

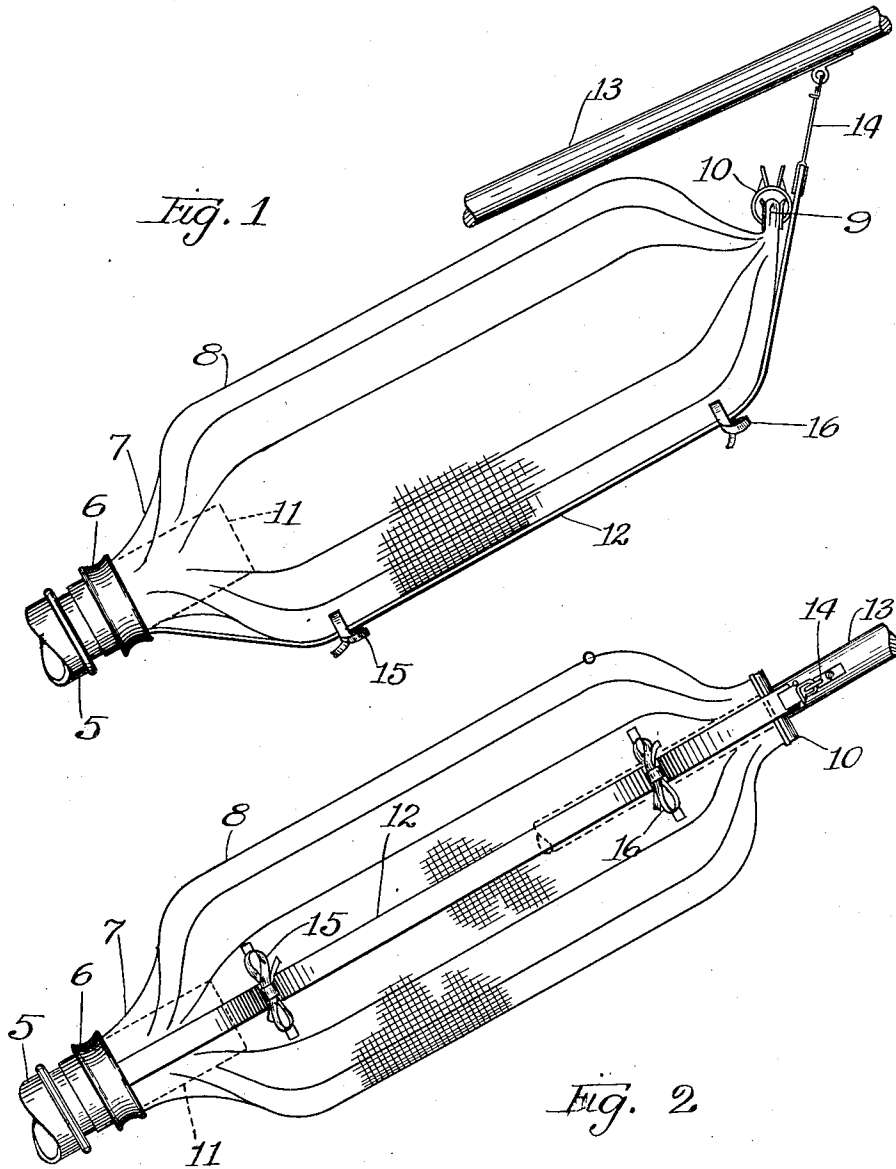
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SUCTION CLEANER

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## UNITED STATES PATENT OFFICE

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## SUCTION CLEANER

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This invention relates to suction cleaners in general and particularly to dust bags for suction cleaners. More specifically the invention relates to means for supporting a dust bag from a suction cleaner.

It has been found that a dust bag made of a substantially porous material such as cotton felt produces a very good filtering medium without an appreciable amount of back pressure. A bag made of this material will permit all the air to seep through the bag and still prevent any of the dust from escaping into the atmosphere.

Cotton felt material, however, does not have sufficient tensile strength to absorb all the strains and stresses which are normally applied to a bag, so means have been provided to properly support the bag and absorb these stresses and strains which occur during normal operation of a suction cleaner.

The object of the invention is to provide new and novel means to support a dust bag and to absorb the strains and stresses which are commonly required of suction cleaner bags.

