Sept. 18, 1923. 1,468,431

S. WODONOS

CLEANING DEVICE

Filed Feb. 21, 1921 2 Sheets-Sheet 1

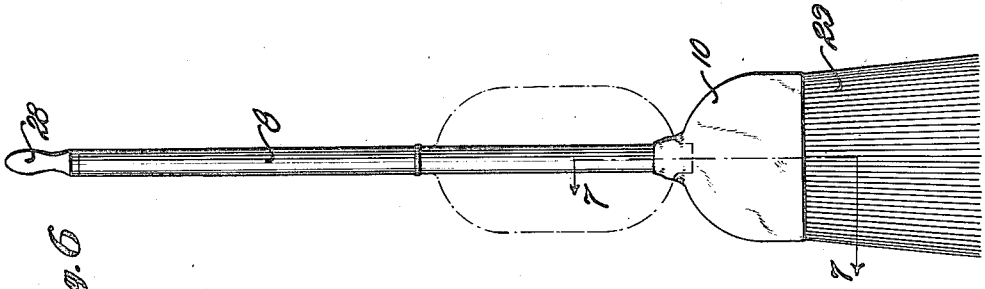


Fig. 6.

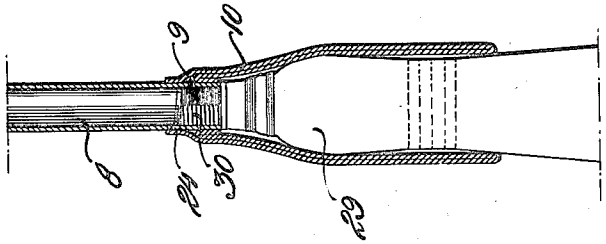


Fig. 7.

Fig. 1.

Fig. 5.

Witnesses
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Augustus B. Copper

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Fig. 3

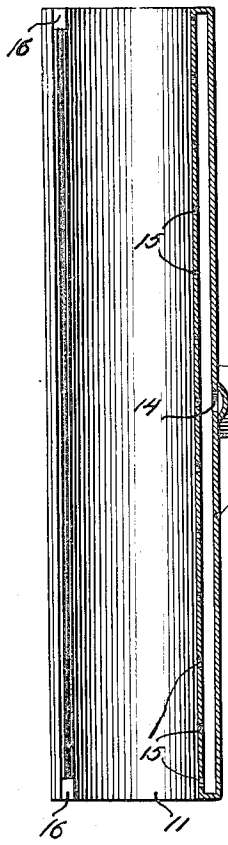


Fig. 4

Fig. 2

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UNITED STATES PATENT OFFICE.

STEPHEN WODONOS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ROMAN KARAJEM, OF PHILADELPHIA, PENNSYLVANIA.

CLEANING DEVICE.

Application filed February 21, 1921. Serial No. 446,911.

To all whom it may concern:

Be it known that I, STEPHEN WODONOS, a citizen of Ukrainia, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Cleaning Devices, of which the following is a specification.

One object of my invention is to provide an improved cleaning device which will be well adapted for cleaning and scrubbing floors, etc.

Another object is to make my improved device of a durable construction and convertible for different purposes.

These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which—

Figure 1 is a perspective view of my improved device as it appears when used for scrubbing or sweeping a floor or the like,

Figure 2 is an enlarged fragmentary section showing in full lines the position of certain of the parts when being used for sweeping purposes prior to admitting water therein and in dot-and-dash lines the position of certain of the parts which they assume when filling a portion of the device with water,

Figure 3 is a section on the line 3—3 of Figure 2,

Figure 4 is a view of the same general character as that shown in Figure 2 illustrating the water therein and how the latter can be supplied adjacent the brush for scrubbing purposes,

Figure 5 is an end elevation showing how the brush can be reversed to present a felt wiping or cleaning pad such for example as for polishing purposes,

Figure 6 is an elevation of my improved device showing a part of the bottom structure having been removed and an ordinary broom substituted; a part of the bag being moved down so as to embrace the upper portion of the broom, and

Figure 7 is an enlarged section taken on the line 7—7 of Figure 6 the broom being shown in outside elevation.

