(No Model.)

C. B. LOVELESS.

VENTILATOR.

No. 315,522. Patented Apr. 14, 1885.

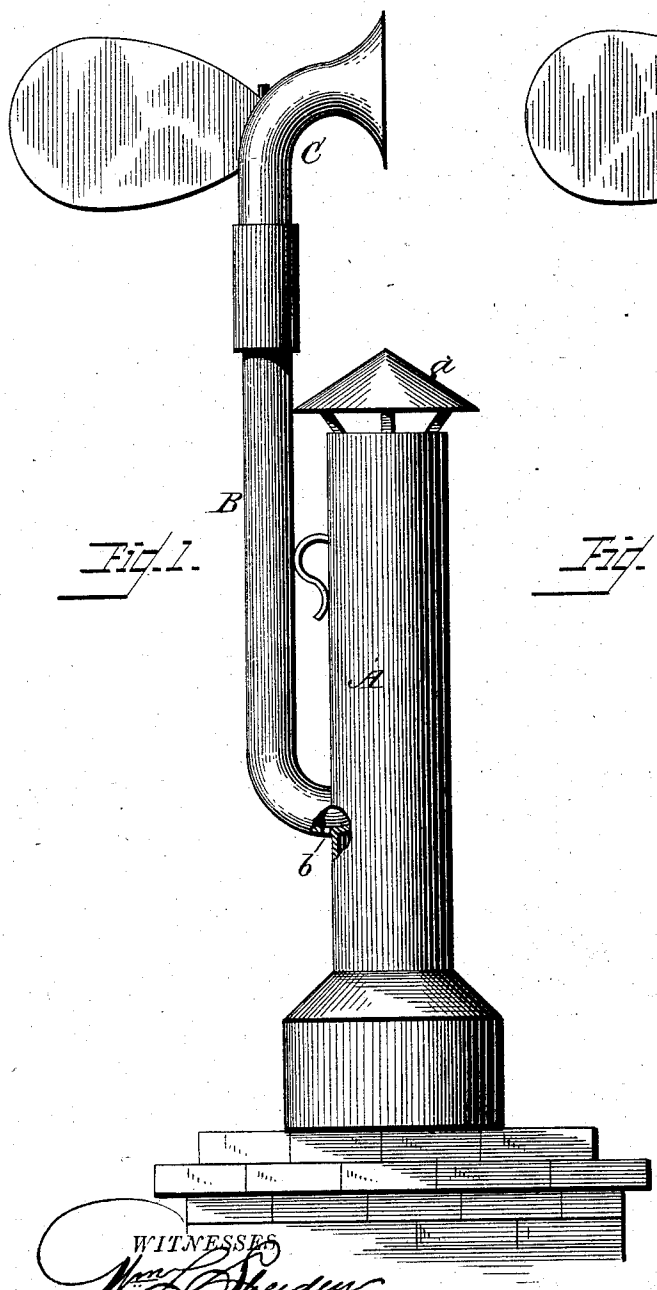

Fig. 1.

