Dec. 23, 1930. E. J. MULLER 1,785,873

VACUUM CLEANER

Filed Nov. 29, 1929

Fig. 1.

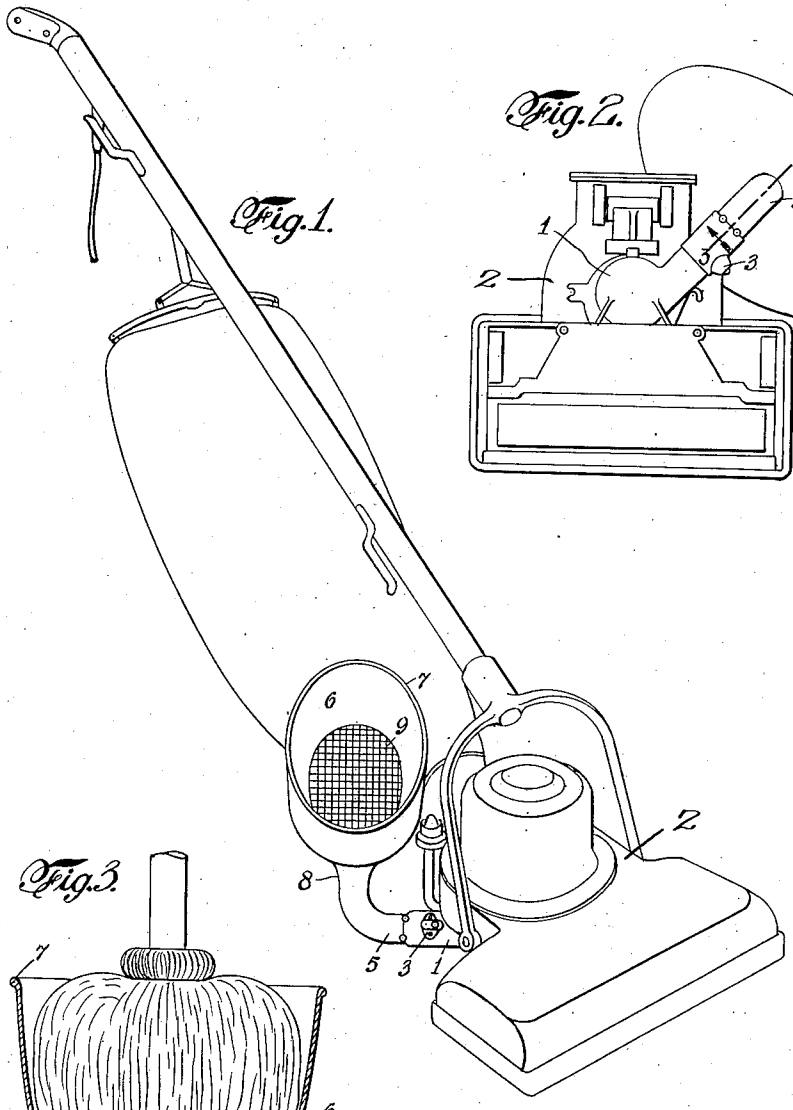
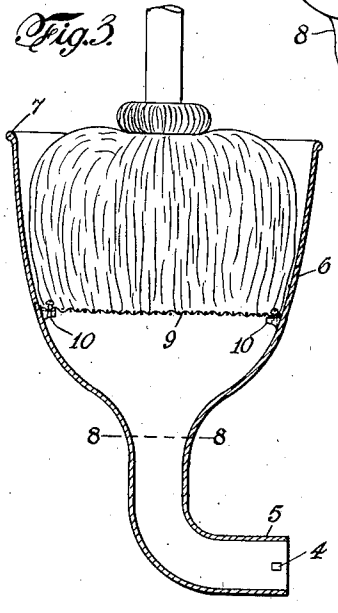


Fig. 2.

Fig. 3.



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VACUUM CLEANER

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The present invention has as its object the provision of a novel and efficient vacuum cleaning device for dry mops, dust cloths, or the like.

