

Aug. 9, 1932.

W. BARBER

1,871,024

DUST BAG AND COUPLING FOR VACUUM CLEANERS

Filed June 11, 1929

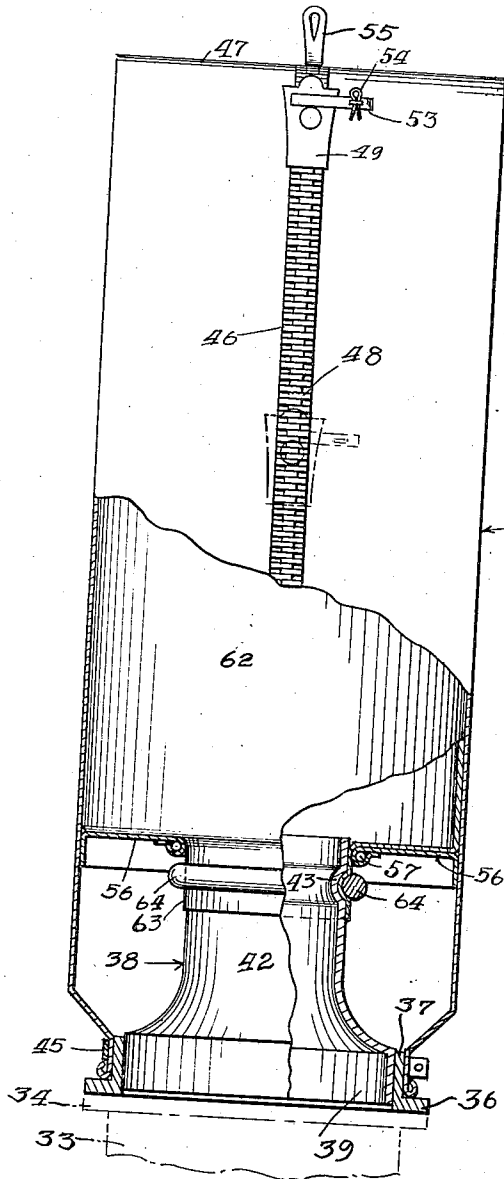


Fig. 1.

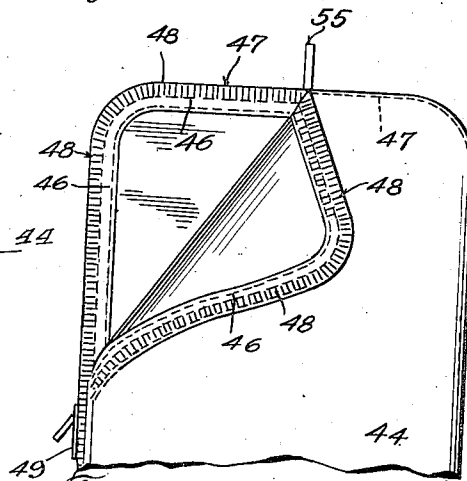


Fig. 3.

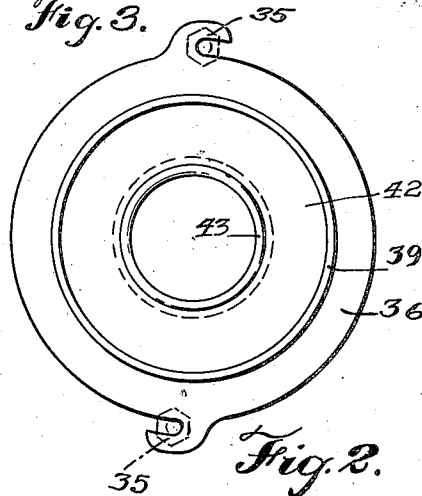


Fig. 2.

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DUST BAG AND COUPLING FOR VACUUM CLEANERS

Application filed June 11, 1929. Serial No. 370,021.

My present invention relates to improvements in vacuum cleaners.

In the construction of many of the vacuum cleaners the dust and dirt carried by the air is deposited in a removable, inner dust bag. The large number of different makes of vacuum cleaners necessitates as great a number of inner and outer bags especially made to accommodate each individual make of cleaner.

It is therefor an object of this invention to provide an outer, and an inner, dust bag having a universal coupling whereby they may be connected to any make of cleaner with ease and certainty.

A further object of the invention is the provision of outer and inner dust bags and a coupling therefor, which may be easily, simply and cheaply constructed so that the combination may be marketed for a reasonable amount, and of such type that the inner bag may be destroyed after having been removed from the outer bag of the vacuum cleaner.

With the foregoing and other objects in view which will become apparent in the following detailed description and appended claims, reference is had to the accompanying drawing for an illustrative embodiment of the invention wherein:

Figure 1 is a side elevational view of bags and coupling, with parts in section.

Figure 2 is a bottom plan view of the coupling.

Fig. 3 is a front elevational view of the bag with its flap open.

