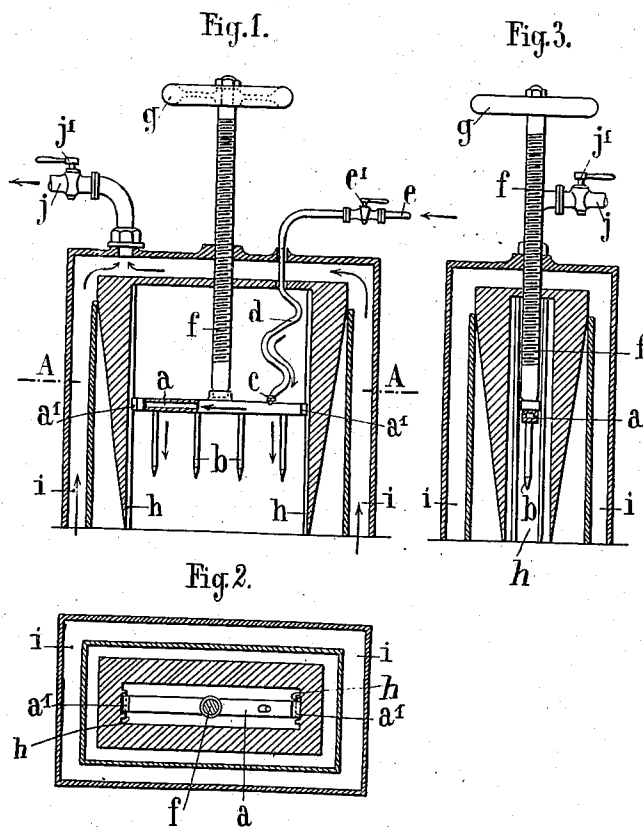


No. 858,911.

PATENTED JULY 2, 1907.

A. RICHTER.
PNEUMATIC CLEANER.
APPLICATION FILED DEC. 20, 1905.



WITNESSES :
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ARMAND RICHTER, OF GARCHES, FRANCE.

PNEUMATIC CLEANER.

No. 858,911.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed December 20, 1905. Serial No. 292,568.

To all whom it may concern:

Be it known that I, ARMAND RICHTER, of 76 Boulevard Michel Brézin, Garches, (Seine & Oise,) Republic of France, chemist, have invented an Improved Pneumatic Cleaner, of which the following is a full, clear, and exact description.

The apparatus which makes the subject-matter of this invention allows of acting inside the carpets and the like, so that the cleaning will be very efficient.

The accompanying drawing shows a way of carrying out this invention.

In this drawing: Figure 1 is a longitudinal vertical section. Fig. 2 is a cross horizontal section made according to line A—A of Fig. 1, and Fig. 3 is a cross vertical section made through the apparatus.

As shown in this drawing, the apparatus comprises a distributor of compressed air formed of a receiver *a* to which are secured needle-shaped outlet pipes *b* having a beveled point. The receiver *a* is connected by means of a suitable joint *c* and of an india-rubber pipe *d* to the compressed air pipe *e*. The receiver *a* can be lifted and lowered in a well known manner by means of a screw *f* provided with a hand wheel *g* in order to cause the outlet pipes *b* to enter the material to be cleaned or to withdraw the said pipes from the latter. In these movements, the receiver is guided by two projections *a'* sliding between suitable strips *h*.

Around the space inclosing the distributor is arranged in a well known manner, as shown in Fig. 2, an annular sucking chamber *i* which is to be connected with an exhausting pump by means of a pipe *j*. The pipe *e* and with it the india-rubber pipe *d* leading to the distributor are to be connected with a pump producing compressed air.

In order to be able to regulate according to the requirements the power of the blast or of the sucking, the pipes *e* and *j* are provided with valves or cocks *e'* and *j'*.

To make use of the apparatus for removing dust from clothes, pillows, eider-downs, or carpets, for example; the pipes *b* are inserted in the article by suitably rotating the screw *f*. The air escaping from the pipes *b* spreads through the article and removes the dust there-

from; the dust is then sucked in the chamber *i* and carried off by the pipe *j*.

It may be useful in some cases not to make use of the blast in a continuous manner but to send the compressed air in successive or intermittently into the stuff to be cleaned, which results can be obtained by a suitable operation.

Instead of using the screw *f* to effect the raising and lowering of the distributor provided with outlet pipes, any other suitable device could be used for imparting the up and down motion to the compressed air outlet pipes.

Claim:

1. A pneumatic cleaner, comprising a casing, a plurality of needle-shaped outlet pipes movably mounted in the casing and connected with a compressed air pipe, and means for forcing the outlet pipes into the material to be cleaned.

2. A pneumatic cleaner, comprising a casing, a receiver movably mounted in the casing, said receiver being provided with a plurality of pointed outlet pipes and connected with a compressed air pipe, and means for raising and lowering the receiver.

3. A pneumatic cleaner, comprising a casing having guideways on its inner face, a receiver sliding in said guideways and provided with a plurality of pointed outlet pipes, a flexible compressed air pipe connected to the receiver, and means for raising and lowering the receiver.

4. A pneumatic cleaner, comprising a casing having an exhaust chamber, a receiver movably mounted in the casing and provided with a plurality of pointed outlet pipes, means for raising and lowering the receiver, a compressed air pipe connected with the receiver, and a pipe connected with the exhaust chamber.

5. A pneumatic cleaner, comprising a casing having an exhaust chamber surrounding the casing, a receiver slidably mounted in the casing and provided with a plurality of pointed outlet pipes, means for raising and lowering the receiver, a flexible compressed air pipe connected with the receiver, and a pipe connected with the exhaust chamber.

The foregoing specification of my apparatus for removing dust from materials, carpets, stuffed pieces of furniture, and the like, by means of forced and exhausted air signed by me this fifth day of December, 1905.

ARMAND RICHTER.

Witnesses:

FREDERIC W. CAULDWELL,
MAURICE H. PIGNET.