

Feb. 12, 1946.

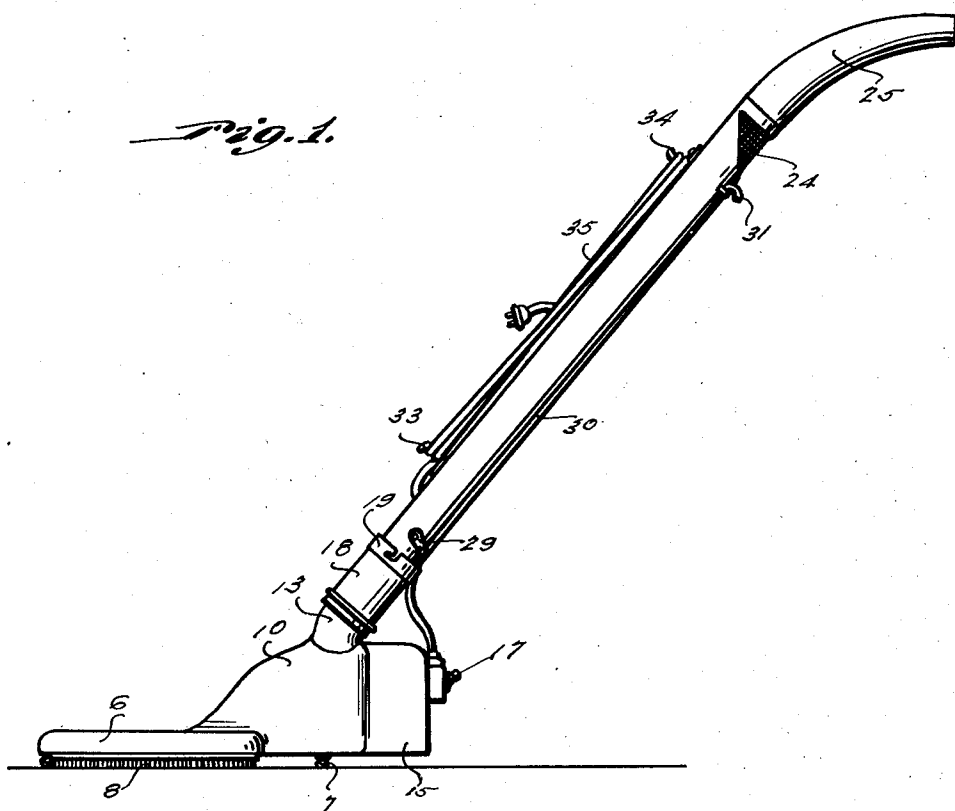
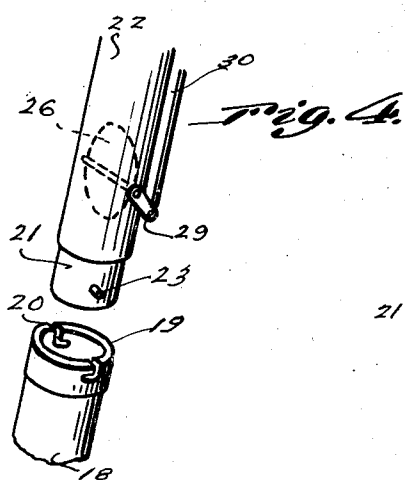
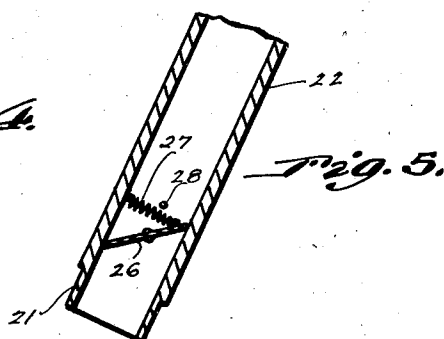
I. McNEAL

