

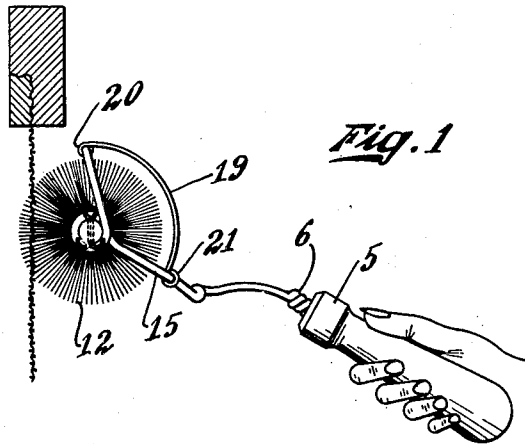
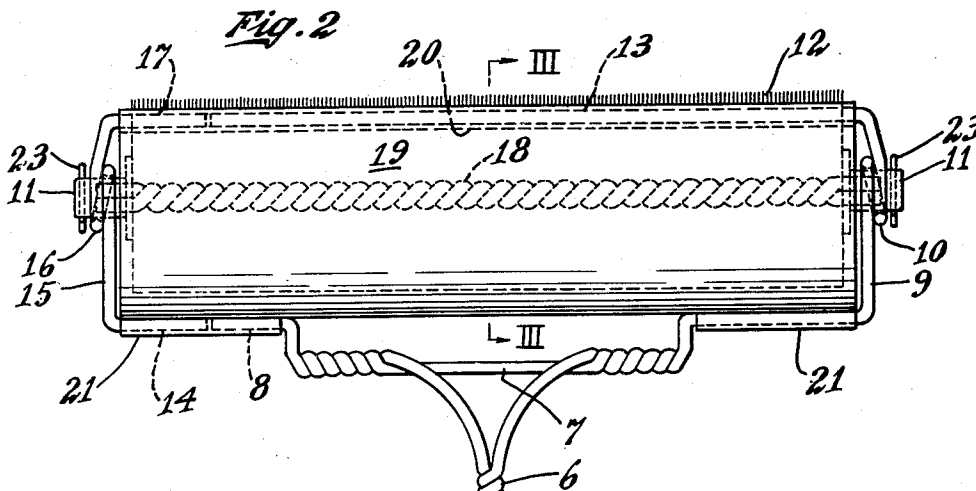
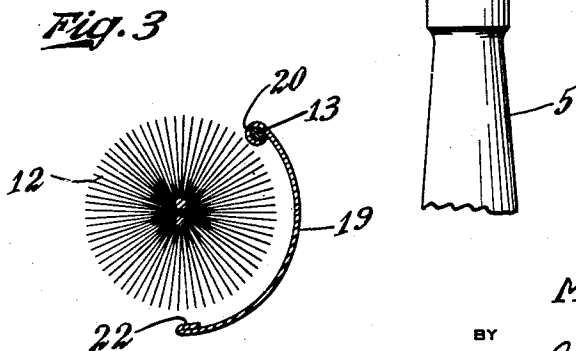
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WINDOW SCREEN CLEANING DEVICE

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WINDOW SCREEN CLEANING DEVICE

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My invention relates to a novel device for cleaning window screens and the like, and comprises a rotatable cylindrical brush suitably mounted in a handle and having its
5 radially disposed bristles or fibers adapted, by penetrating the interstices of the screen, to enable the same to be effectively cleaned as the brush is run back and forth over the screen.

10 My invention further contemplates that in order to effectively clean the screen it is often necessary that water, gasoline, or the like be used on the brush, and to this end I have equipped the brush with a suitable
15 guard which will protect the hands and garments of the user from becoming soiled by liquid thrown off from the bristles of the revolving brush as it is worked over the screen.

20 My invention further contemplates the provision of an improved type of handle and means to permit of the ready substitution of new brushes for old therein.

25 My invention further comprises the novel means for the mounting of the guard so that brushes may be readily replaced without disturbing its mounting on the handle.

30 My invention further comprises the novel details of construction and arrangements of parts, which in their preferred embodiment only are illustrated in the accompanying drawings which form a part of this specification, and in which:—

35 Fig. 1 is a view in end elevation showing the brush as used in cleaning a window screen.

Fig. 2 is a side elevation of the brush as viewed from the guard side.

40 Fig. 3 is a cross-sectional view taken on the line III—III of Fig. 2.

Similar reference numerals refer to similar parts throughout the drawings.

45 In the embodiment of my invention illustrated, I show a window screen cleaning device provided with a suitable handle 5,

though it will be understood that any type of handle, either long or short, may be provided according to the work required of the device. The handle carries a brush mounting frame which is preferably formed of bent wire but may be made of metal or other
50 suitable material in one or more parts.

As shown, the frame comprises a shank portion 6 formed of twisted wires suitably inserted into and secured in the handle 5.
55 The wires forming this shank diverge and are bent at an angle downwardly as viewed in Fig. 1, their ends being twisted to interlock them with the cross-frame member 7, one end of the wire being bent up and out horizontally towards one end of the frame to
60 form the portion 8 and the other being correspondingly bent and extended to the other end of the frame where it is bent up at right angles as at 9 and formed in a loop 10 to provide a bearing for the trunnion sleeve 11 at
65 one end of the cleaning brush 12. The wire continues beyond this loop and is bent to form the member 13 which is parallel with 7 and extends approximately to the other
70 end of the frame where it terminates even with the end 8. A demountable bent wire bearing member is provided for the other end of the brush and comprises a wire bent to form the end 14, the upright portion 15,
75 the bearing loop 16, corresponding to 10, and the end portion 17 which is inturned parallel with the portion 14 and terminates even therewith. The loop 16 receives a trunnion bearing sleeve 11 for the other end of the
80 brush.

