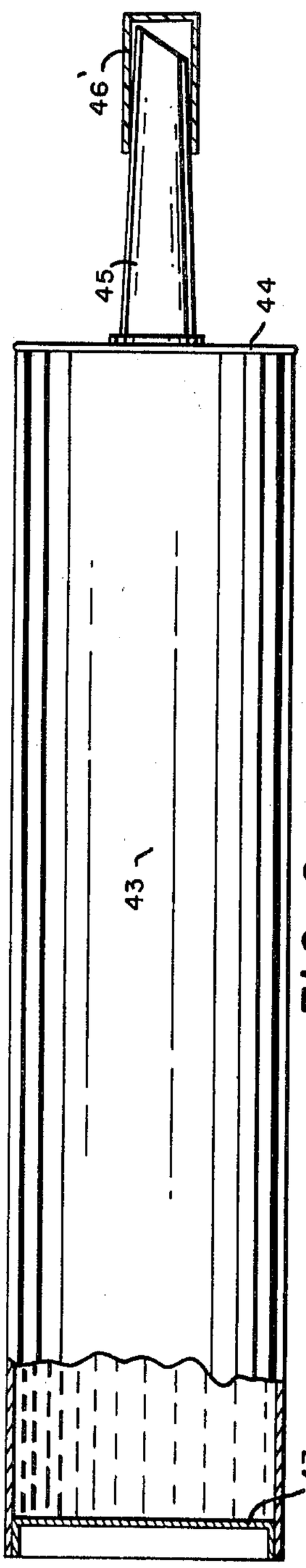

FIG. 2

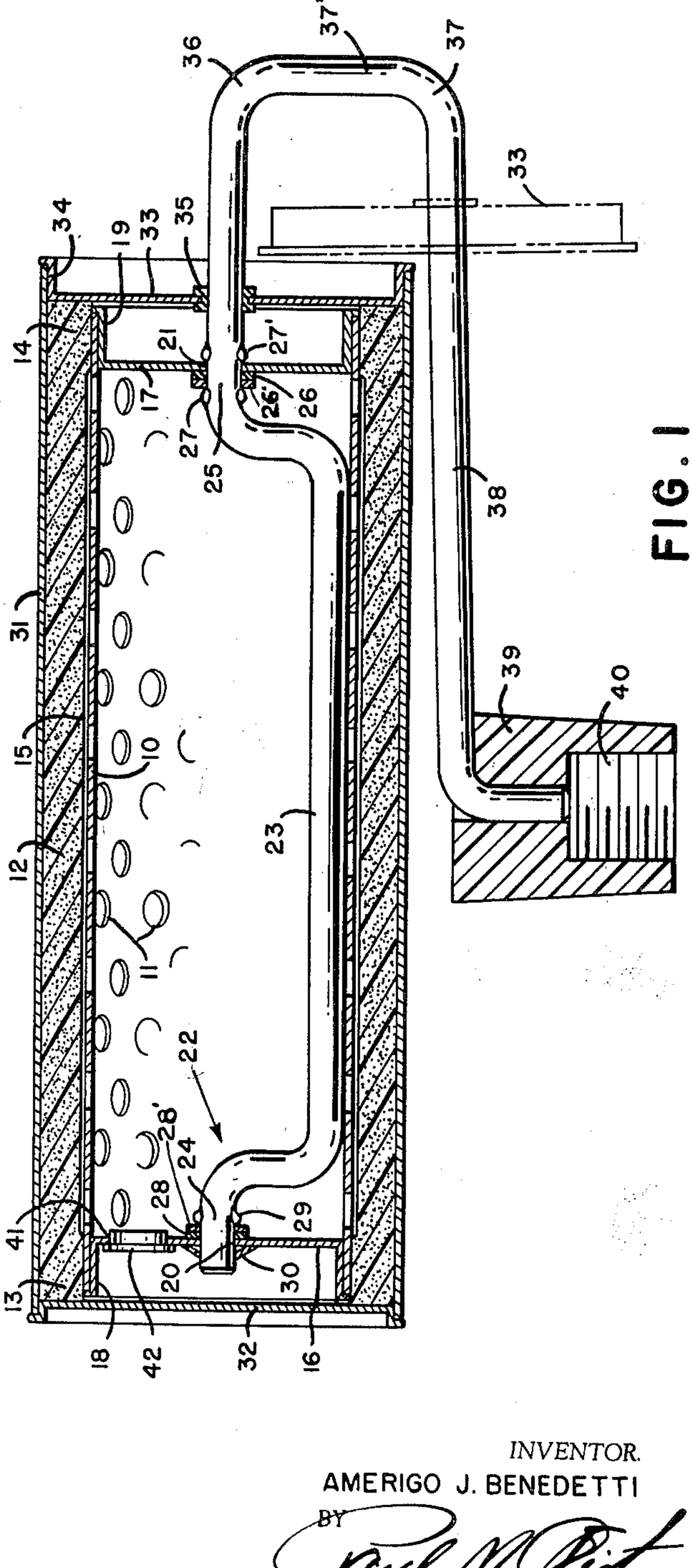

FIG. 1

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WAX APPLICATOR

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The present invention relates to applicators and particularly to an applicator for such materials as floor wax and the like.

The application of floor wax and the like to a floor or wall requires covering the surface with a thin, even coating prior to polishing. Prior known applicators for this purpose usually necessitate manual handling of the wax with consequent messiness. Between applications of wax, prior known applicators dry up, making it necessary to use a new applicator each time a surface is to be waxed after protracted time intervals between waxings. Furthermore, prior known roller wax applicators are usually covered with a porous material that is often attacked by the solvent of the wax, causing its early deterioration.

The principal object of the present invention is to provide an applicator for floor wax and the like which is filled for use without manual contact with the wax.

Another object of the invention is to provide such an applicator in which there is included as an integral part thereof, a closure for a container within which the applicator is adapted to be stored.

Still another object of the invention is to provide such an applicator which is conveniently packaged for sale in the same container in which the applicator is stored between uses.

Still another object of the invention is to provide such an applicator having a porous covering that is solvent-resistant.

Still another object of the invention is to provide such an applicator in which an offset arm continuously breaks up the wax without permitting it to bridge across the axis of rotation of the roll.