2,394,798

VACUUM-TYPE DUSTING MOP

Filed April 18, 1944

2 Sheets-Sheet 1



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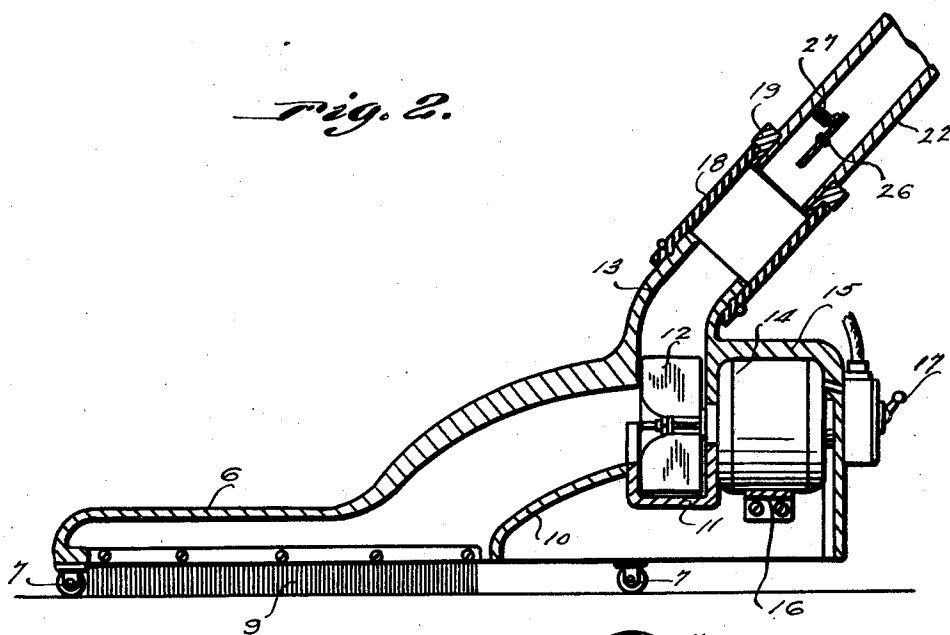
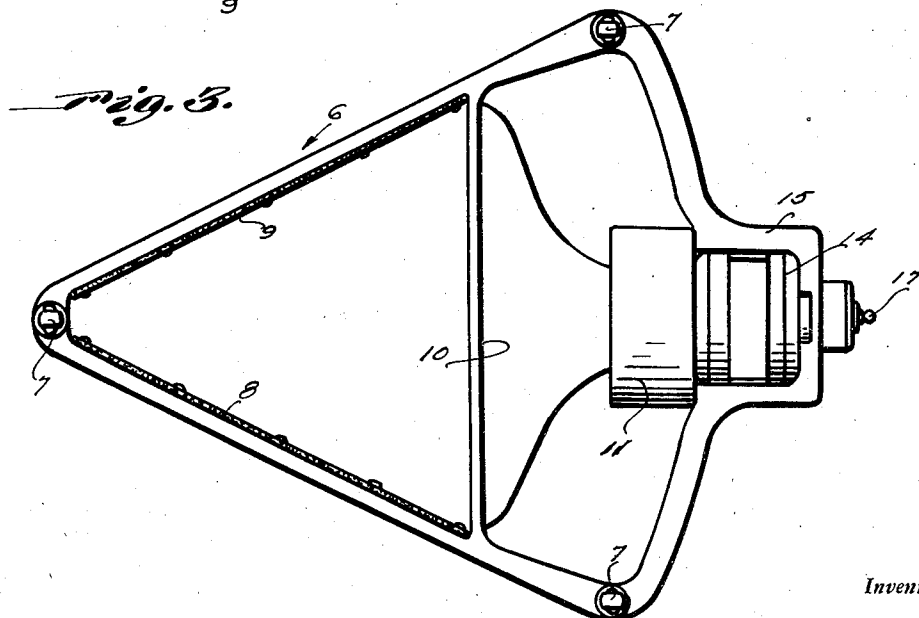
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UNITED STATES PATENT OFFICE

2,394,798

VACUUM-TYPE DUSTING MOP

Irene McNeal, Newport, Vt.

Application April 18, 1944, Serial No. 531,600

2 Claims. (Cl. 15-16)

This invention relates to a novel and improved lightweight readily shiftable and maneuverable dusting mop for domestic use, the same being of the so-called "vacuum type" and including suction means and dust collecting and disposal means.

More specifically, I have evolved and produced a simple and economical dust-mop characterized by a limited suction principle rendering the structure apt and suitable for light work dust-mopping floors. It is not intended for heavy rugs and, therefor, the suction characteristics can be quite limited, though it may be possible for use on scatter rugs, it is primarily a quickly maneuverable dust pick-up mop for simple light-work accomplishments.

In carrying out the principles of the invention I have adopted for use a simple and economical electric dust-mop, the same characterized by a triangular or three-cornered flattened nozzle head of sufficiently low vertical height as to be small and flat enough to get under radiators and low beds and furniture, the same being adapted to pick up lint, dust, and perhaps a small amount of grit, something more than the ordinary non-suction dust mop will do. The collected extraneous matter and dirt is seized and picked up by the quick maneuverable caster supported nozzle head and carried up and deposited in a twistable-type hollow handle, the latter being quickly detachable so that the contents can be emptied into a paper bag or an incinerator.

