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FLOOR WAX APPLICATOR

Filed May 11, 1931

2 Sheets-Sheet 1

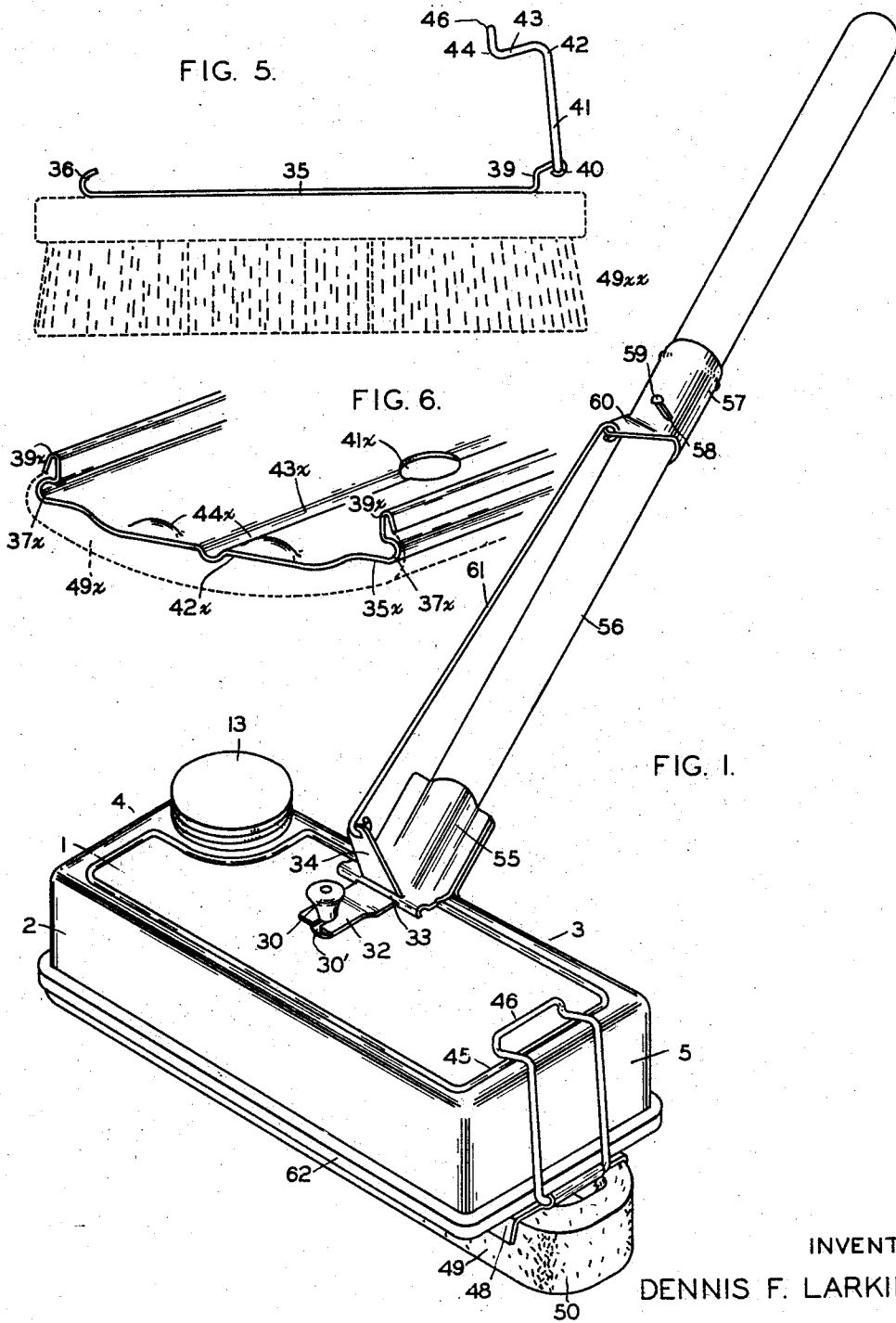


FIG. 1.

FIG. 5.

FIG. 6.

