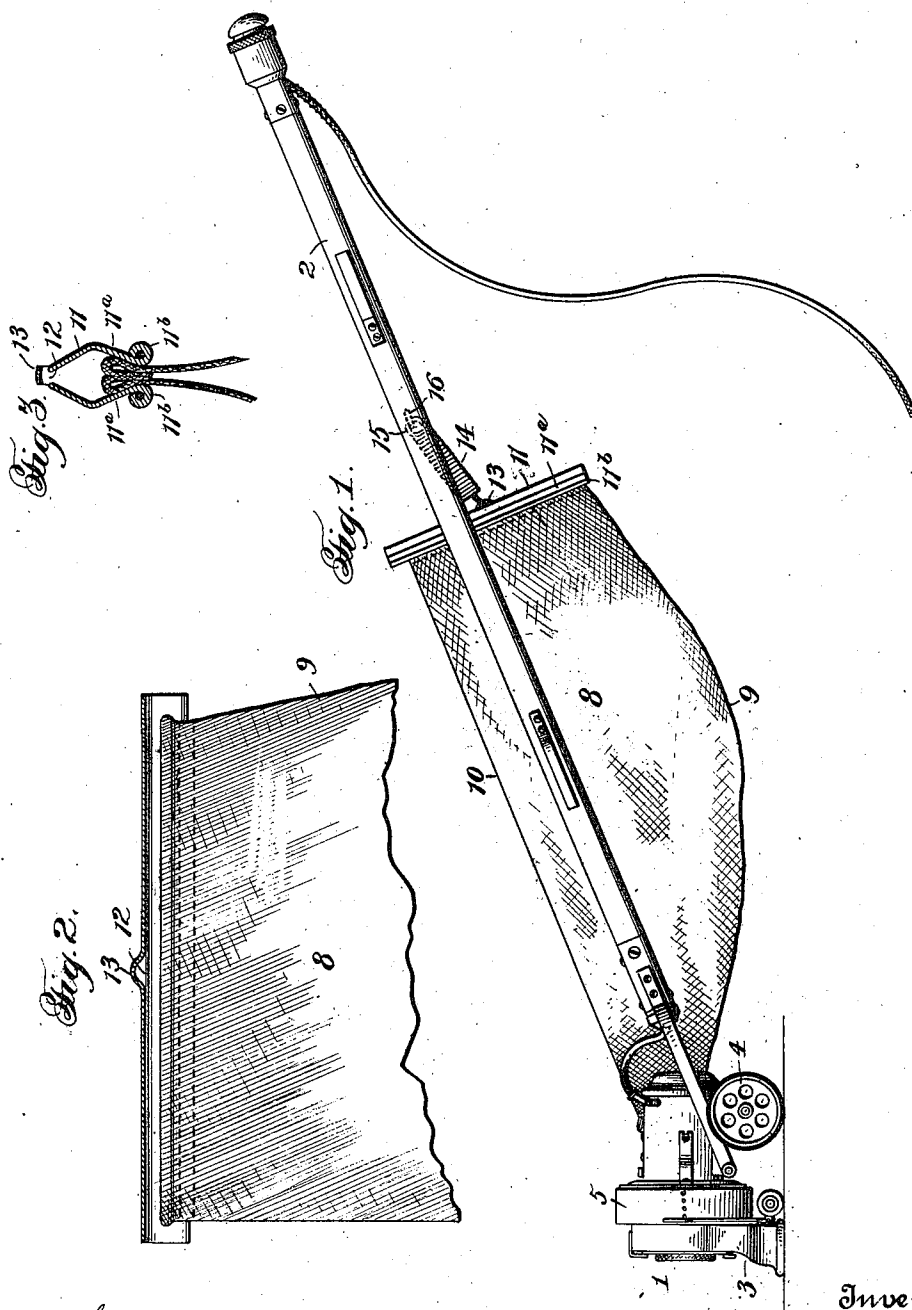


M. S. WRIGHT,
DUST COLLECTING RECEPTACLE FOR VACUUM CLEANERS.
APPLICATION FILED AUG. 28, 1916.

1,317,646.

Patented Sept. 30, 1919.
2 SHEETS—SHEET 1.



