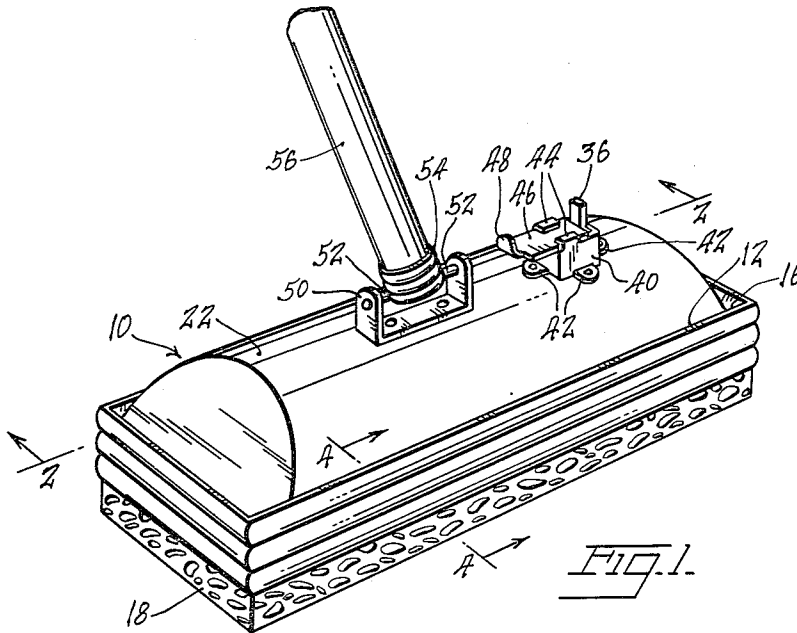
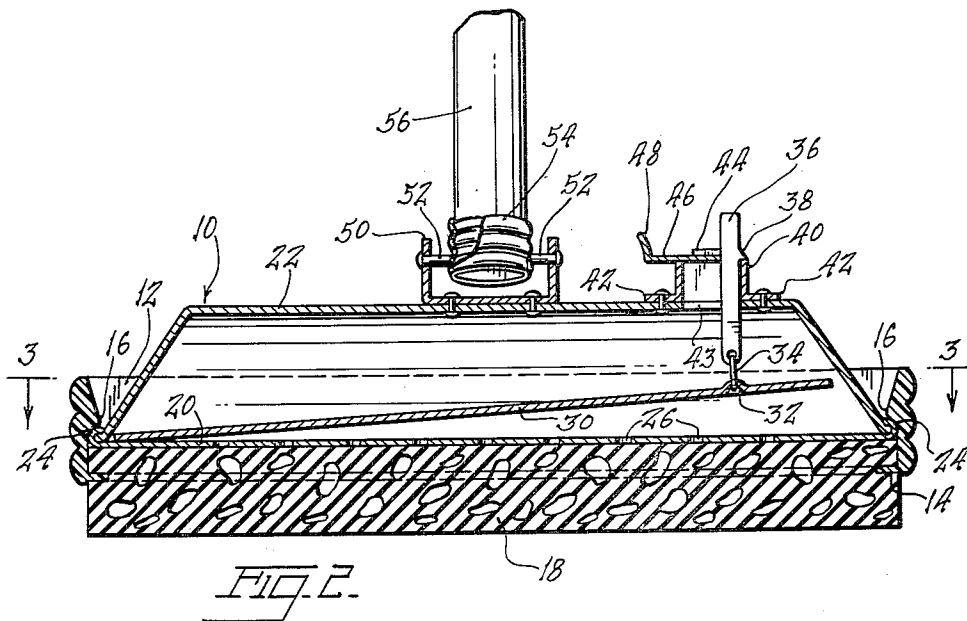


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AUTOMATIC SELF FEED WAX APPLIER

