

(No Model.)

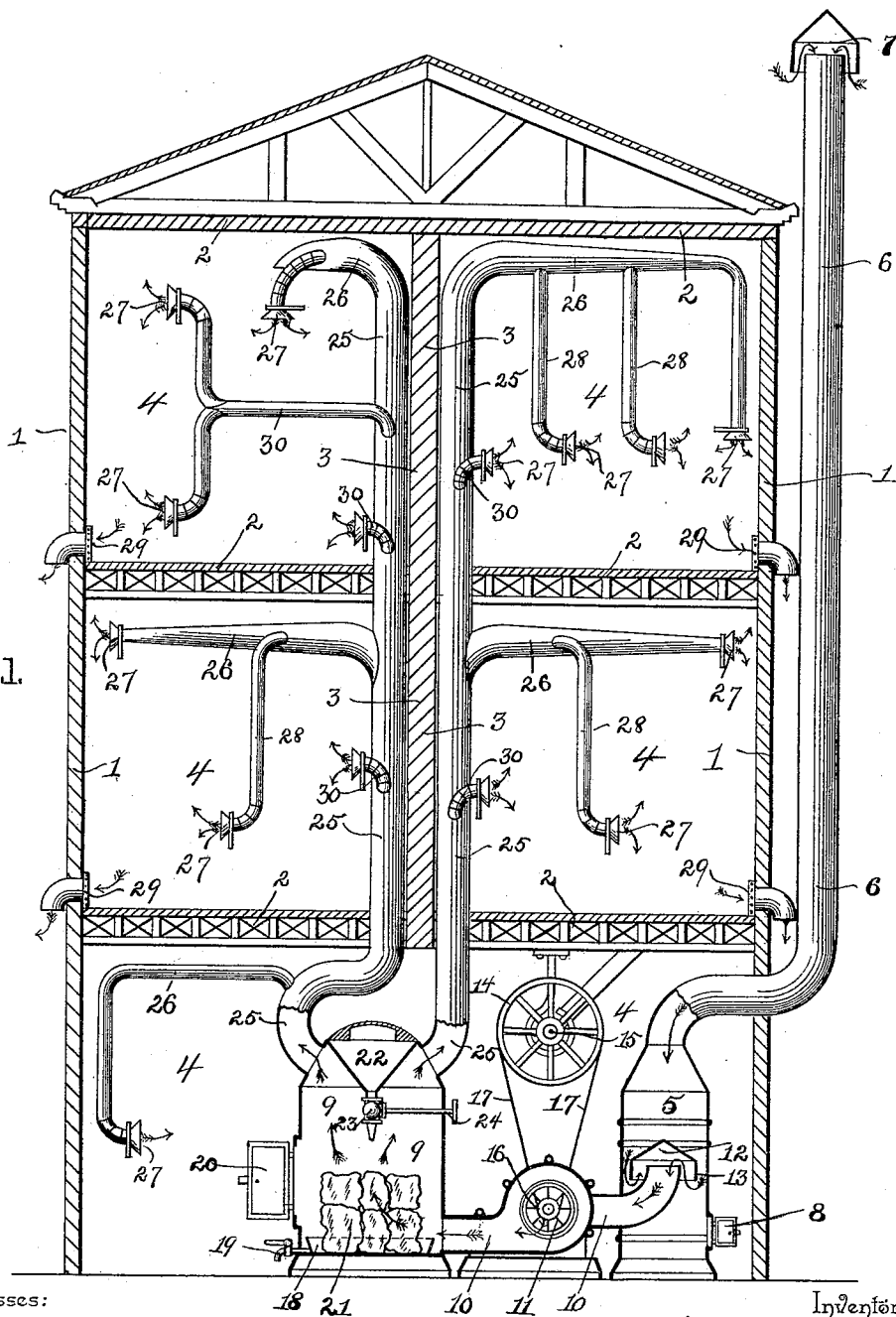
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J. B. WEIS.
VENTILATOR.

No. 493,321.

Patented Mar. 14, 1893.

Fig. 1.



Witnesses:

A. O. Babendreier.

W. S. Duwall.

By his Attorneys,

C. A. Snow & Co.

Inventor
John B. Weis.

