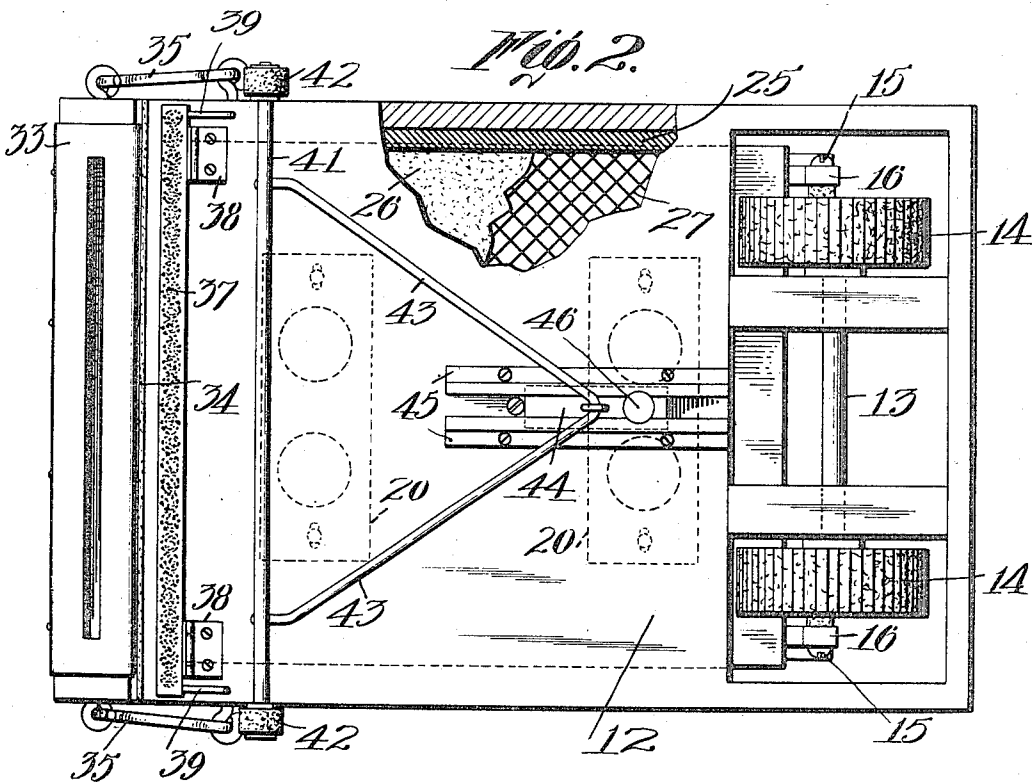
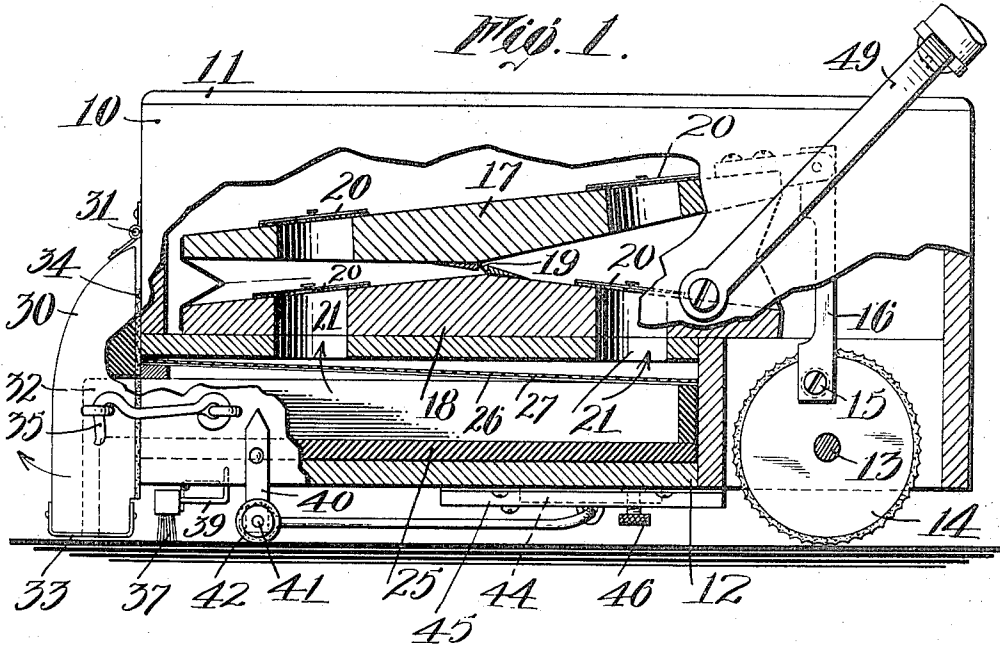


