

A. T. NOE.
PNEUMATIC RENOVATOR.
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918,896.

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Fig. 1.

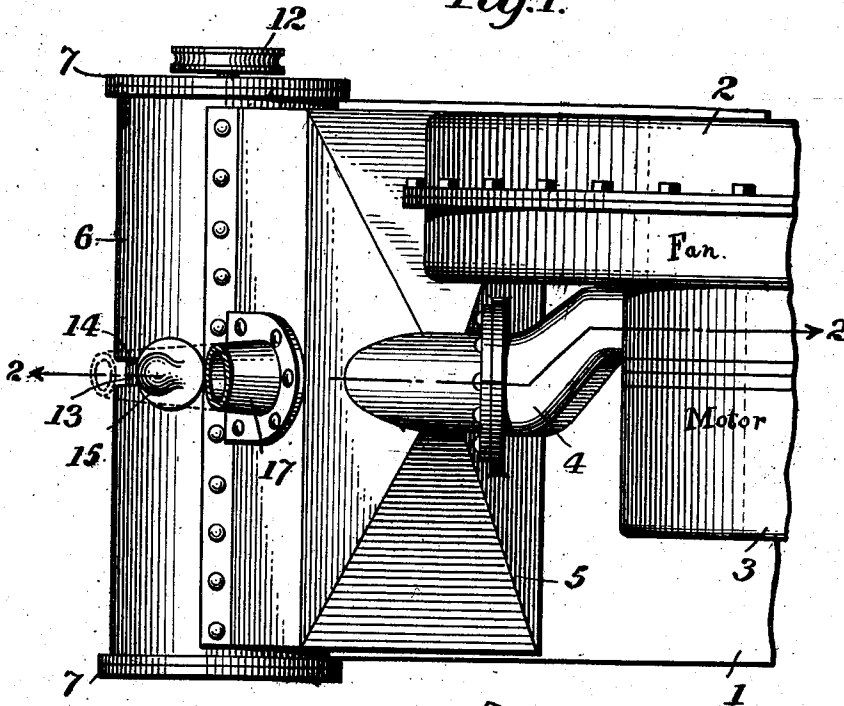
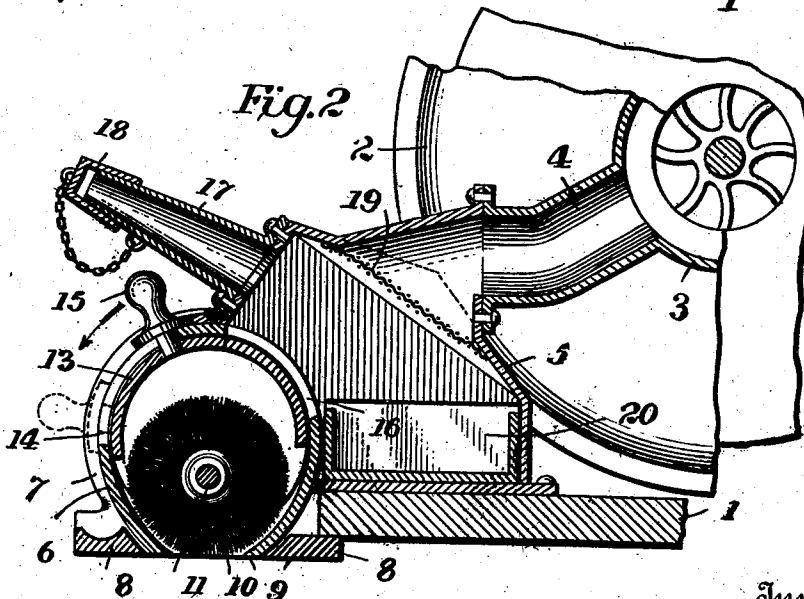


Fig. 2.



Witnesses
J. Hanson
Boyd.

Inventor
A. T. Noe.
by C. Ludlow Livingston
Attorneys

UNITED STATES PATENT OFFICE.

