

Sept. 1, 1931.

E. F. WOODWARD

1,821,824

DUST COLLECTOR

Filed Dec. 24, 1929

Fig. 1.

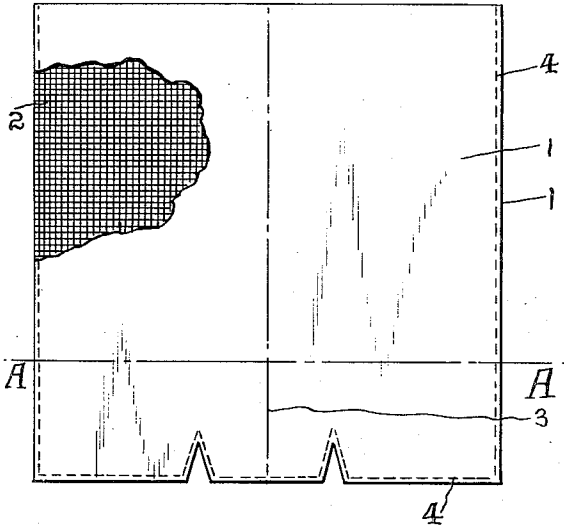


Fig. 3.

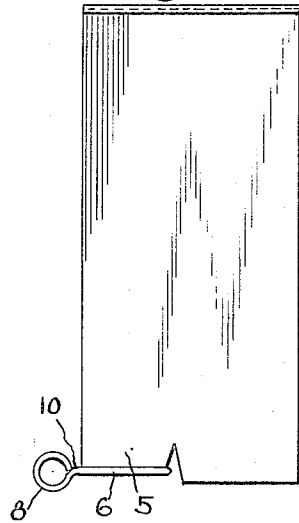


Fig. 4.

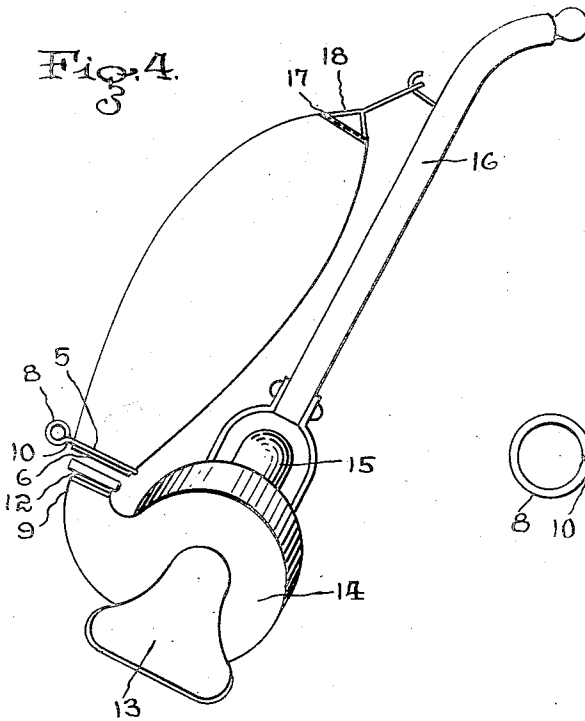


Fig. 2.

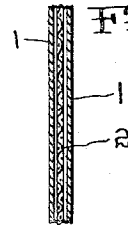
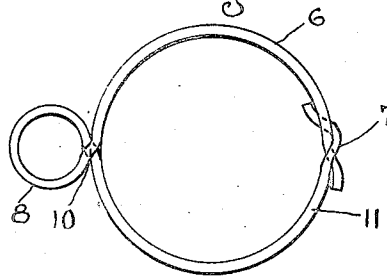


Fig. 5.



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DUST COLLECTOR

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This invention relates to dust collectors for pneumatic cleaners, and has for its object to improve the efficiency of separating the dust from the air, to simplify the disposal of dust when collected, to cheapen the cost of the dust collector and such further objects as may appear herein.

In the accompanying drawings in which:

Fig. 1 is a diagrammatic view of a porous paper blank with a portion cut away to more clearly show a net-like reinforcement. Fig. 2 is an enlarged view taken along section line A—A of Fig. 1 showing two layers of porous paper and the net-like reinforcement. Fig. 3 is a plan view of a finished dust collector. Fig. 4 is a perspective view of a pneumatic cleaner with a dust collector of my improved type in position for attachment thereto and Fig. 5 is a plan view of a wire collar fastener.