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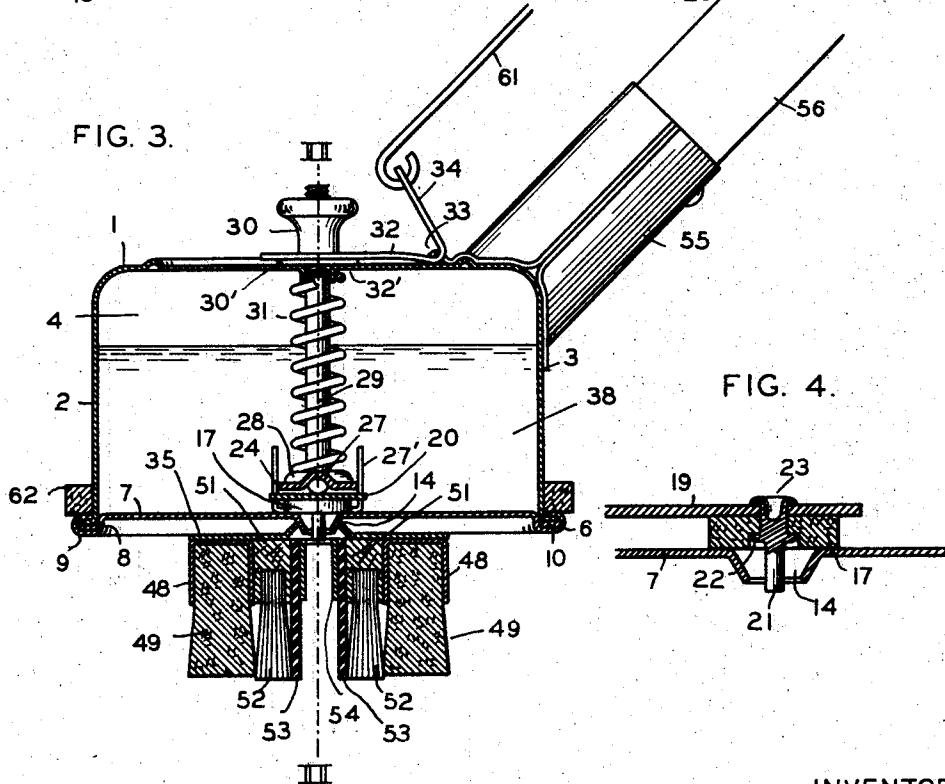
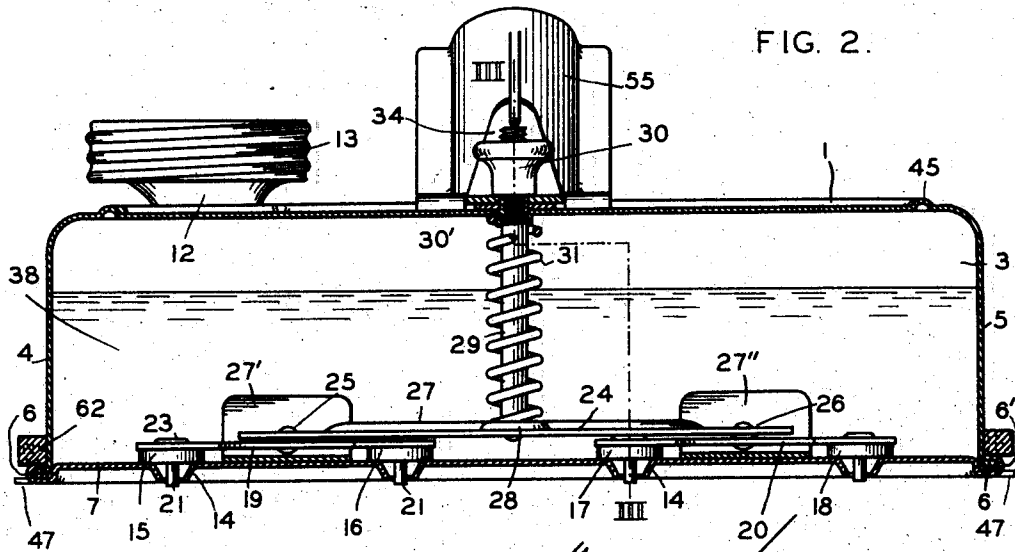
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2 Sheets-Sheet 2



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FLOOR WAX APPLICATOR

Application filed May 11, 1931. Serial No. 536,332.

