Aug. 30, 1966 M. ROSSNAN 3,268,942

SUCTION CLEANING NOZZLE

Filed Jan. 6, 1965

Fig. 1

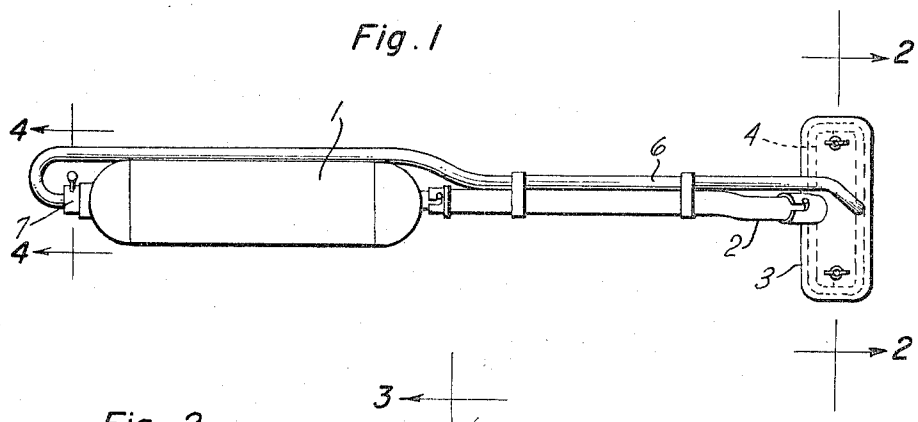


Fig. 2

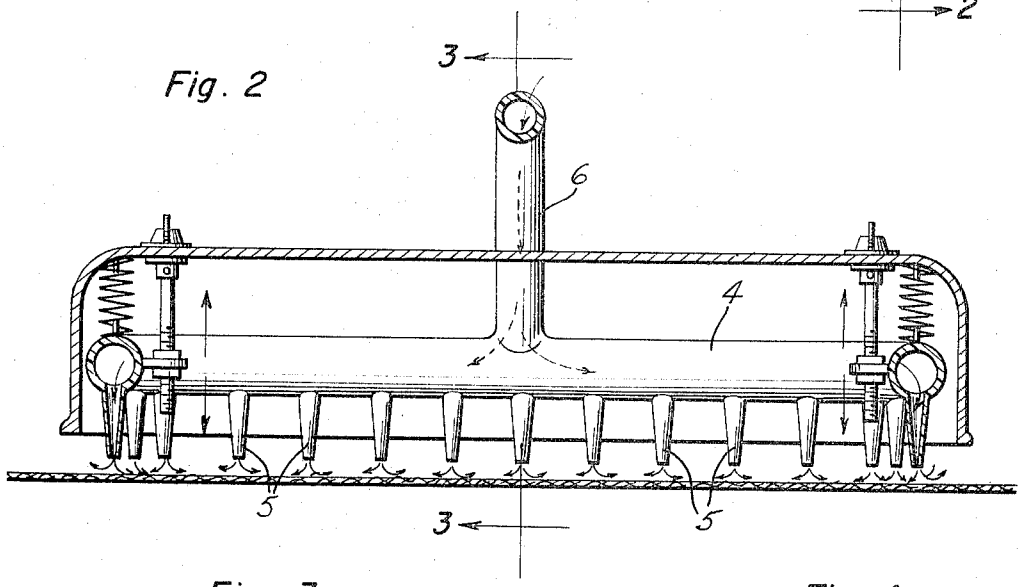


Fig. 3

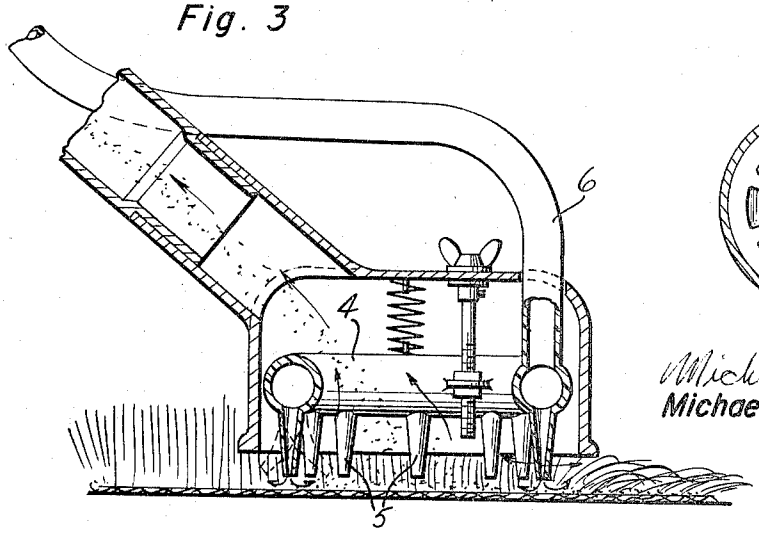
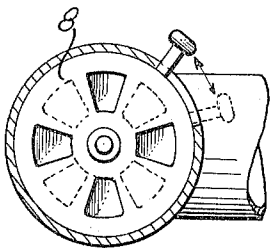


