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ATTACHING MEANS FOR DUST BAGS FOR SUCTION CLEANERS AND THE LIKE.

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To all whom it may concern:

Be it known that I, FOSTER K. SOLLIDAY, a citizen of the United States, residing at Grand Rapids, county of Kent, State of Michigan, have invented certain new and useful Improvements in Attaching Means for Dust Bags for Suction Cleaners and the like, of which the following is a specification.

This invention relates to improved attaching means for dust bags for suction cleaners and the like.

The objects of the invention are to provide an attaching means or ring for the mouth of the dust bag which can be easily applied and removed, which is secure in position and neat in appearance and inexpensive to manufacture.

Objects pertaining to details will appear from the description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this application, in which:

Fig. I is a fragmentary side elevation view of the discharge spout of a vacuum cleaner with my improved attaching ring in position, showing a part of the dust bag, dotted lines showing details.

Fig. II is an enlarged detail longitudinal section al view through the parts appearing in Fig. I, taken on line 2—2 of Fig. III.

Fig. III is a detail transverse sectional view taken on line 3—3 of Figs. I and III.

Fig IV is a detail perspective view of the slotted split ring for carrying the coiled retainer spring.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the numbered parts of the drawing, 1 is the discharge spout of a suction cleaner, terminating in a flanged head 2. 3 is the metal bag-retainer ring to which is secured the bag 4 by clamp means 5, either a wire or string. The mouth of the bag may be secured to the ring by any suitable means.

The ring 3 is recessed to receive the flanged end of the spout 1 and within an internal annulus 6 is disposed a coiled wire retainer spring 7 of substantially the diameter of the cross section of the annulus. This is held in the annulus by the supporting ring 8. In the ring 8 are a series of circumferential slots 9 opposite the annulus 6 with intervening cross supports 10. The ring is a split ring, being preferably split through one of the cross supports 10.

The coiled wire retainer spring 7 is carried on the supports 10 and subtends the chords of the ring between the supports, projecting inwardly through the slot 9 into position to engage the projecting bead flange 2 on the end of the discharge spout 1.

It will thus be seen that a very smooth rounded spring surface is presented for contact and engagement with the annular flange 2. As this flange 2 is slightly beveled, the action of the spring is to engage the same and hold with yielding pressure the ring 3 against the mouth of the spout. It may be readily removed simply by pulling with the hand and snaps to place.

I have provided a simple, inexpensive and effective means for supporting the retaining spring but desire to state that it can be supported in this relation by other means. While this structure and retainer is especially adapted for suction cleaner use, the connection is available and of advantage for other and various purposes.

I desire to claim the invention specifically in the relation as described and shown, and also broadly, as pointed out in the appended claims.

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

1. In a retaining and attaching means for suction cleaner dust bag, the combination with the spout member having a beaded flange at its mouth, a retainer ring, with dust bag secured thereto, with a bore to receive said flange, an internal annular recess in said ring, a coiled retainer spring disposed in said annular recess of diameter corresponding thereto, and a supporting means for the said retainer spring comprising a split ring containing circumferential slots with cross bar supports at intervals for said retainer spring whereby the supported

spring under tension subtends chords of the arc of said ring and engages the flange of said spout, coacting as specified.

2. In a retaining and attaching means for suction cleaner dust bag, the combination with the spout member having a beaded flange at its mouth, a retainer ring, with dust bag secured thereto, with a bore to receive said flange, an internal annular recess in said ring, a coiled retainer spring disposed in said annular recess of diameter corresponding thereto, and a supporting means for the said retainer spring comprising a ring containing circumferential slots with cross bar supports at intervals for said retainer spring whereby the supported spring under tension subtends chords of the arc of said ring and engages the flange of said spout, coacting as specified.

3. In a retaining and attaching means for suction cleaner dust bag, the combination with the spout member having a beaded flange at its mouth, a retainer ring, with dust bag secured thereto, with a bore to receive said flange, an internal annular recess in said ring, a coiled retainer spring disposed in said annular recess of diameter corresponding thereto, and a supporting means for the said retainer spring comprising a ring with cross bar supports at intervals for said retainer spring whereby the supported spring under tension subtends chords of the arc of said ring and engages the flange of said spout, coacting as specified.

4. In a retaining and attaching means for suction cleaner dust bag, the combination with the spout member having a beaded flange at its mouth, a retainer ring, with dust bag secured thereto, with a bore to receive said flange, an internal annular recess in said ring, a coiled retainer spring disposed in said annular recess of diameter corresponding thereto, and supports at intervals for said retainer spring whereby the supported spring under tension subtends chords of the arc of said ring and engages the flange of said spout, coacting as specified.

5. A retainer means comprising a ring with internal annular recess, and a coiled spring disposed within said recess with diameter corresponding thereto and supported at intervals so that portions of the spring subtend the chord of the arc of the circle of said ring and project inwardly therefrom to form yielding engaging means.

6. A retainer means comprising a ring, and a coiled spring disposed within said ring and connected to subtend a chord of the arc of the circle of said ring to form a yielding engaging means.

In witness whereof, I have hereunto set my hand.

FOSTER K. SOLLIDAY. [L. S.]