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W. J. WISE ET AL.
DUST BAG CONNECTOR.
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1,443,449.

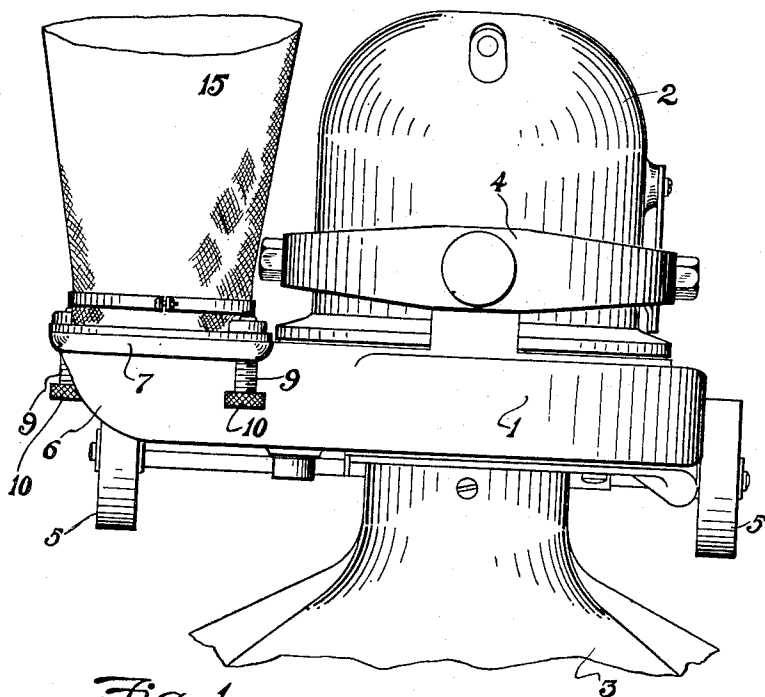


Fig. 1

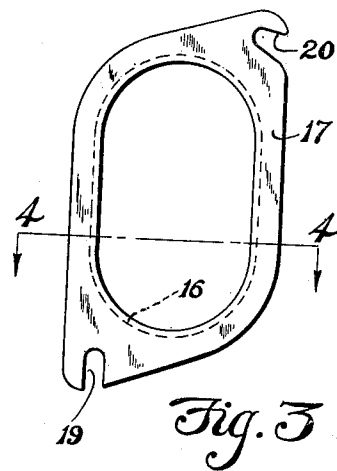


Fig. 3

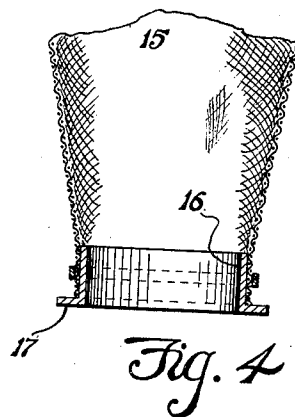


Fig. 4

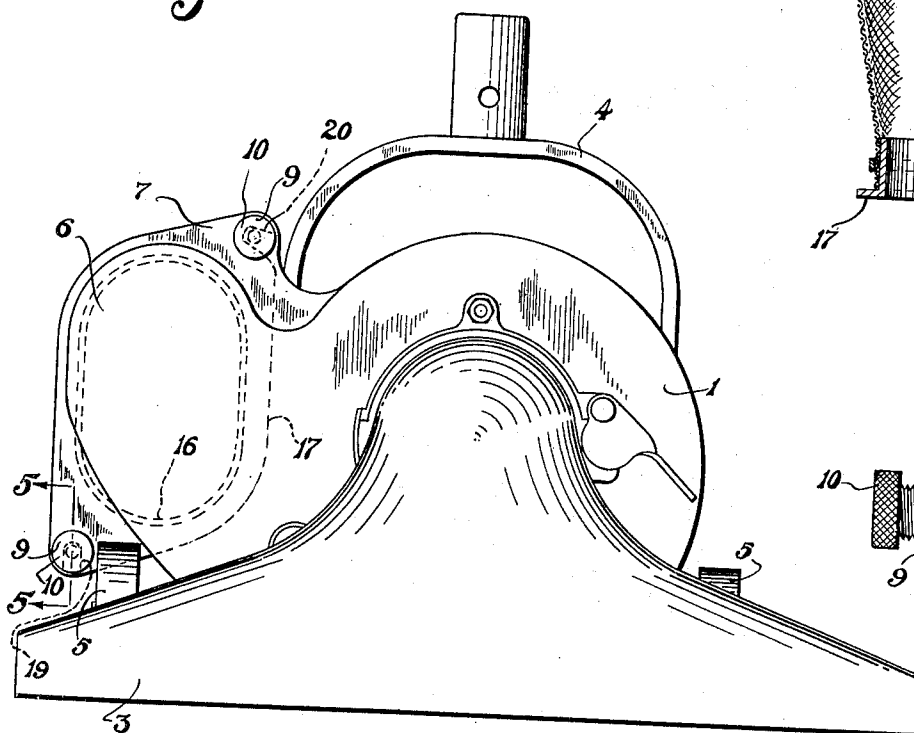


Fig. 2

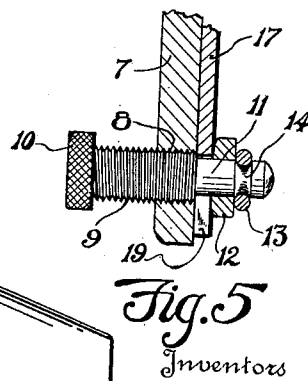


Fig. 5

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UNITED STATES PATENT OFFICE.

WILLIAM J. WISE AND THOMAS O. ADAMS, OF NEW PHILADELPHIA, OHIO, ASSIGNORS
TO THE WISE-McCLUNG MANUFACTURING COMPANY, OF NEW PHILADELPHIA,
OHIO, A CORPORATION OF OHIO.

DUST-BAG CONNECTOR.

Application filed January 19, 1922. Serial No. 530,294.

To all whom it may concern:

Be it known that we, WILLIAM J. WISE and THOMAS O. ADAMS, citizens of the United States, both residing at New Philadelphia, in the county of Tuscarawas and State of Ohio, have invented a new and useful Dust-Bag Connector, of which the following is a specification.

This invention relates to suction cleaners and more particularly to a dust bag connector adapted to connect the dust collector bag to the fan chamber of the suction cleaner. The objects of the invention are to provide a dust bag connector which normally forms a tight seal between the fan chamber and the dust collector bag and which may be easily and quickly operated to detach the bag from the fan chamber and attach the same thereto without the necessity of removing bolts or screws, the attaching and detaching of the bag being accomplished by slightly loosening the two screws which hold the same in position.

The above and other objects may be attained by providing a device of the character illustrated in the accompanying drawings, the dust bag and connector comprising a frame having an angular flange to which the dust collector bag is clamped and provided with notches which receive the clamping screws carried by the outlet neck of the fan chamber.

A preferred embodiment of the invention thus set forth in general terms is illustrated in the accompanying drawing, in which—

Figure 1 is a plan view of a suction cleaner showing the dust bag connector embodying the invention applied thereto;

Fig. 2, a front elevation of the same;

Fig. 3, a detached elevation of the dust bag frame or ring;

Fig. 4, a section on the line 4—4, Fig. 3, showing a portion of the dust bag connected to the frame; and

Fig. 5, a section on the line 5—5, Fig. 2. Similar numerals of reference indicate corresponding parts throughout the drawing.

In carrying out the invention, the fan casing 1, motor 2, nozzle 3, handle bail 4 and wheels 5 may be of any usual and well known construction of either the horizontal motor type of vacuum cleaner as shown in

the drawings, or of the usual vertical motor type.

