C. A. SUNDSTRAND.

FOUNTAIN BRUSH.

APPLICATION FILED FEB. 8, 1916.

1,205,681. Patented Nov. 21, 1916.

Fig. 1.

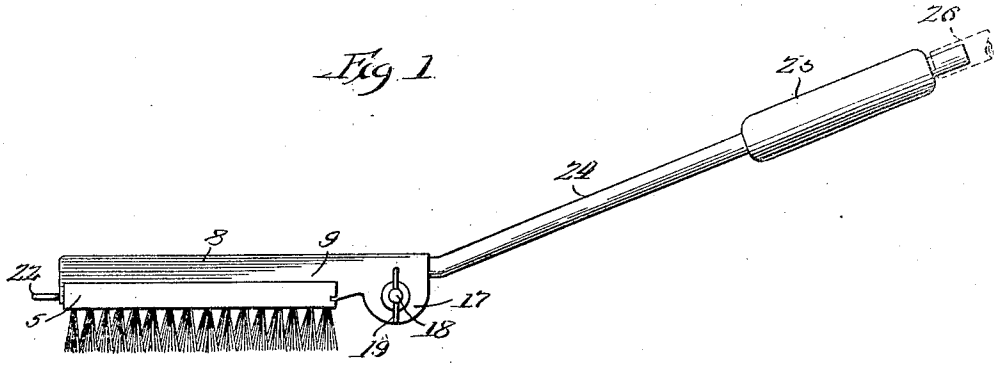


Fig. 2.

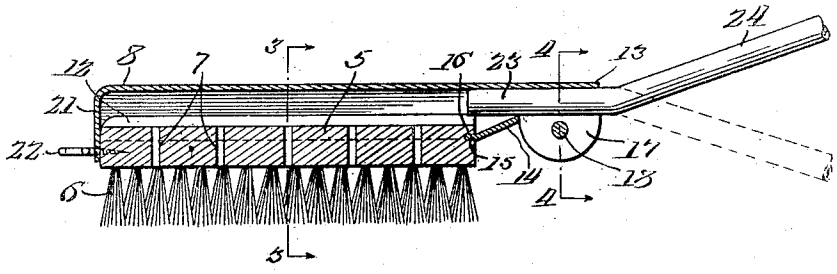


Fig. 3.

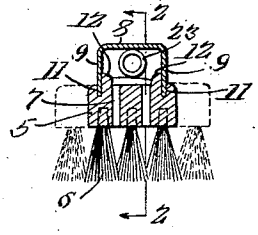
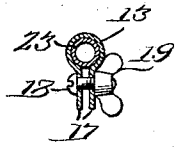


Fig. 4.



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UNITED STATES PATENT OFFICE.

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FOUNTAIN-BRUSH.

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Application filed February 8, 1916. Serial No. 76,915.

To all whom it may concern:

Be it known that I, CARL A. SUNDSTRAND, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Fountain-Brushes, of which the following is a specification.

This invention relates to the general art of fountain brushes, and has more particular reference to that class characterized by the provision of a liquid supplying means attached to the brush head so as to supply a liquid cleaner such as water to the face of the brush during the cleaning operation.

The primary object of my invention is to provide a brush especially adapted for cleaning automobiles, vehicles, etc., although suitable for numerous other cleaning purposes, and which shall be of simple design so that it may be produced at a comparatively low cost.

Another object of my invention is to provide a brush, the handle of which, angularly arranged with respect to the brush head shall serve as a conduit for passage of liquid to the latter and be adjustable so that the head and handle may be positioned in different angular relations to allow adaptation of the brush for various cleaning purposes.

My invention also contemplates the provision in a brush of the character described, of a cap of improved construction, that is pressed out of sheet metal so as to enable a simple and effective connection with the brush head and provide a socket attachment by which the liquid-supplying handle may be adjustably secured to the cap.

A further object is to provide a liquid-cleaning brush of novel construction by which leakage of liquid past the sides of a cap of the brush is prevented and by which brush heads of various sizes and shapes are interchangeable with the cap.

Referring to the drawings: Figure 1 is a side view of a brush embodying my improvements; Fig. 2 is an enlarged longitudinal sectional view through the brush taken on the line 2—2 of Fig. 3; and Figs. 3 and 4 are cross-sectional views taken on the lines 3—3 and 4—4, respectively, of Fig. 2.

The brush head designated in general by reference character 5, may be of suitable configuration, and while I have shown it merely for purpose of illustration in the form of a narrow-width brush, my invention contemplates, as will appear hereinafter, the use of brush heads of various shapes, such as oval shaped heads and rectangular heads of various widths. The face of the brush head is provided with bristles 6, suitably secured to the head which is perforated by apertures 7 to permit passage of liquid from the back to the face of the brush head.

