

July 2, 1929.

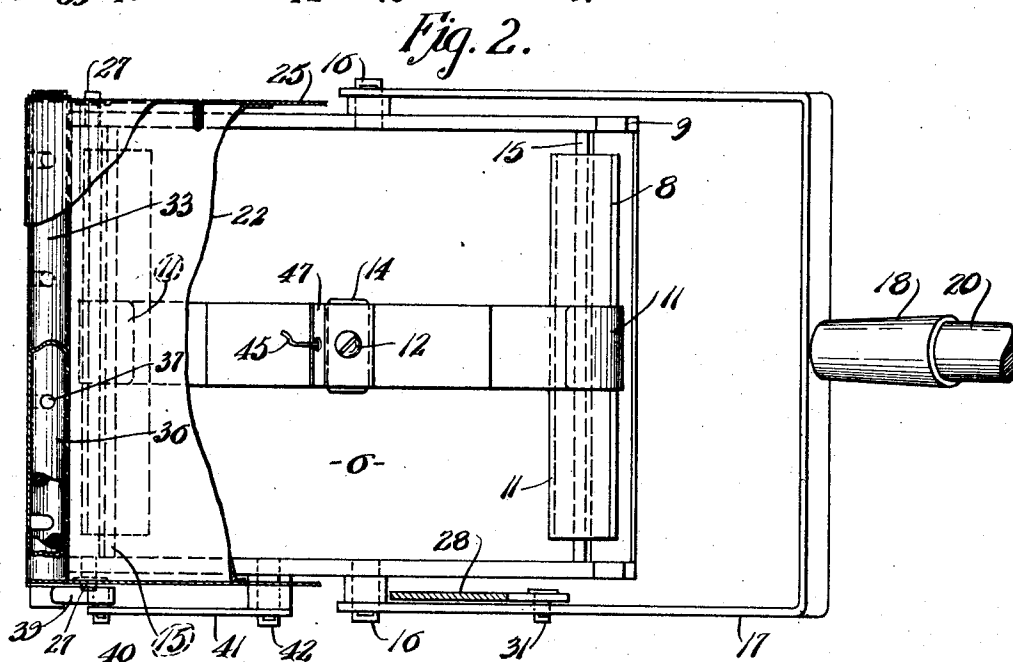
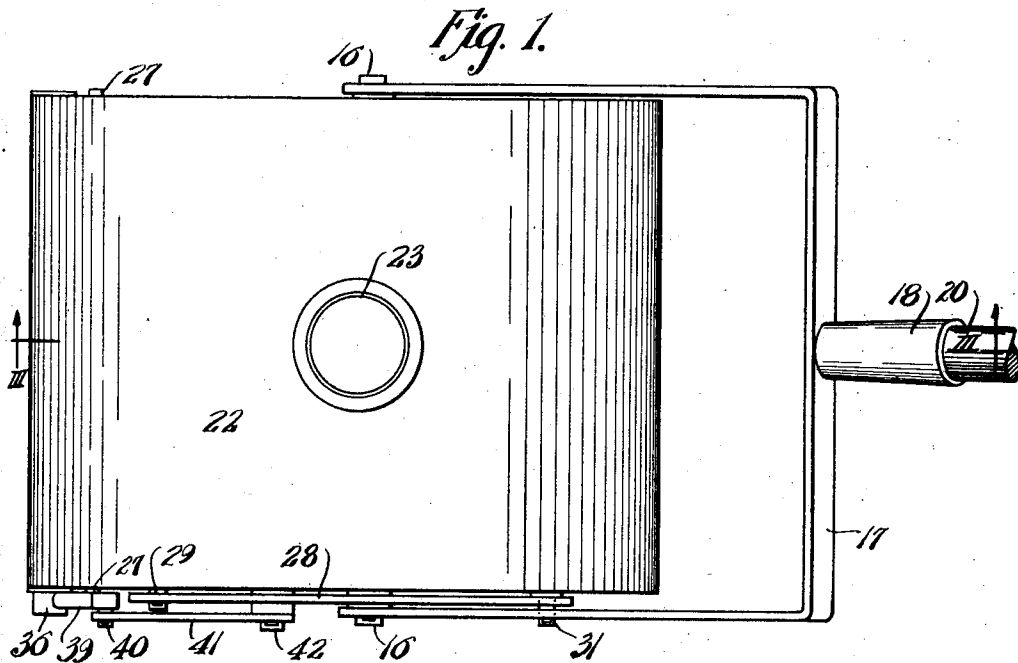
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1,719,616

