

June 1, 1926.

F. WEBB

1,586,868

VACUUM CLEANER BAG

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Fig. 1.

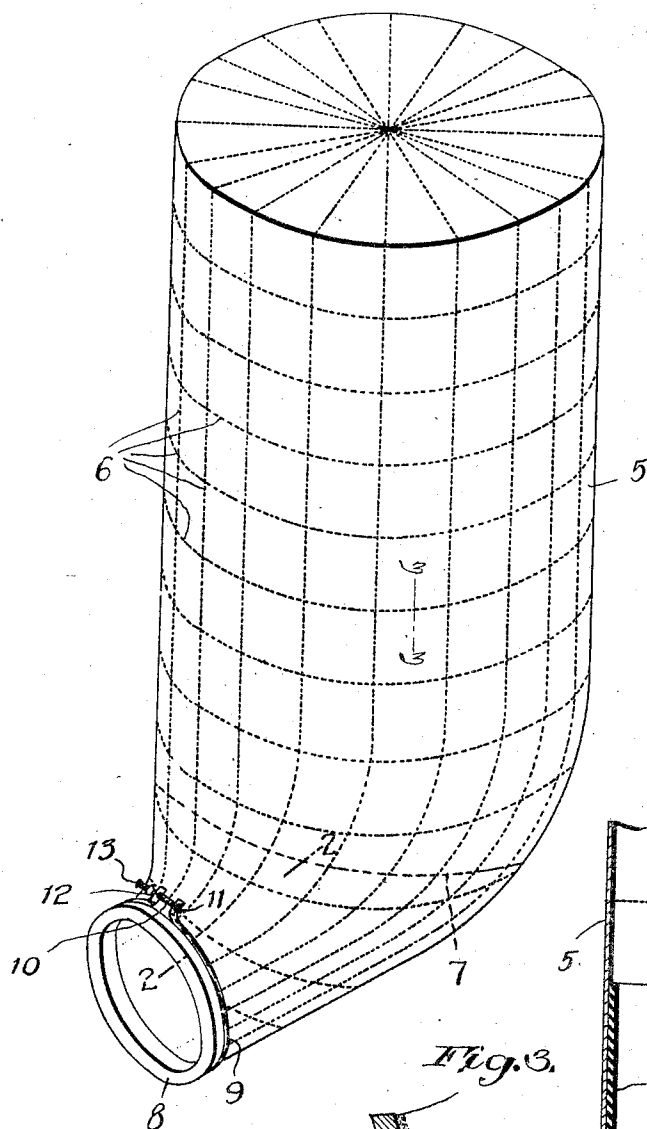


Fig. 2.

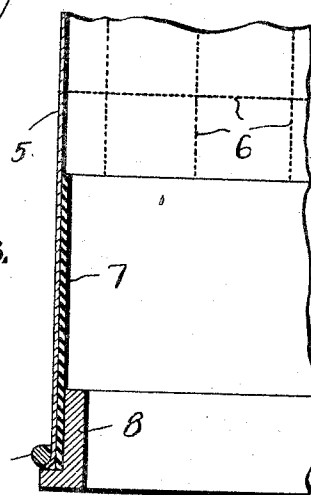


Fig. 3.

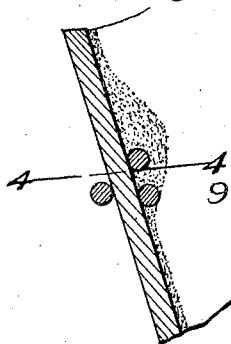
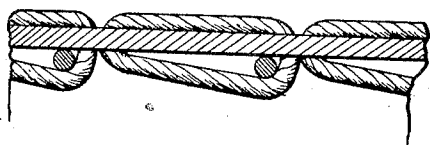


Fig. 4.



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UNITED STATES PATENT OFFICE.

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VACUUM-CLEANER BAG.

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This invention relates to containing bags employed in vacuum cleaners of the type in which the dust and air are drawn into the cleaner and then forced into the bag, while the air escapes through the sides of the bag. It may be observed that such bags, the type that are in common use today, have failed to execute the desired function of retaining the dust and simultaneously expelling the air, with any great amount of success.

