

[54] **FLOOR WAX DISPENSER**

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[51] **Int. Cl.**.....A47I 13/26, B67d 5/64

[58] **Field of Search**.....401/137-139; 222/166

[56] **References Cited**

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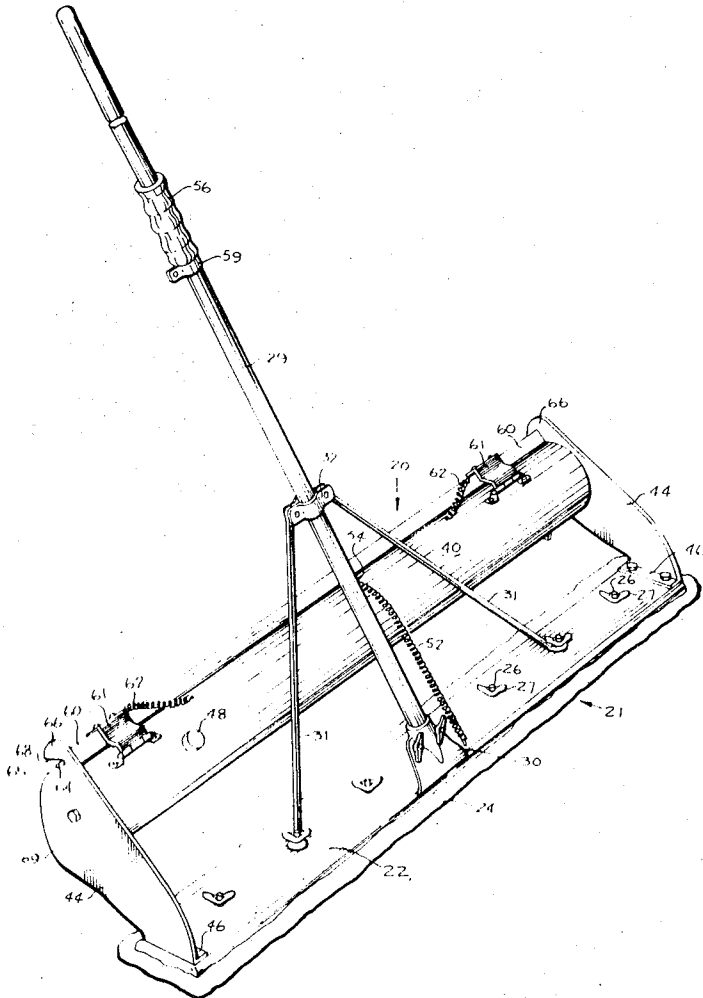
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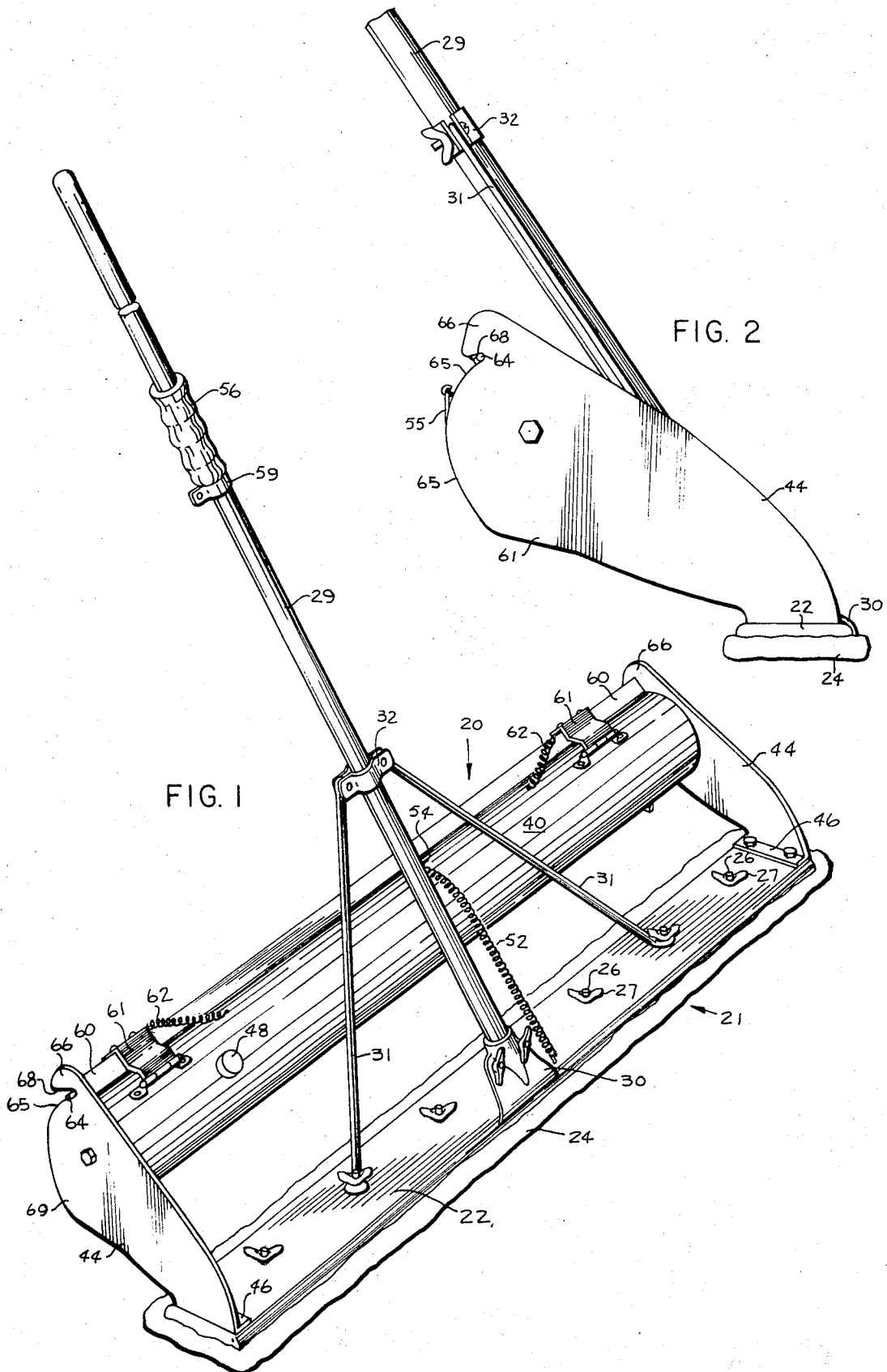
[57] ABSTRACT

