

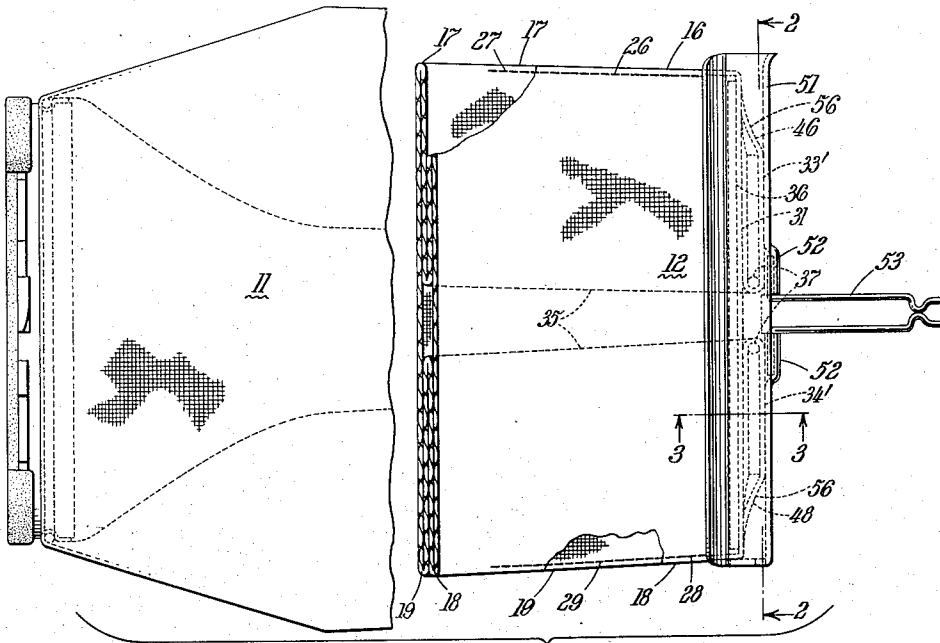
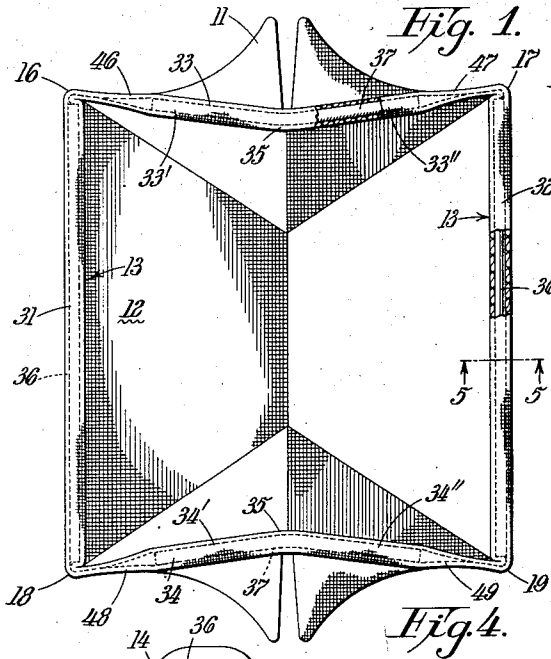
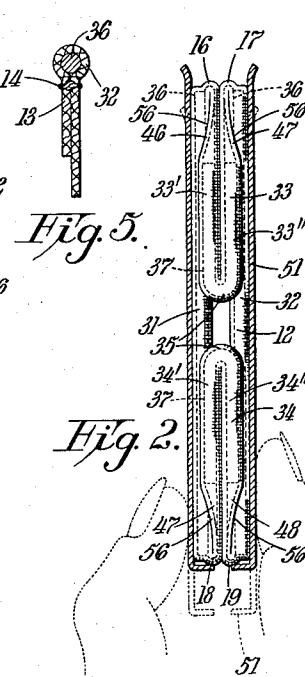
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BAG CLOSURE FOR VACUUM CLEANERS

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BAG CLOSURE FOR VACUUM CLEANERS

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This invention relates to dust bags for vacuum cleaners and more particularly to means for closing the upper or discharge end of such bags.

It is an object of this invention to provide, in a vacuum cleaner dust bag, improved and simplified means for closing the discharge end of the bag and adapted to prevent dust or other refuse from escaping from the bag while the bag is receiving dust discharged under pressure from the exhaust of a vacuum cleaner.

It is a further object of the invention to provide an improved means for preventing the ends of a dust bag from being blown out of the bag closing clamp.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations, and arrangements of parts hereinafter set forth and illustrated in the accompanying drawings of a preferred embodiment of the invention, from which the several features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

In the single sheet of drawings, which forms a part of this specification:

Fig. 1 shows a vacuum cleaner dust bag embodying the present invention, portions of the bag being cut away to show other portions which lie therebeneath,

Fig. 2 is a sectional view of the dust bag taken substantially along the line 2—2 of Fig. 1,

Fig. 3 is a sectional view taken along the line 3—3 of Fig. 1,

Fig. 4 is a view showing the dust bag with the discharge end opened, and

Fig. 5 is a fragmentary sectional view taken along the line 5—5 of Fig. 4.

