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J. TANNENBAUM

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POWER DRIVEN FOUNTAIN BRUSH

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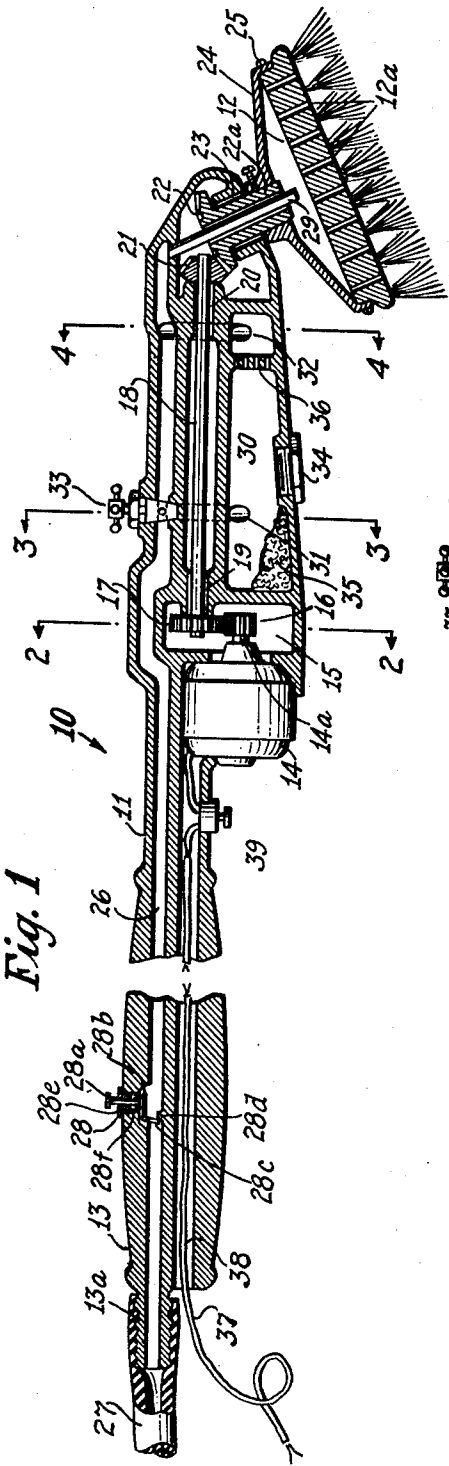


Fig. 1

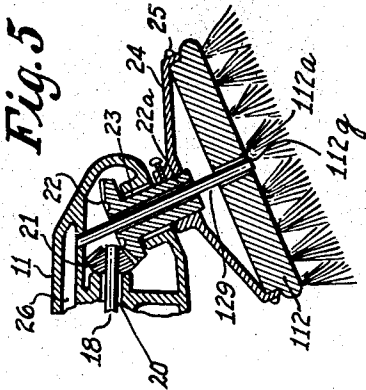


Fig. 5

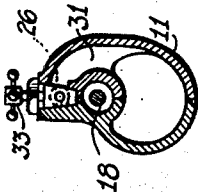


Fig. 3

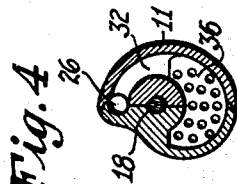
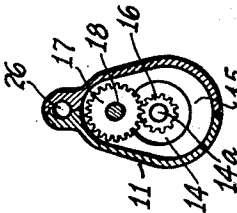


Fig. 4

Fig. 2



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POWER-DRIVEN FOUNTAIN BRUSH.

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This invention relates to fountain brushes and more particularly is directed to a portable, motor-driven fountain brush of improved construction adapted for household use to clean the surfaces of bath tubs, walls, windows and floors, for vehicles, such as automobiles, and for other like purposes.

An object of the invention is the provision of a device of the character described comprising few and simple parts, which shall be inexpensive to manufacture, strong and durable, neat in appearance, and practical and efficient to a high degree for the purposes described.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements and arrangements of parts which will be exemplified in the construction hereinafter described and of which the scope of invention will be indicated in the following claims.

In the accompanying drawings in which is shown one of various possible illustrative embodiments of this invention—

Fig. 1 is a longitudinal cross-sectional view of a motor-driven fountain brush embodying the invention.

Figs. 2, 3 and 4 are cross-sectional views taken on lines 2—2, 3—3 and 4—4 respectively in Fig. 1.

Fig. 5 is a fragmentary cross-sectional view of a modified form of brush and water distribution means.

Referring in detail to the drawing, 10 denotes a portable fountain brush embodying the invention which is seen to comprise a casing 11, having a revolvable brush 12 mounted at one end thereof, a handle 13 at the other end, and a motor 14 fitted to a mid-portion of the casing for rotating said brush. Within the casing 11, there is provided a suitable power transmission-drive, connecting the motor with said brush, which may include chamber 15 for enclosing a pinion 16 secured to turn with the motor shaft 14^a and a driven gear 17 meshing with said pinion. The gear 17 is fastened to an overhanging end of a drive shaft 18 which is journaled in bearings 19 and 20 spaced in said casing, the other end of said shaft 18 being adapted to carry a bevelled pinion gear 21. Meshing with the latter there is a bevelled gear 22,

having a hub portion 22^a, which is mounted in a bearing 23 to extend through the casing, the exterior end of said portion 22^a being adapted to rigidly carry a dished member 24 which may be provided with any suitable means such as screws 25 for removably attaching the brush, as shown in Figs. 1 and 5.