The brush is formed of bristles or fiber arranged in cylindrical form about a center member of any suitable character, that shown
85 being the twisted wire frame 18, the ends of which are adapted to be received in and permanently secured to the trunnion sleeves 11.

I provide an arcuate guard 19 for the brush, the same having its upper edge bent from end to end thereof to form a head 20
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that surrounds the wire element 13 and receives the wire element 17. This bending of the edge of the guard is in the form of an intumed bead which stiffens it and conceals the upper transverse wire frame members.

Along its lower edge the guard is provided with an out-turned bead 21 at each end, the one at the left hand end (Fig. 3) receiving the wire elements 14 and 8 with the element 14 detachable therefrom. The beads 21 are out-turned but the metal between the beads is bent inwardly over against the inside of the guard at 22 (see Fig. 3), and serves with the beads 21 to stiffen the lower edge of the guard and to prevent the fluid thrown against the guard from dripping therefrom opposite the handle but leaving it free to pass off over the beads 21 and from the open ends of the guard which are left unobstructed.

I provide cotter keys 23 which are passed through the outer ends of the sleeves 11 beyond the bearings 10 and 16 therein, to hold the brush and frame parts assembled.

Having formed the guard and frame in the manner described, the brush with its trunnion sleeves secured thereon is inserted in the bearing 10 and then the wire frame member carrying the bearing 16 is slipped over the other trunnion sleeves 16 of the brush and the ends 14 and 17 of the detachable wire frame member are slipped into the adjacent ends of the beads 20 and 21. Cotter keys 23 are then inserted through the outer ends of the trunnion sleeves and the brush is assembled, it being noted that the sleeves adjacent to the brush are formed with a flange sufficiently large to serve as a washer but which is so small in diameter relative to the diameter of the brush that it will not interfere with the free and full penetration of the bristles through the screen interstices so as to permit them to work back and forth through such interstices as the brush is rolled over the screen. The device having been thus assembled on the frame is ready for use as follows:

The brush is dipped freely in gasoline or soapy water, and held in the position shown in Fig. 1 with the guard toward the user. It is then passed freely up and down and back and forth over the screen, the liquid being shaken out from the bristles and replaced from time to time. As the brush rotates the bristles are free to penetrate deeply through all of the interstices in the screen and as they work in and out they apply the liquid properly to the screen and thoroughly clean it. As the brush rotates freely in either direction the bristles as they leave the screen will tend to throw off the liquid but it is caught by the guard 19, which will protect the user as the liquid caught by the guard will run down and being diverted right and left by the flange 22 will fall from the ends of the guard. It is noted that the bend in the handle keeps

the hand away from the screen and out of the path of the liquid falling from the guard.

Though I have described with great particularity the details of the embodiment of the invention herein shown, it is not to be construed that I am limited thereto, as changes in arrangement and substitution of equivalents may be made by those skilled in the art without departing from the invention as defined in the appended claims.

What I claim is:—

1. A frame for carrying a freely rotatable cylindrical brush having bristles to penetrate deeply through the interstices of a screen, said frame comprising a handle and transversely disposed rigid frame members, an arcuate guard mounted on said members, a fixed and a movable end bearing for the brush on said frame, and means carried by the brush to hold said bearings assembled, said separable bearing member being adapted to engage and interlock with said guard.

2. A frame for carrying a freely rotatable cylindrical brush having bristles to penetrate deeply through the interstices of a screen, said frame comprising a handle and spaced longitudinal members connected by end brush bearing members, one of which is demountable, and an arcuate guard mounted on the longitudinal frame members, and means to hold the brush and its end bearings in assembled relationship on said handle.

3. A frame for carrying a freely rotatable cylindrical brush having bristles to penetrate deeply through the interstices of a screen, said frame comprising a handle and spaced longitudinal wire strands connected by end wire strands coiled to form brush bearings, one end strand and parts of the longitudinal strands being separable from the remainder of the frame, an arcuate guard bent along its top and bottom edges to embrace the longitudinal frame strands, and means to hold the brush bearings in assembled relationship with said guard and handle.

4. A window screen cleaning brush, comprising an elongated cylindrical brush formed by stiff radial bristles adapted to penetrate deeply through the screen interstices as the brush is rolled over the screen surface, a handle having its axis spaced a proper distance from the brush axis on the non-working side of the brush to protect the grasping hand from contact with the screen surface under treatment, means to mount said brush in said handle free to rotate in either direction about an axis normal to the axis of said handle and free of any rigid element which would prevent its bristles having an extended sliding movement in and out of the screen interstices to effectually clean same, and an arcuate metal guard substantially co-extensive in length with the brush and rigidly mounted on said handle to project therefrom

upwardly over the brush and to subtend an arc substantially less than 180°.

5. A window screen cleaning device, comprising a handle having a transversely disposed bent wire frame mounted thereon with separable end sections, an elongated cylindrical bristle brush mounted to rotate freely in said frame ends, an arcuate metal guard having its sides rolled to receive said wire frame end members, and a brush axis having end bearing elements adapted to detachably hold the frame ends assembled in said guard.

In testimony whereof I affix my signature.

MABEL W. GRAY.

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