The outlet neck 6 of the fan chamber is provided at its extremity with the angular flange 7 of a shape best shown in Fig. 2. This flange is provided at diagonally opposite corners with the threaded apertures 8 through which are located the locking screws 9, each of which is provided upon its forward end with a knurled head 10, the rear extremity thereof being reduced as shown at 11 and having a washer 12 held thereon as by the ring 13 mounted within the annular groove 14 of the screw.

The mouth of the dust collector bag 15 is located around the angular flange 16 formed upon the bag ring or plate 17 and connected thereto as by the band 18. The plate or ring 17 is preferably shaped to correspond with the flange 7 upon the outlet neck of the fan chamber and is provided in diagonally opposite corners with the downwardly open notch 19 and the inclined slot 20, said slots 20 being arranged to be engaged over the reduced portions 11 of the locking screws. By placing the plate or ring 17 in position as shown in Figs. 1 and 2, and tightening the screws 9, the washers 12 thereon will be drawn against the ring or plate 17, clamping the same tightly against the flange 7.

When it is desired to remove the dust bag for cleaning the same, it is only necessary to slightly loosen the screws 9 when the plate or ring 17 may be rocked upon the lower screw as a pivot until the notch 20 is disengaged from the adjacent screw, when the bag and plate may be lifted out of engagement with the lower screw, thus detaching the same easily from the suction cleaner.

With the screws loosened slightly, the plate 17 may be easily attached to the cleaner by engaging the lower screw 9 with the notch 19 and rocking the plate until the notch 20 engages the upper screw 9 when both screws may be easily tightened, clamping the plate 17 against the flange 7 of the outlet neck and holding the bag rigidly in position upon the suction cleaner.

From the above, it will be evident that a very simple and efficient dust bag connector is provided which will normally hold the dust bag in an air tight connection with the

fan chamber by means of which the dust bag may be easily and quickly attached to or detached from the cleaner.

It will be seen that the screws 9 are located in a position so that they will not interfere with the dust bag and are easily accessible. The operator may stand in front of the machine and away from the dust bag while removing the same from the machine.

The washer 12 fits upon the shank 11 of the screw loosely enough so that when the screw is turned to tighten the dust bag ring, the washer will bind on the ring 17 and the shank 11 will turn within the washer.

By providing the lock spring 13 in the groove 14 of the screw, it will be seen that by turning the screw to the left, it will bind the washer 12 between the dust bag ring 17 and lock spring 13, thus making it possible to clamp the dust bag ring to the outlet of the machine very securely with very little exertion.

We claim:—

1. In combination with a flanged neck, clamping screws located through the flange thereof, a rotatable collar upon each clamping screw, and a ring provided with notches adapted to receive the screws, the collars upon the screws being adapted to clamp the ring against the flange.

2. In combination with a flanged neck, clamping screws located through the flange thereof, a rotatable collar upon each clamp-

screw, and a ring provided with a vertically disposed notch adapted to receive one screw and an angularly disposed slot adapted to receive the other screw, the collars upon the screws being adapted to clamp the ring against the flange.

3. In combination with a flanged neck, clamping screws threaded through the flange thereof and provided with heads upon their forward ends, the rear ends of said clamping screws being provided with reduced, grooved shanks, a spring ring in the groove of each shank, a collar loosely mounted upon the shank and retained thereon by the spring ring, said collar being spaced from the threaded portion of the screw, a ring provided with notches adapted to receive the shank portions of the screws, the collars upon the screws being adapted to clamp the ring against the flange when the screws are tightened.

4. In combination with a flanged neck, clamping screws located through the flange thereof and a ring provided with a vertically disposed notch adapted to receive one screw, and an angularly disposed notch adapted to receive the other screw, the screws being adapted to clamp the ring against the flange.

In testimony that we claim the above, we have hereunto subscribed our names.

WILLIAM J. WISE.
THOMAS O. ADAMS.