In one aspect of the invention, a wax applicator may comprise a tubular element having a perforated peripheral surface, which element may be closed by disks that frictionally engage the inner peripheral surface at each end of the tube. The disks may include central apertures for receiving a rod on which the tube may turn.

In another aspect of the invention, a porous, resilient tubular member or covering extending over the entire periphery of said perforated element may be securely held to said element at each end thereof, providing a floating condition thereof between said ends. It has been found that the use of a plastic foam for the porous cover provides a resilient, porous solvent-resistant covering of long life.

In a still further aspect of the invention, the rod that rotatably supports the perforated tubular element may include aligned, spaced trunnions between which may be located a radially displaced portion adapted to lie close to the inner peripheral surface of the tubular element. This radially disposed portion adjacent the inner peripheral surface of the perforated tubular element acts to break up the wax and feed it through the peripheral perforations thereon without permitting bridging of the wax between the trunnions along the axis of rotation of the tubular element.

In another aspect of the invention, the rod that rotatably supports the perforated tubular element may be bent back on itself, forming an arm parallel to and spaced from the axis of the rod on which the tubular element is journaled. The spacing of these two parallel portions of the rod may be such that a disk may be mounted on the rod and be capable of being slid along the bent rod so that it turns through 180°.

In still another aspect of the invention, a container having one end closed and the other end open may be adapted to receive the perforated element such that the porous, resilient covering thereon snugly fits said container; and, in addition, the slidable disk on the bent rod is adapted to close the open end of the container.