Extending longitudinally through the casing 11 over the drive shaft 18 and through the handle 13, a conduit 26 is provided for supplying water or other cleansing fluid to the brush. The handle end of said conduit may be formed with a suitable fitting 13^a for coupling with flexible hose 27 which connects with water supply (not shown) in the well understood manner.

If desired a check valve 28 may be installed in the handle portion of the conduit and hand control means provided for holding the valve open, said means comprising a plunger pin 28^a which when depressed engages a rock arm 28^b for swinging the valve disc 28^c from the seat 28^d to which it is normally held by the water pressure. A suitable gland 28^e and packing 28^f is provided to eliminate leakage about the pin 28^a.

The water from the brush end of the conduit 26 is conducted to the brush for distribution to the surface to be cleaned through a short pipe-nipple 29 mounted on the casing to extend freely through bevelled gear 22 and its hub 22^a, and through spaced passages 12^a provided in the back portion of the brush, as shown in Fig. 1.

The cleansing operation is greatly facilitated when a detergent, such as soap or the like, is added to the water. In order to introduce such detergent into the water as it passes through the device 10, suitable dispensing means may be associated with the conduit 26. For this purpose a mixing receiver 30 is provided in the casing between the motor 14 and the brush 12 to connect the conduit 26 with said receiver by means of spaced passages 31 and 32 formed in said casing. A three-way cock 33 is positioned between the conduit 26 and passage 31 to selectively control the flow of the water to pass either directly to the brush or through the receiver 30 as is well understood.

A removable cover 34 of any suitable construction is provided for the receiver 30 through which a supply of detergent 35, preferably in flakes or small solid pieces, is

introduced and to retain the undissolved detergent from leaving the receiver there is a perforated partition 36 forming the side wall of said receiver adjacent the entrance or lower end of the passages 32, as shown in Figs. 1 and 4.

Power is supplied to the motor 14 from any suitable power source (not shown) through conductor wires 37 which preferably are made to pass through a passage 38 in the handle 13 so that both the hose 27 and the conductor wire 36 extending from the handle are located to least interfere with the manipulation of the device 10. A suitable switch 39 conveniently positioned on the handle 13 is employed for controlling the operation of the motor 14.

In using the invention the hose 27 and conductor wire 37 are connected to a suitable water and electric supply source, respectively, in the well known manner and the brush 12 simply applied to the surface to be cleaned. Operating the switch 39 starts the motor and is effective to cause the brush 12 to rotate and depressing the pin 28^a opens the valve 28 permitting the water to flow through the conduit 26. With the cock 33 as shown in Fig. 1, the direct flow of water is cut off and the water is passed through the passage 31 to the receiver 30 for mixing with the detergent 35 and hence through the passage 32, conduit 26 and pipe nipple 29 to the brush passages 12^a for distribution. It is apparent that the cock may be turned to cut off the passage 31 from the conduit 26 and the water permitted to flow directly to brush 12.

Releasing the pin 28^a permits the check valve to swing against its seat 28^d. Thus, if the device 10 leaves the hand of the operator for any reason the water supply to the brush is automatically cut off.

If desired the dished plate 24 and brush may be replaced by other attachments adapted to sand paper, buff, polish or to facilitate in effecting other similar operations on the surface being worked on.

In Fig. 5 is shown a modified form of brush 112 which shows but a single central perforation 112^a through which the pipe nipple 112^b passes. This construction allows the direct application of a stream of water to the surface being cleaned and permits the device 10 to be used as an ordinary hose for flushing the said surface when so desired.

The device 10 as above described and shown in the drawing is constructed for convenient selective operation with or without mixing the water with the detergent and with the water supply and the rotation of the brush under complete control.

It will thus be seen that there is provided apparatus in which the several objects of this invention are achieved and which is well

adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense except as to such limits imposed by the scope of the claims.

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

1. A device of the character described comprising a casing a handle at one end of the casing, a brush mounted for movement with respect to the casing at the other end thereof, an electric motor intermediate the ends for driving said brush, said casing-handle having a conduit extending there-through from end to end passing the motor for supplying water to the brush, a detergent mixing receiver integrally formed in the casing, said casing having passages joining the receiver with said conduit, and means for selectively connecting and disconnecting the receiver between the conduit and the brush.

2. A device of the character described comprising a casing, a handle at one end of the casing, a motor on the handle, a brush connected to said motor and mounted at the other end of the casing, said casing-handle having a conduit and a passage extending therethrough, the conduit for supplying water to the brush and the passage adapted to receive conductor wires for connecting the motor to an electric supply source, means on the handle for controlling the brush operation, and a detergent mixing receiver formed in the casing associated with the conduit.

3. A device of the character described comprising a casing, a handle at one end of the casing, an electric motor on the handle intermediate the ends thereof, a brush connected to said motor and mounted at the other end of the casing, said casing-handle having a conduit and a passage extending therethrough said conduit extending past the motor for supplying water to the brush and the passage adapted to receive conductor wires for connecting the motor to an electric supply source, means on the handle for controlling the brush operation, a detergent mixing receiver formed in the casing, the latter having passages joining the receiver with said conduit, and a cock located between the conduit and one of said passages for selectively controlling the effectiveness of the receiver.

In testimony whereof I affix my signature,
JACOB TANNENBAUM.