July 19, 1938. D. B. REPLOGLE 2,123,913

DUST COLLECTING DEVICE FOR PNEUMATIC CLEANERS

Original Filed July 20, 1931

Fig. 1.

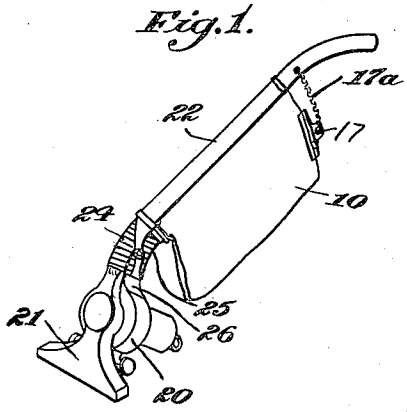


Fig. 2.

Fig. 3.

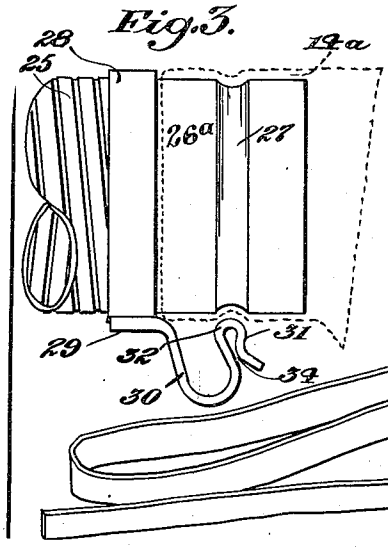
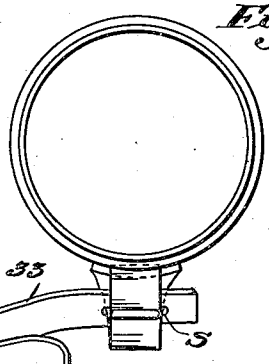


Fig. 4.



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DUST COLLECTING DEVICE FOR PNEUMATIC CLEANERS

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Application July 20, 1931, Serial No. 552,050
Renewed October 20, 1937

5 Claims. (Cl. 183—51)

The invention relates to pneumatic cleaners and dust collecting devices therefore, and more particularly to the connections between the bag and fan outlet pipe of the cleaner.

The invention will be more readily understood by reference to the accompanying drawing in which:

Fig. 1 is a perspective view on a reduced scale, illustrating one form of suction cleaner with a dust collector bag attached thereto;

Fig. 2 is a side elevational view on an enlarged scale, partly in central cross section, and with parts broken away, illustrating one means for attaching the dust collector to the cleaner, and

Figs. 3 and 4 are detail views on a further enlarged scale, illustrating the attaching means.

Figs. 1 and 2 illustrate the dust collector applied to a suction cleaner of the type shown in my application Serial No. 499,575, filed Dec. 2, 1930. As shown, the cleaner includes a suction producing fan **20**, a floor tool **21**, a suction handle **22**, a valve **23** for operatively connecting either the floor tool or the suction handle with the source of suction. A flexible connector **24** is shown interposed between the valve **23** and the suction handle **22**, and a like flexible hose pipe **25** is interposed between the exhaust outlet **26** from the fan casing and the dust collector **10**. Both the connectors **24** and **25** are preferably detachable at both ends so that they may be renewed when necessary. As shown in detail in Fig. 3 the hose connector **25** is preferably provided with a substantially rigid terminal or nipple portion **26a**, having an external circumferential groove **27** intermediate its ends. Toward the fan end of the nipple is a collar **28** which may be permanently secured over the end of the flexible portion of the hose **25** and upon this collar is suitably secured as by a rivet **29** a resilient or yielding detent member **30**, having an outturned clasp **31** at the end thereof. A portion **32** of the detent member is normally yieldingly held in contact with the groove **27** by the resilience of the material of which the detent is formed.

The dust collector bag may be secured to the cleaner by drawing the mouth of the bag over the nipple **26a**, as illustrated in Fig. 3, the detent serving to temporarily hold the same in position. An air-tight fit between the bag and nipple may be obtained by passing a strap **33** of leather or other suitable material around the mouth of the bag and through the narrow neck **34** formed in the detent **30**. The strap forces part of the material of the bag mouth into the circumferential groove **27** in the nipple, and this groove together with the detent **30** serve to prevent the strap and bag from slipping. The ends of the strap may be secured together in any suitable manner, thus providing a simple and effective air-tight connection between the dust collector and the connector **25** which communicates with the fan exhaust.

I claim:

1. The herein described means for attaching a dust filtering element to the discharge pipe of a suction cleaner which comprises a nipple operatively connected to the discharge pipe, said nipple having a circumferential groove therein, a spring finger carried by and extending lengthwise of said nipple and having a bent-over portion normally forced into said groove, and a strap for securing the mouth of the dust collector over said nipple, said strap passing around said finger and being retained thereby, and forcing a portion of said bag mouth into said groove.

2. In a suction cleaner having a fan discharge nozzle, a dust collector bag having an inlet mouth, and means for operatively connecting the inlet mouth of said dust collector bag to said discharge nozzle, said means comprising a nipple in communication with said discharge nozzle, and having a circumferential groove adjacent the end thereof, a spring finger secured to said nipple and having a bent-over portion normally held in said groove by the resilience of the material of which the finger is composed, the mouth of said bag being fitted over the grooved end of said nipple, and detachably held in position by the bent-over portion of said finger, and a strap passing over said bent-over portion of the finger and about the neck of the dust collector bag and serving to retain the same in position.

3. A dust collector bag adapted for use on a suction cleaner having an exhaust outlet pipe, said bag having a flexible mouth, and means for connecting said dust collector bag to said pipe, said means comprising a circumferentially grooved connector, over which connector the mouth of the bag passes, a spring finger extending lengthwise of said connector and having a portion overlying the mouth of the bag, and a strap surrounding the bag mouth and forcing the material of said mouth into said groove, said finger having a neck for retaining said strap to prevent movement thereof lengthwise of the connector.

4. A dust collector bag adapted for use on a suction cleaner having an exhaust outlet pipe, said bag having a flexible mouth, and means for connecting said dust collector bag to said

pipe, said means comprising a circumferentially grooved connector, over which connector the mouth of the bag passes, and a spring finger extending lengthwise of the connector having a portion thereof extending over the bag mouth and forcing the material of said mouth into said groove.

5. A dust collector bag adapted for use on a suction cleaner having an exhaust outlet pipe, said bag having a flexible mouth, and means for connecting said dust collector bag to said pipe, said means comprising a circumferentially grooved connector, over which connector the mouth of the bag passes, a strap surrounding the bag mouth and forcing the material of said mouth into said groove, and means carried by said connector for holding said strap in place, said means comprising a spring finger extending lengthwise of the connector and having a portion which fits over the mouth of the bag and having a hooked portion to retain the strap against lengthwise movement with reference to the connector.

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