In still another aspect of the invention, the free end of the bent rod may support a fitting adapted to be attached to a handle or the like.

The above, other objects and novel features of the invention will become apparent from the following specification and accompanying drawing which is merely exemplary.

In the drawing:

FIG. 1 is a longitudinal sectional view of an applicator and container to which the principles of the invention have been applied; and

FIG. 2 is a view, with portions broken away of a tube of wax for loading the applicator of FIG. 1.

Referring to the drawing, the principles of the invention are shown as applied to an applicator and container therefor. The applicator may include a tubular element 10 having its peripheral surface provided with a large number of holes or perforations 11. The element 10 may be made from metal, wood, rubber, plastic, pressed paper and the like. The hole size should not be too small; otherwise the wax will clog the holes. Neither should the holes be too large because they would weaken the tubular construction. It has been found that if round holes are employed, they should be between about ⅛" to ⅝" in diameter and preferably about 9/32" in diameter.

The peripheral surface of element 10 may be covered with a porous covering 12 which may be any one of several plastic foams or the like having a porosity capable of passing semi-fluid wax by capillary action and slight pressure. It has been found that the polyester, or polyether urethane and the poly vinyl foams provide a solvent-resistant resilient covering having the desired porosity and long life.

The ends 13, 14 of the covering 12 may be rigidly attached to the outer peripheral ends of the perforated element 10 by an adhesive or other suitable means, providing a thin annular space 15 between the inner and outer peripheral surfaces of the covering 12 and element 10 between said ends; thus, the major portion of the covering 12 floats on the perforated tubular element 10, facilitating the covering of uneven portions of the surface being waxed.

The opposite ends of tubular element 10 may be closed by sheet metal disks 16, 17 or the like. These disks may include flanges 18, 19 that frictionally engage the inner peripheral surface of element 10 at its opposite ends.

Disks 16, 17 may be provided with central through passages 20, 21 that are in aligned relation. A rod 22 may include a radially offset portion 23 between aligned portions 24 and 25. The end disk 17 may be mounted on the portion 25 against a sealing ring 26, backed up by a washer 26', between staked protuberances 27, 27' on rod 23. The opposite end 24 may support a sealing ring 28, backed up by a washer 28', by similar staked protuberances 29. The construction is such that the end 24 of rod 23 may slidingly fit hole 20 with disk 16 in place and frictionally engaging the inner periphery of element 10 when disk 17 is also in its proper place, frictionally engaging the opposite end of element 10. A speed fastener 30 may be mounted on the outer end of portion 24 holding the assembly in place.

A container 31 having an hermetically sealed end 32 may be open at its opposite end to receive the applicator assembly previously described. The portion 25 of rod 22 may be extended an amount at least a little greater than the radius of the container 31. A closure disk 33

for container 31 having a flange 34 may be mounted on the extension of portion 25 with a rubber sealing grommet 35 between the two. The flange 34 of disk 33 is adapted frictionally to engage the inner peripheral surface of the open end of container 31 when the applicator is marketed or stored. The extended portion 25 may be bent at right angles at point 36, and again at right angles at point 37, forming a portion 37' and an arm 38 substantially parallel to rod 22, and spaced from the extended portion 25 an amount that also is slightly greater than the radius of the container 34. The free end of the arm 38 is bent at right angles and supports a fitting 39 having a threaded recess 40 for the reception of the end of a handle. The outer surface of the fitting 39 may be tapered to receive the wand or tube of a vacuum cleaner.

From the foregoing it is evident that the spacings of the portion 37' and arm 38 are such that the disk 33 can be slid along the extended portion 25, turned through 90° and slid along arm 38 to a point near the end 14 of the applicator. In this way, the applicator may be marketed and stored within the container 31 and when it is to be used, the disk 33 may be moved to its dot-and-dash line position and the applicator removed from the container 31. When it is to be stored, the reverse of these steps hermetically seals the applicator within the container to prevent the wax within the pores of the porous covering 12 from drying and solidifying.