L. F. ST. ANTHONY.
PNEUMATIC CARPET CLEANER.
APPLICATION FILED MAY 13, 1912.

1,059,645.

Patented Apr. 22, 1913.



Witnesses:

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UNITED STATES PATENT OFFICE.

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PNEUMATIC CARPET-CLEANER.

1,059,645.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed May 13, 1912. Serial No. 696,910.

To all whom it may concern:

Be it known that I, LOUIS F. ST. ANTHONY, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Pneumatic Carpet-Cleaner, of which the following is a specification.

This invention relates to a carpet cleaner of the pneumatic type, and the principal objects thereof are to provide improved features of construction and especially to provide an improved way of connecting the nozzle with the casing so that the nozzle can be swung out of the way readily for the purpose of removing the dust collecting device and can be as readily swung back into position without any adjustments; also to provide improved means for loosening the dust in a carpet or rug; and to provide this means in the form of a brush which can be swung up out of the way when it is not desired to use it; and to locate it in a convenient position where it will be adjacent to the nozzle when in use but independent thereof; also to provide improved means for vertically adjusting the position of the nozzle end of the sweeper so that it can be used on bare floors and on carpets and rugs of different kinds.

The invention also involves improvements in the pneumatic pump, and the connections thereof with the operating wheels.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had the accompanying drawings, in which—

Figure 1 is a side view of a carpet cleaner constructed in accordance with this invention with parts broken away and showing the interior in sectional elevation; and Fig. 2 is a bottom plan, with parts broken away.

The invention is illustrated as comprising a substantially rectangular casing having a cover 11 glued or otherwise secured to the top thereof. At the bottom of the casing is a horizontal compartment 12 at the rear of which is a space within the casing for receiving an axle 13 on which the operating wheels 14 are located. These wheels are shown as covered with corrugated rubber so that they will work on carpets, rugs, or bare floors. These wheels are provided with cranks 15 connected by links 16 with the movable leaf 17 of the pump.

This movable leaf is hinged in the middle and extends beyond the rear end of the compartment 12 so that the links can be connected directly with it. The pump is a double acting one having a bottom plate 18 fixed to the top of the compartment 12 and slanting downwardly on both ends from the center. The movable leaf 17 is of the same form, but oppositely located. They are hinged together at the center by a flexible connection 19. They are provided with the usual valves 20 which need not be described in detail. Both sides of the pump communicate with the compartment 12 through ports 21.

In the compartment 12 is located a drawer 25 having a textile or other cover 26 for screening the air that enters it and preventing the dust from passing into the pump. To keep the flexible cover from being drawn against the ports of the pump a wire screen 27 is placed over it. The end of the drawer is open and it coincides with the opening in the end of the casing. For the purpose of covering this opening a nozzle 30 is hinged above the drawer at 31 to the front of the casing. It is provided with a passage 32 which, when the nozzle is in position, communicates with the open end of the drawer and compartment, and also communicates with a slot in the nozzle plate 33. This nozzle is provided with a packing 34 surrounding the opening 32 in its side and hooks or other fastening devices 35 are provided for securing it tightly in position against the end of the casing.

On the front of the casing at the bottom thereof is a brush 37 pivoted to the casing by means of hinges 38 so as to be capable of swinging up into horizontal position off the floor. A pivoted latch 39 is provided for locking the brush in position.

On the sides of the casing are pivoted two arms 40 which are connected by an axle 41 on which a pair of rubber rollers 42 are mounted. This axle is connected by wires 43 with a slide 44 mounted to move horizontally on the bottom of the casing in guides 45. This slide is provided with a screw 46 by which it can be fixed in adjusted position.