The vacuum cleaner dust bag, illustrated in the accompanying drawings, has a main body portion 11 preferably made from a single piece of air porous and dust impervious material, of which the side edges are sewed together to form a tube. At its upper or discharge end 12, the margin of this tube is intumed to form an edge-fold 13 that is secured by a line of stitches 14 encircling the circumference of the tube.

The finished bag is provided with four permanent corner-folds 16, 17, 18 and 19 that extend longitudinally down the bag for a short distance below and at right angles to the above mentioned edge-fold 13. These permanent corner-folds 16, 17, 18 and 19 are respectively secured by lines of stitches 26, 27, 28 and 29 and thereby divide the upper or discharge end of the bag tube, which in this instance is the upper

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edge-fold 13, into a pair of equal front and back edge-fold portions 31 and 32 and a pair of slightly smaller edge-fold side portions 33 and 34. The side portions 33 and 34 are collapsible, after the manner of an accordion, infolding as at 35, and thus the edge-fold portions 33 and 34 are divided into two smaller sections 33'—33'' and 34'—34'', respectively.

The front and back portions 31 and 32, of the intumed edge-fold 13 located between the corners 16—18 and between the corners 17—19, are each reinforced with a stiff, straight, spring-wire rod 36, each of these rods extending substantially the complete length of the respective front and back edge-fold portions.

The side portions 33 and 34 of the edge-fold 13, located between the corners 16—17 and between the corners 18—19, each encase a flexible cord-like filler 37. These fillers do not extend from one corner of the bag to the other but are restricted to portions of the edge-folds that are located on opposite sides of the mid-point accordion-like fold 35. This results in the end portions 46, 47, 48 and 49 of the side edge-fold portions 33 and 34 being unfilled.

When the vacuum cleaner bag is in use, the upper end thereof is closed by a conventional channel-like, spring metal clamp 51. The clamp 51 is provided, intermediate its length, with a pair of stamped-up portions 52—52 into which are fitted the ends of a conventional bag support link 53.

In closing the end of the bag from its open condition, as shown in Fig. 4, to the closed condition, shown in Figs. 1 and 2, the upper end of the bag is collapsed by bringing the front and back portions 31 and 32 toward one another. This causes the two accordion-like folds 35—35 to move toward one another, and in so doing the cord filled side portions 33 and 34 are bent and positioned (Fig. 3) above the rod filled front and back portions 31 and 32. As soon as this has been accomplished, the channel-like metal clamp 51 is slipped lengthwise over the collapsed end of the bag. Since the cord-filled edge-fold portions 33 and 34 are held in place above the wire reinforced front and back edge-fold portions 31—32 by the clamp 51, the accordion folded portions 33—34 of the fold 13 will not be blown out when pressure is applied to the bag due to the vacuum cleaner being operated. The stiff reinforced edge-fold portions 31—32 also facilitate insertion of the collapsed end of the bag into the metal clamp 51. It should further be noted that the unfilled edge-fold portions 46, 47, 48 and 49

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make it possible to position the filled portions of the edge-folds 33 and 34 above the front and back edge-fold portions 31 and 32. These unfilled edge-fold portions 46, 47, 48 and 49 are easily folded about the ends of the rod-filled portions 31 and 32 in a manner shown at 56.

Having thus set forth the nature of the invention, what I claim herein is:

1. A closure for the discharge end of a tubular vacuum cleaner dust bag, comprising, an in-turned edge-fold encircling the discharge end of the bag, four corner-folds dividing said edge-fold into front, rear, and two side portions, a wire rod enclosed by and extending the full length of the front and the rear edge-fold portions, a flexible cord filler shorter than the side edge-fold portion enclosed by mid-portions of said side edge-fold portions thereby leaving unfilled side edge-fold portions adjacent said corner-folds, and a metal clamp for clamping together said front, rear and side portions, whereby when said front and back edge-fold portions are clamped by said metal clamp said filled side edge-fold portions are positioned above said front and back edge-folds.

2. A closure for the discharge end of a tubular vacuum cleaner dust bag, comprising, an edge-

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fold encircling the discharge end of the bag; means defining four corners dividing said edge-fold into front, rear and two side portions; stiff members enclosed by the front and rear portions of said edge-folds; flexible fillers, shorter than the side edge-fold portions, and enclosed by mid-portions of said side edge-fold portions, thereby, leaving unfilled side edge portions adjacent said means defining four corners; and means for clamping together said front, rear and side portions, whereby, when said front and back edge-fold portions are clamped by said last named means, said filled side edge-fold portions are positioned above said front and back edge-folds.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
Re. 17,852	Willis	Oct. 28, 1930
1,952,900	White	Mar. 27, 1934
2,152,745	Klass	Apr. 4, 1939
2,259,855	Martinet	Oct. 21, 1941