Witness:
Jas. E. Hutchinson:

By

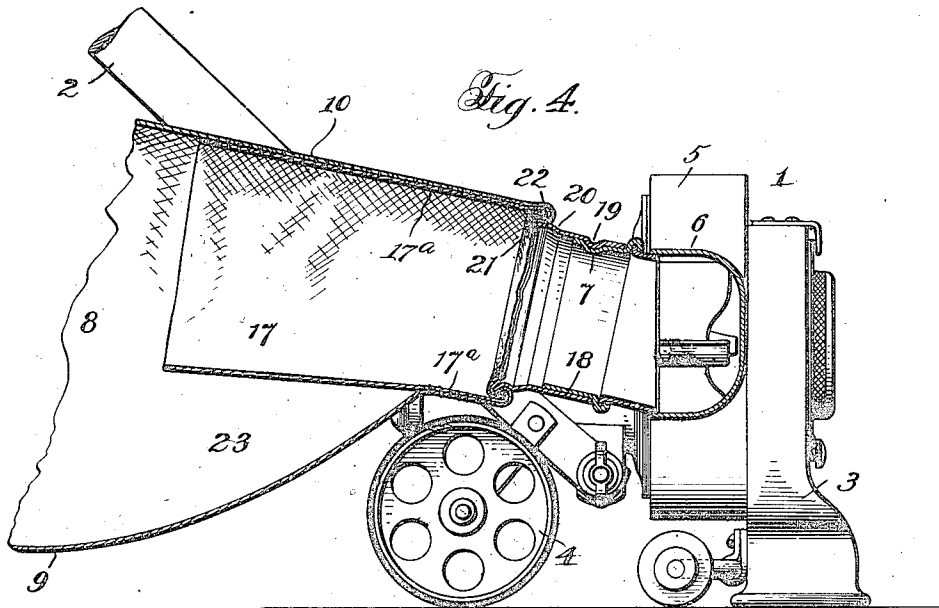
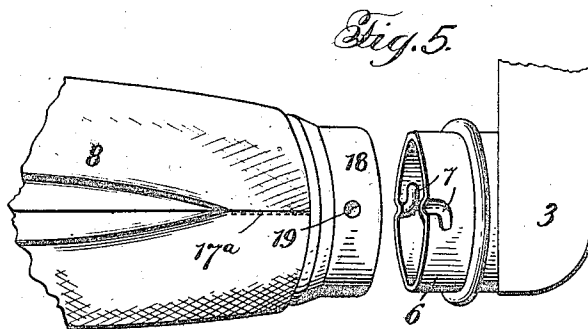
Morris S. Wright,
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UNITED STATES PATENT OFFICE.

MORRIS S. WRIGHT, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO M. S. WRIGHT COMPANY, OF WORCESTER, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

DUST-COLLECTING RECEPTACLE FOR VACUUM-CLEANERS.

1,317,646.

Specification of Letters Patent.

Patented Sept. 30, 1919.

Application filed August 28, 1916. Serial No. 117,379.

To all whom it may concern:

Be it known that I, MORRIS S. WRIGHT, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Dust-Collecting Receptacles for Vacuum-Cleaners, of which the following is a specification, reference being had therein to the accompanying drawing.

The present invention relates to dust collecting receptacles for vacuum cleaners and more particularly to that type of receptacle having a valve controlled inlet opening adapted to permit the passage of the dust laden particles into the receptacle, while preventing accidental discharge of the collected material through said opening.

One of the primary objects of the present invention is to improve upon that type of receptacle or bag illustrated and described in the patent to A. N. Mummert, No. 1,184,485, dated May 23, 1916, wherein the receptacle is provided with an internal tubular valve part connecting with the wall surrounding the inlet opening of the receptacle or bag, the material as it flows through said tubular part into the receptacle being intended to find a place of deposit beneath the tubular part whereby the latter constitutes an effective closure against the escape of the material through the tubular opening.

While dust bags of the character just described have proven partially successful, it has been ascertained that the tubular valve member has a tendency to collapse and partially or completely close the opening provided thereby, thereby materially impeding, if not preventing the ready entrance of the dust and the like through said opening under the action of the suction or draft appliances designed for this purpose.

It has also been ascertained that the rear surface of the tubular member is not maintained out of contact with the rear portion of the bag, so that the dust and the like as it accumulates in the bag along the rear surface thereof, will at times escape through the tubular opening into the fan casing or the like of the vacuum cleaner, especially when the machine is not in use.

