April 1, 1952 D. H. ADAMS 2,590,913

WINDOW CLEANING AND THE LIKE DEVICE

Filed May 26, 1948

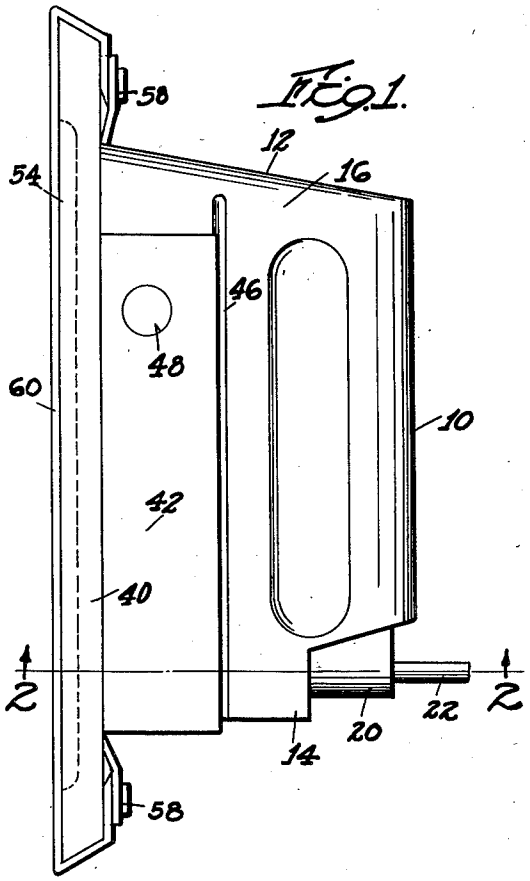


Fig. 1.

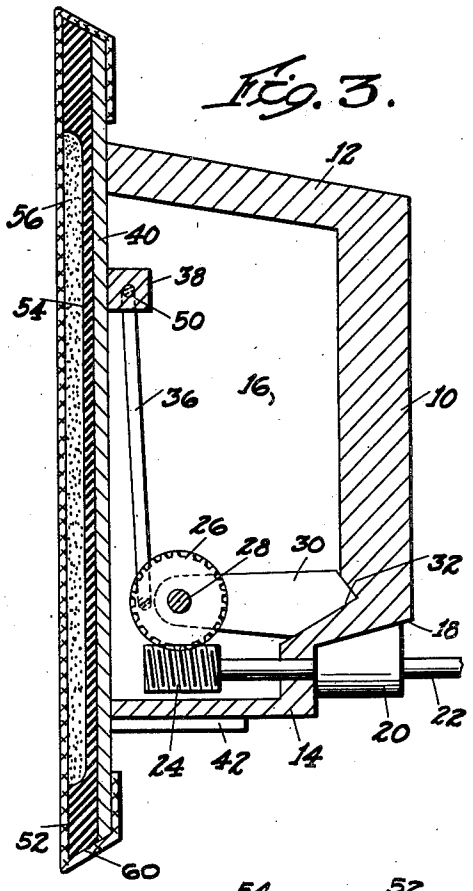


Fig. 3.

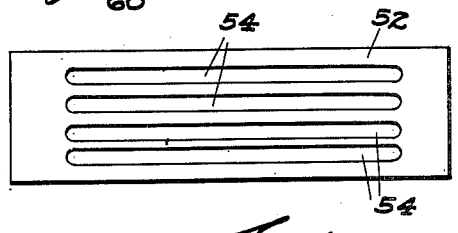


Fig. 4.

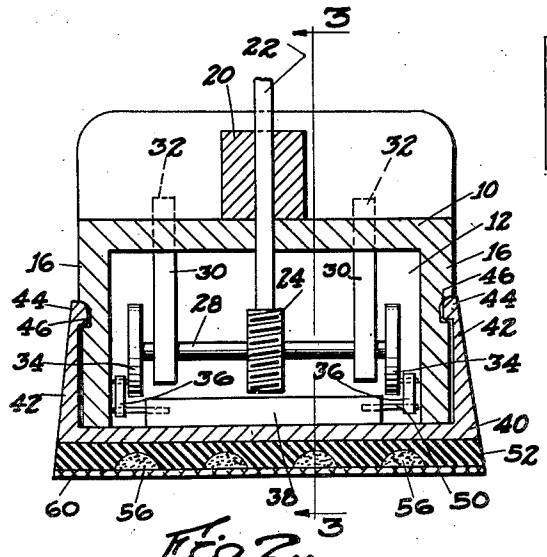


Fig. 2.

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WINDOW CLEANING AND THE LIKE DEVICE

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2 Claims. (Cl. 15—103)

1

This invention relates to new and improved power operated hand manipulated window cleaning devices and the principal object of the invention resides in the provision of a device of the class described which may be used without fluids, i. e., for dry cleaning by means of detergents in the form of solids, such as powder; but it is to be understood that this invention is not limited to such use and that the construction of the new device lends itself also to other kinds of cleaning as, for instance, with fluids.

