Jan. 23, 1934. W. REEVE 1,944,270

VACUUM CLEANER

Filed April 7, 1931

Fig. 1.

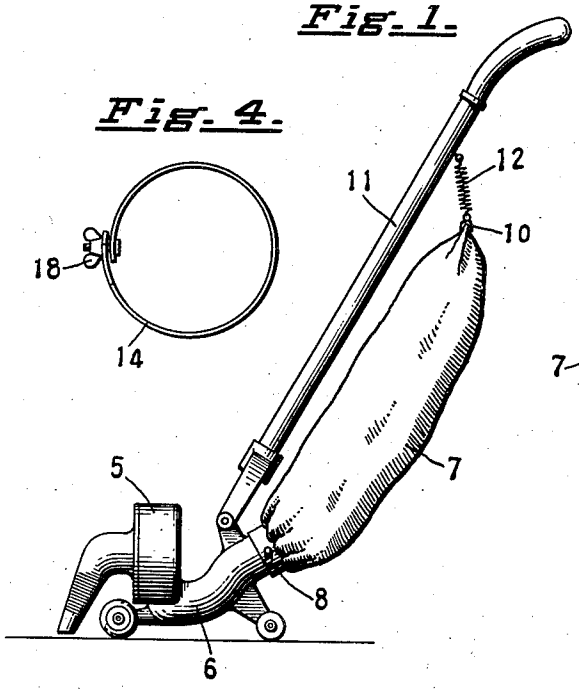


Fig. 4.

Fig. 2.

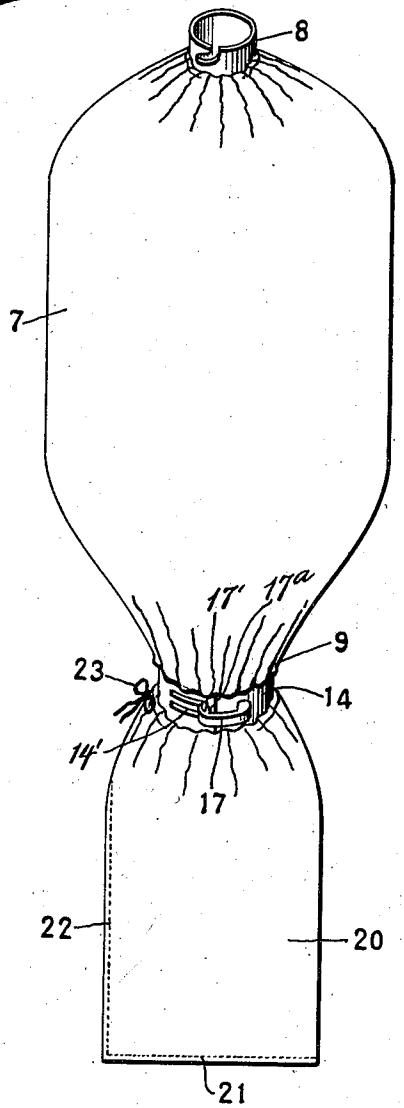
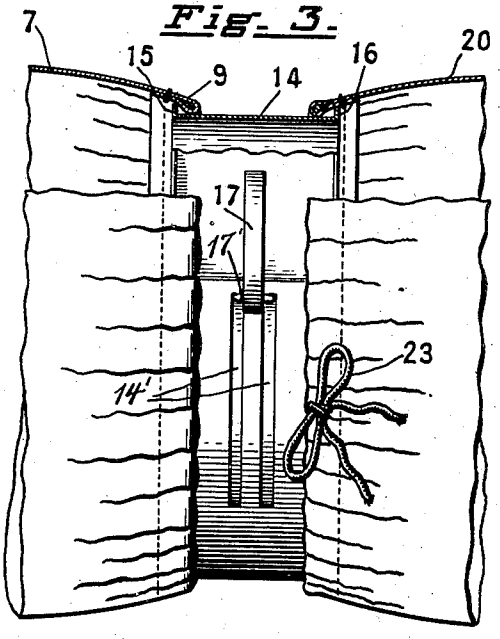


Fig. 3.



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VACUUM CLEANER

Weltha Reeve, Irvington, N. J.

Application April 7, 1931. Serial No. 528,309

2 Claims. (Cl. 285—76)

My invention relates particularly to attachments for facilitating the removal of dirt from the collecting bag of vacuum cleaners.

The ordinary so-called vacuum cleaner consists of an electrically driven suction device together with a bag which collects the dust and dirt picked up by the cleaner. The disposal of this dirt is a serious problem. Usually the bag is emptied on to the floor or in a box which operation requires considerable time and care and usually results in smearing a considerable quantity of the dirt. To avoid this difficulty it has been proposed to throw away the bag when full but thus far no practical construction has been found which is sufficiently cheap to justify it.

I have discovered a very simple method which is inexpensive and which can be readily operated by anyone.

