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SUCTION CLEANING APPARATUS

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2 Sheets-Sheet 1

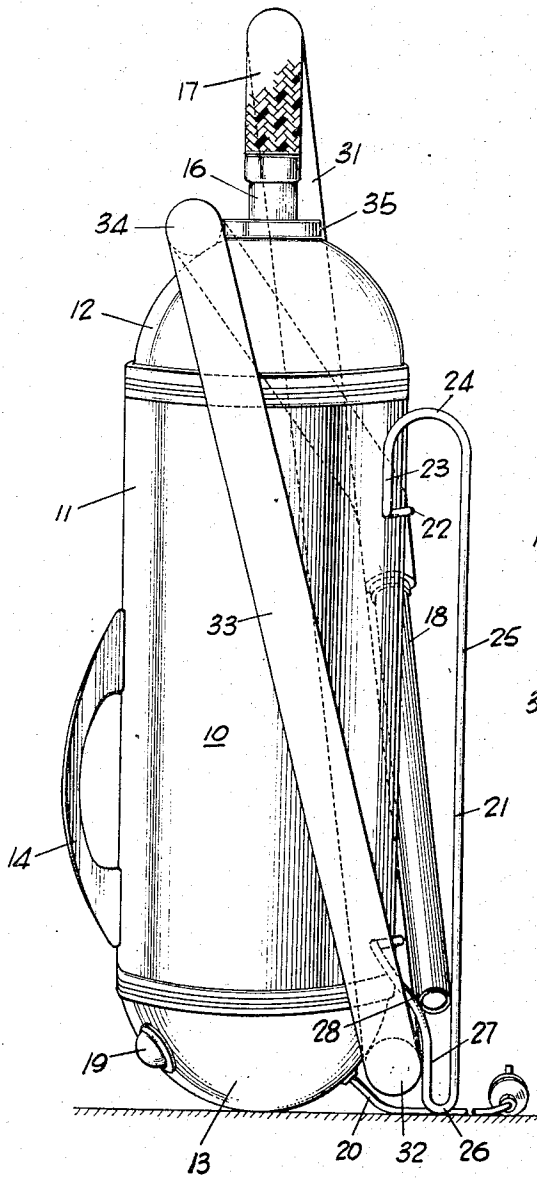


FIG. 1.

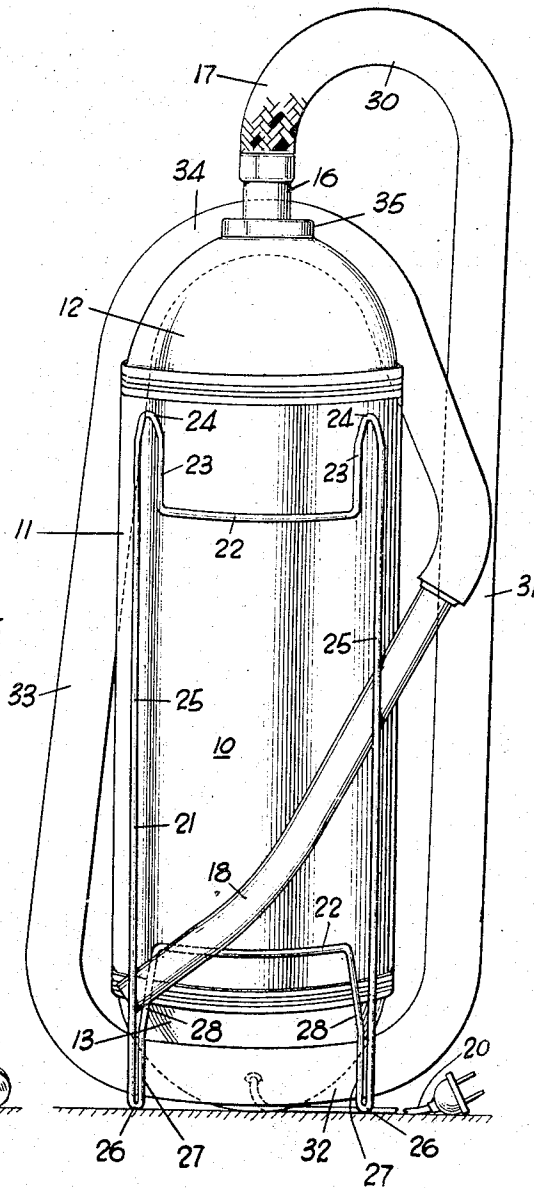


FIG. 2.

