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BLOWING NOZZLE FOR SUCTION CLEANERS

Filed Oct. 24, 1928

Fig. 1.

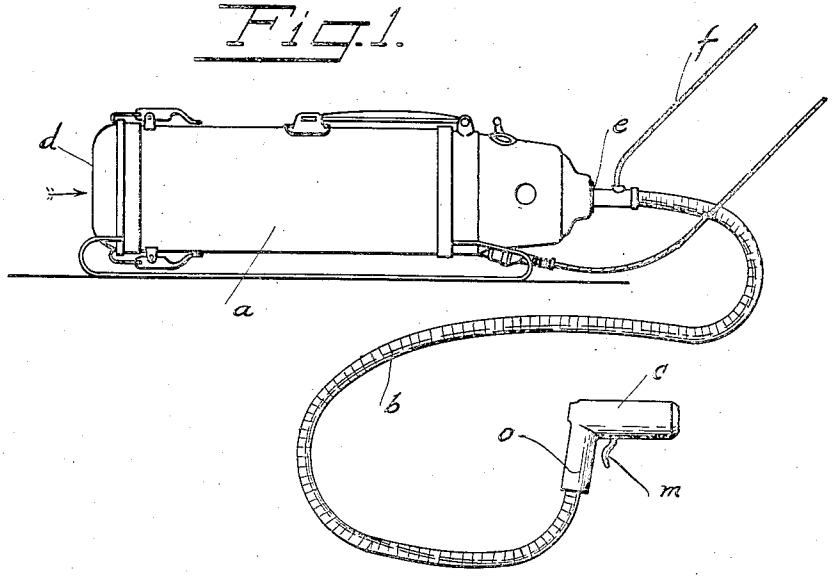
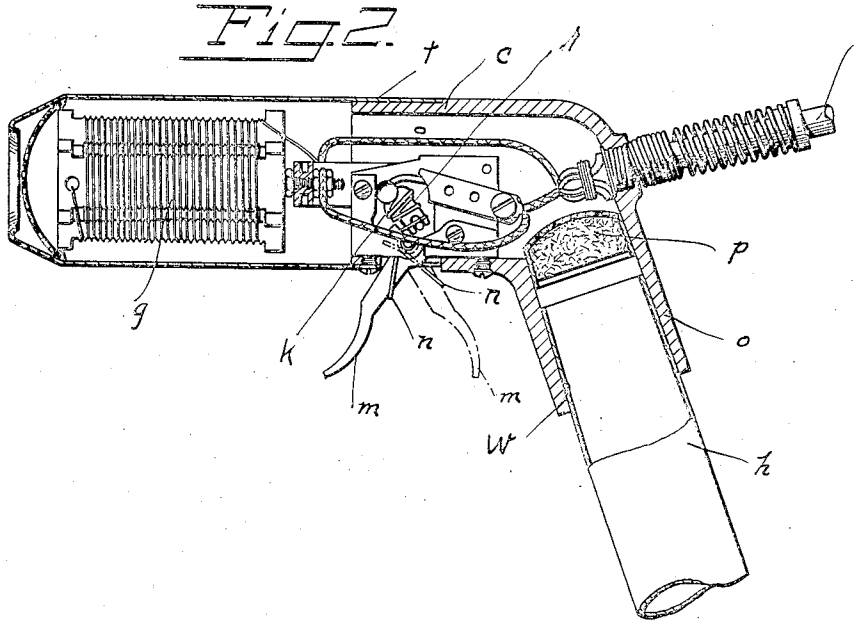


Fig. 2.



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BLOWING NOZZLE FOR SUCTION CLEANERS

Application filed October 24, 1928, Serial No. 314,574, and in Sweden May 19, 1928.

The present invention relates to a blowing nozzle for suction cleaners comprising an electric heating resistance and a normally open hand-operated switch device, the switch device having means constantly operative to cut off the electric current. The preferred embodiment of the invention includes a coupling lever on the switch and an associated spring adapted to automatically open the switch.

The air stream passing through the blowing nozzle may be regulated, when desired, by using an adjustable outlet damper of any well-known construction.

The invention contemplates filtering out such dust as may have passed through the suction cleaner dust bag, by positioning a filter pad in the air stream, preferably in the nozzle inlet.

In addition, the nozzle is constructed to cooperate with, and utilize part of the vacuum cleaner hose pipe as a handle, thus preventing disconnection of the nozzle from the hose pipe when in use.