AMON T. NOE, OF PARNASSUS, PENNSYLVANIA, ASSIGNOR TO ELECTRIC RENOVATOR MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

PNEUMATIC RENOVATOR.

No. 918,896.

Specification of Letters Patent.

Patented April 20, 1909.

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To all whom it may concern:

Be it known that I, AMON T. NOE, a citizen of the United States, residing at Parnassus, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Pneumatic Renovators, of which the following is a specification.

My invention relates to certain new and useful improvements in pneumatic renovators and more particularly to machines of the portable manually propelled type.

Machines of the type above noted and to which this invention appertains comprise a manually movable supporting base or platform on which are mounted some suitable form of suction producing means, such as a fan, and motor for driving the same, and also a dust box and suction chamber having a suction mouth, the edges of which are adapted to make direct contact with the surface being cleaned. A suitable conduit extends from the dust box to the fan casing and, in order to provide for the cleaning of walls, furniture, and the like, by means of a special tool carried by a flexible hose, a branch connection or auxiliary intake nozzle projects from the conduit, and valve means for controlling the passage of air through either the suction chamber or the auxiliary intake nozzle is provided.

The primary object of the present invention is to provide novel means whereby currents of air coming in through either the main or auxiliary intakes may be filtered through a separating screen, and whereby the larger particles of dust are collected in the dust box, and prevented from passing to the fan.

A further object of the invention is to provide an improved valve or door for controlling the passage of air from the suction chamber to the dust box.

With the above and other objects in view, and to improve generally upon the details of construction of such apparatus, my invention consists in the construction and arrangement of parts hereinafter described, and illustrated in the accompanying drawings in which:—

Figure 1 is a plan view of so much of a pneumatic renovator as is necessary to illustrate my invention. Fig. 2 is a central vertical section thereof, substantially on the line 2—2 of Fig. 1.

Referring to the drawings in detail, 1 designates the supporting base or platform which is mounted upon suitable rollers (not shown). 2 indicates the fan casing, and 3 the motor for operating the same. A conduit 4 extends from the fan casing to a dust box 5 carried by the platform 1. As the novel features in this invention do not reside in any specific construction of fan or motor, these two elements are illustrated in a conventional way only, it being understood that any type of fan and motor may be employed.

Mounted at the end of the platform is the suction chamber 6, preferably cylindrical, and provided with end plates 7, which are extended and support between them shoes 8. The lower edges of the chamber 6 and shoes 8 lie in the same plane, as indicated at 9, and are adapted to make direct contact with the surface being cleaned. The space between the lower edges of the chamber constitutes the suction mouth. If desired and as shown, a rotary brush 10 may be mounted in the suction chamber on a shaft 11, carrying at its end a suitable pulley 12, adapted to be driven by means of a belt (not shown) from the motor shaft.

Mounted within the upper part of the suction chamber 6 is a sliding door 13, rotatably supported and provided with a projecting handle 15, the shank of which extends through a narrow slot 14 formed in the wall of the chamber 6. This door serves to control the passage of air through the main intake opening 16, and, when in the position shown in Fig. 2 shuts off communication between the suction chamber and the dust box. When, however, the door is rocked to the position shown in dotted lines, dust laden air coming up through the suction mouth may pass through the opening 16, and on through the conduit 4 to the fan.

Projecting from the front wall of the dust box is an auxiliary intake nozzle 17, which is so shaped as to readily accommodate the end of a suitable piece of flexible hose which hose usually carries at its other end a suitable cleaning tool or suction nozzle designed to be moved over the surface to be cleaned. As it is common in the art to employ a flexible hose with a suction nozzle at its end, and as these do not constitute a part of the present invention, they are not illustrated, although the auxiliary intake 17 designed to receive the hose, and which is a feature of the pres-

ent invention, is clearly shown in the drawing. A removable cap 18 serves to close this auxiliary intake when not in use. Extending across the mouth of the conduit 4, where it enters the dust box 5, is a wire or other foraminous screen 19, and in the bottom of the dust box immediately below this screen, is placed a removable drawer 20. It is therefore evident that, by properly manipulating the door 13 and the cap 18, air may be drawn into the apparatus through either the main or auxiliary intakes, and then, in either case, the air will be compelled to pass through the screen 19, which screen will intercept the larger particles of dust and cause them to be deposited in the drawer 20.

