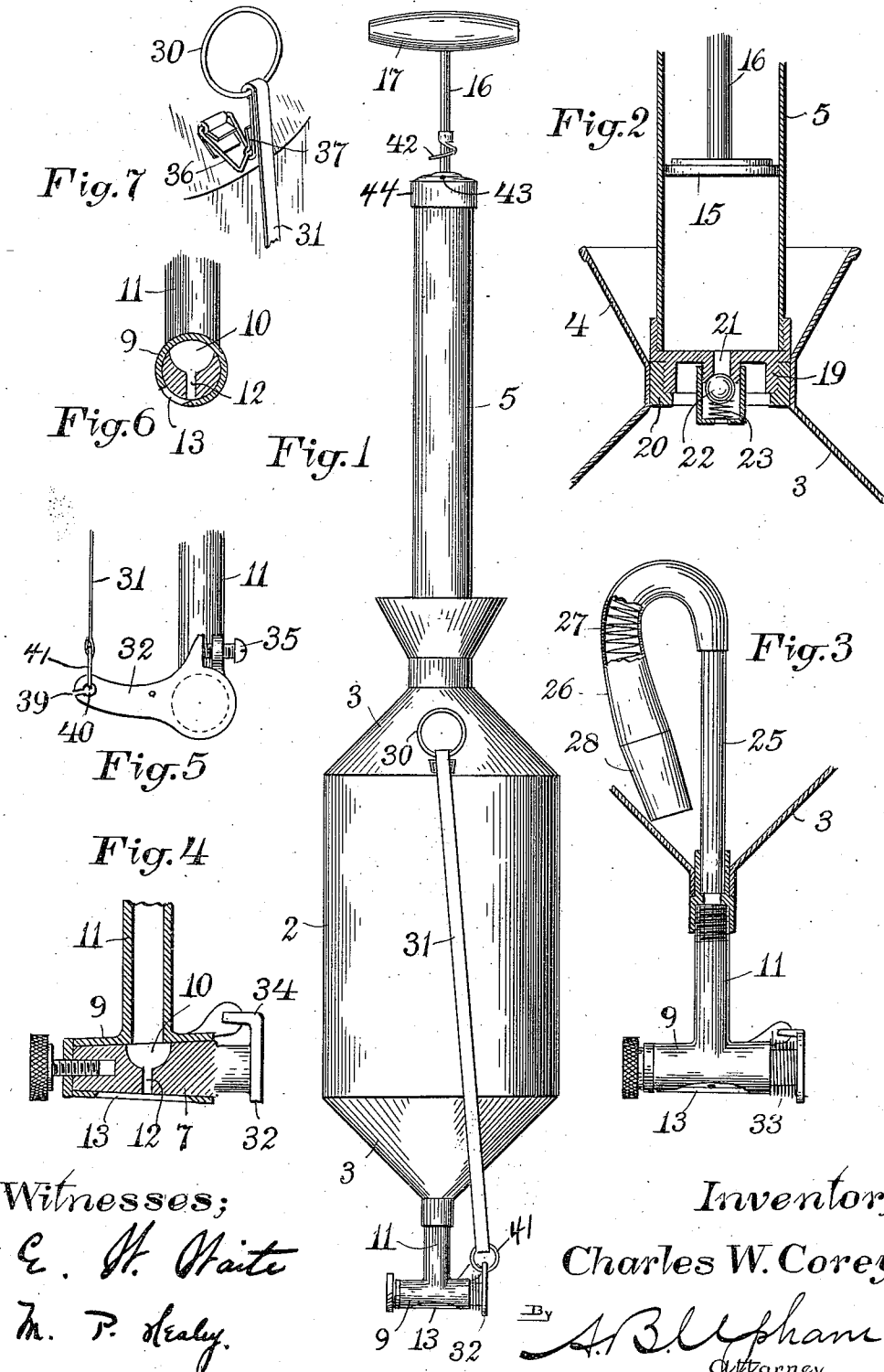


C. W. COREY.
PNEUMATIC FLOOR OILER.
APPLICATION FILED MAY 18, 1910.

1,019,135.

Patented Mar. 5, 1912.



Witnesses;
E. H. Waite
M. P. Healy.

Inventor,
Charles W. Corey;

By *A. B. Blapham.*
Attorney.

UNITED STATES PATENT OFFICE.

CHARLES W. COREY, OF MALDEN, MASSACHUSETTS.

PNEUMATIC FLOOR-OILER.

1,019,135.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed May 18, 1910. Serial No. 561,984.

To all whom it may concern:

Be it known that I, CHARLES W. COREY, a citizen of Canada, residing at Malden, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Pneumatic Floor-Oilers, of which the following is a specification.

The object of this invention is the construction of an improved hand-operated means for spraying floors with oil, for spraying shrubs and plants with insect-destroying fluids, and for other purposes of a like character.

Referring to the drawings forming part of this specification, Figure 1 is an elevation of the device in its normal position for spraying floors. Fig. 2 is a sectional elevation of the upper part of the container, and the lower part of the air-pressure pump. Fig. 3 is a sectional elevation of the lower part of said container and of the sprayer-nozzle. Fig. 4 is a sectional view of said nozzle. Fig. 5 is a side view of the valve-operating lever. Fig. 6 is a cross section of said nozzle. Fig. 7 is a perspective view of the upper part of the handle or ring and connections, used in operating said valve.

