March 7, 1950 J. F. SMUL 2,499,933

SURFACE CLEANING ATTACHMENT

Filed Aug. 4, 1949

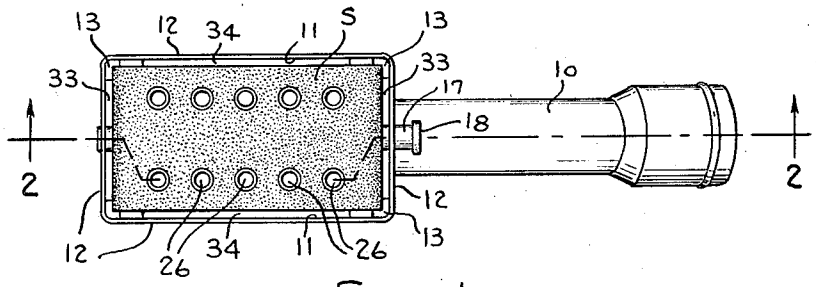


FIG. 1

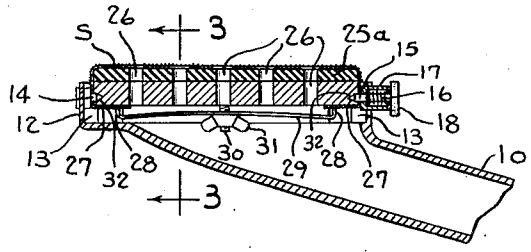


FIG. 2

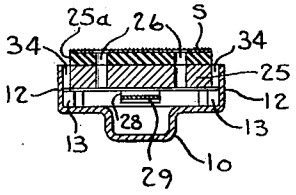


FIG. 3

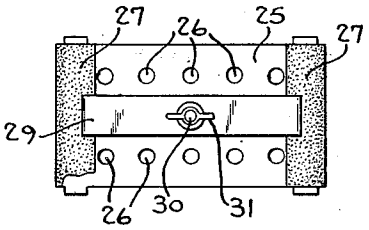


FIG. 4

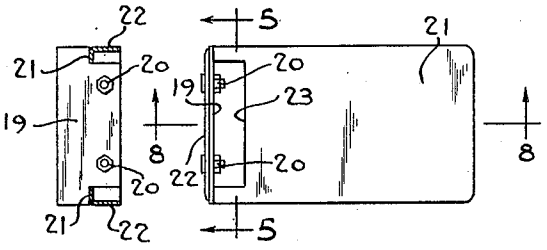


FIG. 5

FIG 6

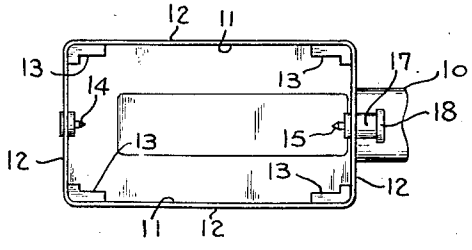


FIG. 7

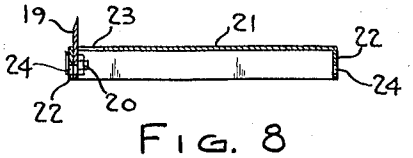


FIG. 8

INVENTOR.
Joseph F. Smul
BY
Charles A. French
Attys.

Patented Mar. 7, 1950 2,499,933

UNITED STATES PATENT OFFICE

2,499,933

SURFACE CLEANING ATTACHMENT

Joseph F. Smul, Milwaukee, Wis.

Application August 4, 1949, Serial No. 108,505

3 Claims. (Cl. 51—187)

1

The invention relates to surface removing attachments of the type for removing paint, varnish, or paper from walls or floors, and for smoothing such surfaces or plaster wall surfaces, and more particularly to attachments of the above type as adjuncts of a vacuum cleaner.

One of the objects of the invention is to provide a new and improved form of cleaner nozzle associated with interchangeable members for cleaning or smoothing wall or floor surfaces by abrasives or scrapers.

