

A. LOTZ.
PNEUMATIC CLEANER.
APPLICATION FILED FEB. 13, 1906.

956,535.

Patented May 3, 1910.

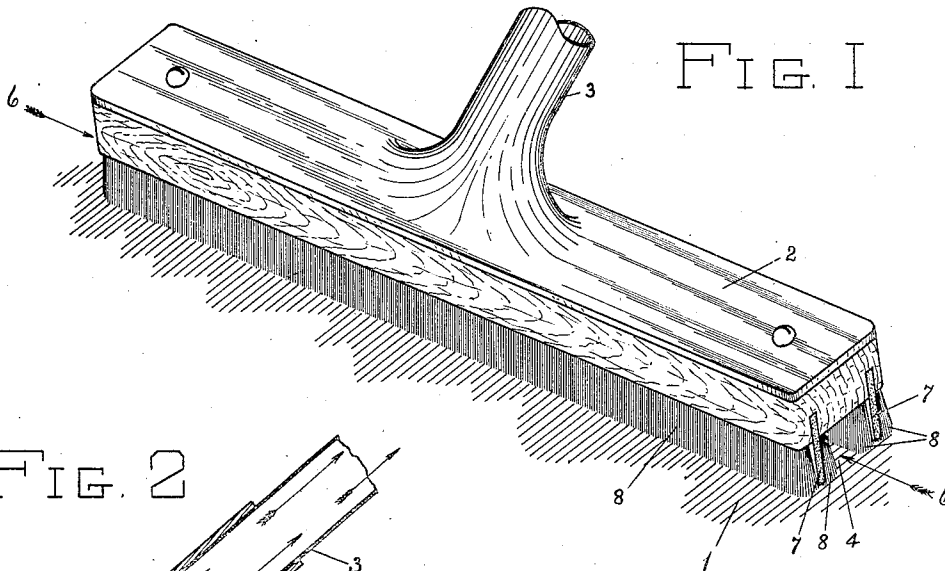


FIG. 2

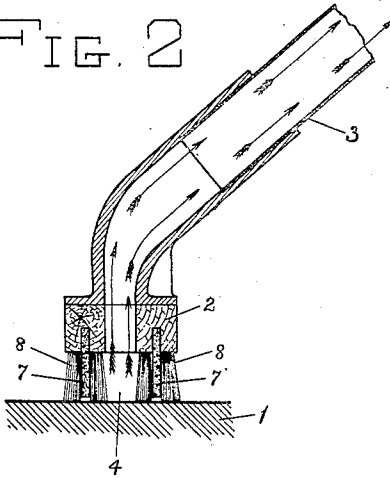
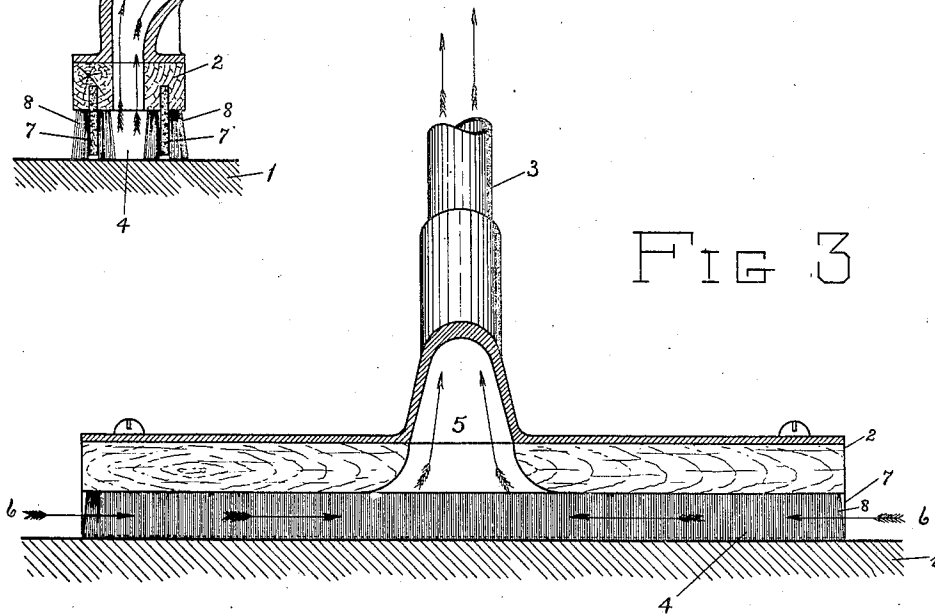


FIG. 3



WITNESS:

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UNITED STATES PATENT OFFICE.

