J. M. HINKLE.

FOUNTAIN SCRUBBING BRUSH.

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1,181,594.

Patented May 2, 1916.

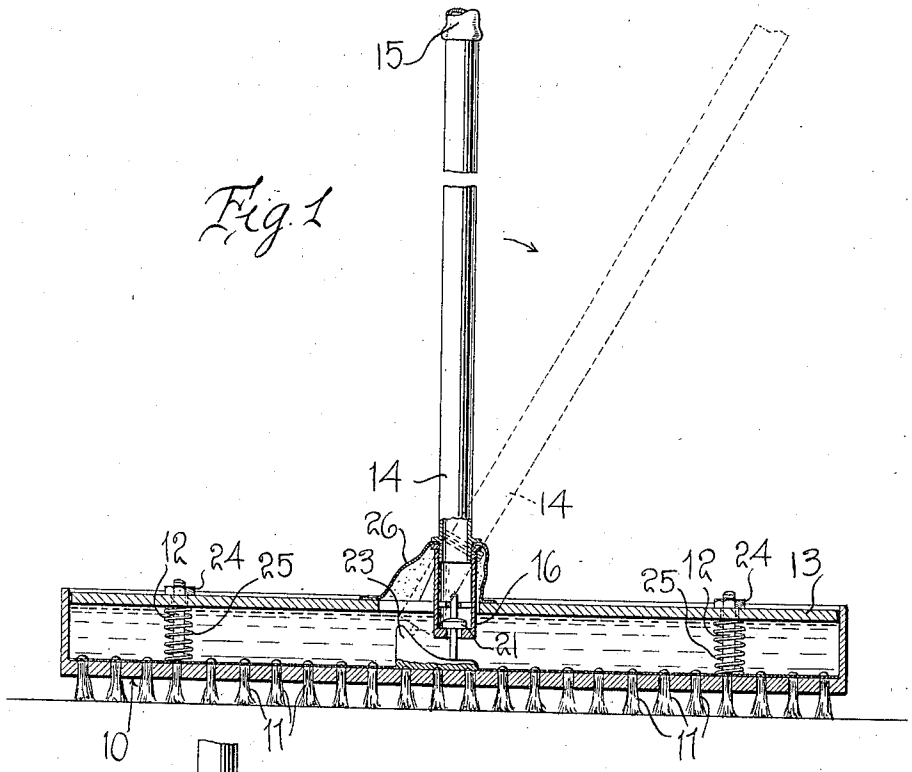


Fig. 1

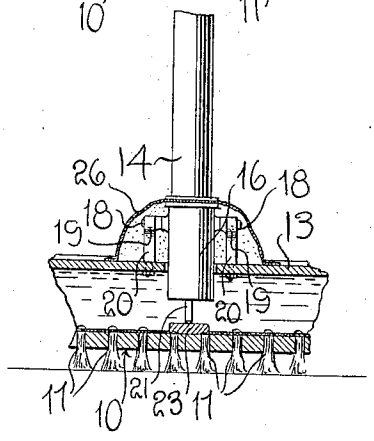


Fig. 2

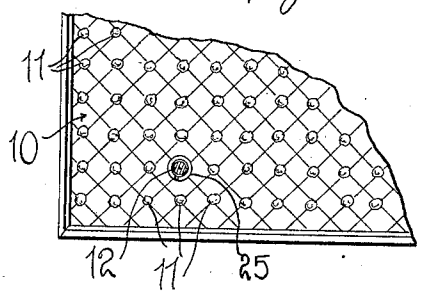


Fig. 3

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FOUNTAIN SCRUBBING-BRUSH.

1,181,594. Specification of Letters Patent. Patented May 2, 1916.

Application filed December 8, 1915. Serial No. 65,738.

To all whom it may concern:

Be it known that I, JAMES M. HINKLE, a citizen of the United States, residing at Ringgold, in the county of Pulaski and State of Kentucky, have invented certain new and useful Improvements in Fountain Scrubbing-Brushes, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to fountain brushes, and particularly to that class of fountain brushes wherein the handle is adapted to be connected to a water conductor so that the brushes may be supplied with water.

The general object of the invention is the provision of a very simple scrubbing brush of this type wherein the water is allowed to flow automatically into the brush as the brush is pushed from the operator and the water cut off when the brush has been brought back to its initial position.

A further object of the invention is the provision of a brush so constructed that the water chamber may be readily taken apart, and still another object is to provide a brush of this kind wherein the bristles or brushes proper may be readily inserted or removed so that when the brushes proper wear out they can be renewed.

A further object of the invention is the provision of means whereby water can be forced out from the brush with a greater or less degree of force, as desired by the operator.

My invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a sectional view of a brush constructed in accordance with my invention; Fig. 2 is a section on a plane transverse to the plane of the section shown in Fig. 1; Fig. 3 is a top plan view with the cover removed and one of the bolts shown in section.

