

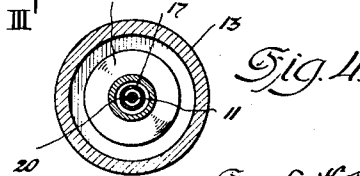
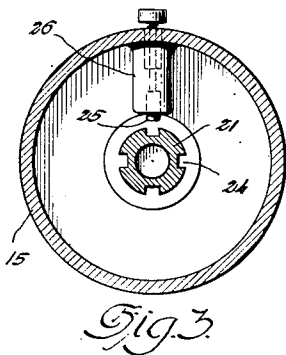
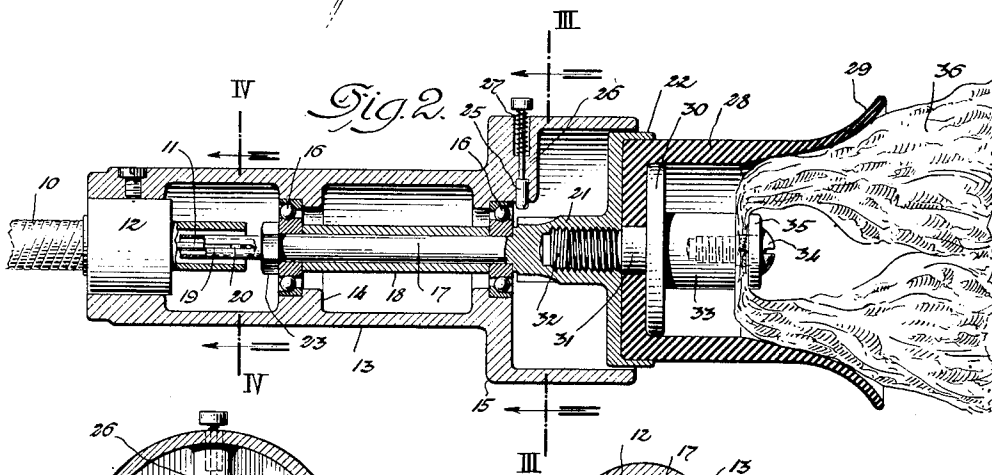
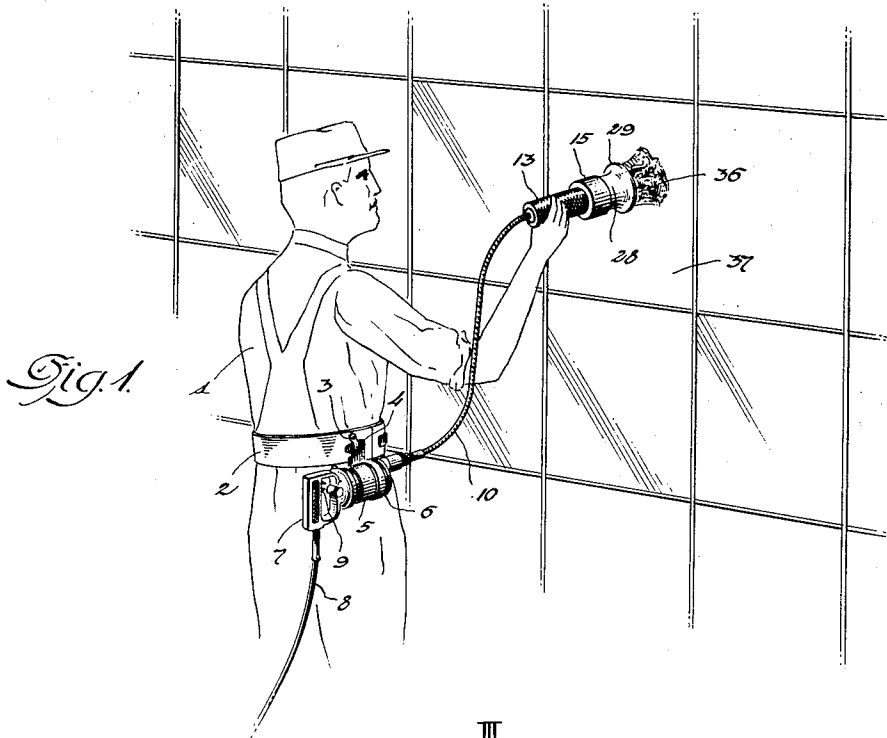
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F. H. DELLAREE ET AL

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WINDOW CLEANING DEVICE

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Inventors:

Frank H. Dellaree
Jacob Domze

By

Barthel Barthel

Attorneys

UNITED STATES PATENT OFFICE.

FRANK H. DELLAREE AND JACOB BOMZE, OF DETROIT, MICHIGAN.

WINDOW-CLEANING DEVICE.

Application filed January 9, 1926. Serial No. 80,183.

This invention relates to a window cleaning device primarily designed to facilitate cleaning and polishing panes of glass, but the device is capable of general use for wiping, cleaning, polishing or otherwise treating various kinds of surfaces heretofore operated upon by manually manipulated tools.