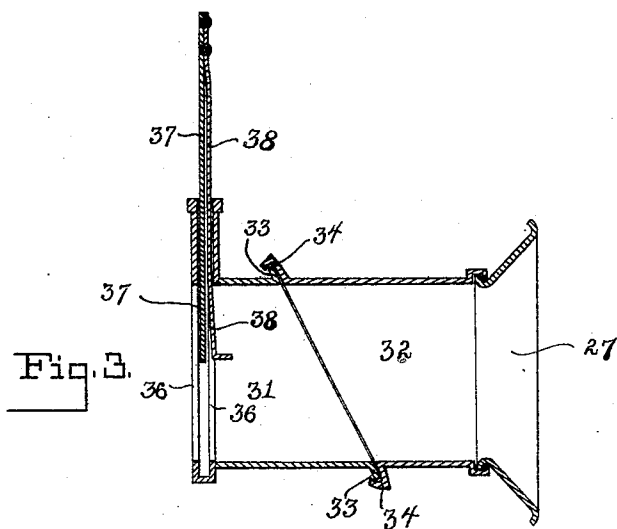
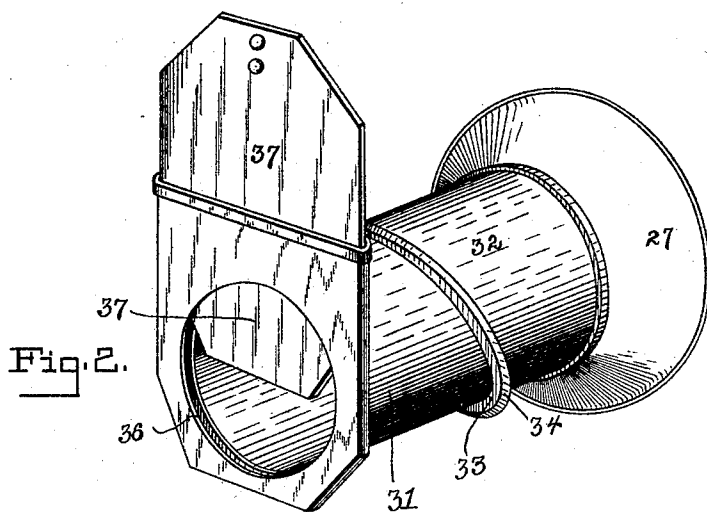
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UNITED STATES PATENT OFFICE.

JOHN B. WEIS, OF TOLEDO, OHIO.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 493,321, dated March 14, 1893.

Application filed May 13, 1891. Serial No. 392,578. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. WEIS, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Ventilator, of which the following is a specification.

This invention relates to house ventilation; and the objects in view are to provide a convenient means for thoroughly purifying the atmosphere and cooling and ventilating a house, hall, theater, or other edifice.

The objects of the invention are to provide a means for injecting under pressure, into the several compartments of a house or to the top of any other edifice or building, a draft of cool, fresh air, and for expelling from the same all foul air.

Other objects and advantages of my invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings—Figure 1 is a vertical longitudinal section of a house provided with a ventilating piston constructed in accordance with my invention. Fig. 2 is a detail in perspective of one of the swiveled discharges. Fig. 3 is a vertical longitudinal section of the same.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the side walls of a house, 2 the floors, and ceilings of the several compartments, and 3 the partition wall, said walls and floors combining to form the several compartments 4. In the lower compartment or cellar there is located an air receiving drum or cylinder 5, to the top of which leads a fresh air supply pipe 6, said pipe terminating at its opposite end at a point of suitable elevation, preferably above the roof of the house, and there provided with a proper cap or cowl 7. The lower end of the cylinder or drum 5 is provided with a door 8 at its base, whereby the dust, &c., taken in by the pipe 6 and delivered into the cylinder and collected at the bottom thereof, may be removed.

9 designates an air cooling chamber, the same being preferably cylindrical, as shown, and connected to the air receiving chamber by an intermediate pipe 10, between the ends of which is located a rotary fan 11. That end of the pipe 10 which extends into the drum

5, has mounted thereover a conical dust shield 12, provided with depending flanges 13 surrounding the upper end of the pipe. This shield serves to prevent the dust entering through the pipe 6 into the receiver, from entering the air cooling chamber, so that said dust falls to the bottom of the drum 5, where it collects and as before stated the same may be removed.