The operation of the device is very simple. It is moved back and forth over the floor by means of a handle 49 which, of course, rotates the wheels 14 and operates the bel-

lows or pump. The bellows draw air in through the nozzle and drawer, and the screen on the drawer separates the dust from the air and keeps the dust in the drawer. When it is desired to empty the drawer the hooks 35 are detached from the nozzle and the drawer can be removed and emptied. When the drawer is replaced, the nozzle of course swings back into proper position and no adjustments are required in order to get it placed correctly. When the device is to be used for cleaning a heavy rug the brush 37 is swung downwardly into the position shown in Fig. 1 and the slide 44 is moved forwardly to bring the roller 42 down on the rug to lift the nozzle slightly from the surface on which the rollers operate. In this way the brush can loosen the dust on the pile of the rug and leave it in a favorable condition to be taken up by the nozzle, but if it is desired to use the machine on a smooth carpet the slide 44 is moved back to bring the rollers out of contact with the surface and the brush preferably is used. On bare floors the nozzle is elevated slightly to prevent scratching the floor.

It will be seen, therefore, that the device is adapted for a wide range of uses and can be made efficient for all of them and yet the removal of the dust-collecting device is accomplished in a very simple manner without complications and can be attended to by any operator.

Although I have illustrated and described a preferred embodiment of the invention, I am aware that many modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore I do not wish to be limited to all the details of construction herein shown and described, but

What I do claim is:—

1. In a carpet cleaner, the combination of a casing having a compartment at the bottom thereof opening at one end, means for exhausting air from said compartment, a dust collector in said compartment, a nozzle movably mounted on the end of said casing adapted to cover the open end of said compartment and in communication therewith, and a brush movably mounted on the bottom of said casing just under the open end of said compartment.

2. In a carpet cleaner, the combination of a casing having a compartment at the bottom thereof opening at one end, means for exhausting air from said compartment, a dust collector in said compartment, a nozzle movably mounted on the end of said casing adapted to cover the open end of said compartment and in communication therewith, a brush movably mounted on the bot-

tom of said casing just under the open end of said compartment, said nozzle and brush being pivoted to the casing to swing away from each other from their normal positions.

3. In a carpet cleaner, the combination of a casing having a compartment opening at one end, means for exhausting air from said compartment, a nozzle movably mounted on the end of said casing adapted to cover the open end of said compartment and in communication therewith, a brush movably mounted on the bottom of said casing just under the open end of said compartment, said nozzle and brush being pivoted to the casing to swing away from each other upwardly from their normal positions.

4. In a carpet cleaner, the combination of a casing, pneumatic pumping devices within said casing, a nozzle communicating with said pneumatic devices and located on one end of the casing, and a brush parallel with the nozzle and hinged to the bottom of said casing near the nozzle so as to swing from the nozzle.

5. In a carpet cleaner, the combination of a casing, pneumatic pumping devices carried thereby, a nozzle communicating with said pneumatic devices and located near one end of the casing, a brush hinged to the bottom of said casing near the nozzle so as to swing from the nozzle into a horizontal position, and means for vertically adjusting the end of the casing near the brush.

6. In a carpet cleaner, the combination of a casing, operating wheels at one end, a nozzle at the other end, a brush mounted on the casing between the nozzle and wheels and near the nozzle and arranged to swing upwardly into horizontal position, and means for vertically adjusting the end of the casing on which the brush is located.

7. In a carpet cleaner, the combination of a casing, a pair of arms pivoted on opposite sides thereof, an axle carried by said arms, rollers on the axle, a horizontal guide on the bottom of the casing, and a slide in said guide movable toward and from the axle and connected with the axle.

8. In a carpet cleaner, the combination of a casing, a pair of arms pivoted at opposite sides thereof, an axle carried by said arms, rollers on the axle, a horizontal guide on the bottom of the casing, a slide in said guide movable toward and from the axle and connected with the axle, and means for fixing said slide in adjusted positions.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

LOUIS F. ST. ANTHONY.

Witnesses:

ALBERT E. FAY,
C. FORREST WESSON.