The container is preferably of sheet metal, with a cylindrical body 2 and conical ends 3. Within this is put the oil or other liquid to be sprayed, the same being poured in through the funnel mouth 4 after the pump 5 has been unscrewed therefrom. See Fig. 2. Connected with the apex of the lower end 3 is the spraying nozzle and valve controlling the same; the valve consisting of the slightly tapered plug 7 rotatably held in the nozzle 9, as shown in Fig. 4; the plug 40 having a recess 10 adapted to communicate with the stem 11 leading from the container, and also a small hole 12 adapted to coact with the slot 13 in the nozzle, as shown in Figs. 4 and 6.

When a sufficient air pressure is maintained upon the surface of the liquid in the container, and the plug 7 is turned to present said recess to said stem and said hole to the edge of said slot, as in Fig. 6, then said liquid will be emitted in a thin but wide spray extending to a considerable width. To maintain such air pressure, the pump cylinder 5 is provided with a plunger 15 of the usual bicycle-pump type, operated by the stem or rod 16 and handle 17. Said cylinder terminates in a threaded end 19

adapted to be screwed into air-tight engagement with the correspondingly threaded socket 20 fixed in the mouth or throat of the container. Through said terminal is a port 21 normally closed by a ball 22 and spring 23 pressing the latter into its seat. By working the plunger a few times, a sufficient air pressure is maintained upon the surface of the fluid in the container to force the fluid out through the valve (when opened) and to cause the same to issue in the form of spray as above described.

The sprayer is adapted for throwing disinfectants and other liquids upon floors, walls and ceilings, in the following manner: As is evident, when the spraying nozzle opens from the lowermost point of the container, and the liquid is thereby between such outlet and the body of air under compression, the device as above described will work according to plan; but if the container has its nozzle elevated to spray upon a ceiling or upper part of a wall, the body of air under compression will rise between the liquid and the nozzle, and air alone will escape. To remedy this, a tube 25 is connected with the outlet to the nozzle, within the container, as shown in Fig. 3, having a freely swinging terminal 26. This terminal or branch may be of soft rubber, and its length and that of the tube 25 such that when the sprayer is held in the position illustrated by Fig. 1, the free end of said rubber branch will hang down close to the bottom of the container and so make sure that the liquid alone will be forced out. If the container is held horizontally, said branch will gravitate to the lowermost side thereof, and still be out of the reach of the body of air above the liquid; or if the container be elevated to present the spray to the ceiling of a room, or to some tall shrub or vine, the flexible branch will again descend to keep its mouth below the liquid. In this manner, the sprayer can be moved in any direction or to any angle, and always remain automatically operative.

In holding the container, the user should grasp it about its neck between the funnel-mouth and top end 3; in this position the pump lying against his arm and thereby aiding him in directing its discharge. While his hand is thus holding the container, his forefinger is hooked into the ring 30 which is connected by a tape 31 to the lever 32 rigid with the plug 7. A coiled

spring 33 encircling the neck of said plug normally closes the latter, so that pulling upon said tape opens the valve, and its release permits the valve to close. A finger 5 34 projecting from said lever into engagement with a stop-screw 35, limits the opening of the valve to the exact point required for the production of a perfect spray. See Figs. 4 and 5. The upper part of the tape 10 is retained in position, and at the same time permitted free vertical movement, by means of the wire link 36 pivotally attached to the conical top of the container and also to the tape, as in Fig. 7. This link is formed with 15 an elbow-bend in order to rest against the said top and normally support the tape and ring in the position illustrated. For better security against injury in transportation, this tape is made removable from said link 20 and also from the lever 32, by means of the shepherd's-crook bend 37 which connects it with the link, and by the narrow slit 39 opening from the hole 40 in said lever, into which the tape-ring 41 is caught. Some- 25 times the ball valve 22 fails to perfectly close the port to the container, and the air will slowly leak from the latter into the pump cylinder and thereby cause the plunger to gradually rise to its upper limit. 30 This brings the plunger handle into the way of the user. To stop the same I provide the plunger rod with a spur 42, which is more or less helical with respect thereto, adapted to be caught in the hole 43 in the cylinder 35 top 44, and so hold the plunger in its innermost position.

Inasmuch as one of the most important uses of this sprayer is for the purpose of oiling floors, and oil is very injurious in its 40 effects upon rubber, it is best to make the flexible tube or branch 26 of some other material than that above referred to. I therefore prefer to make said branch of soft

leather, having a helix 27 of fine wire within it for causing it to maintain its shape. 45 The extremity of this branch is preferably a section of metal tubing 28 in order to so add to the weight thereat that there can be no failure of its gravitating constantly to the lowermost part of the container. 50

What I claim as my invention and for which I desire Letters Patent is as follows, to wit:—

1. A sprayer comprising a container having a spraying nozzle at its lower end, a 55 tapered top, a funnel rising from the small end of said tapered top, a pressure-pump rising from the container within said funnel, a spring for closing said sprayer nozzle, and a link between said sprayer nozzle and 60 said top, whereby the hand of the user clasped about said funnel and top and thereby supporting the sprayer can operate the sprayer nozzle at will.

2. A sprayer comprising a container hav- 65 ing a sprayer nozzle at its lower end, a hand-engaging means at its top, a tape operatively connected to said nozzle and having a finger-engaging ring at its upper end, and a link pivoted both to said tape and to 70 the top of the container, the pivotal point of said link to said top being higher than the connecting point of the link and tape, and the link being disposed to bring the tape substantially into contact with the periph- 75 ery of the container when the sprayer nozzle is closed, whereby, when the tape is drawn upward to open said nozzle, the tape moves out of contact with said periphery.

In testimony that I claim the foregoing 80 invention, I have hereunto set my hand this 16th day of May, 1910.

CHARLES W. COREY.

Witnesses:

A. B. UPHAM,
WALTER L. CHASE.