A floor wax dispenser is disclosed attachable to a wax applicator having a base and an upstanding handle. The dispenser is a tubular container mounted on brackets supported on the applicator base. An array of wax discharge ports is aligned on the container. A handle grip is provided connected to the container to rotate the container on the supports and position the discharge ports downwardly so that wax is discharged onto a floor surface. A spring return mechanism normally positions the container with the discharge ports upwardly, and a cover flap encloses the ports to prevent discharge of wax. Cam surfaces on the brackets engage cam pins on the cover both to hold the cover in place when the discharge ports are upwardly and to lock the tubular container to prevent further rotary movement. The cam pins on the cover coact with the brackets to open the cover flap automatically as the container is rotated into the wax discharge position.

10 Claims, 12 Drawing Figures



3 Sheets-Sheet 1



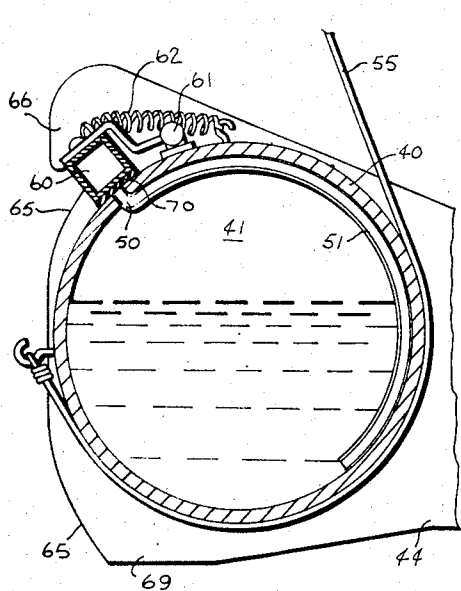


FIG. 6

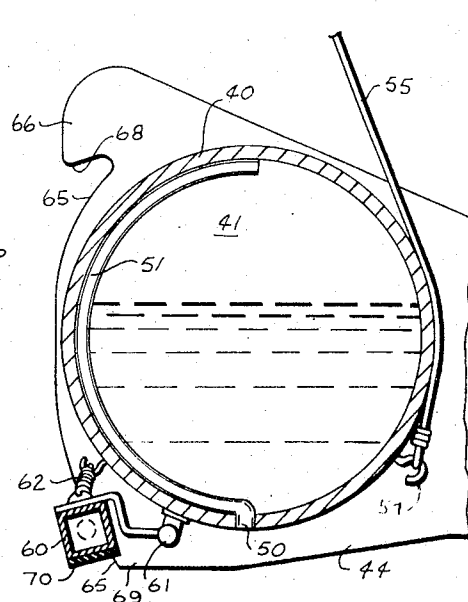


FIG. 7

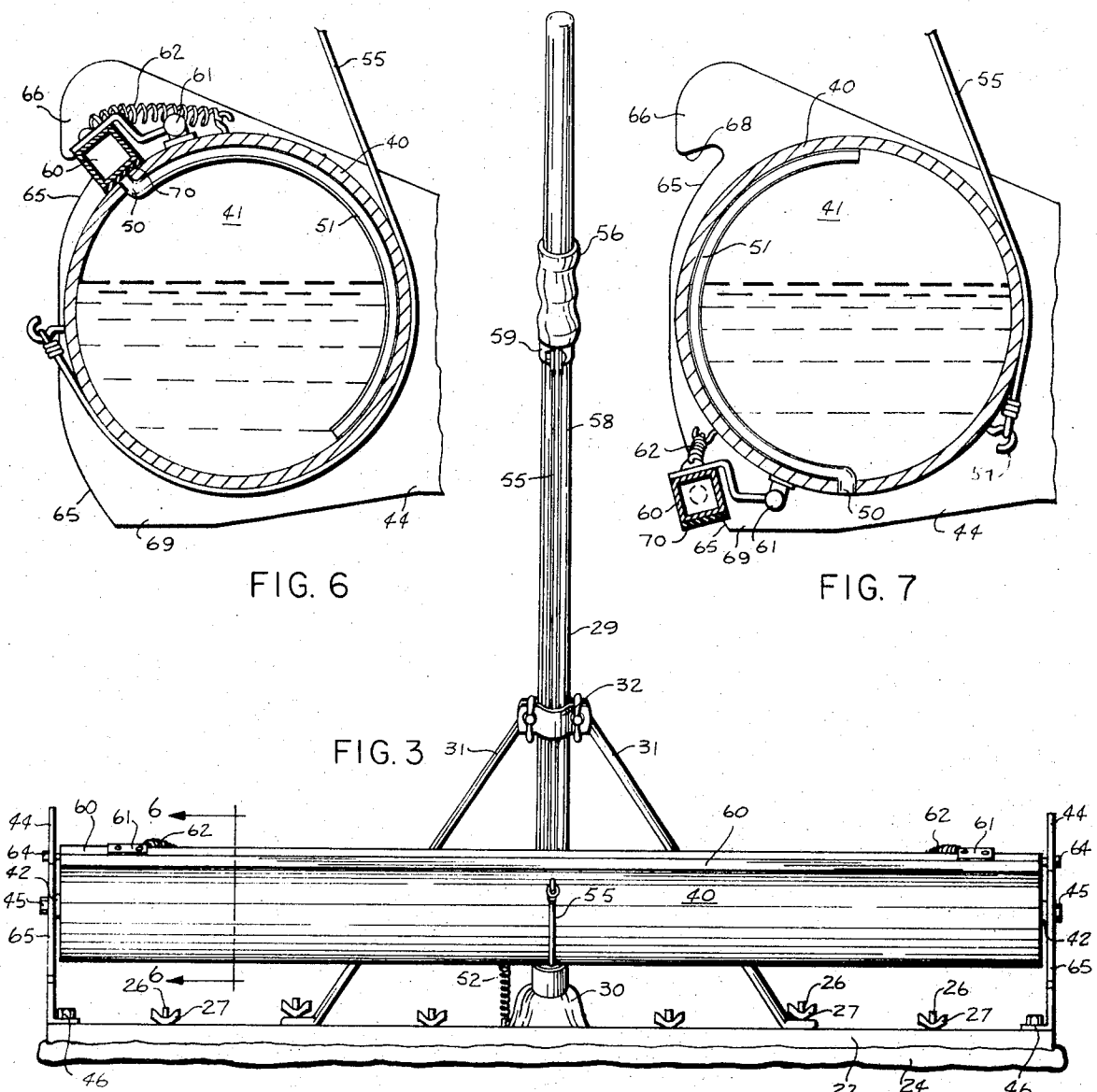


FIG. 3

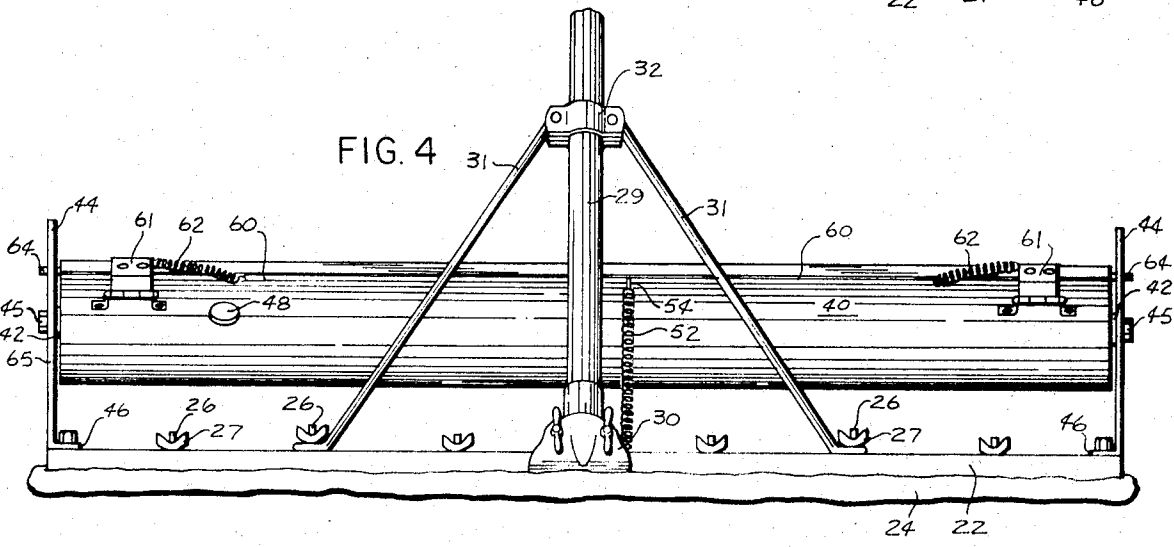
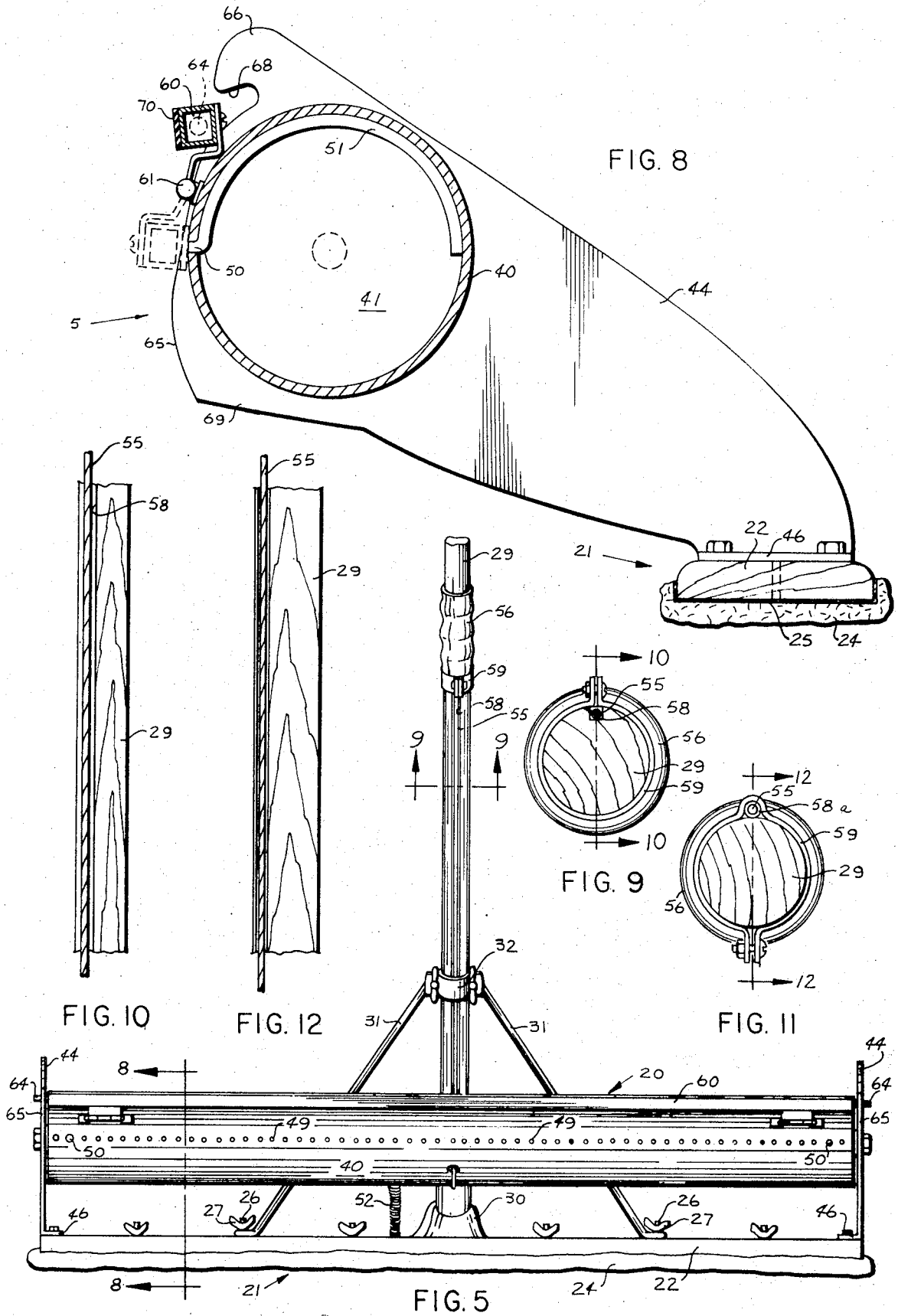


FIG. 4



FLOOR WAX DISPENSER

BACKGROUND OF THE INVENTION

The present invention relates to floor wax dispensers and more particularly to floor wax dispensing mechanisms mounted in association with wax applicators.