2 Sheets-Sheet 1



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Sept. 10, 1957

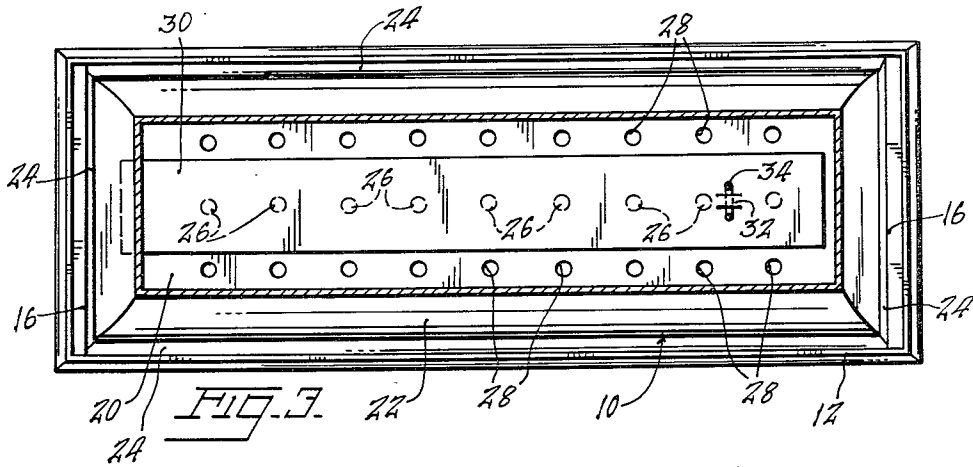
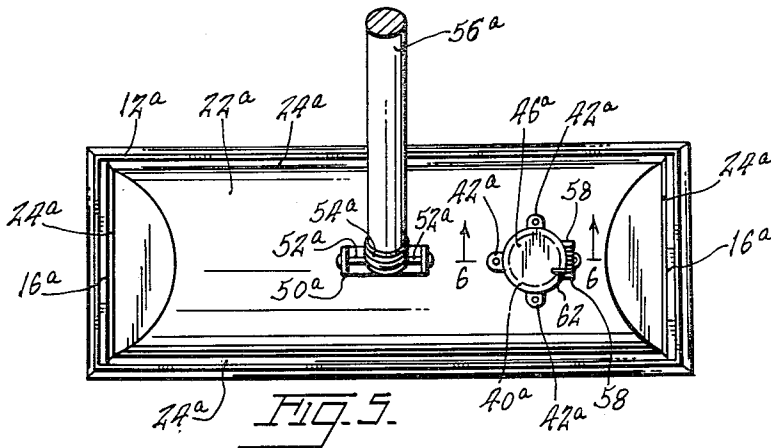
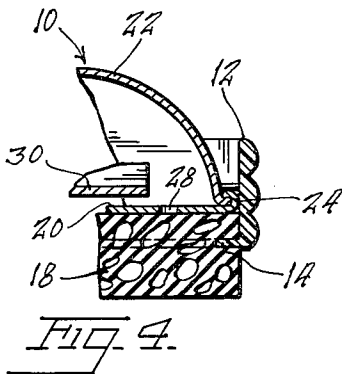
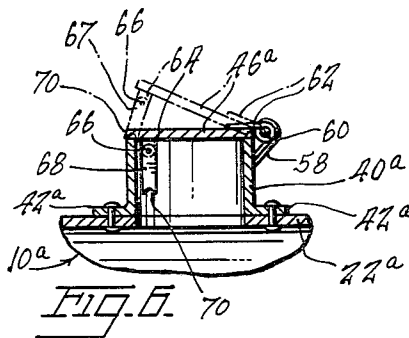
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2,805,435

AUTOMATIC SELF FEED WAX APPLIER

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2 Sheets-Sheet 2



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2,805,435

AUTOMATIC SELF FEED WAX APPLIERS

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2 Claims. (Cl. 15—131)

This invention relates to floor waxers or applicators and, more particularly, has reference to a device of the type stated, that is self feeding.

Self feeding floor waxers are not new per se. However, one important object of the present invention is to provide an improved means for controlling the flow through the floor-contacting element of the device. To this end, the invention includes a pivotally mounted plate within the wax container, which plate when lowered is adapted to close a substantial number of the apertures through which the wax flows into the sponge. Means is associated with the plate for facilitating the up-and-down movement thereof between its opposite extreme positions, said means including a stem engageable over the filler neck of the wax container and held in its neck-engaging position by a slidable closure provided on said filler neck. Means to further regulate the flow is constituted by said closure, since the closure, in its fully closed position seals the wax container at its top against the admission of air, thus setting up a partial vacuum within the container as the wax flows therefrom to reduce and eventually halt the flow of the wax.

An important object is to provide a generally improved wax applicator of the type stated, which as noted above will be particularly adapted, at little or no increase in cost above that required from waxers not having this feature, to regulate the flow of the wax.

Another object of importance is to provide means facilitating the connection of a selected floor-contacting element, such as a sponge, to the wax container.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a perspective view of the wax applicator formed according to the invention, a portion of the handle being broken away.

Fig. 2 is an enlarged, longitudinal sectional view on line 2—2 of Fig. 1.

Fig. 3 is a plan sectional view on line 3—3 of Fig. 2.

Fig. 4 is an enlarged, detail sectional view on line 4—4 of Fig. 1.

Fig. 5 is a top plan view, a portion of the handle being broken away, of a modified construction.

Fig. 6 is an enlarged sectional view on line 6—6 of Fig. 5, the dotted lines showing the closure in open position.

