S. NOGUCHI.

VACUUM CLEANER BAG.

APPLICATION FILED MAY 1, 1914.

1,182,404. Patented May 9, 1916.

Fig. 1.

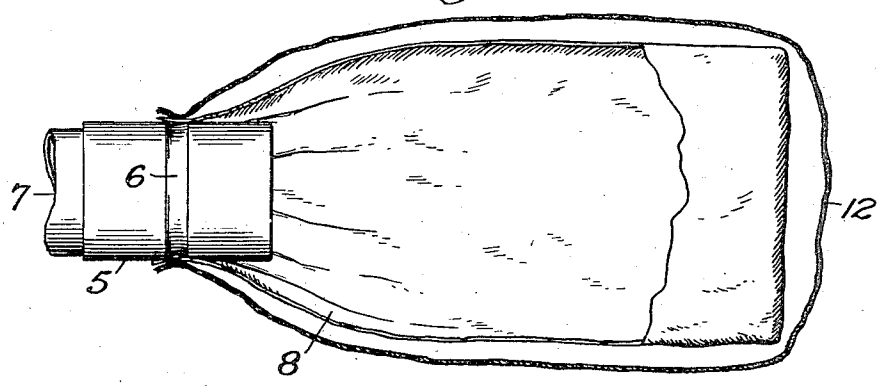


Fig. 2.

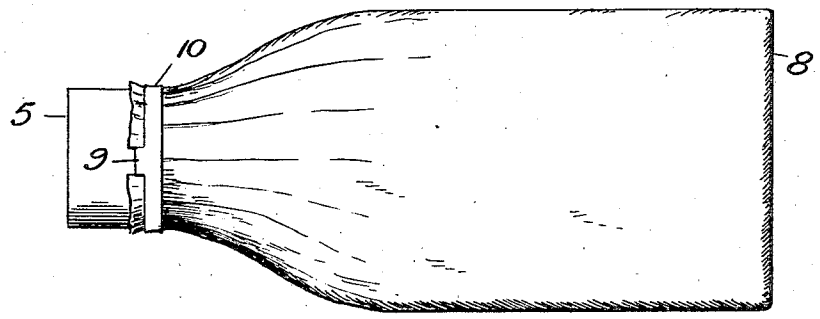


Fig. 3.

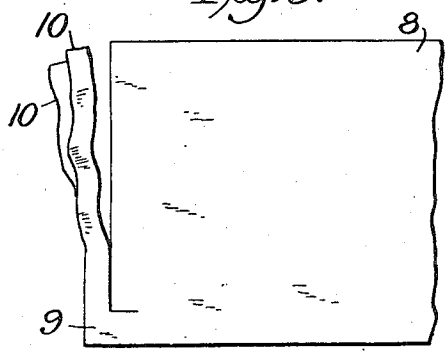
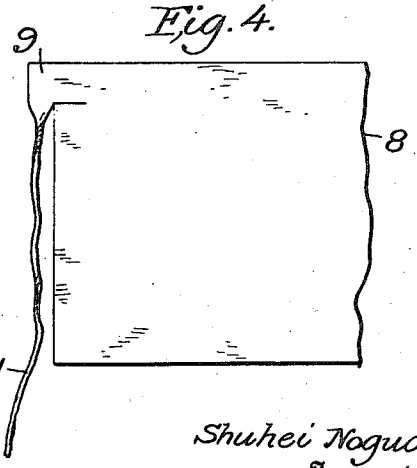


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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VACUUM-CLEANER BAG.

1,182,404. Specification of Letters Patent. Patented May 9, 1916.

Application filed May 1, 1914. Serial No. 835,682.

To all whom it may concern:

Be it known that I, SHUHEI NOGUCHI, a subject of the Emperor of Japan, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Vacuum-Cleaner Bags, of which the following is a specification.

This invention relates to vacuum cleaners and more especially to bags adapted to be attached to the same to receive the dust and dirt collected by the cleaner, the object of the invention being to provide a porous bag of cheap material which when attached to the discharge nozzle of the cleaner will retain the dirt, but permit the air to escape, the bag being provided with a tape or string integral with itself at its open end, as will be more fully described in the following specification, set forth in the claims, and illustrated in the accompanying drawings, wherein:

Figure 1. is a sectional view through the bag showing it attached to the discharge nozzle of a vacuum cleaner. Fig. 2. is an outside view of the same. Fig. 3. is an end view of the bag with its tape. Fig. 4. is a similar view showing a modified form of tape.

In collecting the dirt and dust which passes through the vacuum cleaner, a cotton or linen bag has heretofore been used into which the dust and air is blown, the former being retained while the latter passes through the pores of the bag. This operation when repeated after emptying the dirt from the bag eventually fills the cotton with dust, which is finally driven out and through the bag and which makes the bag so unclean that it is objectionable. To relieve the cleaner of this objectionable feature a thimble 5 having an annular groove 6 is provided and adapted to be fitted on the end of the nozzle 7 of the cleaner.

A bag 8 is provided to receive the dust from the cleaner, and is made of tough but porous paper, so that while the dirt is retained the air may escape. In order to provide attaching means for the bag, the bag is cut nearly all the way across its open end leaving the attaching portion 9 and forming a strip 10 on each side of the bag, so that when the bag is secured to the thimble 5, the strips 10 may constitute a band to be turned back on the bag as shown in Fig. 2, and when tied to force the end of the bag into the groove 6 to prevent leakage of dust or air at that point.

A modified construction of the bands is shown in Fig. 4 where it will be seen that the strips 11 are twisted into strings to make them stronger.

In case that the cleaner and bag are subjected to rough usage, while in operation, the paper bag may be inclosed in a cotton bag 12, which may be secured on the thimble in any desired manner. While the paper bag is to be used but once, the cotton bag may be used many times to protect the interior bag, and may be depended upon to prevent the escape of the finer particles of dust which invariably penetrate a single bag. The texture of both bags will however allow the compressed air to pass through them while the dust remains within.

It is obvious that the construction of the bag may be modified and otherwise arranged without departing from the essential features above described, or from the scope of the appended claims.

When the bag has been used on a vacuum cleaner and contains dust and dirt it may be burned or destroyed without any great expense and without the danger and disagreeable effects of emptying as with a cotton bag which is to be used again.

The cheapness of the bag and the simplicity of its construction would permit of the use of a clean bag with every operation of the cleaner and insure the complete and effectual destruction of the dust and dirt. The bands 10 instead of being cut to form a plurality may be cut as one, as shown in Fig. 4.

What I claim as new and desire to secure by Letters Patent is:

1. A porous paper bag adapted to be fitted on the discharge pipe of a pneumatic cleaner, provided with tapes cut from the open end of the bag and attached to the same by a tongue which is adapted to be folded back so the tapes may secure the bag to the discharge pipe.

2. A porous paper bag adapted to be se-

cured to the discharge pipe of a pneumatic cleaner and having attaching means adapted to bind it to the pipe, and a mesh bag inclosing the said porous paper bag and adapted to be secured to such discharge pipe.

3. A porous paper bag adapted to be secured to the discharge pipe of a pneumatic cleaner, in combination with a mesh bag adapted to loosely envelop the paper bag, and means for securing the bags to the discharge pipe.

Signed at New York, in the county of New York and State of New York this 27th day of April A. D. 1914.

SHUHEI NOGUCHI.

Witnesses:

JAMES F. DUHAMEL,

GERTRUDE SCHOFIELD.