(No Model.) 2 Sheets—Sheet 1.

J. R. YOUNG & J. P. DOUGLASS.

APPARATUS FOR REMOVING DUST FROM CARS, ROOMS, OR BUILDINGS.

No. 566,554. Patented Aug. 25, 1896.

Fig. 1.

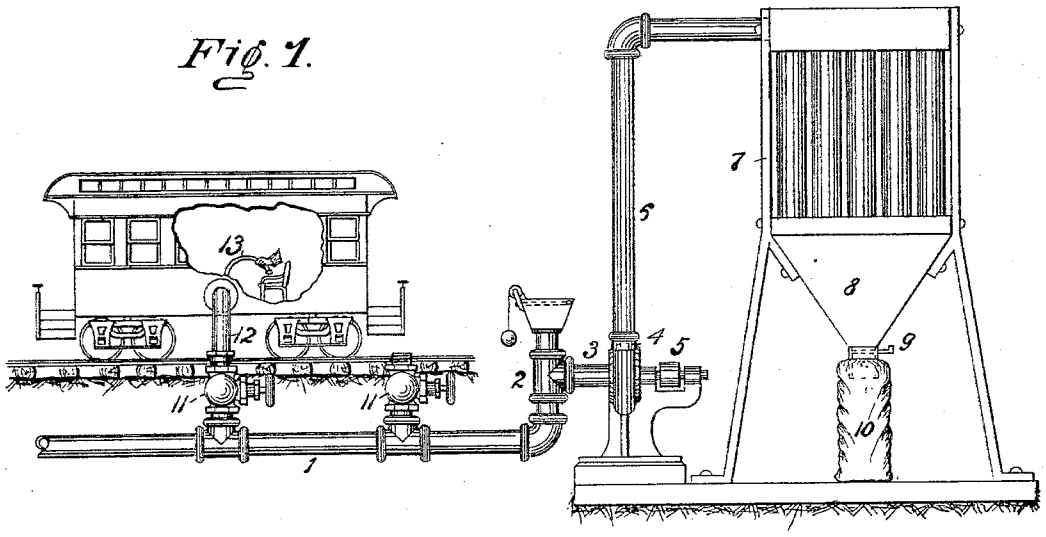
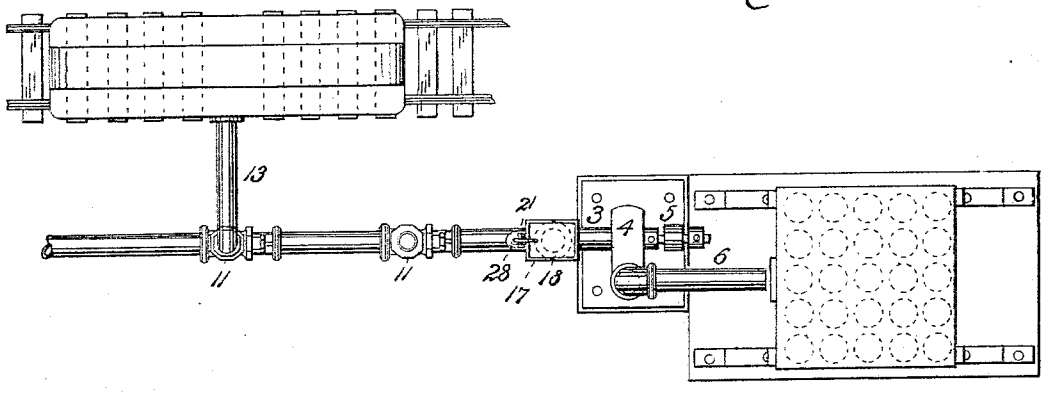


Fig. 2.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. R. YOUNG & J. P. DOUGLASS.

APPARATUS FOR REMOVING DUST FROM CARS, ROOMS, OR BUILDINGS.

No. 566,554. Patented Aug. 25, 1896.

Fig. 3.