Referring to the drawings, 8 represents a tubular handle which may be made from a metallic pipe and has an internal screw thread 9 at its lower end. A bag 10, which is made of flexible water-proof material, surrounds the tubular handle 8; the opposite ends of the bag being open but tightly fitting against the outer surface of the handle 8. A casing 11, which is preferably made of metal and convex in cross section as shown in Figure 2, is made elongated transversely and provided with a hollow nipple 12 located centrally between its ends and slanting downwardly toward the casing as illustrated.

The casing 11 has an inwardly extending hollow bead 13 and a hole 14 communicates with the interior of the nipple 12 and the interior of the bead 13. This bead has a row of perforations 15 directed into the casing 11. The side of the casing 11 opposite the bead 13 has inwardly turned lips 16 and a head 17 of a brush 18 is adapted to be slid into the casing so as to rest and slide jointly on the lip 16 and bead 13 as clearly shown in Figure 2. This head 17 has a felt pad 19 thereon which when not desired for use is located within the casing 11 but if desired for polishing purposes, the combined brush and pad can be removed and reversed so as to slide in the casing as shown in Figure 5.

The nipple 12 has an exteriorly screw threaded end which fits within the screw threaded portion 9 of the tubular handle 8. A partition 20 in the nipple has a valve hole 21 normally closed by a flexible valve 22. The inner end of a screw 23 when the latter is screwed in the nipple 12, engages the end of the valve 22 and bows or bends the same as shown in Figure 4 so as to open the hole 21. The tubular handle 8 has a port 24 which is capable of being closed by a portion of the bag 10 due to the pressure of a disk 25 on the end of a spring arm 26; said spring arm being secured to the screw 23.

A pump piston rod 27 snugly but slidably fits within the tubular handle 8 and at its end outside of the tubular handle is provided with a hand-hold 28 as shown in Figure 1. The spring arm 26 and disk 25 when in the position shown in full lines in Figure 2 serve to keep the port 24 closed. However, if the device is placed with the lower end including the perforations 15 in a bucket or receptacle of water and the pump piston rod 27 is pulled outwardly, a suction will be established in the tubular handle 8 between

the trap valve 22 and the inner end of the piston rod and water will be sucked through the perforations 15, valve hole 21 into the tubular handle and portion of the nipple above the flexible or flap valve 22. When the piston rod 27 is pushed downwardly the water will be forced out of the port 24 against the tension of the spring arm 26 and will force the water into the bag 10; the spring arm disk and portion of the bag being moved into the position shown in dot-and-dash lines in Figure 2; it being noted further that the valve 22 will close when the piston rod moves downwardly to force the water into the bag, and when the valve 22 is opened through the medium of the screw 23 to permit escape of water into the handle the piston 27 may be used to force the water outwardly.

After being thus filled with water, if the device is desired for scrubbing purposes, the screw 23 can be turned into the position shown in Figure 4 so as to cause its inner end to bend or bow upwardly the valve 22 and the water will flow through the valve hole 21 into the bead 13 where it will pass out through the perforations 15 in a position adjacent the brush and the device can be used for scrubbing purposes. It will be noted that when the screw 23 is turned into the position shown in Figure 4 the disk 25 will be moved from its position previously occupied in pressing a portion of the bag into closing position relative to the port 24 so that the water within the bag can pass freely through the port 24 and down through the nipple 12.

As shown in Figures 6 and 7, my device can be used in connection with a broom 29; said broom having a screw threaded hollow extension shank or stem 30 adapted to be screwed into the internally screw threaded portion 9 of the tubular handle 8 and the bag can be slid downwardly and folded around the top portion of the broom 29; thereby serving as a desirable cover and binding protection for the upper portion of the broom.

