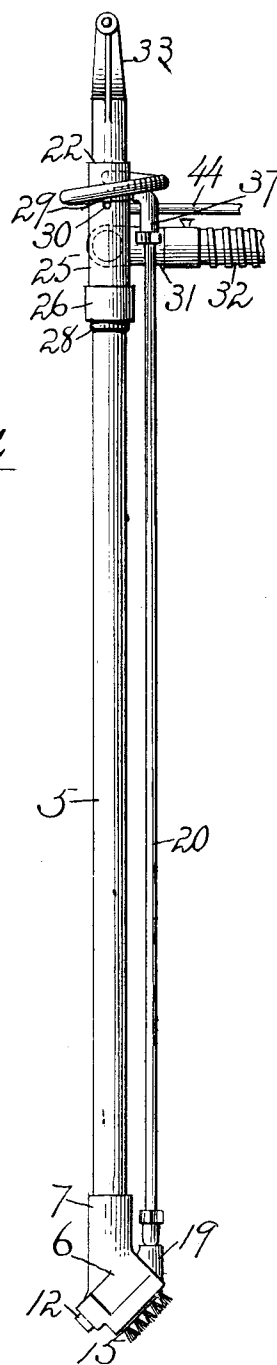


1,034,040.

Fig.1.



Witnessed:
L. E. Berkovich

Ira H. Spencer. INVENTOR.
BY
Arthur B. Jenkins, ATTORNEY.

UNITED STATES PATENT OFFICE.

IRA H. SPENCER, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE SPENCER TURBINE CLEANER COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

CLEANING DEVICE.

1,031,040.

Specification of Letters Patent.

Patented July 30, 1912.

Application filed December 23, 1907. Serial No. 407,646.

To all whom it may concern:

Be it known that I, IRA H. SPENCER, a citizen of the United States; and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented a new and Improved Cleaning Device, of which the following is a specification.

My invention relates more especially to that class of cleaning devices employed for scrubbing, or washing purposes, and the object of my invention is to provide a device of this class having special features of utility and advantage.

A form of device in the use of which the objects sought may be attained is illustrated in the accompanying drawings in which—

Figure 1 is a view in front elevation of a device embodying my invention. Fig. 2 is a view in side elevation of a cleaning device embodying my invention. Fig. 3 is a view on enlarged scale partially in central section of my improved cleaning device. Fig. 4 is a detail view on plane denoted by dotted line 4-4 of Fig. 3, and showing the relative positions of the stock and valve sleeve to permit flow of air through the stock. Fig. 5 is a like view but showing such parts in position to prevent flow of air through the stock.

In the accompanying drawings the numeral 5 denotes the stock which may be composed of any suitable material and of any desired shape in cross section and of proper length to meet special requirements in use. At the lower end of the stock a head 6 is secured, in the form shown a neck 7 extending from the head being attached to the stock in any suitable manner. The stock is hollow providing a passage 8 for air, and an air chamber 9 is located in the head communicating with the passage 8. An opening 10 extends from the chamber 9, terminating in a mouth 11. In the preferred form of construction and as shown herein this mouth is formed in a mouth-piece 12 secured to the head; this mouth-piece preferably consisting of rubber or other elastic material secured in a recess 13 located in one edge of the head. A recess 14 is formed in another portion of the head and a brush 15 with perforations 17 in its base is secured within this recess.

In the preferred form of construction as shown herein the base 18 forming a portion of the brush is so located in the recess 14 that a chamber 16 is constituted immedi-

ately back of the brush. An extension 19 from the back of the head provides suitable means for connection of a tube 20 through which the cleaning fluid is delivered. This extension has an opening 21 communicating with the fluid chamber 16 and also with the tube 20.

The stock 5 at that end opposite the head is secured to a valve body 22, a flange 23 on the body projecting into the stock and forming a shoulder 24 against which the end of an air valve sleeve 25 rests. This valve sleeve is formed of such length that it may be used as a grip by means of which the stock may be supported and rotated therein to bring the different faces of the tool into proper position for use. It has an enlargement 26 in which a spring 27 is located, one end of the spring resting against the bottom of the spring chamber in the enlargement and the other against a shoulder on the stock 5 formed as by a collar 28 secured to the stock. The upper end of the air valve sleeve has locking slots or notches 29 arranged upon diametrically opposite sides thereof and in position to engage a locking stud 30 secured in the flange 23 on the valve body and to the stock 5. A tube 31 is secured to a tubular extension 131 from the sleeve to which a hose or like flexible tubing 32, through which air is caused to travel, may be attached. This tubing or hose may be suitably connected with mechanism for creating a flow of air from the mouth 11 upward through the stock and along the tube to such apparatus.

In the operation of the device, the valve and supporting sleeve 25 being employed to support the tool, with one hand of the operator a pull upward on the handle 33 will disengage a locking notch 29 from the stud 30, and then by means of the handle the stock is rotated in the sleeve and the opening 34 in the upper end of the stock 5 is moved out of registering position with respect to the opening through the extension 131. The sleeve thus forms a support in which the stock may be rotated and also a valve to shut off the flow of air through the stock. In this use of the sleeve to support the stock in its turning movement to remove the mouth piece from the floor and bring the brush into position for operation the valve is automatically operated to shut off the air, and vice versa.