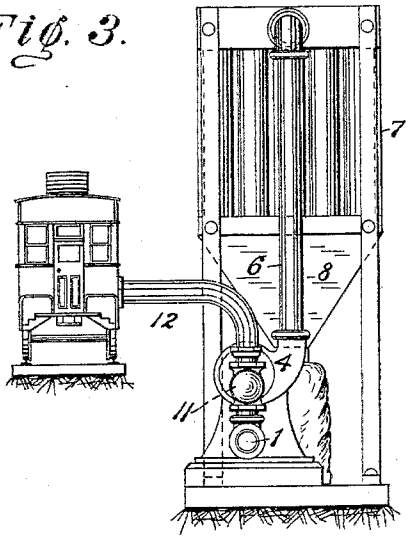


Fig. 4.

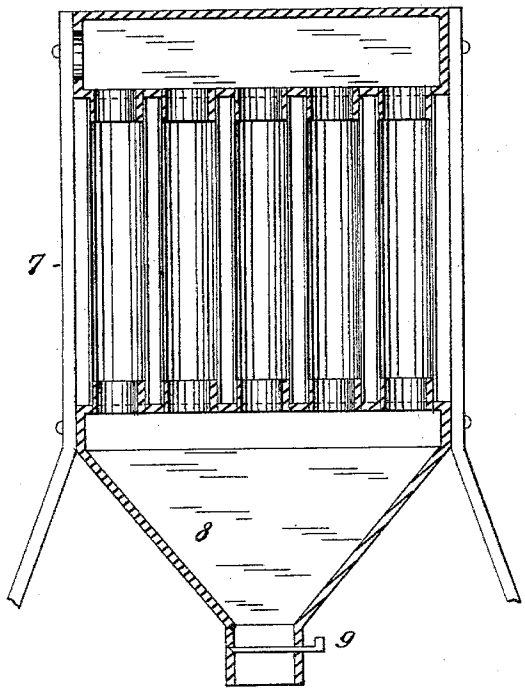


Fig. 5.

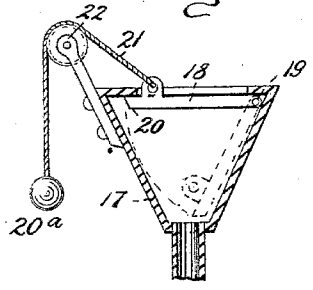


Fig. 6.

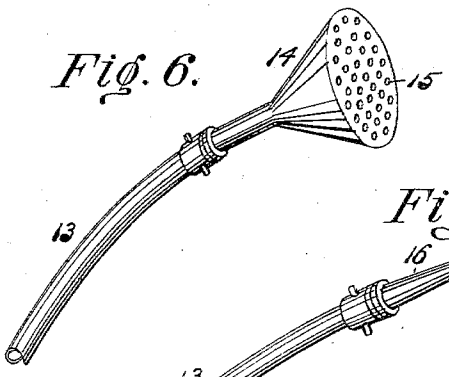


Fig. 7.

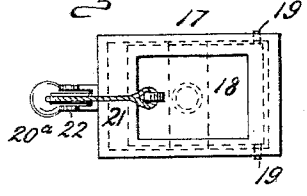
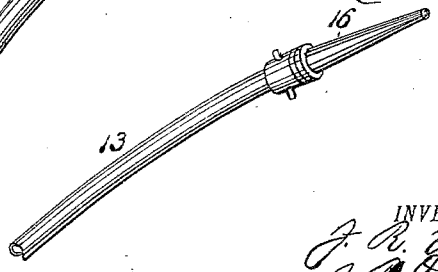


Fig. 8.



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UNITED STATES PATENT OFFICE.

JAMES R. YOUNG AND JOHN P. DOUGLASS, OF LEAVENWORTH, KANSAS.

APPARATUS FOR REMOVING DUST FROM CARS, ROOMS, OR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 566,554, dated August 25, 1896.

Application filed May 6, 1895. Serial No. 548,229. (No model.)

To all whom it may concern:

Be it known that we, JAMES R. YOUNG and JOHN P. DOUGLASS, of Leavenworth, in the county of Leavenworth, in the State of Kansas, have invented certain new and useful Improvements in Apparatus for Removing Dust from Cars, Rooms, or Buildings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to improvements in apparatus for removing dust from cars, rooms, or buildings; and our invention consists in certain features of novelty hereinafter described, and pointed out in the claim.