The reference numeral 10 has been generally applied in Figs. 1—4 to a wax applicator formed in accordance with the invention. The applicator includes a rectangular connecting frame 12, formed of a polyethylene or other plastic material. The frame has, upon its lower edge, a continuous, inwardly directed, relatively narrow, spreader element support flange 14. The flange 14 lies in a horizontal plane, and lying in a common horizontal plane spaced above that of the flange 14 are inwardly extend-

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ing, rounded lips 16 formed upon the inner surface of the holding frame, at the opposite ends of the frame. The lips are for the purpose of engaging a wax container to be described hereinafter.

5 The flange 14, as shown in Figs. 2 and 4, is adapted to extend into a peripheral, complementary groove formed in a spreader element 18 which, in the illustrated example, is a rectangular, cellulosic sponge. The spreader element contacts the floor surface, and distributes the wax evenly thereover. Material other than sponge material can be employed for said element, if desired, so long as it has sufficient porosity for passage of the liquid wax there-through.

15 Due to the resiliency of the sponge, it can be compressed to an extent sufficient to engage the same in the lower portion of the holding frame in the position shown in Fig. 2, with the flange 14 extending into the peripheral groove of the sponge.

20 A wax container includes a rectangular, flat, bottom plate 20 and a downwardly concave, part-cylindrical top plate 22 the opposite ends of which are disposed in downwardly diverging planes as shown in Fig. 2. The top plate 22, throughout its periphery, has an outwardly rolled edge, and this is engaged by a similarly rolled peripheral edge 24 of the bottom plate, the edges being crimped together to permanently connect the top and bottom plates and thus form a sealed, hollow wax container.

25 Extending longitudinally and centrally of the bottom plate 20 is a center row of outlet openings 26, through which wax may flow out of the container for passage through the element 18. At opposite sides of the center row (Fig. 3) are side rows of outlet openings 28.

30 A flow control plate 30 is engaged at one end between the angularly related bottom plate 20 and the end wall of top plate 22 (see Fig. 2). As a result, the plate 30 is pivotally mounted within the wax container to swing between a first position in which it is in contact with the bottom plate 20, over the full area of the flow control plate 30, and a second position in which the plate 30 is swung upwardly as shown in Fig. 2.

35 Adjacent its other end, plate 30 has an upwardly struck portion 32, in which is loosely engaged a ring 34 extending through an opening formed in the inner end of a stem 36 having adjacent its upper end a projection 38. A filler neck 40, at its lower end, has peripherally spaced, outwardly extending apertured tongues 42 through which rivets extend into the top plate, to fixedly secure said filler neck to the top plate in registration with a filler opening 43 of the top plate.

40 Formed upon opposite side walls of the filler neck 40 are inwardly extending guide lips 44, and slidably engaged with the top of the filler neck, under the guide lips, is a slidable, plate-like closure 46 having at one end an upwardly extending handle 48. The guide lips 44 are of slightly springable characteristics, and are bent downwardly to an extent sufficient to firmly engage the closure 46, to press the closure downwardly against the top of the filler neck. As a result, when the closure is in its fully closed position with the stem recessed wholly within the filler neck, the wax container will be closed to the entry of air, thus resulting in a partial vacuum within the container inhibiting free flow of the wax, and thus restricting said flow. When the closure is open as in Figs. 45 1 and 2, of course, air can enter the wax container, thus permitting the wax to flow freely. However, under these conditions the amount of wax permitted to flow into the sponge element is accurately controlled by up-and-down movement of the plate 30. With the plate 30 in its lower position, only the side rows of outlet openings 28 are uncovered, so that wax can flow only through said openings of the side rows. When, however, the plate 30 is

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swung upwardly as in Fig. 2, all the openings 26 are also uncovered, so that wax flows freely through all of the outlet openings of the container.

As will be noted from Fig. 2, the closure 46 holds the stem 36 in engagement with the filler neck, to maintain the flow control plate 30 in its upwardly swung position. The spring tension of the guide lips 44 prevents the closure 46 from moving to the left in Fig. 2 out of engagement with the stem. As a result, the projection 38 is firmly engaged over the associated portion of the filler neck edge.

When the plate 30 is dropped, the stem 36 is wholly recessed within the neck, so as to permit the closure 46 to be adjusted to a closed position or left in an open position, whichever is desired. However, the upper end of the stem is disposed adjacent the top of the filler neck, thus to permit it to be grasped and pulled upwardly whenever the plate 30 is to be lifted to its Fig. 2 position.

Mounted medially between the opposite ends of the wax container, upon plate 22, is a U-shaped, elongated yoke 50, and extending inwardly toward one another from the opposite legs of the yoke are coaxial trunnions 52 engaging in diametrically opposite openings formed in a threaded ferrule or socket 54 into which is threaded a wooden handle 56. This arrangement permits the handle to pivot about the axis of the pins or trunnions 52, so as to permit the wax applicator to be moved under furniture or the like, by lowering of the handle. At the same time, the handle can be detached from the socket 54 for replacement or for facilitating storage of the device.