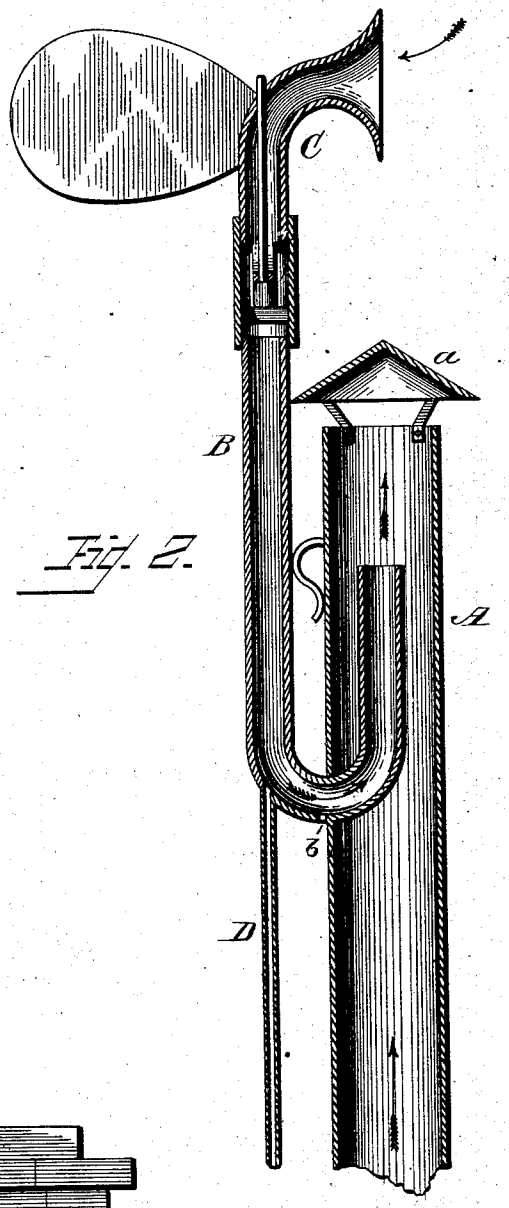

Fig. 2.

WITNESSES.
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UNITED STATES PATENT OFFICE.

CHARLES B. LOVELESS, OF WORTHINGTON, MINNESOTA.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 315,522, dated April 14, 1885.

Application filed October 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. LOVELESS, a citizen of the United States, residing at Worthington, in the county of Nobles and State of Minnesota, have invented certain new and useful Improvements in Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a side elevation of my invention, showing it in use as an attachment to a chimney; and Fig. 2, a sectional elevation of the invention, with the addition of the induction-pipe to adapt it for use as a ventilator for vaults, closets, and other structures.

The present invention has for its object to provide a simple and effective ventilator that can be used on chimneys to produce a partial vacuum, and consequently a draft or suction to carry upward the ascending smoke and cinders to the point of discharge, and also employed as a means for ventilating vaults and other similar structures by the withdrawal of the foul or vitiated air and the introduction of fresh or pure air. These objects I attain by the construction, substantially as shown in the drawings and hereinafter described and claimed.

In the accompanying drawings, A represents the discharge-pipe, through which the smoke and cinders or foul air pass and escape, said pipe at its upper end being provided with a suitable cap, *a*, to deflect the smoke and other volatile products of combustion as they escape from the pipe. A pipe, B, which I shall term a "suction-pipe," passes through the side of the pipe A, and extends upward some distance, to near the top thereof, to render the ventilator more effective in producing the suction or required draft. The outer portion of the pipe B, or that portion located upon the outside of pipe A, is of sufficient length to extend some distance above the same, so as to create a suction of greater force and power, this especial feature being essential in insuring the successful and practical operation of the device. To the upper end of the pipe B is attached a revolving cowl, C, of any of the usual forms, and conducting the wind down the pipe by the mouth of the cowl being at all times brought to the proper position or in the direction the wind is blowing. At the bend in the pipe B a drip-hole, *b*, is formed to admit the escape of any collected moisture or rain entering the pipe, thereby not affecting the passage of the air through the pipe and leaving it all times unobstructed.

When the ventilator is employed in vaults, closets, and other similar structures to expel foul air and introduce vital air, I provide the suction-pipe B, at the elbow or bend thereof, with an induction-tube, D, communicating with said pipe and extending down any suitable distance into the vault or other structure.

By the employment of the tube D a sufficient amount of vital air passes down said tube into the vault by force at the same time the body or larger amount of air passes through the suction-pipe B and into the pipe A to suck or draw the foul or vitiated air from the vault, the tube D furnishing sufficient air to keep up a strong circulation in the vault.

The introduction of a small portion of air into the vault, which is driven down the induction-tube, prevents the possibility of creating a partial vacuum in the vault, which would affect or stop the process of ventilation.

The force with which the air passes through the pipe B and escapes through the upper end of pipe A causes a powerful suction, which will draw the foul air out of the vault and discharge it through the upper end of the pipe A.

The pipe A may be of any suitable size and length as found necessary, and when used as a discharge-pipe for vaults and other like structures it may be of sufficient length to extend down some distance therein, and when the device is employed as in the ventilation of vaults the drip-hole *a* may be dispensed with, in which case the rain or moisture would escape through the tube D into the vault.

Having now fully described my invention,

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

In a ventilator, the combination, with a discharge-pipe, of a suction-pipe extending above it and provided with a revolving cowl, and at or near its lower end with an induction-tube of less diameter than the suction-pipe, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES B. LOVELESS.

Witnesses:
I. N. SIEVWRIGHT,
JOHN E. BARNES.