This invention relates to improvements in floor wax applicators and more particularly to implements for applying liquid wax and polishing floors.

The principal object of the invention is to apply and evenly distribute floor wax.

Another object is to provide a manually controlled feed that will operate without leakage.

Another object is to facilitate the construction and assembly of the implement.

A further object is to provide for easily applied attachments to meet the requirements of waxing and polishing floors.

Other objects and advantages will appear as the description progresses.

In this specification and the accompanying drawings the invention is disclosed in its preferred form. It is to be understood, however, that it is not limited to this form because it may be embodied in other forms within the purview of the claims following the description.

In the two sheets of drawings:

Fig. 1 is a perspective view from above of a floor waxer constructed in accordance with this invention.

Fig. 2 is a longitudinal vertical section through the body of the implement, substantially on the line II—II, in Fig. 3, illustrating the operation of the feed valves and control mechanism within the wax reservoir. The spreading and polishing attachments are omitted from this view.

Fig. 3 is a cross section of the same, taken on the line III—III, Fig. 2, illustrating the operative relation between the feed and spreading attachment.

Fig. 4 is a fragmentary detail in vertical section showing the wax valve assembly.

Fig. 5 is a side elevation of the detachable plate for applying the attachments to the body of the implement.

Fig. 6 is a modified form of plate for applying the various attachments to the body of the implement.

In detail the construction illustrated in the drawings, referring to Fig. 1 comprises the wax reservoir forming the body of the implement. This body 1 is preferably formed

of sheet metal shaped in dies, so that the upper portion is an integral piece comprising the top 1, the front and back 2, 3 and the ends 4, 5, with the flange 6 extending entirely around the lower edge of the body, see Figs. 2-3.

The bottom 7 comprises a flat plate upset at 8 to fit snugly within the lower edge of the body. The margin 9 of the bottom extends beneath and is curled upward around and over the flange 6 at 6' and clinched. The gasket 10 is interposed between the planes 6-9 to hermetically seal the bottom to the body of the reservoir. The filling spout 12 is clinched into the top 1 and closed by the screw cap 13.

The plurality of depressed outlets 14-14 are struck downward through the bottom 7 on a meridian line, see Fig. 3. Each of these outlets is sealed by its respective valve 15, 16, 17, 18. These valves are preferably composed of leather or other suitable pliable material. They rest upon the bottom 7 and extend well beyond the margins of the outlets 14, to form liquid-tight valves.

The valves 15-16 and 17-18 are riveted to their respective bars 19, 20, see Fig. 2. The preferred manner of attachment is shown in Fig. 4, in which the rivet 21 has the flange 22 seated within a counter bore in the valve. The hollow head 23 is expanded and clinched over the top of the bar 19. The stems 21 of the rivets are guided freely in the outlets 14 to break away any encrusted wax in the outlets.

These bars 19, 20 are in turn pivoted loosely on the opposite ends of the beam 24, see Fig. 2, by studs fixed to the bars 19, 20, with their heads 25, 26 pivoting freely in depressions formed in the ends of the beam. The longitudinal stiffening rib 27 is struck up from the body of the beam on opposite sides of the center boss 28. This beam is guided in its vertical movements by the U shaped guides 27'-27'' fixed to the bottom 7.

The shouldered end of the stem 29 is riveted through this boss. The stem extends upwardly through the top 1 of the body and is threaded to receive the tension nut 30. The expansion spring 31 encircling this stem

is interposed between the beam 27 and the top 1. The valves 15 to 18 are thus normally seated under the tension of this spring 31.

The bell crank 32 is pivoted at 33 to the top 1 and is forked to extend under the nut 30, so that a pull on the end 34 of the bell crank lifts the stem 29 and opens all the valves 15 to 18 simultaneously. The amount of this lift is regulated by the adjustment of the nut 30 on the stem 29.

