June 20, 1933. M. R. HUTCHISON, JR 1,914,370

VACUUM CLEANER DUST BAG

Filed Nov. 9, 1929

Fig. 1.

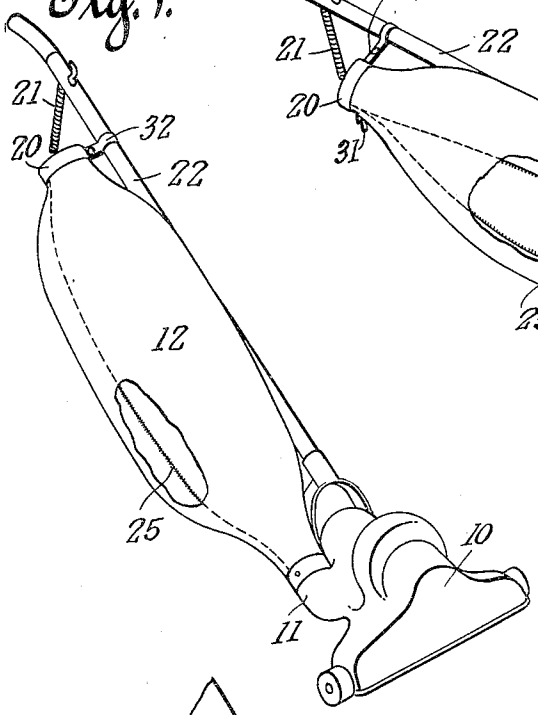


Fig. 2.

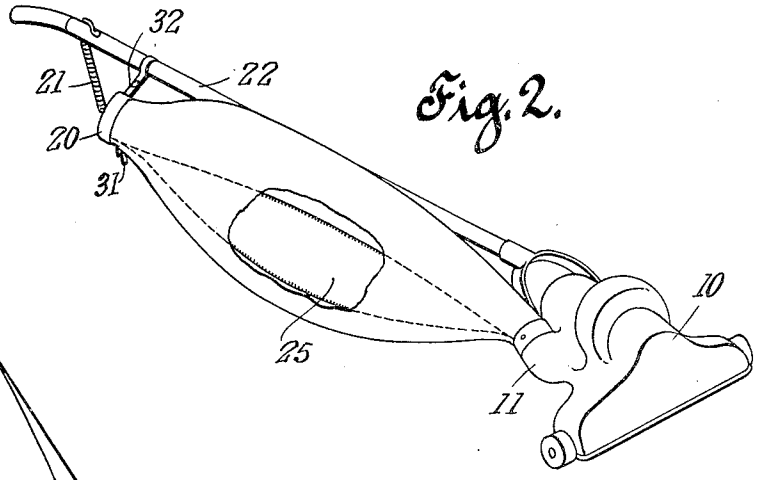


Fig. 3.

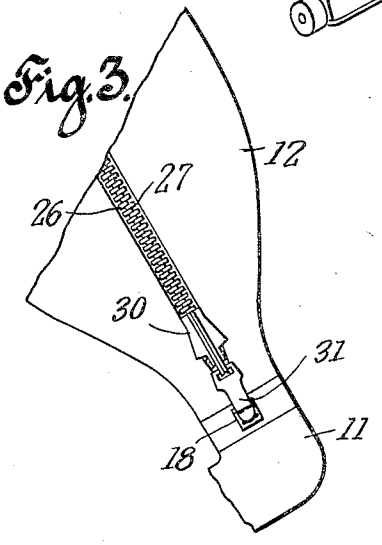


Fig. 4.

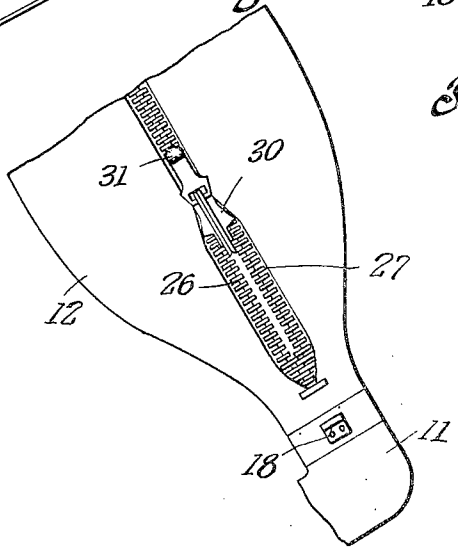
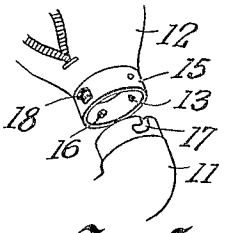


Fig. 5.



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UNITED STATES PATENT OFFICE

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VACUUM CLEANER DUST BAG

Application filed November 9, 1929. Serial No. 405,853.

This invention relates to vacuum cleaners and particularly to the disposal of the dust or dirt collected thereby.