While the notches 29 are shown herein as arranged on diametrically opposite sides, they may be arranged in any relative position to provide for the locking of the sleeve with the opening 34 registering with the opening through the extension 131, or with said openings located out-of line, as when the valve is closed.

The valve body 22 has an outlet chamber 35 terminating in a tip 36 extending from the valve body to which a union 37 is attached, this union serving as a means of connection of the tube 20 with the valve body. A valve 38 is located in the valve body resting against a valve seat 39. This valve has a stem 40 projecting through a suitable stuffing box 41 in the end of the valve body, a spring 42 holding the valve to its seat. The valve stem terminates in a button 43 located within the opening in the handle 33 and in suitable position to be manipulated by the fingers of the hand grasping the handle.

In use the air valve sleeve being turned 25 to close the air passage into the stock 5 the valve is opened by means of the button 43, allowing water to pass through the hose 44 connected at 45 with the valve body. The water passes into the chamber in the valve body and downward through the tube 20 to the chamber 16, whence it is delivered through the openings 17 among the bristles of the brush. The brush is used to loosen the dirt from the surface being cleaned, the water aiding in this function. When this part of the cleaning operation has been completed the air valve sleeve 25 and the stock 5 are so relatively positioned that the air passages from the stock and sleeve register, thus permitting air to travel along the stock. 40 The mouth-piece 12 is now applied to the surface being cleaned and all water and dirt are rapidly taken up, passing through the stock 5 out through the tubing 32 from which it may be delivered into any suitable place. It will thus be seen that the sleeve 25 acts as a valve, in that it is movable to control the flow of fluid through an opening. It will be noted that with the mouth-piece or brush upon the floor if the tool be 50 raised and the sleeve held stationary, by a turning movement of the handle, the opposite tool may be brought into proper position for operation on the surface being cleaned. This turning movement of the handle operates to close the valve and shut off the flow of air through the mouth-piece or, should the brush be upon the floor, turning the stock in the sleeve will serve to open 60 the passage and permit flow of air through the mouth-piece.

I claim:—

1. A stock having an air passage, means for conducting air from said passage, a head 65 borne by the stock, said head having an air

chamber and a mouth opening therein and also having a water chamber formed therein separate from said air chamber, a brush located on the head, and means for delivering water to said brush.

2. A stock having an air passage, means for conducting air from said passage, a head having an air chamber with a mouth communicating therewith and also having a water chamber separately formed thereon, a brush located to receive water from said water chamber and provided with openings through its base communicating with said water chamber, and means for delivering water to said water chamber.

3. A stock having an air passage, means for conducting air from said passage, a head borne by the stock and having an air chamber with a mouth communicating therewith and also having a recess, a brush secured within said recess and located to form a water chamber therein, means for delivering water to said water chamber, one wall of which is formed by said brush that also has openings through its base communicating with said water chamber.

4. A stock having an air passage extending therealong, means for conducting air from said passage, a head borne by the stock and having an air chamber with a mouth communicating therewith, an extension from said head forming a connection for a water tube, a water tube connected with said extension, means for supplying water to said tube, a brush secured to said head, said head having means for delivering water from said water tube to said brush.

5. A stock having an air passage, means for conducting air from said passage, a head borne by said stock and having an air chamber with a mouth communicating therewith and also having a recess, a brush with its base located in said recess to form a water chamber back of the brush, said base having openings extending therethrough to said water chamber, an extension on the head, said extension having a passage communicating with said water chamber, a tube connecting with said extension, and means for delivering water through said tube.

6. A stock having an air passage, means for conducting air from said passage, a head borne at the end of the stock and having on one side an inlet mouth communicating with said air passage, a brush located on a different portion of the head from said mouth, means for delivering water to said brush, and a valve secured at the opposite end of the stock from said head to form a manual support for the stock that is rotatable therein, said valve closing the air passage in one position of the stock by rotation therein.

7. A stock having a passage for fluid with an inlet opening thereto, a tool located

at the end of the stock, said tool having a passage to permit flow of fluid, and a valve sleeve located on the stock and formed of a length to provide a grip by means of which the stock may be manually supported for rotary movement, said sleeve having an opening to register with said inlet opening through the stock in one position and forming a valve to close said opening in another position.

8. A stock having an air passage therealong and an opening to said air passage, means for supplying air to said passage, a head having an air chamber communicating with the passage in the stock, a valve sleeve formed into a grip of a length to provide a support within which the stock may be supported and rotated to control the opening in said air passage, a mouth-piece located on the head in a position fixed with respect to said opening, and a tool located on the opposite side of said head.

9. A stock having an air passage therealong and an opening to said air passage, means for delivering air to said passage, a

head having an air chamber communicating with the passage in the stock, a valve sleeve formed into a grip of a length to provide a support within which the stock may be supported and rotated to control the opening to said air passage, a brush located on the head in a position fixed with respect to said opening, a mouth located on the head in a position fixed with respect to said opening, and means for delivering water to the brush.

10. A stock having an air passage therealong and a valve opening to said passage, a head having an air passage communicating with the passage in the stock and a mouth opening from said passage, a tool located on the head in fixed position with respect to said mouth, and a valve sleeve formed into a grip support within which the stock is supported for rotation.

IRA H. SPENCER.

Witnesses:

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