While I have described my invention as taking a particular form, it will be understood that the various parts of my invention may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

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

1. A cleaning device including a hollow handle; a reservoir for liquid carried by the handle and in communication with the interior thereof; cleaning means communicating with said handle; and means by one operation of which draws liquid into said handle, and by another operation of which forces said liquid into said reservoir.

2. A cleaning device including a hollow handle; a reservoir for liquid carried by the handle and in communication therewith; a pump, including valves within the handle, adapted to force liquid into the reservoir, and means establishing communication between the interior of the handle and the cleaning means whereby the liquid may pass from the reservoir to the cleaning means.

3. A cleaning device including a hollow handle; cleaning means carried by the handle; a bag carried by the handle and in communication with the interior thereof; a pump, including valves associated with the handle, adapted to draw liquid through the handle and force the same into the bag, and means establishing communication between the interior of the handle and the cleaning means whereby the liquid may pass outwardly to the cleaning means.

4. A device of the character described including a tubular handle having a port; a pump rod in the handle; a casing having perforations communicating with the interior of said handle; a valve for cutting off communication between said perforations and the handle; a cleaning element carried by said casing; a bag communicating with the interior of the handle through said port; means for closing said port; and means for opening said valve; substantially as described.

5. A device of the character described including a tubular handle having a port; a pump rod in the handle; a casing having perforations communicating with the interior of said handle; a valve for cutting off communication between said perforations and the handle; a cleaning element carried by said casing; a bag communicating with the interior of the handle through said port; means for closing said port; and means for opening said valve, said valve opening means and port closing means being connected so that when the valve is opened the port will be opened; substantially as described.

6. A cleaning device including a hollow handle having a coupling member; a cleaning element having a cooperative coupling member for attachment to the handle; a liquid reservoir carried by the handle and in communication with the interior thereof; pumping means carried by the handle adapted to force liquid into the reservoir, and valve means for controlling the escape of liquid from said reservoir, said valve in open position permitting the pumping means to force liquid to the cleaning member.

7. A device of the character described including a tubular handle; a casing for attachment to the handle and having perfora-

tions communicating with the interior of the handle; means providing a partition with a valve hole between said perforations and another portion of said handle; a pump in said latter portion of the handle, said latter portion of the handle having a port therein; a reservoir communicating with said port; a valve for closing said hole; means for closing said port; means for opening said valve; and cleaning means carried by said casing, said pump being operative to suck liquid into said handle through the valve hole and to force said liquid into said reservoir, said port closing means being movable into a position to open the port and allow liquid from the reservoir to pass through said perforations to the cleaning means; substantially as described.

8. A device of the character described including a tubular handle; a casing attached to the handle and having perforations communicating with the interior of the handle; a partition with a valve hole located between said perforations and another portion of the handle; a pump rod in said latter portion of the handle, said latter portion of the handle having a port therein; a bag carried by the handle, the interior of the bag being in communication with said port; a valve adapted to close said hole; means for pressing a portion of said bag to close said port; means for opening said valve; and cleaning means carried by said casing, said pump being operative to suck liquid into said handle and force the liquid into said bag through the medium of said port, said pressing means being adapted to be released to allow the liquid to pass through the port and perforations to the cleaning means; substantially as described.

9. A cleaning device including a hollow handle; a cleaning element carried by said handle; a liquid reservoir carried by the handle and in communication with the interior thereof, and with the cleaning element, the reservoir having an outlet for supplying liquid to the cleaning element, and pumping means in the handle for forcing liquid into the reservoir.

10. A cleaning device having a hollow handle; a cleaning member connected with the handle; a flexible member adapted to hold liquid and in communication with the interior of the handle and with the cleaning member, the flexible member having an expanded body with converging ends connecting with the handle, one of the ends being slidably connected whereby the two ends may be brought together and the body folded to cover the connections between the handle and the flexible member and to embrace part of the cleaning member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

STEPHEN WODONOS.

Witnesses:
ELIZABETH GARBE,
CHAS. E. POTTS.