AUGUSTUS LOTZ, OF SAN FRANCISCO, CALIFORNIA.

PNEUMATIC CLEANER.

956,535.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed February 13, 1906. Serial No. 300,864.

To all whom it may concern:

Be it known that I, AUGUSTUS LOTZ, of San Francisco, California, have invented certain new and useful Improvements in Pneumatic Cleaners, whereof the following is a specification.

My invention relates to devices for cleaning surfaces by means of currents of air. Such currents are commonly produced either by delivering air under superatmospheric pressure to the surface to be cleaned, and taking it away under atmospheric pressure, the dirt going with it, in which case a compression apparatus only is required; or by delivering the air under atmospheric pressure and taking it away under less than atmospheric pressure, in which case a suction apparatus only is required; or by combining both these systems, delivering the air under super-atmospheric pressure and taking it away under less than atmospheric pressure, in which case both compression and suction apparatus is required.

My invention relates to the means by which the air current however produced, is caused to act upon the surface to be cleaned. Its main feature consists, in general terms, in a conduit or channel of appreciable length, one side of which is formed by the surface to be cleaned, the air being delivered to the channel at an inlet and taken therefrom at an outlet an appreciable distance apart, whereby the air passes over an appreciable length of surface before leaving it, and the velocity due to its pressure is substantially maintained throughout its action on the surface, whereby I secure the greatest cleaning effect.

The invention also consists in the mechanism by which the above is carried into effect.

In the accompanying drawings I have shown a device containing my invention in the form best adapted for operating on the surface to be cleaned under atmospheric pressure, the air and dust being taken away by suction. The drawings, and the subjoined description of them, are merely illustrative and explanatory of the invention, and are not to be considered as limiting it. They show it as adapted for cleaning floors.

In the drawings: Figure 1 is a perspective view of the device. Fig. 2 is a central cross section and Fig. 3 is a longitudinal section.

In the drawing 1 represents the surface to be cleaned, 2 the head of the cleaner, 3 a tubular outlet leading from the head to a suitable connection with a vacuum pump.

7 are flexible rubber strips secured to the bottom of the head parallel with each other and extending below said head thereby constituting an open end channel 4, which connects with a central channel 5 leading to the tube 3. On either side of the rubber strip 7, I arrange brushes 8, which serve, when the tool is moved over the floor, to loosen the dust which is drawn into the passage or channel 4 and thence out through the tube 3 by the suction, the rubber strips constituting impervious walls approximately in contact with the surface being cleaned. The air enters the ends of the channel formed by the rubber strips and brushes as indicated by the arrows 6, thus passing over the surface to be cleaned and taking up the loose dirt and dust which passes off through the tube 3 and its connections to the pump.

I claim:

1. A pneumatic cleaner having a head with a central air exhaust outlet, a pair of impervious elastic strips projecting from the bottom of said head adapted to make close contact with the surface to be cleaned and constituting a shallow open-end channel communicating with said air exhaust.

2. A pneumatic cleaner having an elongated head provided with a central air outlet, a pair of impervious elastic strips arranged longitudinally on the bottom of said head and parallel with its sides and adapted to make close contact with the surface to be cleaned and constituting therewith an open-end air conduit connecting with said exhaust outlet and brushes arranged on both sides of said strips and adapted also to make close contact with the surface to be cleaned, as and for the purposes described.

3. A pneumatic cleaner having a head with a central air exhaust outlet, rows of bristles on the bottom thereof, and an impervious flexible depending strip arranged between the rows of bristles.

In testimony whereof I have hereto set my hand this 15th day of January 1906.

AUGUSTUS LOTZ.

Witnesses:

G. C. FITCH,
D. B. RICHARDS.