Fig. 4



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INVENTOR

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3,268,942

SUCTION CLEANING NOZZLE

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5 Claims. (Cl. 15—346)

My present invention relates to improvements in suction cleaning machines, and one object of the invention is the utilization of the exhaust air from the machine to comb and set up the pile during the suction action and to loosen the dust and dirt adjacent to the base or web of the pile and the web of the floor covering for the suction action to suck the loosened dust and dirt and with the dust and dirt initially removed from the floor covering, so that the pile of the floor covering such as wall-to-wall carpets and rugs are more thoroughly cleaned than when only brushing and suction are employed.

In order that the invention may be fully understood and its numerous advantages appreciated, attention is invited to the accompanying drawings, in which:

FIGURE 1 is a top plan view of a suction cleaning machine, showing my attachment connected thereto.

FIGURE 2 is a vertical section on line 2—2 of FIGURE 1.

FIGURE 3 is a transverse view taken on the line 3—3 of FIGURE 3.

FIGURE 4 is a cross-section taken on line 4—4 of FIGURE 1.

Referring to the drawings, the numeral 1 designates the main machine, which as normal carries a motor, not shown, a flexible hose or conduit 2, and a suction head or nozzle 3.

Mounted within this head is an elliptical tube 4, carrying a plurality of depending finger-like air directing tubes 5 that act as combs, while connected to the elliptical tube 4 is a flexible tube 6, which is connected to the exhaust 7 of the machine.

Thus by this arrangement, as the suction head is moved upon the floor covering, of the pile type, the suction action, as usual sucks the loose surface dirt from the pile, while the tubes 5 comb and set up the pile adjacent to the web within the suction head, and loosen the web dirt and blows it into the suction path, so that the exhaust from the machine is used to augment the suction action and thus render a better cleaning of the floor covering.

To regulate the active exhaust flow, an adjustable valve 8 is employed which is graduated to permit various amounts of the exhaust air to the depending finger-like combing tubes 5.

From the foregoing description taken with the drawings, it is apparent that by thus utilizing the exhaust from the suction cleaning machine to loosen the dust and dirt that remains after normal suction cleaning, that a very useful device or attachment for suction cleaning machines is here presented.

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What I claim as new is:

1. The combination with a motor operated suction cleaning machine having a suction inlet and an exhaust outlet, a suction head having an air inlet and means attached to the exhaust outlet of the machine and positioned within the suction head to comb the pile of the floor covering during the suction action in the head and to comb and lift the pile and free the dust and dirt adjacent to the web of the floor covering for action upon it by the air suction within the suction head, said means including a conduit adjustably positioned within said head and substantially conforming to the contour of said suction head air inlet; said conduit having a plurality of depending closely spaced, flexible, hollow tubes depending therefrom and projecting below the plane formed by the suction head air inlet, said plurality of open-ended tubes being arranged to act as combs and to deliver air under pressure into the pile.

2. The apparatus of claim 1 with means to regulate the volume of exhaust air passing through the conduit.

3. A floor tool attachment for connection to a suction cleaning machine having a suction inlet and an exhaust outlet, said attachment including a hollow suction head having a suction hose connection adapted for connection to the suction inlet, an exhaust connection adapted for connection to said exhaust outlet and a suction opening, a conduit adjustably mounted within the hollow suction head conforming to the contour of the suction opening and in communication with the exhaust connection and a plurality of depending combing tubes carried by and in communication with the conduit, said combining tubes depending below said suction opening to inject exhaust air at the base of a floor covering whereby the tubes comb the pile and face surface of the floor covering and inject air under pressure adjacent the web of said floor covering.

4. An attachment as claimed in claim 3 wherein the combing tubes are flexible.

5. The attachment as claimed in claim 3 wherein said conduit is vertically adjustable.

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