Aug. 5, 1958 O. G. WOODRUFF 2,845,651

VACUUM CLEANER BRUSH UNIT

Filed March 12, 1957

Fig. 1

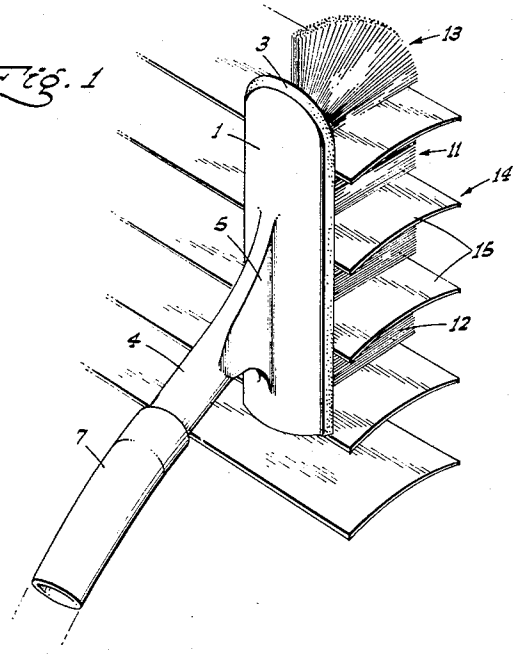


Fig. 2

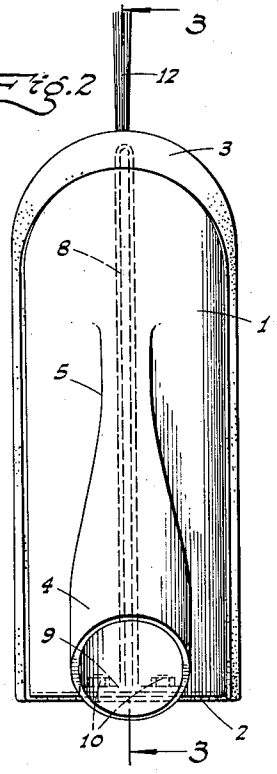


Fig. 3

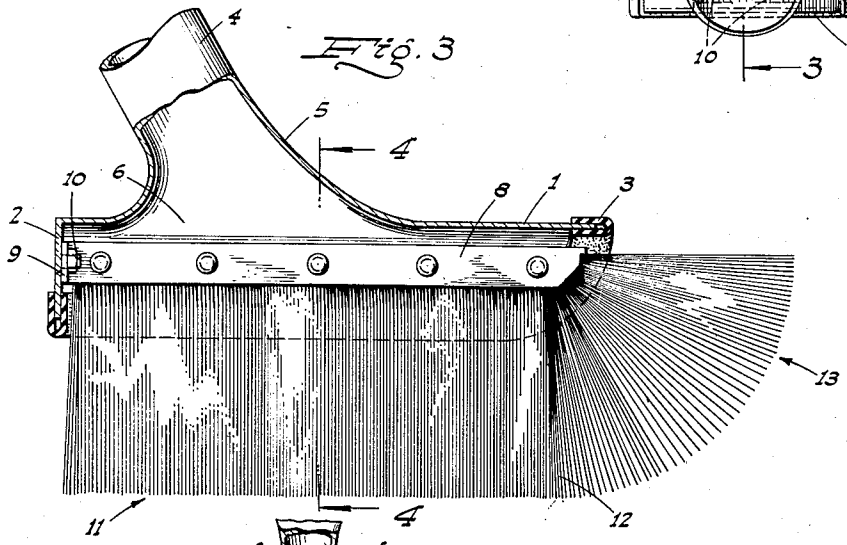
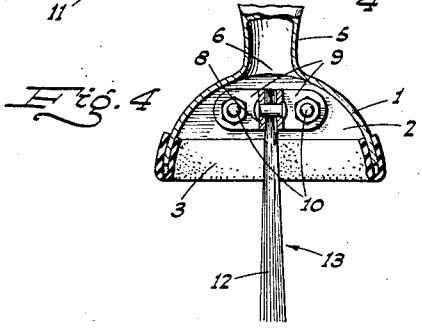


Fig. 4



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VACUUM CLEANER BRUSH UNIT

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5 Claims. (Cl. 15—400)

The present invention is directed to, and it is a major object to provide, an improved vacuum cleaner brush unit of the type which is adapted for attachment to the outer end of a hand-supported suction tube or hose of the cleaner; the brush unit being especially designed—but not limited—for use to clean Venetian blinds, draperies, furniture, and walls.

Another important object of this invention is to provide a vacuum cleaner brush unit which is constructed so that when in use there is an effective flow, by suction, all about the brush and into the brush supporting body; the latter being of a configuration which minimizes the possibility of air entry being substantially impaired or blocked by engagement of the unit with a surface being cleaned.

An additional object of the invention is to provide a vacuum cleaner brush unit wherein the brush has relatively long bristles which project from the supporting body in a manner to afford access into hard-to-reach places, and to thereby improve the efficiency of the brush unit.