Various types of wax dispensers and applicators are known in the art. See, for example, U. S. Pat. No. 1,739,983 issued Dec. 17, 1929 to G. H. Nelson et al. for "Waxing Machine"; U. S. Pat. No. RE. 20,762 issued June 14, 1938 to H. C. Thompson for "Floor Waxing Device"; U. S. Pat. No. 2,533,706 issued Dec. 12, 1950 to P. J. Acocella et al. for "Floor Waxer and Polisher"; and U. S. Pat. No. 3,054,132 issued September 18, 1962 to E. Ormerod for "Floor Waxing Device."

OBJECTS OF THE INVENTION

It is the principal object of the present invention to provide an improved floor wax dispenser, for use in association with a wax applicator, which dispenser is simple and rugged in construction, and provides a reliable and uniform flow of liquid wax onto a floor surface.

Another object of the present invention is to provide a wax dispenser of the foregoing character which affords an easy and rapid positioning of the wax container to dispense liquid wax so that the operation of the dispenser can be easily controlled to provide a uniform application of wax to the surface to be treated.

A further object of the present invention is to provide a wax dispenser of the above type which is suitable for use with a wide variety of applicator sizes so that the applicance may be utilized for applicators intended for household use as well as applicators intended for commercial and industrial use.

Still another object of the present invention is to provide a wax dispenser of the above character which can be quickly and readily mounted on existing wax applicators without requiring extensive modification of such applicators or without requiring use of specially constructed applicators, thereby substantially reducing the cost of the unit and simplifying the installation thereof onto an applicator.

Further objects of the present invention will become apparent from the following description of the preferred embodiment thereof.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a floor wax applicator having a wax dispenser embodying the present invention secured thereon.

FIG. 2 is an end elevation view of the device shown in FIG. 1.

FIG. 3 is a rear elevation view of the device shown in FIG. 1.

FIG. 4 is a front elevation view of the device shown in FIG. 1.

FIG. 5 is a rear elevation view of the device shown in FIG. 1 but with the wax container partially rotated towards dispensing position, and the cover lifted up to expose the dispensing ports.

FIG. 6 is a section view taken substantially in the plane of line 6—6 on FIG. 3.

FIG. 7 is a section view similar to FIG. 6 but showing the wax dispensing container rotated into wax dispensing position.

FIG. 8 is a section view taken substantially in the plane of line 8—8 on FIG. 5.

FIG. 9 is a section view taken substantially in the plane of line 9—9 on FIG. 5.

FIG. 10 is a section view of a portion of the wax applicator handle taken substantially in the plane of line 10—10 on FIG. 9.

FIG. 11 is a section view similar to FIG. 9 but showing an alternative construction for the dispenser actuating cable.

FIG. 12 is a section view taken substantially in the plane of line 12—12 on FIG. 11.

SUMMARY OF THE INVENTION

In accordance with the invention herein and to accomplish the foregoing objects, a generally cylindrical wax dispensing container is mounted between two brackets which are secured to the opposite ends of an elongated base of a floor wax applicator. The dispensing container includes an elemental array of wax dispensing ports together with one or more vent ports. The container is positioned on a wax applicator below the handle and in a position for dispensing wax onto a floor or other surface to be treated. The container is rotatably biased to a position in which the dispensing ports are directed upwardly in a non-dispensing position. This is accomplished, for example, by a spring or similar means attached between the container and the applicator base. An elongated port closure member or cover is swingably mounted on the container to cover the dispensing ports and vents when they are in the upwardly directed non-dispensing position, and to swing away from the ports as the container is rotated to direct the dispensing ports downwardly into dispensing position. For this purpose, the mounting brackets include cam surfaces which are engaged by followers on each end of the cover. As the container is rotated, the cover followers ride on the cam surfaces to open the cover.

For rotating the container to position the ports in dispensing position, a sliding grip is provided on the applicator handle. The grip is connected to the container by a cable or similar mechanism so that by pulling on the grip the container is rotated against the biasing force of the spring.

The brackets also include notches or similar means for engaging the cover followers when the container is in the upright position, that is with the dispensing ports upwardly in order to hold the cover closed and prevent further rotation of the container. In this way the ports are tightly closed to prevent undesired leaking or spilling of the liquid wax contents of the container.

The dispensing device may be readily mounted on commercially available wax applicators, and enables the user of the applicator to quickly and easily apply a uniform application of liquid wax to a surface to be treated. The wax applicator is then moved over the liquid wax to spread it and produce a uniform high quality coating on the floor or surface.