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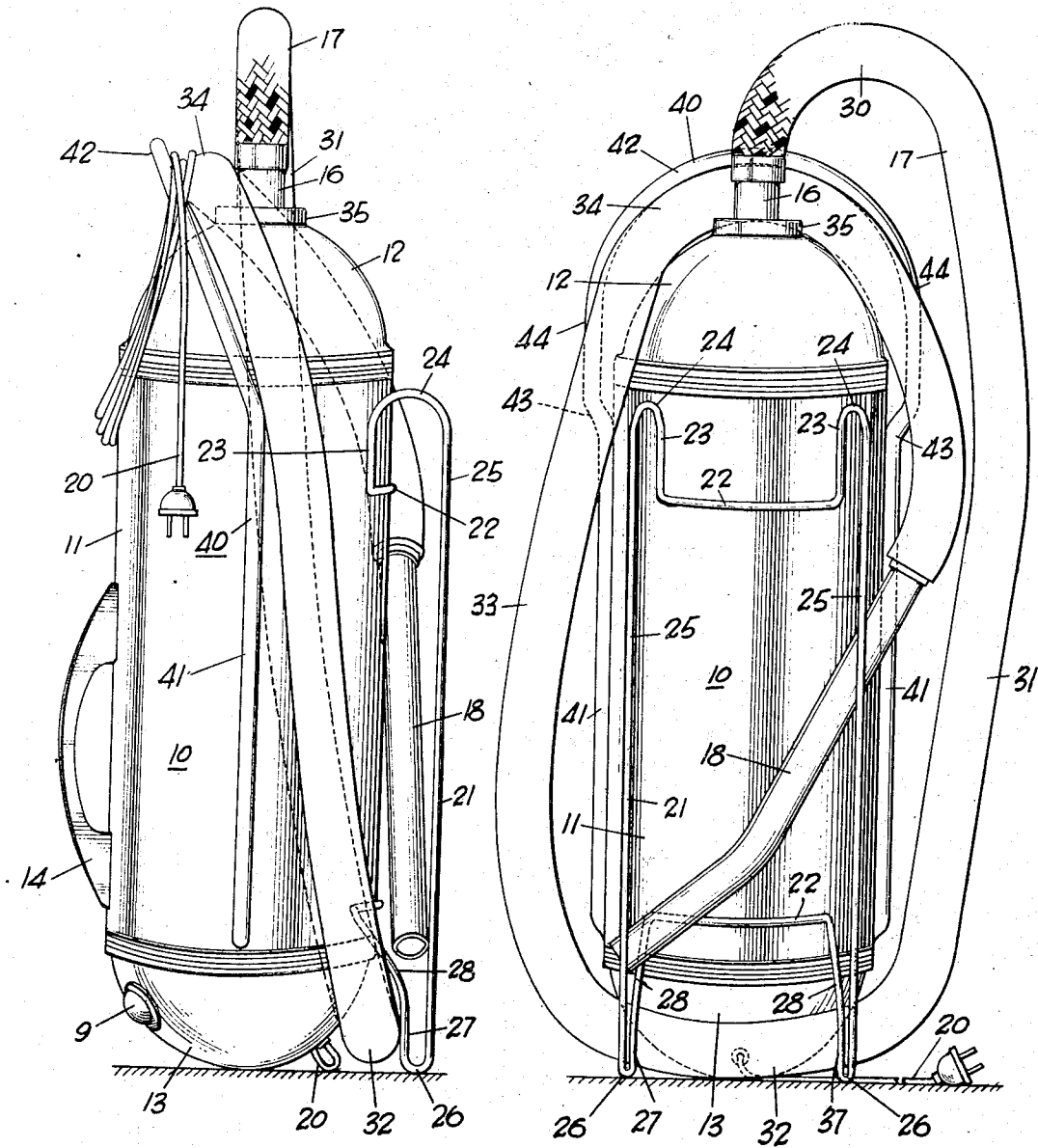


FIG. 3.

FIG. 4.

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# UNITED STATES PATENT OFFICE

2,337,364

## SUCTION CLEANING APPARATUS

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### 1 Claim. (Cl. 15-16)

This invention relates to suction cleaning apparatus, more particularly to a suction cleaner of the type known as a "tank cleaner," and it has for an object to provide improved apparatus of this type.

A further object is to provide means whereby the attachment hose may be conveniently reeled about the body of the cleaner.

A further object is to provide means for supporting the cleaner body in a vertical position.

A further object is to provide means which prevent the cleaner from scarring furniture or other articles that it might contact while being moved about over the surface being cleaned.

A further object is to provide means which serves as a support for the cleaner, and which retains the attachment hose in reeled position.

These and other objects are effected by my invention as will be apparent from the following description and claims taken in connection with the accompanying drawings, forming a part of this application, in which:

Fig. 1 is an elevational view of the cleaner disposed in vertical position, showing one side of the cleaner;

Fig. 2 is an elevational view of the cleaner in vertical position, showing the bottom of the cleaner;

Fig. 3 is an elevational view of a second embodiment of the cleaner disposed in vertical position, showing one side of the cleaner; and

Fig. 4 is an elevational view of the second embodiment of the cleaner in vertical position, showing the bottom of the cleaner.

In the drawings, 10 indicates a suction cleaner of the type to which this invention is applicable, and which is commonly referred to as the "tank" type. The suction cleaner includes generally a cylindrical body 11 provided with end caps 12 and 13, and a handle 14 for carrying the cleaner in a horizontal position. The body 11 and end caps 12 and 13 house the usual motor, suction-creating apparatus, and air filter.

