Dec. 5, 1950 J. B. SPARKMAN 2,532,429

WINDSHIELD CLEANING DEVICE

Filed Aug. 14, 1947

Fig. 1

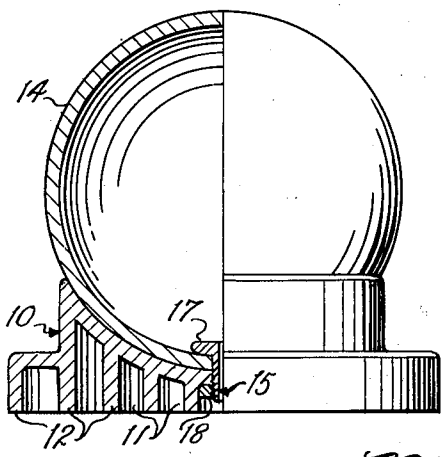


Fig. 4

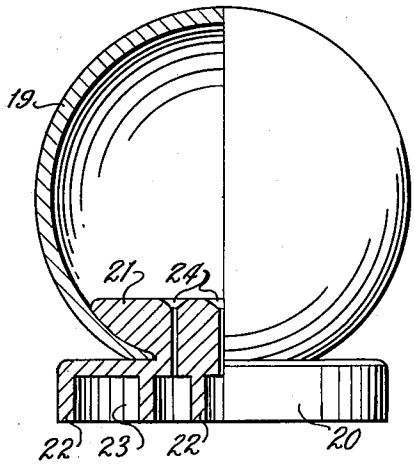


Fig. 2

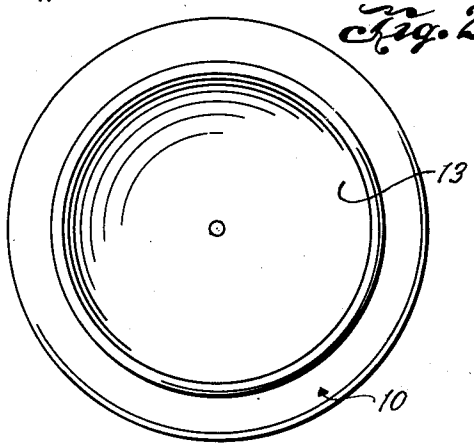


Fig. 5

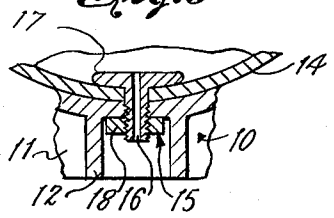
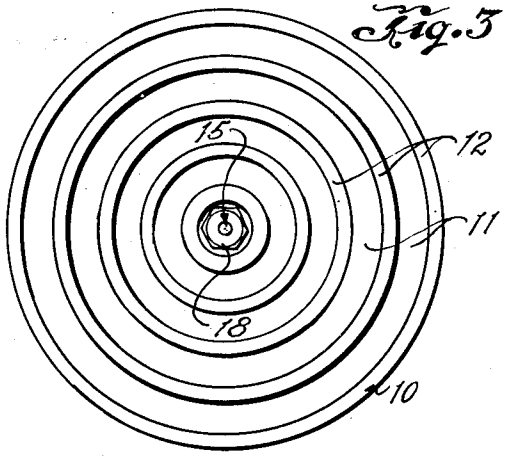


Fig. 3



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Patented Dec. 5, 1950 2,532,429

UNITED STATES PATENT OFFICE

2,532,429

WINDSHIELD CLEANING DEVICE

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Application August 14, 1947, Serial No. 768,569

1 Claim. (Cl. 15—136)

1

This invention relates to a device for removing extraneous matter from surfaces and it has particular reference to a plate glass and windshield cleaning device.