In addition to the dispensing and application of liquid wax, the dispensing device may be utilized for dispensing any appropriate liquid substance, such as,

cleasing agents, sealers, paints and other decorative coatings. The size of the device will be determined generally in accordance with the size of the applicator and the floor or surface to be treated.

DESCRIPTION OF THE PREFERRED EMBODIMENT

An illustrative wax dispenser 20 embodying the present invention is shown in the drawings in association with and mounted on a conventional industrial wax applicator 21. It will be appreciated that a wax dispenser of like construction can be as easily mounted on a smaller household size wax applicator.

The wax applicator 21 shown in the drawings comprises an elongated wooden base member 22 having a wax applicator pad 24 secured on the lower face thereof. The applicator pad is formed of sheepskin or a synthetic material of similar fluffy fibrous characteristics. The applicator pad is formed on a channel-shaped shell 25 which is mounted onto the face of the applicator base 22 by means of bolts 26 extending upwardly from the channel 25 through the base 22 and secured by wing nuts 27. The applicator is provided with an elongated handle 29 mounted to the base 22 by a bracket 30 and braced to the base by means of inclined brace rods 31 extending between one of the applicator pad bolts and wing nuts and a handle bracket 32. Wax applicators of the type described are well known in the art and are commercially available on the market. The length of the base and applicator pad determine generally the field of use for the applicator, that is most commercial and industrial applicators are long and heavy while the applicators are much smaller and shorter for household use. While the present invention has been shown in association with a typical commercial size applicator, it should be understood that it is equally applicable to both larger and smaller devices.

The applicator handle 29 is held by the bracket 30 and braces 31 at an acute angle with respect to the applicator base 22 and pad 24. This angle makes it convenient for the user to push or pull the applicator over the floor surface being treated. The user may, within the limits of construction of the applicator, position the handle at the desired angle by adjusting the handle bracket 30 and brace bracket 32.

The wax dispenser embodying the present invention is mounted on the wax applicator as shown in the drawings (FIG. 1) within the acute angle formed between the handle 29 and the base 22 so as to be positioned generally below the handle 29 when the applicator is in use. The dispenser is formed by a generally tubular container 40 closed at both ends by end panels 41. The end panels are provided with stub shafts or bolts 42 and the dispenser container 40 is supported on brackets 44 secured at each end of the applicator base 22 with the end bolts 42 extending through appropriate apertures in the brackets 44 and secured thereto by nuts 45. The brackets 44 include an inturned apertured mounting flange 46 bolted to the ends of the applicator base 22. The wax container is provided with a filling port and cap 48 through which wax or other liquid to be dispensed may be poured to fill the container. For dispensing the wax or liquid, the container is provided with an array of dispensing ports 49 elementally aligned along the container wall.

In order to assure a uniform dispensing flow of liquid from the container through the discharge ports 49, a vent port 50 is provided adjacent each end of the array of dispensing ports 49. Each vent port 50 is connected to an internal vent tube 51 which extends partially circumferentially around the interior wall of the container as shown in FIGS. 6, 7 and 8. When the container is in the position shown in FIG. 6, the inner end of the vent tube 51 is below the level of liquid wax in the container while the outer end or vent port 50 is above the level of the liquid. As the container is rotated to a position as shown in FIG. 8, liquid will drain out of the interior end of the vent tube 51. When the container is fully rotated to place the discharge holes 49 in a dispensing position, the inner end of the vent tube is above the liquid level and air can pass from the inlet port 50 adjacent the dispensing ports 49 through the vent tube 51 into the interior of the container, thereby allowing liquid wax to flow freely from the container through the discharge ports 49. The wax flowing from the container is applied to the surface in a uniform coating and is spread by the applicator pad 24.

For rotating the wax container about its central axis to control the dispensing of liquid wax, the present invention contemplates an actuating handle and mechanism together with a cover or closure member for the dispensing ports. The cover serves the dual function of both closing the dispensing ports to prevent splashing of the wax therefrom and at the same time for holding and locking the container with the ports in an upright position.

The cylindrical container 40 is mounted on the brackets 44 by the support bolts 42 for pivotal or rotating motion about its central axis. To prevent spilling of wax in the container, the container 40 is biased to a position in which the dispensing ports 49 are in an upright position. This is accomplished by a spring means such as an elastic band or coil spring 52 connected between the cylinder 40 at a point 54 adjacent the array of dispensing ports, and the base 22 of the wax applicator. Alternatively, other biasing means may be used, such as a spiral spring may be utilized at one or both ends of the container 40 acting between the container end walls 41 and the supporting brackets 44, or any other suitable biasing means may be utilized. For rotating the container 40 against the biasing force of the spring 52, there is provided an actuating linkage or flexible cable 55 (FIGS. 3, 9 and 10) acting between the container 40 and a grip 56 slidably mounted on the applicator handle 29. When a cable is utilized, it is secured at one end to a hook member 57 on the container at a point adjacent the array of dispensing ports, and wraps around the circumference of the container 40, as shown in FIGS. 3 and 6, and extends upwardly along the applicator handle 29 either exteriorly or in a groove 58 cut in the handle, and is secured at its other end to the grip 56. A stop 59 on the handle 29 prevents the grip 56 from sliding too far downwardly on the handle.