Our invention aims to provide a motor driven holder for a mop, rag or other instrumentality used for cleansing or treating a surface, the cleaning instrumentality being rapidly revolved and adapted to be moved about relative to a surface with a minimum degree of hand exertion.

Our invention further aims to provide a device embodying a small electric motor that may be conveniently carried by a workman, the motor being driven from a suitable source of electrical energy as an ordinary electric lighting circuit, and the motor is adapted to drive a flexible shaft on the end of which is mounted a holder adapted to be manipulated by the workman relative to a surface. In the holder and driven by the flexible shaft is a rotary head to which may be attached various kinds of cleaning instrumentalities.

Our device will be hereinafter specifically described and then claimed, and reference will now be had to the drawing, wherein—

Figure 1 is a perspective view of the device showing the manner of using the same;

Fig. 2 is an enlarged longitudinal sectional view of the holder;

Fig. 3 is a cross sectional view taken on the line III—III of Figure 2, and

Fig. 4 is a similar view taken on the line IV—IV of Figure 2.

As illustrating our device in use for window cleaning purposes, we show a workman 1 provided with a belt 2 having a clip 3 from which may be suspended a hook 4 of a clamp 5 surrounding a small electric motor 6. This motor has an end handle 7 constituting a socket for a leading-in conductor 8 by which electric current is supplied to the motor 6; there being a suitable switch or trigger 9 at the handle 7 for controlling the operation of the motor.

Suitably attached to the motor is a flexible casing 10 for a flexible shaft 11, said casing having a head 12 on which is mounted the inner end of a cylindrical hollow holder 13 provided with an intermediate partition 14. On the outer end of the holder 13 is a cylindrical open end housing 15 and mounted in said housing and the partition 14 are anti-frictional

radial bearings 16 supporting a driven shaft 17. On the shaft 17, between the bearings 16, is a spacing sleeve 18, and the inner end of the shaft 17 is bifurcated or slotted, as at 19 and made hollow to receive the outer end of the flexible shaft 11, said shaft having a side projection 20 establishing a driving relation between the flexible drive shaft and the driven shaft 17. Any suitable means may be employed for coupling these two shafts together so that power may be transmitted from one to the other.

On the outer end of the driven shaft 17 is an enlargement 21 supporting a head 22, said enlargement cooperating with a nut or abutment 23 on the inner end of the shaft 17 in preventing longitudinal displacement of said shaft relative to the bearings 16 seated in the holder 13 and the housing 15. The enlargement 21 is toothed or has a series of grooves 24 into one of which may be projected a spring retracted detent or brake member 25 slidably mounted in an enlargement 26 of the housing 15. The enlargement 26 accommodates a coiled spring 27 by which the detent is held normally retracted, and by pressing inwardly on the detent it may be placed in engagement with the enlargement 21 to hold the shaft 17 against rotation while the cleaning instrumentality is removed from the outer end of the shaft.

Mounted in the head 22 is a cup-shaped yieldable shield or guard 28 having an outer flared or bell-shaped end 29, and this shield or guard is preferably made of rubber with its outer end more pliable or resilient than its inner end, which is held in the head 22 by a retaining member 30. The retaining member 30 is seated in the inner end of the shield or guard 28 and has a stem 31 extending through the shield into screwthreaded engagement with a socket 32 in the enlargement 21. Coaxially of the stem 31 on the outer side of the retaining member 30 is a stud 33, and attached to the end of said stud by a screw 34, washer 35, or other securing means, is a cleaning instrumentality 36 which is partly enclosed by the outer end of the shield or guard. The cleaning instrumentality 36 may be in the form of a mop, rag, brush, polisher or any other device adapted for treating a surface.

After starting the motor 6 the workman 1 may manipulate the holder 13 in one hand and the cleaning instrumentality 36 will be revolved against the surface, for instance, a

pane of glass 37. If pressure is brought to bear by the workman 1, the cup-shaped member 28 may contact with a pane of glass without injuring the same. The member 28 serves
5 as a shield for a part of the cleaning instrumentality 36 and as a guard to prevent the head 22 or the end of the housing 15 from contacting with a surface during the use of our device.

10 It is obvious that our device may be used similar to a mop for applying various liquids or compounds to a surface, and while in the drawing, we illustrate a preferred embodiment of our invention, it is to be understood that the structural elements are susceptible to such variations and modifications
15 as fall within the scope of the appended claims.

What we claim is:—

1. A cleaning device comprising a hollow
holder, a housing at one end thereof, a driven
shaft journaled in said holder, a head on said
shaft within said housing, a support for a
cleaning instrumentality in screwthreaded
engagement with said head; and a cup shaped
yieldable shield clamped on said head by and
surrounding said support. 20

2. A cleaning device as called for in claim
1, wherein said shield is made of rubber, and
a retaining member forming part of said support
clamps said shield in said head. 25

In testimony whereof we affix our signatures.

FRANK H. DELLAREE.
JACOB BOMZE.