The principal object of the invention is to provide a work engaging head consisting preferably of a substantially circular body which may be made of wood, plastic, hard rubber or other material which will not scratch or mar the surface to which it is applied. The work engaging surface of the body is provided with a plurality of concentric rings which serve the dual purpose of loosening extraneous matter clinging to the glass or other surface and for retaining for longer periods, water or other liquid cleaning agent against the surface. The body is equipped to receive a rubber bulb into which the cleaning liquid is drawn by suction and expelled through orifices in the body against the surface to be cleaned.

Another object of the invention is to provide a device for applying water or other liquid onto an automobile windshield while the device is manipulated thereover to dislodge obstinate extraneous substances, such as insects, which are difficult to remove with a cloth or chamois.

With the foregoing objects in view, the invention has further reference to certain features of accomplishment which will become apparent as the description proceeds, taken in connection with the accompanying drawing wherein:

Figure 1 is a cut-away elevational view of a device constructed according to the invention.

Figure 2 is a top plan view of the work engaging head.

Figure 3 is a bottom plan view of the work engaging head.

Figure 4 is a view similar to Figure 1 but showing a slightly modified form of the invention, and

Figure 5 is a fragmentary detail view of the manner in which the bulb of one form of the invention is attached to the work engaging body.

Continuing with a more detailed description of the drawing, reference numeral 10 denotes a substantially circular work performing body, preferably made of a material such as plastic, hard rubber, wood or the like which will not scratch or mar a glass or other surfaces. The work engaging surface of the body 10 is formed with a plurality of annular, concentric grooves 11, defined by concentric rings 12. These grooves serve to retain quantities of water or other cleaning solution in intimate contact with the surface being cleaned while the rings 12 exert a loosening force against extraneous hard substances on the surface as the device is manipulated thereover.

2

The top of the body 10 has a concave recess 13 therein which is adapted to receive a rubber ball or bulb 14, the surface of the latter conforming snugly with the wall of the recess. The bulb 14 is secured to the body 10 by means of a bolt 15, having a longitudinal passage 16 therethrough for discharging liquid from the bulb onto the surface being cleaned. The bolt 15 has a large head 17 which is forced through the hole in the bulb and this head is of large diameter so that it will not readily become dislodged from the bulb. The opposite end of the bolt 15 is threaded and extends into the circular space in the body 10 defined by the smallest concentric ring, and a nut 18 is threaded thereon, thus to secure the bulb to the body 10.

To clean a surface such as an automobile windshield, plate glass display window or the like, the described device is submerged in water with the bulb collapsed. As the bulb expands, the liquid will be drawn into the bulb by suction and the work engaging face of the body 10 is applied flush against the surface being cleaned. As the device is moved over the surface under a predetermined amount of pressure, the bulb 14 is squeezed to expel small quantities of water which will aid in expunging obstinate foreign substances as the same is loosened by the action of the rings 12 on the body 10.

In Figure 4 is shown a slightly modified form of the invention in which the bulb 19 is attached to the body 20 through the medium of an undercut boss 21 over which an opening in the bulb 19 is expanded. As in the structure earlier described, the body 20 has a plurality of annular, concentric rings 22 formed on its work engaging surface, defining annular grooves 23 adapted to receive liquid expelled from the bulb 19 through a series of passages 24 in the body.

Operation of the device last described above is the same as set forth in the form of the invention illustrated in Figures 1, 2, 3 and 5.

Manifestly, the construction as shown and described is capable of some modification and such modification as may be construed to fall within the scope and meaning of the appended claim is also considered to be within the spirit and intent of the invention.

What is claimed is:

A windshield cleaning device comprising a substantially circular body of inelastic material having a work engaging surface composed of con-

centric rings with spaces therebetween and effective to dislodge extraneous material from a plane surface over which said device is moved, a circular and peripherally undercut boss formed integrally on said body opposite said work engaging surface having fluid passages therethrough communicating with the spaces between said concentric rings and a collapsible rubber bulb having an opening receiving said boss and effective to forcibly expel through said fluid passages liquid drawn thereinto through said fluid passages.

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