A further object of the invention resides in the provision of a device of the class described comprising a housing which is adapted to be grasped by the operator by one hand, said housing carrying externally a reciprocating platform and containing means to reciprocate the same, there being interengageable guide means between the platform and the housing; the provision of a device as above stated including a rubber-like pad on the platform, said pad being adapted to be reciprocated in contact with the surface being cleaned and preferably containing pockets for the reception of detergents, whether in the form of soap or dry powder or particles; and the provision of a fabric or the like covering at the working surface of the above described pad.

A still further object of the invention resides in the provision of a power-operated, hand manipulated cleaning device as above stated, having a shaft therein for connection to a flexible power shaft, the shaft in the housing being provided with a worm in mesh with a worm gear rotating a shaft on which the worm gear is mounted; there being a pair of eccentrics on the worm gear shaft connected to a block on the platform, the latter having interengaging guide means with the housing and being adapted to be reciprocated by the means above stated on a surface to be cleaned, and said platform being supplied with cleaning means such as a pad or the like.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which

Fig. 1 is a view in side elevation of a device according to the present invention showing the same arranged vertically as it would be in use in washing windows, walls, etc.; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a section on line 3—3 of Fig. 2; and

Fig. 4 is a bottom plan view of the rubber pad on a reduced scale.

By way of illustrating the present invention, there is provided a housing comprising a top 10,

2

a front wall 12, a rear wall 14, and side walls 16, the bottom of the housing being open. The top wall 10 is recessed as at 18 for the provision of a boss or the like 20 journaling a shaft 22 extending into the housing and terminating in a worm 24 in mesh with a worm gear 26. The worm gear 26 is mounted on and rotates a shaft 28 supported on a pair of arms 30 disposed in and anchored in the top wall 10 by means of the V-shaped groove construction illustrated at 32, see Fig. 2. The shaft 28 carries a pair of cranks or eccentrics 34 to which are operatively connected crank arms 36 connected at their other ends to a block 38, said block in turn being secured to or integral with a sliding reciprocating platform 40.

The sliding or reciprocating platform 40 is provided with upstanding flanges 42, the outside surfaces of which are located on the angles shown in Fig. 3. These flanges terminate in inwardly directed lugs or strips 44 taking into corresponding grooves 46 in the side walls 16 of the housing, so that the platform 40 will be reciprocated on the housing and will be guided by the construction recited. Each of the flanges 42 may be provided with a hole 48 which may be alined with the block 38 so as to provide for attaching the crank arms 36 to the block as by means of screws or other fasteners 50.

Secured to the platform 40 there is a rubber-like pad 52 extending the length of the platform 40 which as will be seen in the drawings, extends fore and aft of the housing a substantial distance. The bottom of the pad 52 is provided with a series of recesses 54 which in the form shown in the drawings, assume the shape of elongated rounded grooves or troughs which are adapted to be filled with detergent material 56 so that the device may be used for dry cleaning of surfaces as well as used wet with soap, etc.

A pair of garter type fasteners or any other desired fasteners 58 are provided on the top surface of the platform 40 at the ends thereof exterior of the housing for the purpose of securing at its ends a strip of woven material 60 or the like, this material retaining the detergent in the grooves 54 but allowing a metered quantity thereof to escape continuously in small quantities.

It will be seen that this invention provides a power operated, hand manipulated wall, floor and window cleaner which is extremely efficient in operation, although simple in nature so that it cannot easily become damaged or get out of order. It can be used either for dry or wet cleaning and although power operated is extremely light in weight due to the flexible shaft connec-

tion. The housing and platform may be made of aluminum or other light weight material so that the device as constructed need weigh but a few ounces while, at the same time, attaining a new improved efficiency for the purpose stated.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed otherwise than as set forth in the claims, but what I claim is:

1. A cleaning machine comprising a housing open at one side, a reciprocating platform closing the open side, the housing having longitudinal guide grooves along opposite side walls, flanges on the platform, ribs on the flanges received in the grooves, the grooves and ribs being longitudinal of the housing and intermediate the height of the housing side walls, leaving parts of the latter free for manual gripping for manipulation of the machine, a cross shaft in the housing, a pair of arms supporting the shaft, said arms being mounted in a part of the housing, crank arms connected to the platform and eccentrically to the shaft, and means to drive the cross shaft.

2. A cleaning machine comprising a housing open at one side, a reciprocating platform closing the open side, the housing having longitudinal guide grooves along opposite side walls, flanges on the platform, ribs on the flanges received in the grooves, the grooves and ribs being longitudinal of the housing and intermediate the height of the housing side walls, leaving parts of the latter free for manual gripping for manipulation of the machine, a cross shaft in the housing, a pair of arms supporting the shaft, said arms being mounted in a part of the housing, crank arms connected to the platform and eccentrically to the shaft, and means to drive the cross shaft, a resilient shoe on the platform, said shoe having a series of parallel grooves therein, detergent material in the grooves, and a porous covering for the grooves and detergent material therein.

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