COMBINATION APPLICATOR AND TANK CONSTRUCTION

Filed March 31, 1923

2 Sheets-Sheet 1



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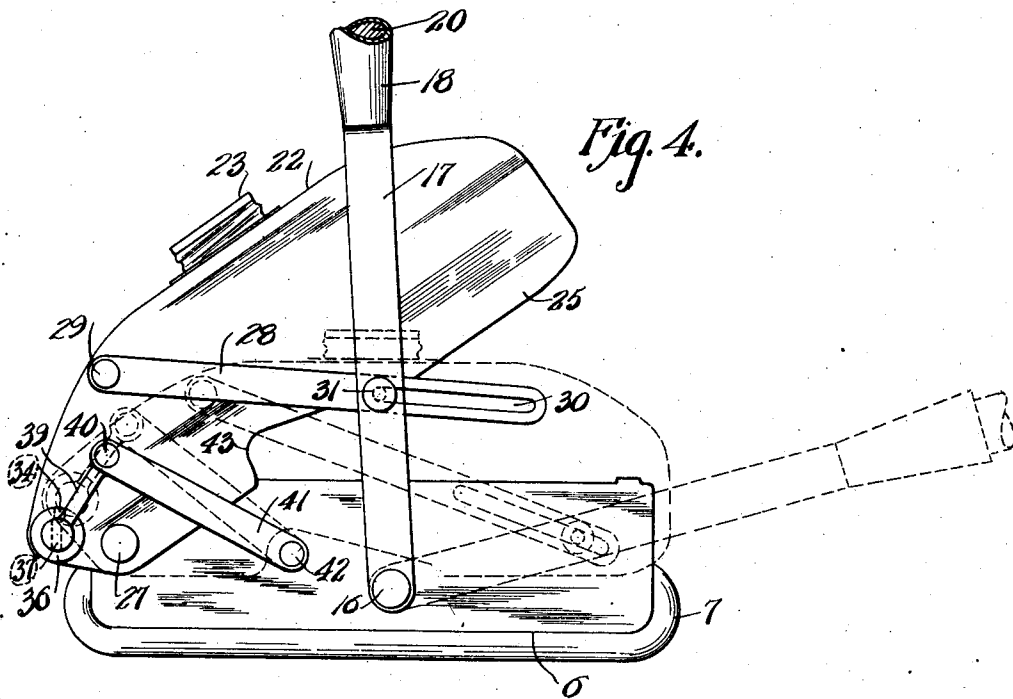
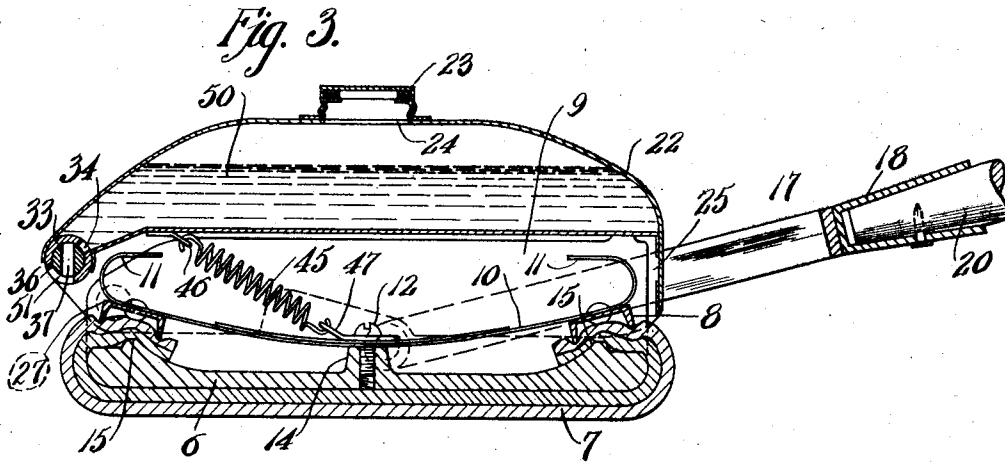
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UNITED STATES PATENT OFFICE.

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COMBINATION APPLICATOR AND TANK CONSTRUCTION.

Application filed March 31, 1928. Serial No. 266,429.

The present invention relates to floor cleaning, scrubbing or polishing devices, and one of the objects in view is to devise an applicator or mop appliance having provision for maintaining a supply of liquid cleaning or polishing preparation ready for application to the floor surface from time to time, and adapted to be conveniently spread or discharged onto said surface by the mere manipulation of the mop or applicator during the operation of the appliance.

In one form of embodiment of the invention, we mount a container in conjunction with the mop or applicator in such a relation that the manipulation of the handle thereof out of its ordinary or normal position will actuate a valve to feed a quantity of the liquid preparation out onto the floor surface in the path of the mop or applicator. With this general object in view, as well as other minor objects appearing in the course of the following specification, the invention will now be described by reference to a practical embodiment of the proposed improvements, as illustrated in the accompanying drawings, after which those features and combinations deemed to be novel will be particularly set forth and claimed.

In the drawings:—

Figure 1 is a plan view of a weighted mop form of floor polisher combined with a tank or container and valve structure embodying the present invention;

Figure 2 is a similar view, but with parts broken away and partly in section, to disclose parts not appearing in Figure 1;

Figure 3 is a central vertical section, taken on the line III—III of Figure 1; and

Figure 4 is a side elevation, with dotted lines representing the normal position of the tank or container, and full lines showing the raised position thereof as manipulated by the handle to discharge a portion of the contents of the container.