The materials heretofore used have to be treated by expensive chemical processes periodically in order to maintain the desired quantity of dust retention and air escape. The durability of such bags is consequently very much limited. Ordinarily, a rough interior surface is employed in such bags in order to retain the dust and dirt and to prevent the accumulation of dust from falling down and so clogging the machine. Such a bag, it is observed, is extremely difficult to clean, and, likewise, unsanitary. With the type now in common use, it is practically impossible to remove all the accumulation of dust and dirt from the rough interior surface of the bag without virtually destroying the bag. Furthermore, the chemically treated bag cannot be washed or beaten to remove dirt or dust without destroying its utility. The object of my invention, therefore, is to provide a means in a vacuum cleaner bag for securing dust retention and air expulsion, and permitting the contents of the bag to be evacuated at desired times without impairing its utility. Thus I have devised a bag for vacuum cleaners which fulfills the essential requirements of the retention of dust and the expulsion of air, and is at the same time lighter, and cheaper and more durable than the type of bag now in common use on vacuum cleaners. My bag can be washed and beaten in the ordinary manner and so can be thoroughly cleaned at frequent intervals without in the least impairing its efficiency as a dust collector and retainer. To obtain my object, I employ for my bag a smooth material, such as mercerized cotton; and instead of using a rough interior, as now in common use, I apply a series of chain or lock stitching to the interior surface of the bag. These lines of stitching are preferably applied at right angles to each other as illustrated in the accompanying drawing, and spaced about an inch apart.

Referring to the accompanying drawing, Fig. 1 is a perspective view of the containing bag 5 for vacuum cleaners, made of mercerized cotton or similar material, and having cross lines or ridges of stitching 6. 7 60 represents a rubberized lining, at the lower part. 8, a ring in the bottom or neck of the bag. 9, a clamping ring holding back the rubber in place. 10, a screw riveted to ring at 11, having nut, 12, clamped or burred over 65 13 to keep nut from becoming detached and getting lost.

Fig. 2 is a detailed sectional view taken on the line 2--2 of Fig. 1.

Figure 3 is an enlarged fragmentary sectional view, taken on the line 3--3 of Figure 1, and Figure 4 is a transverse sectional view taken on the line 4--4 of Figure 3.

It will be readily understood that the lines of stitching may be made to cross each other at acute angles, or curved or angular lines of stitching may be employed, and that the spacing between the lines may be varied, and likewise a material already ribbed or corded in manufacture, or with a cord or other rib producing device woven into it may be used. The function of the slight ridge or ribs caused by the stitching is to precipitate and hold the stream of dust entering the containing bag while the stream of air passes through the material, the minute holes in the material caused by the stitching process facilitating the passage of the air from the bag. I have found that a bag so constructed is further improved by lining the bottom of the bag to a height of about six inches with rubberized or other impervious material, 7, as this prevents any dust from escaping from the bag where the activity of the air and dust in the bag is greatest when the machine is in operation. It is found in practice that a bag as described above is perfectly efficient in use and can be washed and cleaned, and reused as often as desired, which is a manifest advantage over the other containing bags now in use with vacuum cleaners.

Another feature of my invention is an improved means for holding the bag to the vacuum cleaning machine. These bags are usually attached to the machine by clamping the neck of the bag around a circular band or short tube by means of a metal band which is crossed by a bolt and nut. The use of a bolt and nut, which is liable to

loosen, gives rise to much inconvenience, and I have devised a holding rim, or band for the neck of the bag in which the clamping screw, 10, is solid with one end and the band, 11, of the holding nut, 12, preferably of thumb screw form, is prevented from riding off the screw by burring the outer end of the screw, as at 13. This device gives a holding collar for the neck of the containing bag, and with such it is impossible to mislay the clamping screw and nut.

Having thus described my invention, what I now claim and desire to protect by Letters Patent is as follows:

- 15 1. A vacuum cleaner bag comprising fabric that permits the escape of air but not dust through its meshes and a plurality of rows of stitching forming vertical and horizontal ridges on the inner side thereof.
- 20 2. A vacuum cleaner bag comprising fabric that permits the escape of air but not dust through its mesh and a plurality of rows of stitching extending vertically and horizontally through both the inner and
- 25 outer sides of the bag.
3. A vacuum cleaner bag comprising fabric that permits the escape of air but not dust through its meshes and a plurality of rows of stitching extending through both
- 30 the inner and outer sides of the bag, said

stitching being arranged at right angles to each other.

4. A vacuum cleaning bag made of fabric that permits the escape of air but not of dust through its meshes, the interior side of which is ridged or corrugated and having its base partly lined with a rubberized material.

5. A vacuum cleaning bag made of fabric that permits the escape of air but not of dust through its meshes, the interior side of which is ridged or grooved by a series of lines of chain or lock stitching, said bag having an increased porosity by reason of such stitching and having its base partly lined with rubberized material.

6. A vacuum cleaner bag comprising fabric that permits the escape of air but not dust through its meshes and a plurality of rows of stitching through the inner and outer sides of the bag, said stitching forming ridges on the interior of the bag, and comprising stitching substantially projecting from the surface of the fabric, said stitching extending vertically and horizontally through both the inner and outer sides of the bag.

This specification signed this 23d day of October, 1923.

FLORENTINA WEBB.