A further object of the invention is to provide a vacuum cleaner brush unit in which the brush is secured in the body by a mount which permits of ready removal of said brush, and to the end that a new one can be conveniently installed when necessary.

It is also an object of the invention to provide a vacuum cleaner brush unit which is designed for ease and economy of manufacture.

Still another object of the invention is to provide a practical, reliable, and durable vacuum cleaner brush unit, and one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a perspective view of the novel brush unit as used to clean a Venetian blind.

Fig. 2 is a top plan view of the brush unit, detached.

Fig. 3 is a longitudinal sectional elevation of the brush unit taken on line 3—3 of Fig. 2.

Fig. 4 is a cross section taken on line 4—4 of Fig. 3.

Referring now more particularly to the drawings, and to the characters of reference marked thereon, the brush unit of the present invention comprises a longitudinal but relatively short, suction trough forming body 1 which is substantially semi-circular in cross section; one end of such body being closed by an end wall 2. The remaining or opposite end of the body 1 is open, and the edge of the body at said end is rounded, as shown.

All about its free or exposed edges the body 1 is fitted with a rubber bumper strip 3 which is generally U-shaped in cross section and fitted tightly over the adjacent portion of the metal of the body; such strip—if necessary—being retained in place by a suitable adhesive. It is to be noted that the body edges which project into the bumper strip 3 terminate short of the bottom of the groove in the latter, and this is for the purpose of assuring that the contact edges of said strip 3 have adequate flexibility to prevent damage to any surface which may be engaged.

An attachment and suction neck 4 extends away from the top of the body 1 at a longitudinal incline generally overhanging the closed end 2 of said body; such neck including a transversely narrow transition 5 which merges in integral relation with the body 1 and opens in communication into the latter through an elongated slot 6. The neck 4 is adapted to couple to the suction hose 7 which leads from the vacuum cleaner (not shown).

A longitudinal bar 8 is disposed within the confines of the body 1, being spaced from the top and sides; such bar being rigidly but detachably secured to the end wall 2 by means of a bracket 9 connected to said end wall by bolts 10.

The longitudinal bar 8, whose free end terminates short of the open end of the body 1 clampingly engages the inner edge of a longitudinal row 11 of relatively long bristles 12 which project from the bottom of the body 1 and outwardly thereof a substantial distance.

At—and supported from—the free end portion of the bar 8 the longitudinal row 11 of bristles 12 is fanned out to form an end quadrant 13 which, in the related portion, projects a considerable distance beyond the open end of the body 1.

The above described vacuum cleaner brush unit is used to clean a Venetian blind 14 in the manner shown in Fig. 1, and at which time the open bottom of the body 1 is abutted against one edge of the slats 15, with the row 11 of bristles 12 projecting in sections between such slats, whereby to effectively clean the latter as the brush unit is manually swept laterally back and forth.

For other types of uses the brush unit is held in the hand and the bristles are swept back and forth over the surface to be cleaned. Even though such surface may be flexible and substantially closes the open bottom of the body 1, still there is a substantial stream of air entering through the open end of such body for the purpose of assuring that all dust, debris, etc. which is swept up and enters said body will be sucked into, and carried away through, the neck 4 and hose 7. In other words, the open end of the body 1 is of material advantage, in that air flow by suction through the unit cannot be substantially impaired or blocked during normal operation.

Also, the projecting quadrant 13 of the bristles permits the brush to be worked into and effectively sweep points which are hard to reach; air flow over and about such quadrant being assured by reason of the adjacent open end of the body 1.

The described brush unit, while being relatively small and convenient to manipulate, is—by reason of its particular structure and configuration—extremely effective for the intended purposes.

Whenever the bristles of the brush unit become worn, the bar 8 is detached by the simple expedient of removing the bolts 10, whereupon a new bar and brush can be replaced.

From the foregoing description it will be readily seen that there has been produced such a device as will substantially fulfill the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as set forth herein.

Having thus described the invention, the following is

claimed as new and useful, and upon which Letters Patent are desired:

1. A vacuum cleaner brush unit comprising a longitudinal open bottomed body defining an inverted suction trough, a wall closing one end of the body, an attachment and suction neck opening into and projecting in rigid relation from the body at the top, a longitudinal bar within the confines of the body above the bottom edge and spaced from the top and sides thereof, means rigidly securing the bar at one end to said wall, and a row of bristles secured to the bar and projecting out of the open bottom of the body intermediate and spaced from the side edges of the body at the bottom.

2. A unit, as in claim 1, in which the bar securing means is arranged to permit of ready removal of the bar from the body.

3. A unit, as in claim 1, in which the body at the bottom edge is flat and materially wider than the row of bristles.

4. A unit, as in claim 1, in which the body is open at the end opposite the wall, the bar terminating short of said open end; the row of bristles including a substantially quadrant-shaped portion at and projecting beyond the open end of the body and terminating in a plane substantially parallel to and adjacent the upper edge of the bar.

5. A unit, as in claim 4, in which the body at said open end is rounded in a plane at right angles to the row of bristles.

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