Other features of the invention will be more clearly described in connection with the embodiments shown in the attached drawings, wherein:

Fig. 1 is a view of a suction cleaner provided with the improved blowing nozzle, and Fig. 2 is a sectional view of the nozzle, showing the relative arrangement of the heating coil, switch, and filter pad.

In the figures, "*a*" denotes a suction cleaner adapted to be used for blowing purposes, the motor, fan, and dust bag being arranged within the cleaner housing. On rotation of the fan, air is sucked in through suction opening "*d*" and flows out through hose pipe "*b*" inserted in outlet opening "*e*". The improved blowing nozzle "*c*" is connected to the free end of the hose pipe "*b*".

In the embodiment shown in Fig. 1 the nozzle "*c*" is rigidly attached to the pipe "*b*", the electric wire "*f*", for supplying current to heating resistance "*d*" positioned in the nozzle being preferably placed within the pipe "*b*".

In the embodiment shown in Fig. 2 the nozzle "*c*" is detachably secured to the end of a hose pipe "*h*", connected to the vacuum cleaner in a similar manner to the connection of pipe "*b*". In this embodiment, the electric wire "*j*" is not led through the pipe, but is inserted through the nozzle wall. Within the nozzle is a switch "*k*" controlling the flow of current to the heating resistance "*g*"; connected to the switch is a coupling lever "*m*", spring pressed by spring "*r*" to normally keep the switch open.

At the rear end of main portion "*t*" of the nozzle is a connection portion "*o*" for connecting to the pipe "*h*". Connection piece "*o*" has a tapered bore "*w*" and the end of hose "*h*" is correspondingly tapered to form a tight detachable fit by jamming the tapered end of the hose into the tapered bore. This connection piece and the adjacent pipe portion serve as a handle for the nozzle during use, for example, when used for hair drying purposes. If the suction cleaner is running and the nozzle is to be used, the connection piece "*o*" and the adjacent pipe section are grasped by the hand, the lever "*m*" being pulled to the position shown in dotted lines in Fig. 2 and held in that position to close the switch. As soon as the operator releases the nozzle or releases the switch lever, the spring "*n*" forces the lever to the full line position, thus cutting off the current supply to the resistance "*g*".

A filter, such as a cotton pad "*p*", is provided in the blower line, preferably in the connection piece "*o*", at the end of pipe "*h*", to filter out such dust as may have passed through the vacuum cleaner dust bag. When desired, the temperature of the air passing through the nozzle may be regulated by using an adjustable damper (not shown in the drawing) of any well-known type, preferably arranged at the front end of the nozzle.

The substantially right-angled arrangement of the connection piece to the nozzle body permits use of the connection piece and the adjacent pipe portion as a handle for the nozzle, thus avoiding loosening and uncoupling of the pipe from the nozzle such as is liable to occur when using blowing nozzles having a separate operating handle.

We claim:

1. In a blowing nozzle for suction cleaners, a body portion containing an electrical heating resistance and a switch therefor, and a connection piece angularly disposed to said body portion for detachably receiving a hose, said connection piece and the adjacent hose portion forming a handle for said body portion.

2. In a blowing nozzle for suction cleaners, a body portion containing an electrical heating resistance, a switch therefor, means normally holding said switch in open position, manually operated means for closing said switch against the resistance of said first means, and a connection piece angularly disposed to said body portion for detachably receiving a hose, said connection piece and the adjacent hose portion forming a handle for said body portion.

3. A nozzle comprising a casing, said casing including a main portion and a connection portion, said connection portion extending at an angle from the main portion, said connection portion being adapted to be connected to an air hose, said main portion having an air outlet remote from said connection portion, an electric heater in said casing adjacent said outlet, a switch in said casing between said heater and said connection portion, means normally holding said switch in open position, manually operated means for closing said switch against the resistance of the first-mentioned means and a filter pad of fibrous material arranged in said connection portion.

4. In combination, a nozzle comprising a casing, said casing including a main portion and a connection portion, said connection portion extending at an angle from the main portion, said connection portion having a tapered bore, said main portion having an air outlet remote from said connection portion, an electric heater in said casing, a switch in said casing, means normally holding said switch in open position, a lever for closing said switch against the resistance of said means and a hose having a tapered end insertable into said tapered bore, said lever, said connection portion and the adjacent end of the hose being arranged to permit a hand to simultaneously grasp the connection portion and the adjacent end of the hose and move the lever.

In testimony whereof we affix our signatures.

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