The form of the construction devised for accomplishing my ends has in mind the provision of a hollow handle with a screened or equivalent filter vent, said handle being suitably valved for trapping the dust accumulated, and having detachable connection with a flexible joint, that is, a suitable flexible coupling existing between the handle and the neck on the head of the vacuum cleaner unit.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the same:

Figure 1 is a side elevational view of a dust-mop of an electric motor suction-equipped type constructed in accordance with the principles of the instant invention.

Figure 2 is an enlarged view partly in section and partly in elevation detailing the construc-

tion of the head and motor compartment and adjacent portions of the handle structure.

Figure 3 is a bottom plan view of the triangular or triple cornered head.

Figure 4 is a perspective view of a fragmentary character, showing the detachable mount and adapter for the hollow handle.

Figure 5 is a sectional view through the lower valved portion of the hollow handle.

Referring now to the drawings by distinguishing reference numerals and particularly to Figure 3, it will be observed that the head, as a unit, is denoted by the numeral 6 and comprises a casting of general triangular form. At the three corners on the bottom thereof, which bottom is open, I provide self-adapting swivelling casters 7. Attached to and suspended from the marginal portions are suitable bristle or equivalent brushes 8 and 9, these being disposed in converging toward the apex end of the head. The suction nozzle at the median portion is denoted by the numeral 10 and includes a duct leading into an adapter shield 11 for the fan 12. The latter is located at the right-hand end of the nozzle duct and projects into the continuing duct which forms the upstanding handle accommodation neck 13 (see Figure 2). The fan is driven by a suitable motor 14 in an enlarged or accommodation portion 15 in the head construction, the motor being supported on an appropriate anchor or bracket 16. The numeral 17 designates a foot-tripped electric switch for turning the motor "off" and "on."

Attached suitably to the neck 13 is an appropriate flexible coupling 18 which we can conveniently refer to as an adapter coupling. This is permanently secured in any suitable way to the neck and at its opposite end it is provided with a collar 19 which, as shown in Figure 4 is provided with bayonet slots 20, said collar receiving the lower reduced end 21 of the tubular hollow handle 22 and said reduced portion being provided with pins 23 coacting detachably with a bayonet slot. The upper end of the handle is provided with an air vent having a covering screen 24 of appropriate mesh for dust filtering and air passage purposes. Also, on the upper end is a suitable hand-grip 25.

A disk-like damper-type valve 26 is mounted in the lower portion of the handle just above the coupling means and this valve is pulled to normally open position by a contraction spring 27, there being provided a stop pin 28 to limit the swing of the valve to the half-open position seen in Figure 2. The axle means on the valve is pro-

vided with a crank 29 with which an operating rod 30 is connected. This is a push-pull operating member and provided with an appropriate finger hook-up operating element 31 as shown in Figure 2. It is thus possible for the user to open and close the valve, as desired, against the tension of the spring.

Suitable accommodation hooks 33 and 34 are mounted on the handle to accommodate the cord 35 as is customarily done on regular or conventional type vacuum cleaners.

Ordinary mops are such that it becomes necessary for the user to shake the same every so often out of drafty windows and the like and this is attended by objectionable results of many and varied kinds. However, it is not the purpose of the instant description to dwell upon commercial aspects or the objections and advantages of the old mop as compared to the electric dust-mop herein shown and described.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in the shape, size and arrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

Having described the invention, what is claimed as new is:

1. As a component part of a structure of the class described, a hollow dust collecting and disposal handle having a hand-grip at its upper end and flexible attaching means at its lower end, a valve disk mounted and confined for oscillation in said handle, a crank connected to and for operating said valve disk, said crank being located on the exterior of said handle, a push-pull rod for operating said crank, said rod being slidably mounted on said handle, said handle being provided adjacent said hand-grip with a vent, and said vent being covered by a filter-screen.

2. A handle assembly for use in association with a vacuum-type dusting mop of the class described comprising an elongated tubular and rigid handle, a hand-grip secured to the upper end thereof and closing said upper end, the area of the handle adjacent said hand grip being provided with an opening constituting a vent, a filtering screen fitted into said vent, the lower end of said handle being reduced to provide a coupling neck, said neck being provided with diametrically opposite assembling and retaining pins, a normally open spring-held dust chamber closing and trapping valve mounted in said handle, and an operating rod slidably mounted on the exterior of the handle connected at its lower end with said valve for closing same against the tension of the spring, the upper actuating end of the rod being located within convenient reach of the hand grip.

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