Above the blower a pulley 14 is supported upon a drive shaft 15, operated by any suitable means, said pulley being connected with and driving the pulley 16 of the blower, by means of an endless belt 17.

A drip pan 18 is located in the bottom of the cooling chamber, and a draw off cock 19 extends from the pan through the wall of the chamber. The chamber is also provided with a door 20, through which may be introduced cakes of ice 21.

In the roof of the chamber, a depending water reservoir 22 of inverted cone-shape, is located and at the lower end of the reservoir a valved discharge 23 is located, the valve being controlled by a valve stem 24, located outside of the casing of the chamber. The water reservoir is connected with any suitable source of supply, and by operating the valve 23, water may be discharged from the reservoir upon the cakes of ice located in the drip pan below, said water being drained from the pan by the cock or faucet 19.

From the upper end of the cooling chamber, there extends a series of cool air supply pipes 25. There may be as many of these main supply pipes 25 as desired, and as the number of series of rooms may dictate. In this instance but two vertical series are shown, and hence but two supply pipes. These supply pipes run up through the center of the house and opposite the ceiling of each compartment are tapped and connected with horizontal delivery pipes 26, terminating in flared mouths 27, toward which said delivery pipes are tapered or reduced. Smaller delivery pipes 28 lead from the delivery pipes 26 to some other point of the room, preferably opposite a foul air escape 29, with which each room is provided near its floor line. Small branch deliveries 30 project from the pipes 25 below each of the pipes 26. If desired various deflections may be given the pipes 28,

and the same may be duplicated at intervals, and extend to various parts of the room, as shown in several instances in Fig. 1.

As shown in Figs. 2 and 3, the discharge
5 nozzles 27 of each of the discharge pipes, may be rotated so as to deflect or direct the currents of air in various directions. These nozzles each comprise a section 31 and 32, the former being rigid and provided at its outer
10 inclined end with an annular flange 33. The section 32, however, is provided at its inner end which is also inclined with a flange 34, which is bent over and loosely embraces the edge of the flange 33, so that the outer section thus becomes swiveled upon the inner
15 fixed section and as rotated turns or swings at an angle to the inner section. At the inner end of the section 31 parallel guides 36 are located, and in the same is mounted a reciprocating cut off 37, having a spring tongue
20 38, secured at its front end to the cut off and having its rear free end deflected and interposed between the cut off and edge of the section, whereby the cut off is maintained at any
25 point within the guides and consequently the amount of air emitted from the discharge pipes may be regulated. It will be observed that the air in its fresh state is taken in at the upper end of the pipe 6, and is discharged
30 into the receiving chamber by which all dust and other foreign bodies are eradicated. The air thus cleansed is sucked into the cooling chamber by means of the exhaust fan, where it is blown against the ice at the bottom of the
35 chamber, contacts with the cool sides of the chamber and also with the surface of the cool water reservoir, and is finally forced up through the pipes 25 and out of the various discharges, circulates through the rooms, and

passes out into the atmosphere through the 40
foul air discharges heretofore mentioned. In this manner a constant, cool, free circulation of air may be maintained continually.

Having described my invention, what I claim is—

In a ventilator system of the class described, 45
the combination with the air supply pipe and means for forcing air through the supply pipes, of a cooling chamber with which the said supply pipe connects adapted to receive 50
ice and having an inverted conical water tank in the upper portion thereof with a nozzle depending centrally over the bottom portion of said cooling chamber and having delivery
55 pipes connected thereto and extending therefrom, a portion of said delivery pipe being arranged horizontally and having supplemental pipes vertically depending therefrom, adjustable nozzles on the ends of said delivery pipes and supplemental pipes, vertically 60
positioned parallel guides arranged in rear of said nozzles and having openings extending therethrough in a horizontal manner, and reciprocating slides mounted in said parallel
65 guides and consisting of a cut-off plate 37, having a spring tongue secured at its upper end to the upper part of said cut-off plate and its lower end slightly deflecting from a perpendicular line and being at right angles to form a limiting stop to prevent the entire withdrawal of said slides, as set forth. 70

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN B. WEIS.

Witnesses:

WALTER STINGEL,
EMANUEL L. WERR.