It is contemplated by the present invention to provide a novel and improved con-

struction and arrangement of the tubular valve member for the inlet end of a flexible dust receptacle as of fabric, to the end that the tubular member will be supported in a substantially predetermined or fixed position, whereby the dust laden material will more readily pass through the opening of the tubular member, and whereby the rear surface of the tubular member will be maintained elevated above the surface of the rear portion of the bag, which will permit the material to readily fall in contact with said surface and under said tubular member.

Another feature of the invention includes a novel type of collar for the inlet portion of the bag, and novel means of connection between the collar, tubular valve member and receptacle.

Still another feature of the invention embraces novel means of connection between the said collar and the discharging conduit of the cleaner proper.

Other improvements and novel details in the construction and arrangement of the various parts will be appreciated from the description to follow, which, for the clear understanding of the invention is to be considered in connection with the accompanying drawings which form a part hereof, and wherein is disclosed, for the purpose of illustration, a convenient and satisfactory embodiment of the invention.

In the drawings:—

Figure 1 is a side elevation of a vacuum cleaner with my improvements applied thereto.

Fig. 2 is a section of the dust collecting receptacle.

Fig. 3 is a detail view.

Fig. 4 is a detail side elevation with the dust bag illustrated in section; and

Fig. 5 is a detail view of a portion of the dust bag illustrating how it is connected to the cleaner.

With more particular reference to the drawings wherein like reference numerals refer to corresponding parts throughout the several views, 1 designates generally a vacuum cleaner machine, such for instance as illustrated and described more particularly in copending applications for patent filed concurrently herewith.

The vacuum cleaner has a suitable handle

2, nozzle 3 and supporting roller 4. Conveniently, the vacuum creating means employed includes an electric motor driven fan. The fan casing or the equivalent thereof 5 has a tubular discharge conduit 6 with oppositely disposed L-shaped recesses or grooves 7 at the edge thereof. The dust receptacle or bag proper is generally indicated by the numeral 8, the same being constructed preferably of cloth folded upon itself and secured along the rear portion 9 as by stitching. The rear portion 9 of the bag is conveniently curved substantially as illustrated, whereas the upper portion thereof is preferably straight as illustrated at 10. The top or rear end of the bag is preferably open, the material being folded at this edge upon itself and stitched, a suitable spring clip 11 being provided to engage over said stitched edges and constitute a clamp or closing medium for this end of the bag. The clamp 11 is formed of sheet metal bent upon itself so as to provide opposite sides, the lower portions 11^a of which taper inwardly and terminate in beaded ends 11^b. The member 11 intermediate its ends is slotted at 12 and struck up above said slotted portion, whereby to provide a securing eye 13 for the end of a spring member 14 having an eye or hook portion 15 at the upper end thereof adapted to engage a suitable hook or lug 16 on the handle 2. The bag or receptacle 8 at the lower end thereof is provided with an inlet opening, a tubular valve member 17 being provided within this end of the bag and conveniently constructed of the same or similar material as that of the bag. A suitable collar for the hollow opening of the bag is provided, the said collar having a tubular part 18 of a slightly greater diameter than the exhaust conduit 6 of the fan casing whereby to readily engage over the wall of said conduit and being provided with suitable struck up internal projections 45 or pins 19 to engage the L-shaped recesses 7 heretofore described, whereby to maintain the collar in place on the vacuum cleaner. The collar 18 is provided with a tapered portion 20 connecting with an annular grooved portion 21. 22 is a spring wire adapted to engage within the lower edge of both the collar 17 and bag 8 and forces the same into holding contact with the grooved portion 21 of the collar, as illustrated more particularly in Fig. 4 of the drawing. It will be observed that the ring member 22 constitutes means for securing the lower ends of the tubular valve member and bag together, as well as means for securing these parts in place or air tight engagement with the collar 18.

In order to maintain the tubular member 17 in position, it is contemplated to secure that edge thereof extending parallel with the straight edge 10 of the bag to said por-

tion of the bag, and with this in view a convenient means of attachment is to secure these parts together as by stitching 17^a.