In lieu of the groove 58 in the handle 29, for some applications it may be desirable to provide an exterior tubular casing 58a, such as a flexible cable housing, strapped to the handle 29 for guiding the cylinder actuating flexible cable 55 (see FIGS. 10 and 11).

For the purpose of preventing spilling or splashing of liquid wax from the container when the discharge ports

49 are up, a cover or port closure 60 is provided on the container. This cover 60 extends along the array of ports 49 and provides an effective seal. To apply wax to a floor, the user pulls on the grip 56 to rotate the container 40 about its longitudinal axis and position the dispensing ports 49 from an upright position to a downward dispensing position. The discharge port cover 60 is automatically opened and held in an open position during the dispensing of the liquid wax, and when the dispensing application is completed the user releases the grip 56 and the spring 52 turns or counter-rotates the wax container 40 to position the dispensing ports 49 upwardly and simultaneously the cover closes over the ports.

The cover for the dispensing ports is an elongated narrow member or flap hinged to the container 40 by appropriate hinges 61 and biased to the closed position by springs 62. Alternatively, the hinges 61 may be spring hinges or any other suitable closing device may be utilized. At each end the cover 60 includes a projecting cam pin or follower 64, each of which rides on a cam surface 63 defined on the supporting brackets 44. At its uppermost position, the bracket is formed with a hook or finger portion 66 defining a notch 68 which receives the cover pin or follower 64. The finger 66 and notch 68 together with the pin 64 serve the dual purpose of both closing the cover 60 and holding it tightly in the closed position, and also of restraining the wax container 40 with the dispensing holes 49 in the uppermost position when wax is not being dispensed.

To open the cover 60 as the wax container 40 is rotated as the grip 56 is pulled, the follower pins 64 on the cover 60 ride on the cam surfaces 65 of the supporting brackets 44 and thereby swing the cover 60 to an open position (FIG. 7). As the container 40 is rotated, the cover 60 swings open and wax can flow out of the dispensing ports 49. At the lowermost position of the dispensing container (FIG. 7) the cam pins 64 cannot ride over a depending leg portion 69 of the brackets 44 and thereby restrain further rotation of the container 40. This automatically effects a positioning of the dispensing ports 49 in the proper downward direction.

The cover 60 is desirably provided with a sealing surface 70 formed of a resilient sealing material layer, such as a silicone rubber or Teflon material.

Various alternative constructions may be utilized for the handle grip and container actuating mechanism. While a sliding grip 56 is shown in the drawings, for example, a pistol-type grip may be mounted on the applicator handle, or a finger loop or ring may be employed.

As can be seen from the foregoing description, the wax dispenser unit 20 may be readily mounted on available commercial applicators. This is accomplished by bolting the side brackets 44 to the applicator base, cutting a notch in the applicator handle and positioning the wax dispenser grip on the handle. Installation can be made in a matter of minutes. The installation can be further simplified by using a cable-shielding tube in lieu of notching the applicator handle. The wax container cylinder can be removed for cleaning if desired.

While a certain illustrative embodiment of the present invention has been shown in the drawings and described above in considerable detail, it should be un-

derstood that there is no intention to limit the invention to the specific form disclosed. On the contrary, it is the intention to cover all modifications, alternative constructions, equivalents and uses falling within the scope and spirit of the invention as expressed in the appended claims.

I claim as my invention:

1. A wax dispenser for use on an applicator having an elongated base with a wax applicator cover thereon and a handle for moving the applicator over a surface to be waxed, said wax dispenser comprising, in combination:

a cylindrical container having an array of wax dispensing ports,

means for venting the interior of said container,

means for rotatably biasing said container to position said container with the wax dispensing ports generally upwardly,

a pair of spaced support brackets for mounting the container on the applicator base,

means for rotating the container about its axis in opposition to said biasing means to position the dispensing ports downwardly,

cover means on said container for closing the dispensing ports when the container is positioned with said ports directed upwardly,

means defining cam surfaces on said brackets, and

means on said cover means operatively engaging said cam surfaces on said brackets for opening said cover means as said container is rotated downwardly whereby wax is dispensed from said dispensing ports onto a floor for spreading by the wax applicator.