The flexible washer 30' is interposed between the bottom of the bell crank 32 and the top 1. The air vent 32' is perforated in the top 1 and is normally closed by the washer 30' under the tension spring 29. When the bell crank is operated to unseat the valves 15—18, the washer 30' is raised and opens the vent 32'. Thus air is permitted to enter the reservoir 38 to displace the liquid wax flowing through the valves 15—18. Seating of the wax valves closes the vent 32' and prevents leakage therethrough should the reservoir be turned upside down.

An implement of this character has a wide range of uses in cleaning, waxing, polishing and treating floors and other surfaces, by the use of proper attachments in combination with liquid feed mechanism.

To facilitate the application of the attachments the attaching plate 35 is provided, see Figs. 1, 3, 5. This plate extends across the length of the bottom 7, is perforated opposite the outlets 14—14 and the edges of the perforations upset to form a wax-tight seal with the outlets 14. The plate 35 is provided with the hook end 36 adapted to engage the flange 6' extending around the body of the reservoir 38. The opposite end is bent upward at 39 and snugly engages the flange 6' and is bent outward and has the eyelet 40 curled in its end.

The spring latch 41 has its ends bent inward to act as trunnions pivotal in this eyelet. The loop of the latch extends upward and is bent inward at 42—42 and has the extensions 43—43 bent slightly downward and then upward at 44—44 to form a catch engaging resiliently behind the crosshead 45 formed in the top 1. The loop 46 forms a convenient handle for attaching and detaching the latch from the bead.

The plate 35 is centered between the lugs 47—47 formed on the margin 9 of the bottom 7 and struck outwardly therefrom on opposite sides of the hook 36 and angle 39 at both ends of the plate 35.

Any desired form of brush, squeegee, spreader or polisher can be attached to the plate 35 and by it attached to the bottom of the reservoir, as above described.

In Figs. 1, 3 a pair of parallel interspaced channels 48—48 are fixed to the underside of the plate 35. The strip of felt 49 is inserted in one channel and bent back as at 50 and its ends forced into the opposite channel. This

forms a loop of felt frictionally held in the channels 48—48 with its lower edge adapted to sweep the floor surface.

Within the loop of the felt 49 the wooden backs 51—51 of a pair of brushes 52—52 are screwed to the plate 35. The depending squeegees 53—53 are fixed to the plate 35 by means of the U shaped channel 54. The top of this channel is perforated in line with the outlets 14—14 in the bottom 7 of the reservoir.

The body of the implement is provided with the socket 55 within which the handle 56 is secured. The sleeve 57 encircles the handle within convenient reach of the operator. This sleeve has the cam slot 58 therethrough to engage the pin 59 screwed into the handle. The extension 60 on the sleeve is connected by the link 61 to the bell crank 34. When the sleeve is rotated, the cam and pin 58—59 coact to exert a pull upon the link 61, which in turn actuates the bell crank to lift the beam 24 and all the valves 15 to 18, against the tension of the spring 31. Obviously a straight pull on the sleeve would accomplish the same result if the cam and pin were absent, but the rotation of the sleeve is a more comfortable and accurate action for opening the valves. The lift of the valves can be adjusted by means of the nut 30.

When the valves are lifted the liquid wax or other content of the reservoir 38, flows downward through the outlets 14—14, between the squeegees 53—53 by which it is uniformly distributed on the floor across the width of the implement. The wax is worked into the texture of the floor by the brushes 52—52 and the surplus wax is taken up by the felt 49 and redistributed as the implement is pushed across the floor by means of the handle 56.

There are certain forms of floor finishes that are more or less self-leveling and that dry with a desirable gloss, in which instance the operation above described is sufficient.

Where liquid waxes requiring polishing are used in the reservoir 38, the latch 46 is released and the assembly on the plate 35 removed. Another plate similar to 35 having a brush 49x, as indicated in dotted lines, Fig. 5, is substituted for the polishing operation. Any number of such plates 35, having a variety of polishing devices attached thereto, are thus easily attachable to the implement.