The parts when in use assume a position as generally illustrated in Fig. 1 in which position, for convenience, the straight edge of the bag is referred to as the front edge, and the curved edge of the bag as the rear edge. It will be noted that that portion of the tubular member 17, termed for convenience the rear edge, adjacent the curved edge of the bag will be maintained out of contact with the curved edge of the bag whereby to provide at all times, an unobstructed space 23 for the reception of the dust laden particles, and the tubular valve member 17 being secured by the stitching 17^a, the latter will not collapse at this point whereby to close the opening which would hamper the entrance of the dust laden material into the bag. At the same time as the dust passes through the opening provided by the tubular valve 17 and falls below the same, said tubular valve constitutes an effective barrier against the accidental discharge of the material therethrough. Assuming that the tubular member 17 were not secured in place, the lower edge thereof under the weight of the material in passing therethrough would tend to collapse and contact with the curved portion 9 of the bag, with the result that the material would tend to find an exit through said tubular member back into the machine parts, especially when the cleaner is not in use. While the dust receptacle is illustrated and described in connection with electric cleaners of the general character covered by copending applications, at the same time it is to be borne in mind that the dust receptacle is susceptible of various adaptations. It is also to be observed that the improved form of bag illustrated and described may be mounted in position in various ways and upon various types of fan casings or other types of exhausting apparatus, and still be within the spirit of the invention. The detachable connection illustrated and described however is found quite convenient and highly satisfactory in the use of the invention.

What is claimed is:—

1. A dust bag for vacuum cleaners comprising a tubular body portion having a curved rear edge and substantially straight front edge and an inlet opening at one end thereof, a flexible tubular member positioned within the inlet opening and secured at the end of the bag, and means for securing the front edge of the tubular member to the straight edge of the bag substantially as and for the purpose described.

2. A dust collecting bag for vacuum cleaners comprising a body having a straight forward edge, a curved rearward edge, and a tubular member within the bag adjacent

the lower end thereof and forming an inlet opening for the bag, and means for securing the forward edge of said tubular member in place within the bag adjacent said straight edge.

3. A dust collecting bag for vacuum cleaners comprising a body part having a substantially straight forward portion, a curved rearward portion and an internal tubular valve member at the lower end of a body portion forming an inlet opening for the bag, the forward portion of said tubular member being secured to the forward straight portion of the body part of the bag, and the rear portion of the tubular member being spaced from the rearward portion of the body part of the bag.

4. A dust collecting bag for vacuum cleaners comprising a body portion having an opening at one end, a tubular valve member within the body portion at said opening forming an inlet into the bag, a rigid collar at said inlet opening said collar having a tapered periphery connecting with an annular groove, and means held in place by the tapered portion of the collar and fitted to said groove adapted to engage both the tubular member and lower end of the bag for securing these parts to the collar at said groove.

5. A dust collecting bag for vacuum cleaners having at the lower end a valve controlled inlet opening, and means for securing the same to the exhaust conduit of a cleaner, said bag being open at the upper edge thereof and being hemmed at this point, a substantially U-shaped metallic clip adapted to engage over the hemmed portion of the bag to close the upper end thereof, said clip having a struck up part forming a se-

curing eye, and a supporting spring connecting with said eye and adapted for connection with the handle of the vacuum cleaner or the like.

6. A dust collecting bag for vacuum cleaners having a normally closed discharge opening at its rear end, and a relatively small inlet opening, a tubular valve member of flexible material within the bag at said inlet opening, rigid means operatively associated with the inlet end of the tubular valve and bag for maintaining an unobstructed inlet opening, and means for securing the front edge of the valve to the front edge of the bag, whereby to prevent any collapse of the front edge of the valve independent of the front edge of the bag.

7. A dust collecting bag for vacuum cleaners comprising a tubular body portion having a normally closed discharge outlet tube for connection with the handle or the like of the vacuum cleaner, and an inlet opening, a coupling member of rigid material at said opening adapted to be operatively connected with an exhaust chamber of the vacuum cleaner, an elongated collapsible valve connected with the bag at the inlet end thereof, and projected inwardly, and supporting means between the front edge of the bag and the front edge of the valve whereby to prevent collapsing of the valve relative to the bag at said front edge.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

MORRIS S. WRIGHT.

Witnesses:

WILLIAM B. TUNSTALL,
HENRY A. WRIGHT.