When the machine is used to clean floors by moving the suction mouth back and forth over the floor, the valve 13 is brought to a position to uncover the opening 16, and the cap 18, is placed over the auxiliary intake 17, in which case the entire pull or suction action of the fan is through the suction mouth, which is in contact with the floor. When, however, the flexible hose with the suction nozzle at its end is used to do the cleaning, the machine remains stationary, and the said hose is coupled to the auxiliary intake, the cap 18, having first been removed. Now in order to obtain the full suction effect of the fan through the said flexible hose and auxiliary intake 17, the door or gate 13, is moved over the opening 16, tightly closing the same and preventing suction action through the suction mouth at the front of the platform, which, if left free to act, would materially reduce the force of the suction through the flexible hose. By employing the door or gate 13, and cap 18, it will be seen that I can obtain the full suction effect of the fan whether the suction mouth is being used; or whether the flexible hose and suction nozzle are employed, and at the same time I have provided a simple form of apparatus whereby both the suction mouth and suction nozzle can be employed with full force and effect in one and the same machine.

It will thus be seen that I have provided a simple and efficient means for controlling the passage of dust laden air through a plurality of intakes, and for intercepting the larger particles of dust delivered from either intake, and it is thought that the numerous advantages of my invention will be readily appreciated by those skilled in the art:

What I claim is:—

1. In a pneumatic renovator, a supporting base, suction producing means carried thereby, a suction chamber having a suction mouth, also carried by said base and communicating with said suction producing means, an auxiliary intake nozzle having

communication with the suction producing means, and a slidable door mounted in said suction chamber for shutting off the communication between the latter and the suction producing means.

2. In a pneumatic renovator, a supporting base, suction producing means carried by said base, a chamber also carried by said base and having a suction mouth adapted to make contact with the surface being cleaned a dust-box having communication with said chamber, an intake nozzle projecting from the dust-box, a conduit connecting said dust-box and suction producing means, a foraminous screen extending across said conduit, and means between said screen and suction mouth for controlling the passage of air through said chamber.

3. In a pneumatic renovator, a supporting base, a dust-box having an intake, a chamber provided with a suction mouth, said chamber communicating by an opening with the dust-box, a suction creating means, a conduit connecting said dust-box and suction creating means, a foraminous screen extending across said conduit, and separate means for controlling at will the passage of air through said intake and opening.

4. In a pneumatic renovator, a supporting base, a dust box and suction chamber carried by said base, said suction chamber being provided with a suction mouth and with an opening communicating with said dust box and said dust-box having an intake nozzle projecting from a wall thereof, a sliding door for controlling said opening, mounted within said chamber, and means projecting through a wall of the chamber for operating said sliding door.

5. In a pneumatic renovator, a supporting base, a dust box carried thereby, a suction chamber having a suction mouth and a main intake opening communicating with said dust box, an auxiliary intake nozzle projecting from the dust box, and separate means for closing the main and the auxiliary intake, as desired.

6. In a pneumatic renovator, a supporting base carrying a dust box, fan, and suction chamber having a suction mouth, said chamber and box communicating with each other by a main intake opening, means for closing said main intake opening, an auxiliary intake nozzle communicating with said box, a conduit connecting said box and fan, a foraminous screen disposed across the mouth of said conduit, and a cap for closing the said nozzle.

In testimony whereof I have affixed my signature in presence of two witnesses.

AMON T. NOE.

Witnesses:

A. H. KAUFMAN,
ROBT. F. DILWORTH.