The invention contemplates the provision of a collar which can be readily secured in one end of the collecting bag and to which another bag may be readily attached and through which the contents of the usual collecting bag may be transferred to the disposal bag, which in turn can be thrown away. Preferably this disposal bag is of a special construction to facilitate its attachment to the transfer collar or sleeve.

Fig. 1 is a side view illustrating a vacuum cleaner having a collecting bag of conventional form.

Fig. 2 is a perspective view of the usual collecting bag inverted and connected to a disposal bag by means of the transfer collar or sleeve.

Fig. 3 is an enlarged detail side view showing the transfer collar partially in section with fragments of the two bags attached.

Fig. 4 is a detail end view of one form of transfer collar.

The suction device may be of any suitable form mounted for instance in a casing 5 and having a discharge outlet 6 to which the collecting bag 7 is attached. This bag is usually of cloth and provided with a connecting device 8 at one end adapted to be detachably connected to the outlet 6 and having at its opposite end 9 an opening which is normally closed by a clip 10 of the usual type. This end 9 is usually strengthened or reinforced by suitable folding and stitching of the material as indicated for instance in Fig. 3. The upper end of the bag is usually connected to the handle 11 by means of a suitable link 12. In use, the dirt picked up by the cleaner is collected in the bag and must from time to time be emptied, the frequency depending of course upon the amount of dirt collected.

My attachment consists of a slotted collar 14 preferably of metal which is somewhat resilient and expansible and contractible. This collar or sleeve has flanges 15 and 16 at opposite edges and is of a size to be readily inserted in the open end 9 of the collecting bag when it is detached from the clip 10. This collar is suitably expanded into the open end of the bag and held in expanded position by means of a suitable clamping device. In the form shown in Figs. 2 and 3 this clamping device includes a lever 17 which is pivoted to a wire hinge member 17' on the collar at one side of the joint the ends of which pass through slots 14' in one end of the split collar 14 and are secured to the other end of the expansible collar 14 on the other side of the joint. The lever 17 has a portion 17a adjacent the hinge or pivot 17' formed in the shape of a cam so that when the lever is in the position shown in Figs. 2 and 3 the parts will be clamped or drawn together but may be released by swinging the lever 17 outwardly about its pivot. In the form shown in Fig. 4 the ends of the collar 14 are connected by a clamping bolt and nut 18. When this clamping bolt and nut are loosened the collar 14 can be contracted for the purpose of inserting it into the mouth of the cleaner bag 7 and permitting the expansion into the position shown in Fig. 3 whereupon the nut and bolt are tightened to hold the collar in place in the upper end of the bag 7.

The disposal bag 20 may be of any suitable material such, for instance, as heavy and strong creped paper which may be stitched at 21 and 22 and provided with a draw string 23. The open end of this bag is adapted to be attached over the flange 16 on one end of the collar 14. This collar 14 thus serves to connect the two bags and hold their mouths open so that the dirt can be readily transferred from the collecting bag 7 to the disposal bag 20 when the collecting bag is inverted as shown in Fig. 2. To prevent the escape of any dirt, the collar 14 should be extended tightly into the mouth of the bag 7 and the mouth of the disposal bag 20 should be drawn tightly around the collar. The collar therefore should have sufficient strength to stand these strains. The flanges 15 and 16 serve not only to assist in retaining the bags upon the collar but they also substantially reinforce the collar.

It will be seen from this that the bag 20 and the bag 7 may be shaken to facilitate the transfer of the dirt from the collecting bag to the disposal bag. It is also possible to beat the bag 7

to loosen the dirt from the inside without scattering the dirt all over the room.

While it is contemplated that the bag 20 of the sort shown and described may be made so cheaply that it can be thrown away, I do not consider the invention is limited, however, to this feature, as the bag 20 might be used again and again. The disposal bag, however, has a mouth which is substantially its full width so that it can be readily emptied if it is desired to use it over again.

It should be understood that the invention may be applied to vacuum cleaners of various types and that modifications and details of construction can be made without departing from the spirit or scope of my invention.

I claim:

1. As an article of manufacture, a device for connecting and holding the opened ends of bags in communication consisting of a tubular split body portion formed of resilient metal, an outwardly extending flange at each end thereof, a clamping member carried by said body portion adjacent to and on one side of the split, and an elongated slot formed on said body portion on the opposite side of said split, a part of said clamping member being adapted to extend through said slot for clamping the body portion in adjusted extended or contracted position, said clamping member being positioned midway the ends of the tubular body.

2. As an article of manufacture, a device for connecting and holding the opened ends of bags in communication consisting of an elongated split tubular body portion formed of resilient metal, the ends of said body portion being adapted to move relatively for expanding and contracting said body portion, a clamping member carried by said body portion on one side of said split and adapted to engage the body portion on the other side of said split to clamp the body portion in adjusted extended or contracted position and a peripheral flange on the top and bottom edges of said body portion whereby the movement of the body is guided and whereby the body portion is reinforced.

WELTHA REEVE.