The end cap 12 is provided with an air inlet opening which has a rigid tubular member 16 connected thereto. The tubular member 16 provides connecting means whereby the inlet of the cleaner may be connected to one end of a flexible hose 17, to the other end of which various cleaning attachments or tools 18 may be attached. The hose 17 also provides means by which the cleaner may be pulled about by the operator. The end cap 13 is provided with an air outlet opening, not shown. An on-and-off switch 19 for controlling the cleaner motor is mounted on

the cap 13. A core 20 for connecting the cleaner motor to a suitable source of power passes through the cap 13 to the interior of the cleaner.

The cleaner is provided with a support 21 for supporting it in a horizontal position, which is the normal operating position of the cleaner. As seen from the drawings, the support comprises transverse saddle portions 22 which conform to the shape of the cleaner body 11, longitudinal portions 23 which extend adjacent the body 11, bends 24, longitudinal portions 25 which are spaced from the body 11 by the bent portions 24 and which contact the surface on which the cleaner is supported, short bends 26, longitudinal portions 27, and bent portions 28 which space the longitudinal portions 27 from the body of the cleaner. The support is fastened to the cleaner by attaching the saddle portions 22 to the body 11 by any suitable means, such as welding.

To reel the flexible hose 17 on the cleaner, the hose is bent as at 30, a portion 31 is extended along one side of the cleaner, the next portion 32 is placed between the portions 27 of the support and the end cap 13 of the cleaner body, the next portion 33 is extended diagonally along the opposite side of the cleaner, the next portion 34 is bent over the end cap 12 on the left-hand side of collar 35 as it appears in Fig. 1, and the attachment 18 is inserted between the portions 25 of the support and the body 11 of the cleaner. Only one loop of the hose about the body of the cleaner has been shown and described; however, it will be understood that the hose may be looped about the body of the cleaner as many times as is required in order to reel the entire hose on the body of the cleaner.

It will be noted that the portion 27 of the support retains the hose 17 against the end cap 13 and prevents it from sliding down the side of the cleaner. The portion 21 of the support holds the attachment 18 against the body 11.

The tip portion of the cap 13 and the bends 26 in the support 21 provide a three point support whereby the cleaner may be conveniently supported in a vertical position. This feature enables the cleaner to be stored on a minimum amount of floor space, which is advantageous, especially if the cleaner is to be stored in a small closet where floor space is at a premium.

In the embodiment shown in Figs. 3 and 4, there is provided a member 40. This member serves several purposes, namely, it retains the hose 17 against the end cap 12 once the hose has

been properly reeled about the body of the cleaner, it provides a support on which the cord 20 may be conveniently reeled, it provides a handle for the cleaner, and serves as a bumper for the cleaner. The member 40 includes side arms 41 which are attached to the body 11 by any suitable method, such as welding, and an end loop 42 connecting the arms 41. As seen from Fig. 3, the end loop is spaced from the body 11 and tubular member 16. When the hose 17 is reeled on the body of the cleaner as previously described and positioned between the end loop 42 and the tubular member 16, the end loop will retain the hose in place and prevent it from sliding off the end cap 12. With this arrangement, the hose will remain on the body of the cleaner even though it is very loosely reeled about the same.

The end loop 42 provides a handle whereby the cleaner may be carried from place to place in a vertical position.

The member 40 may also be utilized as a bumper to prevent the cleaner from scratching and scarring furniture or walls that it may contact as it is pulled about over the surface being cleaned, and to prevent the cleaner body from being dented or scarred as a result of bumping into articles. To this end the member 40 is formed as best shown in Fig. 4, with portions 44 offset from the side of the body 11 by bends 43 and with the end loop 42 extending beyond the end of the cleaner. With the member 40 so formed, when the cleaner is pulled about by the hose 17 the offset portions 44 and the end loop 42 will contact furniture or other articles before the body 11. The entire member 40 may be covered with rubber or some other satisfactory material that will not scar or scratch furniture.

From the foregoing description taken in connection with the drawings it will be seen that this invention has provided novel means whereby the attachment hose may be very conveniently reeled on the body of the cleaner. In addition, this invention also provides improved support-

ing means, and a novel bumper and handle for a suction cleaner of this type.

While I have shown my invention in several forms, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various other changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims.

What I claim is:

A suction cleaner including a horizontally-elongated body having an inlet opening at one end thereof, a conduit connected to said inlet opening, said conduit including a relatively long, flexible portion and a relatively short rigid portion, supporting members extending longitudinally of said body and spaced therefrom sufficiently to permit said conduit to be inserted and retained between said members and said body, said members being connected to said body at a point or points adjacent but spaced from the other or second end of the body and having end portions extending beyond said connection longitudinally of said body but spaced therefrom sufficiently to receive said flexible portion therebetween, the lengths of said flexible and rigid portions being such that said flexible portion is adapted to be reeled about said body for storage and, when so reeled, extends from said first end longitudinally of said cleaner body to the second end, transversely between said end portions and said cleaner body, longitudinally of said cleaner body to the first end, around the first end, and said rigid portion is inserted between said supporting members and said body, and a handle attached to said cleaner body adjacent the first-mentioned end on the side of the inlet opening remote from said supporting members and spaced from said inlet opening a distance suitable to accommodate a portion of the flexible hose between the same and the portion of said conduit adjacent the inlet opening.

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