Referring now to Fig. 1 the numerals 1—1 indicate thin sheets of porous paper between which is placed a net-like fabric 2 such as cheese cloth or tobacco cloth which has been treated with some adhesive and the sheets pressed together. After drying, the blank shown in Fig. 1 is folded on the dotted line 3 and sewed together along the dotted lines 4—4 shown in Fig. 1. The neck 5 is provided with a wire collar 6 as shown in Fig. 5. This collar is made from a piece of wire twisted together at its ends 7 and provided with a loop 8, the purpose of which is to form a finger hold to enable the operator to tighten the wire band when placed around the outlet 9 in the pneumatic cleaner, by twisting the loop 8 and thus twisting the wire at 10. The wire band 6 is attached to the neck piece 5 of dust collector by turning up the paper and supporting fabric and fastening it by either sewing or by an adhesive leaving the loop 8 projecting out of one side, thus forming a rounded edge which is adapted to fit into the groove 12 surrounding the outlet 9 of the pneumatic cleaner so that by twisting the loop 8 and the wire at 10 the band is drawn tightly around the groove 12 thus holding the dust collector firmly in place upon the outlet 9. In Fig. 4, 13 is the nozzle of a pneumatic cleaner, 14 the im-

PELLER case, 15 the motor and 16 the handle. The dust collector is provided at its upper end 17 with a raised or rounded surface on each side, the top being left open, so that the dust collector may be emptied when desired, but it is provided with a spring clip 18 or other well known means to hold the top in a closed position upon the handle 16, of the cleaner. In the enlarged section shown in Fig. 2, 1—1 are thin layers of porous paper and 2 is a net-like fabric attached to the paper layers by any well known adhesive or by sewing them together. If an adhesive is used care must be exercised to prevent the adhesive from spreading over the porous layers of paper which would have a tendency to seal the pores and thus prevent the passage of air therethrough. When so fastened together the porous layers of paper and the net-like reinforcement form one unit which is porous to air currents but retains dust and may then be made into a dust collector as previously described.

I preferably use two layers of thin porous paper between which is placed a layer of open work cloth such as cheese cloth or tobacco cloth. This net-like fabric is treated with a cohesive substance in such manner that the cohesive will not spread over the porous paper when placed between the sheets and subjected to pressure.

In a modified form I use only one layer of porous paper which is reinforced by a net-like fabric attached to it by a cohesive substance.

By this method the dust collector will be cheap to manufacture and will be strong and durable, while it will also be porous to enable air to pass out freely but will retain dust and dirt therein, and it may be readily detached from the pneumatic cleaner and a new clean dust collector put in its place by means of the wire collar and thumb piece.

While I have shown the dust collector made from two sheets of porous paper and a net-like fabric pasted between them, it is to be understood that only one sheet of paper may be used if desired and the reinforce-

ment may be made of any other material such as wire for instance.

I claim:

1. A dust collector adapted for use on a pneumatic cleaner, comprising a paper container porous to air, a net-like reinforcing member in contact with said container, and adhesive means applied to the strands only of said member for firmly attaching the latter to said container.

2. As a new article of manufacture, a dust bag adapted for use on pneumatic cleaners, said bag being formed from paper porous to air, reinforcing means comprising a net-like cloth fabric attached to said bag by an adhesive, said adhesive being applied only to the paper at the point of contact with the strands of the fabric, whereby to leave said porous paper free of adhesive between the strands of said fabric.

3. The method of making a dust collector for pneumatic cleaners which consists in applying an adhesive to the strands only of a net-like supporting member, pressing said member in face contact with a sheet of paper porous to air, and forming the paper to provide a dust collector bag having a reduced inlet.

4. The method of making a dust collector bag for a pneumatic cleaner which consists in applying an adhesive to the strands only of a net-like fabric, applying a layer of thin porous paper to each side of said fabric, applying pressure thereto and forming the laminated paper to provide a bag having a reduced inlet opening.

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