2. A wax dispenser as defined in claim 1 wherein said venting means includes at least one vent port in the wall of said container aligned with said dispensing ports and a vent tube interior of said container connected at one end to said vent port and extending circumferentially around the interior of said container with the interior end of said vent tube positioned at a point substantially diametrically opposed to said vent port.

3. A wax dispenser as defined in claim 1 wherein said means for rotating the container comprises a hand grip slidably mounted on the applicator handle and a flexible cable connecting said sliding grip with said container.

4. A wax dispenser as defined in claim 3 wherein said applicator handle defines an elongated groove for receiving said cable.

5. A wax dispenser as defined in claim 1 wherein said container rotating means comprises a hand grip slidably mounted on the applicator handle, a flexible cable operatively connecting said slidable hand grip and said container, and a cable shield means secured to the applicator handle between said grip and said container.

6. A wax dispenser as defined in claim 1 wherein said each of said brackets includes means defining a notch at the upper end of the cam surface thereon for receiving said follower means to hold said cover means closed and prevent further rotation of said container when said dispensing ports are upwardly positioned.

7. A wax dispenser for use on an applicator having an elongated base with a wax applicator cover thereon and a handle extending upwardly at an acute angle to said base for moving said applicator over the surface to be waxed, said wax dispenser comprising, in combination:

an elongated cylindrical wax container having an elemental array of wax dispensing ports in the wall thereof.

means including a pair of vent ports aligned one at each end of said array of dispensing ports for venting the interior of said container, 5

a pair of spaced brackets secured to said applicator base at the ends thereof and extending upwardly therefrom,

means on each end of said cylindrical container rotatably mounting said container on said brackets and below the applicator handle, 10

means for rotatably biasing said container to a position with the dispensing ports directed generally upwardly, 15

means on the applicator handle operatively connected with the container for selectively rotating the container to position the wax dispensing ports generally downwardly for dispensing wax onto the surface to be waxed, 20

an elongated closure member on said container biased to close the wax dispensing ports when the container is positioned with the ports directed upwardly,

said end brackets each defining a cam surface terminating at its upper end in a notch, 25

follower means extending from said closure member and operatively engaging said cam surfaces on said brackets for opening said closure member as said container is rotated to position the wax dispensing ports downwardly, 30

said follower means being engaged in said bracket notches when said closure member is closed to hold said closure member closed and prevent further rotation of said container thereby to retain said covered dispensing ports in an upwardly directed position. 35

8. A wax dispenser as defined in claim 7 wherein said venting means includes a pair of vent tubes interior of said container each connected at one end to a respective one of said vent ports and extending circumferentially around the interior of said container with the interior end of each said vent tube positioned at a point substantially diametrically opposed to its corresponding vent port. 40 45

9. A wax dispenser as defined in claim 7 wherein said means for rotating the container comprises a hand grip slidably mounted on the applicator handle and a flexible cable operatively connecting said sliding grip with said container, said cable wrapping partially around the circumference of said container so that said container is rotated as said hand grip is slid upwardly on the applicator handle. 50

10. A wax dispenser for use on a floor wax applicator having an elongated base with a wax applicator cover thereon and a handle extending upwardly at an acute 55

angle to said base for moving said applicator over the surface to be waxed, said wax dispenser comprising, in combination:

an elongated cylindrical wax container having an elemental array of wax dispensing ports in the wall thereof,

means including a pair of vent ports aligned one at each end of said array of dispensing ports for venting the interior of said container,

a pair of vent tubes interior of said container opening at one end through said vent ports and extending circumferentially around the interior wall of said container and having the other end positioned substantially diametrically opposite said vent ports,

a pair of spaced parallel end brackets secured to said applicator base at the ends thereof and extending upwardly at an angle therefrom generally parallel to the handle,

each said bracket having an aperture therethrough adjacent the upstanding end thereof,

means on each end of said cylindrical container adapted for rotating engagement with said bracket apertures for rotatably mounting said container between said brackets and below the applicator handle in a position generally parallel to the applicator base,

resilient means acting between said container and said applicator base for rotatably biasing said container to a position with the dispensing ports directed generally upwardly,

means on the applicator handle operatively connected to the container for selectively rotating the container to position the wax dispensing ports generally downwardly for dispensing wax onto the surface to be waxed,

an elongated cover member on said container biased to close the wax dispensing ports when the container is positioned with the ports directed upwardly,

a resilient non-stick surface covering on said closure member for closing and sealing engagement with the container over the array of dispensing ports, said end brackets each defining a cam surface on the rear edge thereof terminating at its upper end in a notch,

follower means extending from said cover member and operatively engaging said cam surfaces on said brackets for opening said cover member as said container is rotated to position the wax dispensing ports downwardly, and

said follower means being engaged in said bracket notches when said cover member is closed to hold said cover member closed and prevent further rotation of said container thereby to retain said covered dispensing ports in an upwardly directed position. 60

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