Referring to these drawings it will be seen that the improved brush comprises a supporting plate 10 which is perforated across its entire face uniform distances for the reception of the scrubbing elements or bristles 11. This plate 10 is provided with a plurality of posts, illustrated as four in number and designated 12, which extend upward from the plate. Mounted upon these posts is a cover 13, the side margin of which has sliding engagement with the side margin of the base, this engagement being, however, substantially water-tight. Oscillatably mounted upon the cover 13 is a handle 14 which is tubular and which is adapted to be connected to a flexible hose 15, in turn connected to a source of water. The handle is shown as terminating at its lower end in a head 16 formed with oppositely disposed trunnions 18 engageable in the eyes 19 of the bolts 20 projecting upward from the cover. Thus the handle is oscillatably supported at its lower end. In the head there is a check valve 21 whose stem projects out of the head, and disposed upon the plate 10 is a cam-shaped member 23 whose inner face is upwardly inclined. Now when the handle is in a vertical position the check valve will not touch the cam-shaped member but as the handle is inclined in the direction of the arrow, Fig. 1, the stem of the valve will strike the cam-shaped member and cause the valve to open. Thus when the scrubbing brush is moved away from the operator the handle shifts from an obtusely angled position to an acutely angled position with relation to the body and the valve is open. Then as the scrubbing brush is drawn toward the operator the handle turns from an acutely angled position to an obtusely angled position and the valve closes, the valve being urged to its closed position by a spring.

The posts 12 extend up through the cover 13 and are provided with nuts 24, and surrounding the posts are the coiled springs 25 which bear upward against the cover. Thus the nuts act to limit the upward movement of the cover but do not limit its downward movement and thus if it is desired to force the water out of the scrubber pressure exerted downward upon the cover 14 will cause the cover of the body to be forced downward, forcing out the water through the bristles of the brush. In order to prevent the water from passing upward around the opening in the cover plate through which the handle passes a diaphragm of rubber, designated 26, may be disposed around the handle and attached to the cover.

While I have used the term "bristles" above to indicate the brushing elements which are disposed within the perforations of the plate 10, it is to be understood that I may use not only ordinary bristles but corn husks, textile fabric, and the material from which mops are ordinarily made. A small bundle, as it may be termed, of this material is provided for each of the per-

forations in the plate 10, and the material held in place by a wire 27. There are two sets of these wires passing through or around each of these bundles of scrubbing material and extending against the base of the plate, the wires being attached in any suitable manner to the side walls of the body.

With the construction above described it will be obvious that a reciprocation of the scrubbing brush over a floor, for instance, will cause an intermittent opening of the valve in the head 16 permitting water to flow into the scrubbing brush. Whenever it is desired to force the water out more strongly through the bristles or scrubbing elements, the handle may be forced downward thus causing the top to act as a piston for forcing out the water.

My invention is simple, may be cheaply made, readily assembled, may be readily cleaned, and is very effective in practice.

With my construction it will be seen that any longitudinal pressure on the handle 14 will cause the depression of the plate 13 relative to the base plate 10 against the force of the spring 12 and that thus the valve 21 will be opened, allowing water to flow into the body of the brush.

Having described the invention, what I claim is:

1. A fountain scrubbing brush of the character described including a hollow body having perforations and scrubbing elements disposed therein, and a hollow handle pivotally supported upon the hollow body and adapted to be connected to a source of water supply, and means for opening communication between the handle and the interior of the body upon a movement of the handle in one direction relative to the body and cutting off said communication upon the movement of the handle in the other direction relative to the body.

2. In a fountain scrubbing brush of the character described, a hollow body including a bottom plate and a top plate movable toward the bottom plate, scrubbing elements disposed in perforations in the bottom of the plate, a handle attached to the top plate, means yieldingly holding said top plate away from the bottom plate whereby the top plate may be forced toward the bottom plate and the water in the body forced out therefrom, and a handle operatively connected to the top plate.

3. In a fountain brush of the character described, a bottom plate formed with perforations and having scrubbing elements disposed therein, a top plate, a cover, springs disposed between the top and bottom plates, means limiting the outward movement of the cover plate with relation to the bottom plate, a hollow handle pivotally mounted upon the top plate of the cover and having a head at its lower end, a check valve carried by said head and having a depending stem and a cam-shaped member carried upon the bottom plate and adapted to engage the stem to open the valve upon a movement of the handle into an acutely angled relation to the body.

4. In a fountain brush of the character described, a hollow body having perforations and scrubbing elements disposed therein, a hollow handle pivotally supported upon the hollow body and adapted to be connected to a source of water supply, a valve at the lower end of the handle normally cutting off communication between the handle and the body, means whereby said valve may be opened upon an oscillation of the handle relative to the body.

5. In a fountain brush of the character described, a hollow brush body formed in its bottom with perforations and having scrubbing elements disposed therein, a hollow handle pivotally mounted upon top of the brush body and extending into the interior thereof, a normally closed check valve carried at the lower end of the handle, and means within the hollow body engaging the valve and causing it to open upon a movement of the handle in a predetermined direction relative to the body.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JAMES M. HINKLE.

Witnesses:
O. H. WADDLE,
L. B. JORDAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."