Referring to the various figures wherein similar reference characters indicate like parts throughout, it will be noted that the vacuum cleaner, generally designated by 33, has a connecting flange 34 provided with the usual bolts 35. The companion flange 36 having the collar 37 is fastened to the flange 34 by means of said bolts 35.

The universal coupling designated generally by the numeral 38, has a depending ring portion 39, which is permanently secured, by welding or other means, to collar 37 of flange 36.

The universal coupling 38 also has a re-

duced neck portion 42 near the end of which is an annular groove or depression, 43.

The outer bag, designated by the numeral 44, is secured to the collar 37 of the flange 36 by means of the band 45.

The outer bag 44 is provided with an opening 46 throughout the greater portion of its length and across its upper end 47. The opening 46 is provided with the zipper fasteners 48. The zipper opener 49 is provided with an anchor arm 53 and the securing pin 54. To the upper end of bag 44 is attached a hanger support 55.

Near the lower end of bag 44, and integral therewith, is the inner bag supporting member 56, having an annular split ring 57.

The inner bag is designated generally by the numeral 62 and terminates in a neck portion 63, which conforms to the neck portion 42 of coupling 38. Pressing into the groove 43 is the flexible band 64. The coupling 38 is provided with a standard size flange corresponding with that of the make of cleaner to which it is to be applied. Therefore, to equip any cleaner with my improved device all that is necessary is to change the flange portion 36. The neck portion 42 is adaptable to all inner bags. As pointed out the outer bag 44 has a slit extending from near its bottom end to its top end, and across said top end 47, (see Fig. 3) said slit being provided with the zipper fasteners as shown at 48. When the inner bag is to be put in place the outer bag is opened and neck portion 63 of the inner bag 62 slipped over the neck portion 42 of the coupling 38 until it extends well below the annular groove 43, whereupon the flexible band 64 is shoved over the neck of inner bag until it registers with said groove 43 thereby forcing a portion of inner bag neck into the groove and securing said bag against displacement during the process of cleaning. The outer bag may then be closed with the zipper. When the inner bag has served its usefulness, the outer bag is opened by releasing the anchor 53 of fastening member 49 sliding it to the bottom of slit, pushing down the flexible band, and taking out the inner bag to complete the operation.

The inner bag is reinforced against the

compressed air by the supporting members 56 which consists of two segments, each segment is provided with a segment of a metal ring, and tends to prevent any rupture of the bag due to the outward exertion of the air within.

It will be understood that various changes in the details of the construction may be made without departing from the spirit of the invention.

Having thus described my invention, what I claim as new and wish to protect by Letters Patent, is:

1. A tubular dust bag having an opening therein, zipper means for closing and locking said opening, a lining bag of porous material, having a reduced neck portion, a coupling having a reduced grooved neck portion adapted for engagement thereat with the neck of the lining bag and means for disengageably securing said lining bag and said coupling in engagement.

2. A coupling for a vacuum cleaner having an enlarged ring portion and a reduced neck portion, said enlarged ring portion being adapted to engage the inlet aperture of a dust bag, and said reduced neck portion being adapted to engage the reduced portion of a lining bag, means for securing the ring portion of the coupling and the dust bag in engagement and means for securing said lining bag and the coupling in engagement, said coupling being designed so that the mounting and dismounting of said dust bag are independent of the mounting and dismounting of the lining bag.

3. A coupling for a vacuum cleaner having an enlarged ring portion and a reduced neck portion, said enlarged ring portion being adapted to engage the inlet aperture of a dust bag and said reduced neck portion being adapted to engage the reduced portion of a lining bag, means for securing the ring portion of the coupling and the dust bag in engagement, and means for securing the lining bag and the coupling in engagement.

4. A dust bag coupling having an enlarged portion and a reduced neck portion, means for securing a dust bag to said enlarged portion, means for securing a lining bag to said reduced neck portion, and means located within said dust bag and attached to said reduced neck portion for supporting said lining bag.

5. A dust bag coupling for use with a vacuum cleaner having dust and lining bags, having a peripheral grooved reduced neck portion and an enlarged ring portion, means for securing the lining bag to said coupling at its grooved neck portion, and means for securing the dust bag to the enlarged ring portion.

6. A dust bag coupling for use with a vacuum cleaner having dust and lining bags, having a peripheral grooved reduced neck

portion and an enlarged ring portion, means for securing the lining bag to said coupling at its grooved neck portion, means for securing the dust bag to the enlarged ring portion, and means located within said dust bag and attached to said reduced neck portion for supporting said lining bag.

7. In a vacuum cleaner structure a coupling having a reduced peripherally grooved neck portion and an enlarged ring portion thereon, a dust bag having an opening along one side and partly across the top thereof, means to secure said dust bag to said coupling at its enlarged ring portion, means to close the opening in said dust bag which extends along the side and partly along the top thereof, a lining bag, means disposed within said dust bag and affixed to said reduced neck portion of the coupling for supporting said lining bag, and means adapted to secure said lining bag to the coupling at its peripherally grooved reduced neck portion.

In testimony whereof I have signed my name to this specification.

WILLIAM BARBER.