It is common practice to use for cleaning purposes fibrous mops treated with oil or chemicals to enhance their dust-gathering ability. After a short period of use the dust and other material gathered by the mop strings must periodically be removed. The primary object of this invention is to provide a device which will effectively remove the dust from the mop and deposit it in the dust-bag or receptacle of the vacuum cleaner without permitting any of the dust to escape into the room during the cleaning operation.

Another object of the invention is to provide a cleaner of this character which may be connected with any suitable source of suction, such as the ordinary portable vacuum cleaner or the outlet of a so-called "built-in" vacuum cleaning system.

Inasmuch as the suction in vacuum cleaning devices depends on the production of a partial vacuum, and the production of a partial vacuum depends not only upon the operation of the fan but also upon the limitation of the air supply to the fan chamber, the apparatus herein described is designed to provide a suitable receptacle in which a mop or other article to be cleaned may be placed, so constructed as to cause such article to close, or partially close, the air intake whereby the air supply to the fan chamber is sufficiently limited to create a suction of air through the material which will remove the dirt.

In the drawings—

Figure 1 shows one embodiment of my invention in the form of an attachment on a popular style electric vacuum cleaner; Figure 2 is a bottom view of the cleaner showing the method of detachably mounting the device thereon by means of the hose connection supplied with the cleaner; Figure 3 is a latitudinal cross-sectional view. Similar reference numerals in the several figures indicate similar parts.

Referring in detail to the drawings, I have illustrated an electric vacuum cleaner having a hose receiving attachment 1 detachably connected to the fan chamber 2 and having a spring catch 3 which engages with a slot or bayonet joint 4 in the tube 5 of the mop cleaner attachment and serving to maintain the latter in an upright position and prevent its accidental disengagement.

The body 6 of the mop cleaner has a substantially elliptical rim 7. The major and minor axes of this ellipse decrease as they are measured at successive horizontal cross-sections of the body in the direction of the neck 8, the major axis decreasing more rapidly than the minor axis, so that at 8 the horizontal cross-section is circular. It has been found that this formation provides an opening of decreasing area which will receive a greater variety of mops of different sizes and shapes than other possible forms. The important feature of this structure is that when a mop is inserted therein as far as it will go it completely fills the opening. When the opening is thus closed, the supply of air is restricted and any air entering the suction chamber of the cleaner through my device must be drawn through the strings, cloth strips or other fibrous material comprising the mop. This restriction of the air supply by complete closure of the opening likewise increases the suction and effects the removal of the dust or dirt from the mop.

In the present embodiment I have shown a screen 9 positioned above the throat of the receptacle which is held in position by screws engaging with lugs 10 formed in or fastened to the walls of the body. This screen provides a surface against which to rest the fibers of the mop and to prevent its ends from becoming wedged into the throat, which would hinder rather than help the removal of dirt particles. It further serves to cause the mop strings to bulge outwardly and press against the side walls of the receptacle and as the screen possesses a rough surface it further serves as a support against which the mop strings may be rubbed to promote the removal of the foreign particles adhering to them.

It is to be noted that certain changes of

form and structures may be made without departing from the spirit of the invention.

I claim:

1. A device of the class described comprising a rigid body, open at its top and having an elliptical rim and converging side walls in the successively lower cross sections of which the major axis of the ellipse decreases more rapidly than the minor axis to a point where they are equal and terminating in an integral tubular portion, and porous mop supporting means in the elliptical portion of said body.

2. A mop-cleaning attachment for vacuum cleaning devices comprising a receptacle, open at its top and substantially elliptical in horizontal cross section at its upper portion, said receptacle gradually decreasing downward in cross-sectional area and approaching tubular form in cross section, an integral tubular portion on the lower end of said receptacle adapted to connect with vacuum cleaning devices, and porous means in the elliptical portion of said receptacle for supporting a mop.

In testimony whereof, I have affixed my signature to this specification.

EDWARD J. MULLER.