Referring now to the drawings in detail, these illustrate the invention in operative relation to a mop or applicator device comprising a heavy plate 6 to provide suitable mass or weight, and having a smooth under surface against which the mop or scrubbing material 7 is suitably clamped, as by means of spring clamping jaws in the form of channel pieces 8 carried by the end portions of a spring member 10 having the finger engaging

terminals 11 and secured at its midportion 55 by a screw 12 to a central boss or lug 14 on the upper portion of the plate 6.

The ends of the mop 7 are folded over the ends of the plate 6, which are thickened as represented in Figure 3, and provided on their upper faces with ridges 15 against which the ends of the mop are clamped by the jaws 8. To the sides 9 of the plate 6 are secured the pivot studs 16 for pivotally mounting the ends of a bail member 17, the middle portion of which carries a ferrule 18 fitted with the usual handle 20 of any desired length.

The arrangement and construction so far described is more or less common in the art, and the present invention provides means for maintaining a suitable quantity or supply of the liquid to be used with the mop or applicator, ready for intermittent use as required. Accordingly, we have provided a tank or container 22, of a size corresponding in general to the size of the applicator construction just described, having the usual filler cap 23 and opening 24, and also including depending side and end flanges 25 forming a skirt for housing the upper portion of the applicator. At opposite sides the flanges 25 are journaled upon pivot studs 27 projecting out from the sides 9 of the plate 6 near one end thereof, whereby the tank 22 is adapted to be raised or lowered as represented in Figure 4. For this purpose a link 28 is pivoted at one end to a pivot stud 29 projecting out from the top portion of one side of the tank, the opposite end of which link is formed with a slot 30 in sliding engagement with a stud 31 carried by one side of the bail 17.

The front end of the tank chamber tapers forward and downward and carries a transversely extending valve casing 33 having the valve ports 34 and enclosing an oscillating valve plug 36 having ports 37 adapted to be brought into register with the ports 34 in the raised position of the tank shown in Figure 4. One end of the valve plug 36 carries an arm 39 pivotally connected as at 40 with one end of a link 41, the other end of which is pivoted to a stud 42 projecting out from one of the sides 9 of the plate 6 in front of the corresponding pivot stud 16.

The tank or container 22 rests normally in horizontal position upon top of the plate member 6, being supported by the sides 9

thereof engaging the bottom of the tank, and one margin of the skirt 25 being recessed as indicated at 43 to clear the stud 42. A coil spring 45 is provided for yieldingly maintaining the tank in this normal position, without loose play or rattling, one end of the spring being hooked to a fastening element 46 attached to the under face of the tank, and its other end to a similar element 47 retained by the screw 12. The length of the slot 30 in the arm 28 is such as to permit a limited amount of raising and lowering movement of the handle 20 without disturbing the tank; but, whenever the handle is raised to a position approaching vertical, the stud 31 engages the forward end of the slot, and continued lifting of the handle imparts a forward thrust to the arm 28 and thereby raises the tank by a forward rocking movement about the pivots 27 as shown in Figure 4. Simultaneously the arm 41, being attached to the fixed pivot stud 42, effects a rocking of the arm 34 rearward and corresponding oscillation of the valve plug 36. Thus the valve ports 34 and 37 are moved simultaneously toward each other into registered relation, as indicated by the dotted lines in Figure 4, and a momentary discharge of a portion of the contents 50 of the tank is permitted to take place out through the discharge ports 51 of the valve. Preferably these ports 51 are in such position as to discharge the liquid in advance of the mop 7, while permitting any drippings from the valve to be caught by the forward edges of the mop (see Figure 3).

While especially adapted to the applicators in floor polishing operations, it is of course obvious that the improved container and valve construction is equally adapted to other appliances where a supply of any liquid is desired to be maintained in readiness for intermittent use, as in cleaning, scrubbing, and the like.

Therefore, while we have illustrated and described what we have found to constitute one practical and efficient form of embodiment and use of the invention, we desire to be understood as expressly reserving the right to make all such changes or modifications as

may fairly fall within the scope of the appended claims.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:

1. In combination with an applicator comprising a mop or the like, a container movably mounted upon the applicator and provided with a valve casing formed with discharge ports along the front margin of the container, an oscillating valve plug mounted within said casing for opening and closing said ports, a handle for manipulating the applicator and also operative to tilt said container, and a connection between said valve plug and applicator and operated by relative movement of the container and applicator for oscillating said plug.

2. In combination with an applicator comprising a mop or the like, a container movably mounted upon the applicator, a handle for manipulating the applicator, a connection between said handle and container permitting free raising and lowering movement of the handle below a given position operative to tilt said container when said handle is raised above said position, and valve means actuated by the tilting movement of said container for intermittently discharging a portion of its contents.

3. In combination with an applicator comprising a mop or the like, a container movably mounted upon the applicator, a handle for manipulating the applicator, a link pivotally connecting said handle and container and provided with a slot and stud connection with said handle adapted to permit free raising and lowering movement of the handle below a given position and operative to tilt the container after raising of the handle engages said stud with one end of the slot, and valve means actuated by the tilting movement of said container for intermittently discharging a portion of its contents.

In witness whereof we hereunto affix our signatures.

GEO. F. NITZ.
THOMAS M. MURPHY.