In the usual vacuum cleaners, it is necessary to detach the dust bag for emptying. During this operation, the dust and dirt escape from the bag and it is usually necessary to shake the bag, which further distributes and spreads the dust. These bags are of elongated construction with a relatively small discharge opening at one end, which makes it more difficult to entirely empty the contents of the bag.

The objects of this invention are to facilitate discharge of the matter collected by the vacuum cleaner and to provide a holder for the collected matter, which can be easily and quickly emptied without the necessity of removing the same from the cleaner.

Further objects of the invention will appear from the following specification taken in connection with the drawing which forms a part of this application, and in which

Fig. 1 is a broken perspective view of a vacuum cleaner having a dust bag thereon constructed in accordance with the invention, the bag being closed;

Fig. 2 is a view similar to Fig. 1 but showing the bag open;

Fig. 3 is an elevational view showing a portion of the bag, the bag being closed and the slider for closing the bag being secured in closing position;

Fig. 4 is a view similar to Fig. 3 but showing the lower end portion of the bag open; and

Fig. 5 is a detail elevational view showing one manner of connecting the bag to the vacuum cleaner.

The invention briefly described consists of a vacuum cleaner having a dust bag with an opening at one end thereof and means for securing this end of the bag to the cleaner and, furthermore, having a longitudinal slit or opening extending substantially throughout the length of the bag. The longitudinal opening is preferably arranged on the underside of the bag and means is provided for closing said opening. This means preferably consists of a slider actuated type of closure in which a series of fastening elements is secured to each longitudinal edge of the slit or opening and a slider is adapted to coact with the fastening elements of the two series to secure the edges in closed relation.

Further details of the invention will appear from the following description.

In the form of the invention illustrated, there is shown a vacuum cleaner 10, which may be of any suitable form or type, and has a discharge conduit or passage 11.

A dust bag 12, elongated in shape, has an opening 13 at the lower end thereof, means being provided for securing the open lower end of the bag over the outlet end of the discharge conduit 11. The bag may be secured to a discharge conduit in any suitable manner and in Fig. 5 is shown as provided with a metal band 15 having indented portions 16 adapted to enter angularly formed grooves 17 formed on the discharge conduit 11. The band 15 has formed thereon or secured thereto a hook 18 for a purpose hereinafter set forth.

The bag 12 is closed at its upper end 20 and means, such as a spring 21, is secured to the end 20 and to the handle 22 of the vacuum cleaner for supporting the bag in position.

The dust bag 12 has a longitudinal slit or opening 25 extending substantially throughout the length thereof and the edges of the slit 25 have secured thereto oppositely extending series of fastening elements 26 and 27. These fastening elements are preferably the well known slider actuated type and a slider 30 is provided for moving the elements of the two series into closing position. The construction and operation of such fasteners is well known and need not be described in detail.

The slider 30, shown in Fig. 4, is disposed at the upper end of the bag when the slit 25 is open, Fig. 2. When the slider is moved downwardly, the fastener elements 26 and 27 will be operated to close the opening or slit and the slider has connected thereto a loop 31 adapted to engage over the hook 18 on the band 15 when the slider

is in its lowermost position and the opening or slit 25 is closed.

In order to empty the matter collected by the cleaner, it is only necessary to unhook the loop 31 of the slider from the retainer 18 and to move the slider upwardly as indicated in Figs. 2 and 4. As the bag is supported on the cleaner with the slit extending from the bottom along the underside of the bag, it will be seen that the contents will discharge automatically as the slider is pulled upward and that in this discharging process the hand operating the slider is always above the opened portion and so is not in the fall of dust from the bag. The bag may be opened only partly or entirely and when closed, is locked in that condition against any accidental opening by interlocking the slider with the detent 18. As the dust holder need not be detached from the cleaner structure, it may be permanently mounted thereon and in a definite fixed relation instead of being held by a spring connection as shown at 21. The upper closed end 20 of the bag may, for instance, be directly secured to the handle by means of a screw clamp 32 or the like, in fixed relation. Also because of the fact that the bag or holder need not be removed from the cleaner each time it is emptied, it may be made in any shape or size suited to the cleaner. When the top of the bag is rigidly clamped to the handle as indicated at 32, the upper end of the bag will be positively held against the pull of the slider, while the latter is being shifted downwardly to close the bag.

Although one specific embodiment of the invention has been particularly shown and described, it will be understood that the invention is capable of modification and that changes in the construction and in the arrangement of the various cooperating parts may be made without departing from the spirit or scope of the invention as expressed in the following claim.

What is claimed is:

A vacuum cleaner having a dust bag provided with a discharge slit and with cooperating interlocking fastener elements along the edges of the slit, a slider for interlocking and for releasing the fastener elements and means for supporting the bag in an inclined position with the slit at the underside of the bag and with the fastener elements positioned to open on the upward movement of the slider and to interlock on the downward movement of the slider.

In testimony whereof I affix my signature.

MILLER R. HUTCHISON, JR.