The invention further comprises a new and improved cleaning attachment having an abrasive pad so associated with the cleaner head that the removed material is carried away from around all sides of the pad as well as through its surface, so that the abrasive surface is prevented from being clogged up.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a plan view of an attachment embodying the invention;

Fig. 2 is a detailed vertical sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a detailed vertical sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a plan view of my abrasive pad;

Fig. 5 is a detailed vertical sectional view taken on the line 5—5 of Fig. 6;

Fig. 6 is a plan view of a scraper member;

Fig. 7 is a bottom plan view of the cleaner head, parts being broken away;

Fig. 8 is a detailed vertical sectional view taken on the line 8—8 of Fig. 6.

Referring to the drawings, the cleaner head is in the form of a suction cleaner nozzle 10 whose mouth 11 is formed by metal walls 12 forming a rectangle with corner seats 13 below its edge to form rests for the tools. One end of the mouth has a pin 14 mounted centrally thereof below its edge, and the opposite end carries a pin 15 slidably mounted centrally thereof below its edge. The pin 15 is yieldingly urged inward by a spring 16 interposed between it and a fixed inwardly flanged cylinder 17 secured to the mouth and carries a button 18 by which it may be moved outwardly against the tension of said spring.

Referring to Figs. 5, 6, and 8, one of the attachments or cleaning tools comprises a scraper formed by a knife 19 secured by bolts 20 to one end of a rectangular base plate 21 having depending sides 22 and an opening 23 in its top, the ends having oppositely disposed openings 24 for the reception of the pins 14 and 15 when the base plate 21 is inserted in the mouth with the edges of the flanges resting on the corner seats 13, the pins firmly holding the tool in the open end of the mouth, and when so mounted, as paint, varnish, dirt, or other foreign matter is scraped off of the surface being treated by the knife 19, it is carried away from the knife through the opening 23 in its base into the nozzle 10.

2

Referring to Figs. 1 to 4, the sanding or abrasive tool or attachment comprises a base member 25 of wood or other suitable material provided with a series of spaced openings 26. The base member 25 may have a rubber facing 25a secured thereto. A sheet of sand paper S or other abrasive cloth is cut to cover the face of member 25 and extend down over the ends thereof and have its ends 27 extend over a portion of the base member against which they are clamped by the feet 28 of a clamping bar of spring metal 29 whose central portion is anchored to the base 25 by a bolt 30 and a wing nut 31, the bolt extending through an opening in said bar. The facing 25a and the sheet S have openings alined with openings 26. The base has openings 32 at its ends for engagement by the pins 14 and 15, and when inserted in the mouth of the nozzle, rests on the corner seats 13 and is held in position by the pins, but as the area of base 25 is smaller than the mouth opening, openings 33 and 34 are formed between the ends and sides of attachment and the ends and sides of the mouth with the result that not only is dust and removed material carried off by suction through the openings 26 but also through the openings 33 and 34, and it has been found that this action prevents the abrasive material from clogging up or glazing quickly and that it may be used effectively for a considerable period of time. Also since all areas of the removing surface are surrounded by suction zones, the removed material is prevented from depositing upon the surface being treated.

I desire it to be understood that this invention is not to be limited to any particular form or

arrangement of parts except in so far as such limitations are included in the claims.

What I claim as my invention is:

1. A surface cleaning device comprising a suction nozzle having a polygonal mouth provided with corner rests, pins extending into said mouth from opposite ends, one of said pins being retractible, and a tool having a base portion resting on said corner rests and provided with openings engaged by said pins to hold the tool at the entrance to said mouth.

2. In a surface cleaning device, the combination of a suction nozzle having a mouth, a member mounted in said mouth in spaced relation to the sides of the mouth to provide marginal

suction openings, said member being provided with spaced apertures, and a similarly apertured abrasive facing secured to said member.

3. In a surface cleaning device, the combination of a suction nozzle having a polygonal mouth provided with corner rests, a polygonal member of smaller area than the mouth mounted therein on said rests and forming marginal suction openings about said member, said member being provided with spaced apertures, and a similarly apertured sheet of abrasive material clamped to the front face of said member.

JOSEPH F. SMUL.

No references cited.