Figure 1 represents a side elevation of our improved apparatus applied to a car for removing the dust therefrom and cleansing the same. Fig. 2 represents a plan view of the same. Fig. 3 represents an end view of the same. Fig. 4 represents a cross-section of the dust-collector or settling-chamber. Fig. 5 represents a detail cross-section of the draft-regulator. Fig. 7 represents a top view of the same. Fig. 6 represents a perspective view of the dust-collecting funnel. Fig. 8 represents a perspective view of the dust-collecting nozzle.

Similar numerals refer to similar parts throughout the several views.

1 represents a main pipe laid along the car-tracks or laid throughout the buildings when the apparatus is used for cleaning buildings. Said pipe is connected by the coupling 2 and the pipe 3 with a suction-fan in the fan-chamber, said fan being operated by any convenient power applied to the pulley 5 on the fan-shaft.

6 represents a pipe connecting the fan-chamber with the dust-collector or settling-chamber 7, provided with the chute 8, having at its mouth the slide 9 for closing the mouth of the chute. From said settling-chamber the dust may be drawn off into the sacks and carted away. However, said settling-chamber may be dispensed with and the dust delivered at any convenient point outside the building. Said main pipe 1 is provided along its length with valved couplings 11, to which is attached the flexible pipe 12, communicating with the interior of the car or with the different rooms of the building. Inside the car or room a hose 13 is connected with said pipe 12, of size and length adapted to be carried to all parts of the car or room. Said hose 13 is provided with the funnel 14, having the perforated cap or cover 15 removably attached thereto for taking up the dust from the seats and carpets, shelves, and floors. Said funnel may, if desired, be removed and replaced by the nozzle 16, adapted to take up the dust from the corners of the seats and other places not accessible to the funnel.

17 represents the air-draft regulator, connected with the main pipe before it reaches the fan, preferably as shown in Fig. 1, by attaching it to the coupling by which said pipe is connected to the fan. Said regulator is provided with the door, opening inwardly, hinged to one side of the casing at 19, and adapted to close air-tight against the casing at 20. Said door is provided with the counter-weight 20^a, connected with the door by the cord 21 passing over the pulley 22, the purpose of the regulator being to act as a safety-valve, so that if the valves between the main pipe and the car or rooms should be suddenly closed while the fan is in motion the suction will overcome the weight of the counterweight and the door will open, permitting a draft therethrough and preventing disaster to the apparatus.

The operation of our improved apparatus is very simple and of the very greatest advantage. By the action of the fan a current of air is generated through the main pipe and its connections and the dust and dirt withdrawn from the car or room or building and from every nook and corner thereof speedily and effectually. In the usual and ordinary process of sweeping, the dust and dirt are agitated and clouds of dust fill the atmosphere, and as soon as the sweeping is over this dust settles on the furniture and elsewhere, while also there are many nooks and corners not accessible to the broom where the dust and dirt settle and accumulate, making nesting-places for microbes and breeding disease, and greatly increasing the danger from fires. By the use of our improved apparatus no dust is raised to fill the atmosphere therewith and immediately settle back where it was disturbed, but the whole is withdrawn from the

car or room and the atmosphere left pure and free from germs and detrimental matter, while by the use of the nozzle shown in Fig. 8 all the inaccessible nooks and corners are reached and the microbes' favorite nesting-places broken up and the disease and fire risk greatly lessened.

Having thus fully described our improvements, what we claim as our invention, and desire to secure by Letters Patent, is—

An apparatus for removing dust and dirt from cars, rooms and buildings which consists of a main pipe, valved couplings connected with said main pipe, a flexible pipe communicating by said valved couplings with said main pipe and with the interior of the car, room or building, a hose within said car room or building, connected with said flexible pipe, a suitable mouthpiece for taking up the dust and dirt therefrom, a suction-fan connected with said main pipe having a perforated cap or cover for generating an air-current through the same, a discharge-pipe connected with said fan, a settling-chamber into which said discharge-pipe discharges, and a draft-regulator connected with said main pipe, said draft-regulator consisting of a casing connected with said pipe, a trap-door hinged to the casing and adapted to close air-tight within the same, and a counterweight connected with said trap-door by a cord passing over a pulley, supported on the casing, substantially as set forth.

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Witnesses:
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