In order to load the applicator, a through passage 41 may be provided in disk 16, and a removable plug 42 may close the same. Referring to FIG. 2, a cylindrical or other form of container 43 may contain wax of the desired consistency. The container 43 may include a permanent closure 44 at one end having a tapered nozzle 45 extending therefrom, the nozzle being closed by a removable cap 46'. The opposite end of container 43 may be closed by a piston-like element 47 which, when forced toward the nozzle 45, causes the wax within container 43 to be ejected from the end of nozzle 45.

With plug 42 removed, the nozzle 45 may be inserted within hole 41, and the tapered nozzle 45 provides an effective seal therebetween. By forcing closure 47 toward nozzle 45, the applicator can be loaded with the wax from within container 43.

Although the various features of the new and improved applicator and container therefor have been shown and described in detail to fully disclose one embodiment of the invention, it will be evident that changes may be made in such details and certain features may be used without others without departing from the principles of the invention.

What is claimed is:

1. In a combined wax applicator and container therefor, a substantially cylindrical container having one end hermetically sealed and its other end open; a wax applicator adapted to be inserted within said container, said applicator including a hollow tubular element having a perforated periphery; disks closing each end of said tubular element and having axially aligned holes therein; a rod located within said tubular element, having axially spaced, aligned trunnion portions between which is provided a radially offset portion with said trunnion portions extending through the holes in said disks and said offset portion in close proximity to the inner peripheral surface of said tubular element, one of said trunnion portions being extended beyond the corresponding end of said applicator; a resilient plastic foam covering for said tubular element rigidly attached thereto only at the ends thereof, whereby the major portion of said covering floats on said tubular element; an arm connected to, and lying parallel with said extended trunnion portion and spaced from the axis of said trunnion portion a distance greater than the radius of said container; a closure for said container mounted on said extended trunnion portion and adapted to be slid along said extended portion and said arm when said applicator is removed from said container; and means on said arm for attaching a handle thereto.

2. In a combined wax applicator and container therefor, a substantially cylindrical container having one end hermetically sealed and its other end open; a wax applicator adapted to be inserted within said container, said applicator including a tubular perforated element; a porous covering surrounding said perforated tubular element, fixed thereto at the ends thereof and adapted snugly to fit within the interior of said container; end disks frictionally engaging the inner peripheral surface of said perforated tubular element and having central holes therethrough; a rod having trunnion portions extending through said holes and a radially displaced portion adapted to be located close to the inner peripheral surface of said perforated element, one of said trunnion portions being extended beyond the corresponding end of said applicator a distance at least slightly greater than the radius of said container, and formed in a manner to provide a radially extending portion and an arm portion parallel to said trunnion portion, said arm portion being spaced from said trunnion portions a distance at least slightly greater than the radius of said container; a disk closure for said container mounted on said extended trunnion portion and adapted to be slid along said extended, radial and arm portions when said applicator is used; and means on said arm for attaching a handle thereto.

3. In a combined wax applicator and container therefor, a substantially cylindrical container having one end hermetically sealed and its other end open; a wax applicator adapted to be inserted within said container, said applicator including a hollow tubular element having a perforated periphery; disks closing each end of said tubular element and having axially aligned holes therein; a rod located within said tubular element, having axially spaced, aligned trunnion portions between which is provided a radially offset portion with said trunnion portions extending through the holes in said disks and said offset portion in close proximity to the inner peripheral surface of said tubular element, one of said trunnion portions being extended beyond the corresponding end of said applicator; a resilient plastic foam covering for said tubular element rigidly attached thereto; an arm connected to, and lying parallel with said extended trunnion portion and spaced from the axis of said trunnion portion a distance greater than the radius of said container; a closure for said container mounted on said extended trunnion portion and adapted to be slid along said extended portion and said arm when said applicator is removed from said container; and means on said arm for attaching a handle thereto.

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