A channel shaped cap designated in general by 8, secured to the back of the brush head, provides a liquid chamber to which liquid is supplied so as to pass through the perforated brush head to the bristle face thereof. Fig. 3 shows the inverted U-shape of the cap, the sides 9 of which are engaged in a relatively tight fit in parallel grooves 11 formed in the back of the brush head extending lengthwise throughout the length thereof. The back of the brush head is shaped so as to engage a greater portion of the interior walls of the sides 9 than the exterior walls thereof, that is, referring to Fig. 3, the brush head is formed within the sides 9 of the cap with the raised ribs 12 engaging the interior walls of said sides. Evidently, instead of forming ribs, as shown, the entire portion of the brush back between the sides 9 of the cap may be made of a greater thickness than the outer or marginal portions of the head. Thus, the depth of the grooves 11 may be reduced to a minimum so as to facilitate assembling and interchangeability of brush heads, a head comparatively light in weight may be obtained, and a joint provided between the cap and brush head that will preclude leakage of liquid from the cap past the sides thereof.

At one end of the brush the channel-shaped cap is shaped to provide a socket for the reception of an end of a pipe section that constitutes a handle. The sides 9 at this end of the cap are shaped to provide a cylindrical socket 13 and turned inwardly and joined together so as to provide a cross-portion 14 adapted for preventing escape of liquid from this end of the compartment and also for engaging at its inner end 15 in a groove 16 in one end of the brush head for a purpose noted hereinafter. The end portions of the sides at this end of the cap form clamping wings 17 through which a headed bolt 18 equipped with a thumb nut 19 passes so that by tightening the nut on the screw the walls of the socket portion 13

will be clamped onto a pipe section located in the socket to adjustably secure said pipe section to the cap. One end of the cap, therefore, is shaped to provide means of attachment for a handle so that the same may be very easily and quickly secured to or removed from the cap and adjusted relatively thereto for a purpose noted hereinafter. At the opposite end of the cap, its channel compartment is closed by the end 21 which extends nearly to the face of the brush head and is secured thereto by suitable means, such for instance as a screw eye 22, that also affords a convenient means for hanging the brush on a hook when not in use. To remove the cap from the brush head, the screw eye 22 is first removed, and this end of the brush head swung away from the cap on the cross-portion 14 as a fulcrum. By the simple converse of these movements, the brush head may be secured to the cap, it being evident that when the screw is tightened, the head is secured at both ends against removal from the cap.

The handle in the form of a pipe section having an end 23 adapted to be secured in the socket 13 and a major body portion 24 bent angularly with respect to its end 23 is equipped at its outer end with a suitable hand grasp 25 and is adapted to be connected beyond the end of the same to a hose 26 leading to a source of liquid supply. For ordinary cleaning purposes water would be supplied through the hose 26 and handle section 24 to the cap compartment and thence to the face of the brush. An operator grasping the handle 25 may manipulate the brush without coming in actual contact with the cleaning fluid so that the hands are not wetted or soiled in using my improved brush. It is often desirable, because of the location of different surfaces to be cleaned, to adjust the brush relatively to the handle to permit cleaning in a convenient and effective manner. For this purpose, the thumb nut 19 may be loosened and the handle rotatably adjusted in connection with the cap so as to position the brush in a different angular relation to the handle whereupon the nut 19 would be tightened to secure the brush in such desired position.

From the foregoing, it will be apparent that I have provided a liquid cleaning brush exceedingly simple in construction and capable, due to its simple design, of being manufactured at a low cost. It will be evident that brush heads of different sizes and shapes may be constructed to coöperate with the cap 8 in the same manner as does the brush head 5. In Fig. 3, I have indicated in dotted lines a brush head of greater width than the brush 5.

While I have illustrated and described one embodiment of my invention, it should be understood that various changes in details of construction may be resorted to without departing from the spirit of the invention as expressed in the appended claims.

I claim:

1. The combination of a brush head the back of which is formed with a pair of parallel grooves, a channel-shaped cap having parallel sides fitting in said grooves and being shaped at one end to provide a socket having movable wall portions, a conduit fitting in said socket so as to discharge into the chamber formed by the cap and the brush head, the brush head being perforated to allow passage of liquid from said chamber to the face of the brush, and means for clamping said movable portions of the cap to the conduit so as to adjustably secure the said pipe section to the cap.

2. The combination of a brush head formed on its back with spaced grooves and shaped so that the stock of the head is higher along the inner side of the grooves than on the outer side thereof, a channel-shaped cap having spaced sides fitting in said grooves, the said raised portions of the brush head being adapted to prevent liquid from passing to the exterior of the channel cap through said grooves, the brush head being perforated so as to connect the chamber of the cap with the face of the brush, and a conduit connected with the cap for supplying liquid thereto.

3. The combination of a brush head, a chambered cap secured to the head so that the cap chamber lies adjacent to the back of the brush head which is perforated to permit passage of liquid from said chamber to the face of the brush, a conduit serving as a handle and adjustably secured to the cap so as to discharge into the chamber thereof, said conduit being formed so that its outer portion is in angular relation to its attached end whereby the handle may be rotatably adjusted in its connection with the cap to position the brush head in different angular relations to the handle.

CARL A. SUNDSTRAND.

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