Another object of the invention is to provide a supporting sling or cradle which will support the bag and absorb the usual stresses and strains which the conventional bag must usually absorb.

Another object of the invention is to provide means which is connected to the discharge neck or outlet of the suction cleaner and also to the suction cleaner handle for supporting a dust bag.

Another object of the invention is to provide a sling or cradle which is made from tape or a similar material and which is connected at two points to a suction cleaner to support the bag at its underside and which will absorb the stresses and strains which are usually applied to the conventional dust bag.

A further object is to provide a bag provided with means which will prevent the bottom or throat of the bag from coming in con-

tact with the surface to be cleaned when the suction cleaner is being used under low places or articles of furniture, and which will reduce chaffing.

The invention comprises in general a sling made of ordinary canvas or other similar material which is attached to the lower end of the discharge outlet of the suction cleaner, and which has its upper end secured to the suction cleaner handle. The bag is tied or otherwise secured to the sling or supporting member so that the bag is always maintained in proper normal and operable position.

In the accompanying drawings which illustrate a selected embodiment of the invention the views are as follows:

Fig. 1 is a side elevation of a dust bag to which the invention is applied.

Fig. 2 is a bottom plan view of a dust bag showing the manner in which the bag is connected to the sling.

Referring to the drawings, 5 designates the ordinary discharge neck or adapter of a suction cleaner with which bag clamping means 6 cooperate for maintaining the neck 7 of the dust bag 8 in proper position relative to the discharge neck. The bag is open at its upper end at 9 so that the bag may be easily emptied. The open end 9 of the bag is closed by means of a clip 10 as shown, and a dust bag valve 11 may be secured in the lower end or neck of the bag to prevent the accumulated dust gathered in the bag from falling back into the operating mechanism of the cleaner.

The sling 12 is preferably made from ordinary canvas and is secured to the discharge outlet of the suction cleaner by the clamping means 6, or in any other convenient and suitable way. The sling extends upwardly along the bottom of the bag and is suitably supported from the suction cleaner handle 13 by means of an attaching device 14. In order to keep the bag in proper position relative to the sling the bag may be provided

with strings or ties 15 and 16 which are suitably arranged on the bottom of the bag for securing the bag to the sling. The sling provided in the present invention removes all strains and stresses from the bag as these strains and stresses will be carried by the sling itself.

The bag is prevented from retaining other than normal operating position by means of the sling which is not only secured to the discharge neck and the suction cleaner handle but also to the bag at two or more points, as shown.

The invention provides means which are simple and inexpensive, and which properly support the bag in proper relative operating position with the suction cleaner handle and the suction cleaner discharge outlet.

Changes may be made in the form, construction and arrangement of the parts without departing from the spirit of the invention and sacrificing any of the advantages thereof and the right is hereby reserved to make all such changes as fairly fall within the scope of the following claims.

I claim:—

1. A support for dust bags comprising a substantially flat member adapted to be connected to a suction cleaner discharge outlet and extending along the bottom of the bag, means for connecting the upper end of said member to a suction cleaner handle, and means for detachably connecting the bag to said member, at a plurality of points intermediate the ends of the bag.

2. A support for dust bags comprising a member detachably secured to the bottom of said bag, means for securing the bag and said member to the discharge outlet of a suction cleaner, and means for securing said member to the handle of a suction cleaner.

3. A support for dust bags comprising a tape member adapted to be supported by a discharge neck of a suction cleaner and having its upper end supported by the suction cleaner handle, and means carried by said bag for securing said bag to said tape.

4. The combination of a suction cleaner having a discharge neck and a handle, of a bag secured to said neck, and means for supporting said bag adapted to be connected at one end to said neck and at its other end to said handle, and means connected to said bag for detachably connecting the bag to said first named means.

5. The combination of a suction cleaner having a discharge outlet and an operating handle, of a bag in communication with said outlet, means for supporting said bag adapted to be connected to said neck and to said handle at separated points, and means for detachably securing said bag to said supporting means.

6. The combination of a suction cleaner having a discharge neck and a propelling

handle, a dust bag, a sling means adapted to be secured at its end to said neck and said handle for supporting the dust bag, and means connected to said bag and engageable with said sling means for maintaining the bag in position between said sling means and said handle.

Signed at N. Canton, in the county of Stark and State of Ohio, this 8th day of April, A. D. 1929.

WALTER C. DAVIDSON.

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