

D. B. TAYLOR.
VENTILATOR.

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UNITED STATES PATENT OFFICE.

DANIEL B. TAYLOR, OF ST. LOUIS, MISSOURI.

VENTILATOR.

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To all whom it may concern:

Be it known that I, DANIEL B. TAYLOR, of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Ventilators, of which the following is a full, clear, and exact description.

This invention relates to self-adjusting ventilators, to be used on the tops of buildings or elsewhere, for carrying air to any part of a building or different parts of the same room, or to different rooms in the building, and which combines a receiving funnel or conductor with attached vane, arranged so as to be capable of being turned by the wind for the purpose of catching the air and conveying it as required, but which, excepting when so adjusted by the wind to expose the mouth of the funnel to the breeze, occupies a stationary position.

The invention consists in certain novel constructions of such ventilator and combinations of devices therewith, including one or more safety escape-valves in its receiving-funnel for relieving the ventilator of surplus pressure when exposed to a heavy wind, endangering its stability, a valve in the hollow post which carries the turning portion of the ventilator for diverting the current that enters it from passing into the building, and a divided construction of the funnel whereby it may be thrown open or exposed, when not in use, to allow the air to pass over or past, instead of through it, and so relieve the ventilator of strain on the building.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a mainly sectional elevation of a ventilator embodying my invention in part, and as mounted on a building, with means for distributing the air caught and conveyed by it. Fig. 2 is a partly sectional plan of the same on the line *x x*; and Fig. 3 is an exterior elevation of the ventilator when constructed to admit of the top of its receiving-funnel being thrown back to open or expose the ventilator, so that it will fail to receive and conduct air.

Referring, in the first instance, more particularly to Figs. 1 and 2 of the drawings, A is the receiving-funnel of the ventilator, which may be made of any suitable material capable

of catching and conveying the air or breeze or current entering at its mouth *b*.

B is the vane by which the wind is made to turn or adjust the ventilator, so that the mouth *b* of the funnel will be always made to face the wind, and which serves to balance the funnel.

C is the upright hollow post, mounted upon the top *S* of a building, and upon which the funnel A, with its attached vane B, is fitted to turn, and so that the air as it is received by the funnel is passed through side apertures, *c*, down into the post, from whence it may be conveyed, as required—as, for instance, by pipes D D, provided with shut-off valves *d d*—into the apartments of the building.

E is a valve in the upright or post C, arranged below the receiving-apertures *c*, and capable of being opened by a rope or rod, *e*, from the interior of the building, to allow of the escape of air from the ventilator outside of the building, when none or a less quantity than usual is required within it.

The funnel A is provided, at any suitable part of it, with one or more safety and escape valves, G, each of which may be controlled by a spring, *f*, on the inside of the funnel. These valves should be regulated to resist a given pressure, so that they will fail to open excepting when the wind blows so strong as to endanger the stability of the ventilator, but open to admit of the escape of air from the interior of the funnel whenever the internal pressure is in excess of such limit.

In Fig. 3 of the drawings the funnel A is constructed in two parts, with its plane of division longitudinally arranged in a horizontal direction, and with its upper part hinged at its inner end, as at *g*, to the lower part of the funnel, so that it may be turned back and the funnel be thrown open or exposed to allow of the air passing over or by it without strain on the building when the ventilator is not required to be used.

If desired, the vane B may be made capable of adjustment over onto the funnel A in such manner as to direct and hold said funnel away from the wind, and thereby convert it into a means of carrying the air out of a room; or, in other words, reversing the draft and making the ventilator have the same effect as a chimney.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. In a self-adjusting funnel-shaped ventilator constructed to supply air to buildings, as described, the combination, with the hollow upright or post C, in which the air-receiving portion of the ventilator is fitted to turn, and which serves as a duct for conveying the air to the building, of one or more valves, E, capable of operation from the interior of the building to provide for the external escape of air from the ventilator at pleasure of the occupants of the building, essentially as described.

2. The air-receiving funnel A of the ventilator, provided with one or more safety escape valves, G, substantially as specified. 15

3. The air-receiving funnel A of the ventilator, constructed to open and close longitudinally, whereby, when not required for use, it may be thrown open or exposed, essentially as and for the purpose herein set forth. 20

DANIEL B. TAYLOR.

Witnesses:

CLINTON ROWELL,
ABNER COOPER.