In use, the element 18 is connected to the frame 12 in the manner previously described herein. Then, the wax container is filled with wax, through the neck 40, after which, with the plate 30 elevated or lowered whichever is desired, one end of the wax container is engaged under the lip 16. Said end can be pressed downwardly below the lip a substantial extent, due to the compressibility of the element 18. This permits the beaded or rolled opposite end of the wax container to engage under the other lip 16, after which the element 18 is permitted to expand, to hold the wax container in engagement with the lips 16 as shown in Fig. 2. The grooved element 18 is thus a spring means bearing against the container. Referring to Fig. 4, it will be noted that the lips are not provided on opposite sides of the container in the illustrated example, since they are not necessary for holding the container in engagement with the holding frame. They could, however, be provided longitudinally of the holding frame as well as on the ends, and under these circumstances, the holding frame might be split at one location on its periphery to permit it to expand for receiving the wax container. Alternatively, the holding frame can be of inherently resilient material to permit it to spread slightly when the wax container is to be engaged in or removed from the frame.

In the modification shown in Figs. 5 and 6, the applicator is identical in practically all respects to that shown in Figs. 1-4, with the exception that the filler neck and closure are differently formed, and further, the control plate 30 is not used. Similar parts are given similar reference numerals with the latter "a" added to distinguish the parts. In this modification, the wax container 22^a has a filler back 40^a secured thereto, and pivotally mounted upon the upper end of the filler neck is a closure 46^a. The filler neck has upwardly extending ears 58, and the closure 46^a has ears engaging against the respective ears 58. The several ears are apertured for extension of a pivot pin therethrough, to hingedly connect the closure to the filler neck for swinging about the axis of pin 60.

Within the filler neck, the closure is provided, on its underside, with a depending lug 64, carrying a pin 66 on which is loosely pivoted a depending prop element 68 having at its lower end a notch 70.

A spring 62 is coiled about the pin 60, and at one end is in engagement with the filler neck, the other end of the spring engaging against the top of the closure. The

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spring is tensioned to normally bias the closure to its full line, closed position shown in Fig. 6, and in this position, the closure prevents air from entering the wax container, thus causing the previously discussed partial vacuum for inhibiting free flow of the wax.

If, however, free flow of the wax is desired, the closure 46^a is swung upwardly, and the top element 68 is swung outwardly so as to cause the notch 70 to receive the upper edge of the filler neck 40^a. This holds the closure in its upwardly swung position, against the restraint of the spring, thus permitting air to enter the wax container.

It is to be understood that the closure 46^a may also be attached to a screw type or a sliding type of cap engaged over the filler neck 40^a.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A wax applicator comprising a container for liquid wax including a bottom plate, a filler neck, a movable closure for said neck, a spreader element underlying the bottom plate, the container having outlet openings for the passage of liquid wax therethrough into said element, and a rigid connecting frame extending peripherally of and detachably engaging both the container and said element, said outlet openings being formed in side-by-side, parallel rows including a center row and side rows disposed at opposite sides of the center row, the applicator further including a flat control plate within the container having one end engaged with the bottom plate for up-and-down swinging movement of the flow control plate relative to the bottom plate, said flow control plate overlying the center row of openings so as to close said openings when swung downwardly into engagement with the bottom plate, the applicator further including a stem pivotally connected to the other end of the flow control plate and extending upwardly through said filler neck, said stem being adapted to engage over the filler neck when the control plate is swung upwardly, to hold the control plate in its upwardly swung position, the stem including a projection extending laterally thereof, adjacent its upper end, for engaging the filler neck.

2. A wax applicator comprising a container for liquid wax including a bottom plate, a filler neck, a closure for said neck, a spreader element underlying the bottom plate, the container having outlet openings for the passage of liquid wax therethrough into said element, and a connecting frame extending peripherally of and detachably engaging both the container and said element, said outlet openings being formed in side-by-side, parallel rows including a center row and side rows disposed at opposite sides of the center row, the applicator further including a flat control plate within the container having one end engaged with the bottom plate for up-and-down swinging movement of the flow control plate relative to the bottom plate, said flow control plate overlying the center row of openings so as to close said openings when swung downwardly into engagement with the bottom plate, the applicator further including a stem pivotally connected to the other end of the flow control plate and extending upwardly through said filler neck, said stem being adapted to engage over the filler neck when the control plate is swung upwardly, to hold the control plate in its upwardly swung position, the stem including a projection extending laterally thereof, adjacent its upper end, for engaging the filler neck, said closure being formed as a slide mounted upon the upper end of the filler neck to

shift transversely thereof, said slide in one position thereof engaging against the stem to hold the stem in engagement with the filler neck.

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