A modified form of attachment is indicated in Fig. 6, in which the plate 35x is broad enough to completely cover the bottom 7 and is bent up at the sides to form channels 37x—37x adapted to slidably engage the flanges 6'—6'. The upper edges 39x—39x are turned back and clinched over the sheep skin or fabric wax applicator 49x, which extends beneath the plate 35x. The ends of this plate may be extended as at 42x and provided with the latches 44x adapted to engage the flange

6' at opposite ends of the body of the implement. There is enough spring in the plate at 42x to release these latches when manually pushed down to disengage the latches 44x.

5 The plate 35x is perforated at 41x opposite the wax outlets 14 and suitable openings are provided in the sheep skin applicator 49x to provide a free passage of the wax to the surface of the floor. The plate is preferably
10 ribbed along its center line as at 43x to increase its longitudinal rigidity.

The soft bumper 62 encircles the body of the reservoir above the flange 6', to protect walls and furniture during the operation of
15 the implement. The extensions 50 of the felt 49 serve a like purpose in protecting the walls and in distributing wax into the corners formed by the floor and baseboard.

Having thus described this invention, what
20 is claimed and desired to cover by Letters Patent is:

1. A wax applicator including a reservoir having outlets in the bottom thereof; a beam within said reservoir having a stem protruding
25 therethrough; a spring interposed between said beam and the top of the reservoir; bars intermediately pivoted to the ends of said beam; and valves on the opposite ends of said bars cooperating with said outlets.

30 2. A wax applicator including a reservoir having outlets in the bottom thereof; a beam within said reservoir having a stem protruding therethrough; a spring interposed between said beam and the top of the reservoir;
35 intermediate bars loosely pivoted to the ends of said beam; vertical guides for said bars; and valves on the opposite ends of said bars cooperating with said outlets.

3. A wax applicator including a reservoir
40 having a plurality of depressed outlets in the bottom thereof; a stem protruding through the top of said reservoir; means for raising said stem; a beam within said reservoir loosely mounted at the lower end of said stem;
45 a spring interposed between said beam and the top of the reservoir; intermediate bars loosely pivoted to the ends of said beam; valves mounted on the opposite ends of said bars and having flat bottoms resting on the
50 margins of said outlets in the bottom of the reservoir; and stems of smaller diameter than said outlets depending from said valves.

4. A wax applicator including a reservoir having a flange encircling its bottom; outlet
55 valves in the bottom of said reservoir; a plate having a hooked end adapted to engage said flange, said plate having openings therein beneath said outlet valves; a latch on the opposite end of said plate adapted to engage
60 over the top of said reservoir; and distributing means fixed to said plate.

5. A wax applicator including a reservoir having a top portion with a flange around its lower edge; a bottom extending in a plane
65 above said flange and having a depending

margin engaging the flange and a plurality of depressed outlets in said bottom terminating above the plane of said flange; valves closing said outlets; means to operate said
70 valves; a plate detachably engaging said reservoir and having openings therein beneath said outlets; and distributing means fixed to said plate.

6. An applicator including a reservoir adapted to contain a liquid polish and having
75 outlets in the bottom and a vent in the top thereof; valves in said reservoir closing said outlets; a stem operatively engaging said valves and protruding through the top of said reservoir; operating means engaging
80 the top of said stem; and a washer interposed between said operating means and the top of said reservoir and adapted to close said vent.

7. A wax applicator including a reservoir
85 having outlets in the bottom thereof; valves closing said outlets; a stem operatively engaging said valves and protruding through the top of said reservoir; a lever pivoted on said reservoir top and engaging the upper
90 end of said stem; a handle fixed to said reservoir; a sleeve encircling said handle and having a cam slot therein, a pin fixed in said handle and extending through said cam slot; and a link connecting said lever to said
95 sleeve.

8. A wax applicator including a reservoir having a plurality of longitudinally arranged outlet valves in the bottom thereof;
100 means for operating said valves; a plate detachably engaging said reservoir and having openings therein beneath said outlets; a pair of longitudinal rubber squeegees on opposite sides of said outlets; and fibrous spreaders adjacent said squeegees.
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In testimony whereof I have hereunto set my hand this 30th day of April, 1931.

DENNIS F. LARKIN.

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