No. 77,047. PATENTED APR. 21, 1868.

D. F. JAUSS.

CHIMNEY COWL.

Fig. 1.

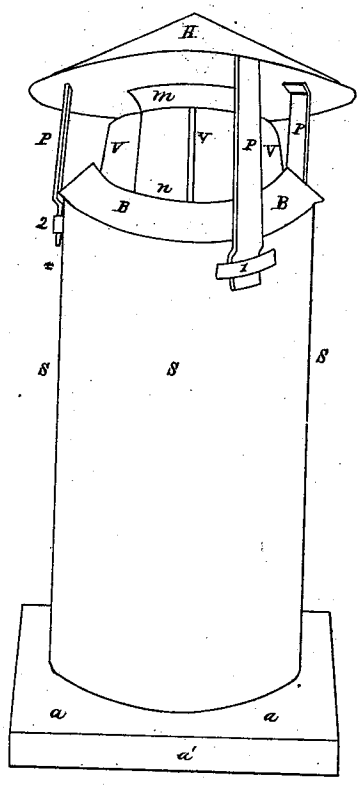


Fig. 2.

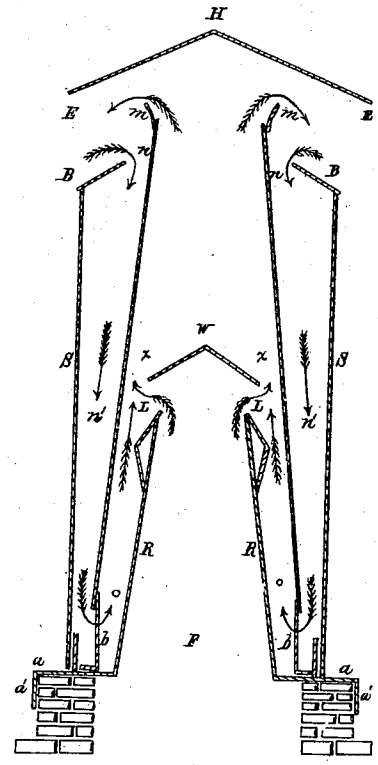
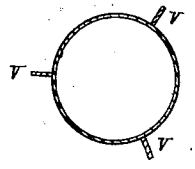


Fig. 3.



Witnesses.

C. A. Snyder

Theophilus Weaver.

Inventor.

David F. Jauss

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

United States Patent Office.

DAVID F. JAUSS, OF HARRISBURG, PENNSYLVANIA.

Letters Patent No. 77,047, *dated April* 21, 1868.

IMPROVEMENT IN CHIMNEY-COWLS.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, DAVID F. JAUSS, of Harrisburg, Dauphin county, and State of Pennsylvania, have invented a new and useful Improvement on a Counter-Current Ventilator; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view,

Figure 2 is a vertical section of ventilator and flue, and

Figure 3 is a transverse section of the top of the middle tube.

I construct my ventilator of sheet metal, cast iron, or earthenware, or any substance that can be readily formed into the requisite shapes. It consists of a base, *a a a'*, fig. 1; an outside case, S S, B B, fig. 1; a deflecting-trunk or case, *m*, fig. 1; a flue-escape, R R, fig. 2; and two shields, H and W, fig. 2.

The base, *a a a'*, figs. 1 and 2, is provided with a rest, *a a*, for support of the flue-escape R R, with a standard for the reception of the outside case S S, and with a strap or flange, *a' a'*, for holding it in place on a chimney, flue, stack, or other escape. The outside case S S is provided with an air-guide, B B, placed so as to bevel upward from the horizon or base, and on the outside, near the top of the case, are hasps 1–2, fig. 1, into which are passed and held the holders P P of the conical hat or rain-shield H.

The deflecting-trunk or case *m*, figs. 1 and 2, has a flaring crown, *m m*, which is mounted on the trunk of a pyramid, *n n*, which rests on feet *b b*, whose toes stand inside and against the standard on base *a a;* is located about midway between outside case S S and flue-escape R R; has vanes or wings V V V, figs. 2 and 3

The flue-escape consists of a pyramidal trunk, R R, tapering upward, like the deflecting-trunk, has a widened or swelled-head deflector on its top, on or over which is suspended the hat W by straps, as the hat H, fig. 1, is suspended by P P on S S. Said swelled head, between L R, is formed by placing the trunks of two pyramids base to base, outside, and inside by continuing the line of inside.

The operation of my ventilator is to cause a contrary wind to become a servant in ventilating chimneys and other escape of the products of combustion, as well as infected and fetid air from dwellings. The direction of the arrows *n n' b*, fig. 2, shows the way external air is admitted or injected. The hat H, figs. 1 and 2, is placed so as to shield the opening at top of deflector-tube *m* against plunging winds or falling weather. The external air must therefore strike between E and B, fig. 2. Its inward course is arrested by the deflector *m* in connection with the vanes V V V, fig. 1. It is thus turned downward, as at *n*, or at least a part of it, and, continuing to flow in at *n*, the column is pushed on to *n'*, and at *b* is again deflected beneath the lower edge, and between the feet of the deflector-tube, passes up to *o*, and is again deflected by the swelled head L R against the wall of deflector-tube, and there meets the products of combustion and accelerates the draught at the same time at I so that at *x* I have a combined draught of external and internal air, which rushes up to the leeward escape at *m*.

It will be seen that I have not only the ordinary power of draught when air is *in equilibrio*, but have an augmented draught internally when the air is disturbed externally, and a thorough protection against downward plunging, not only by employment of the hats or shields H and W, but also by virtue of the power of the ascending column above *x*, which would overcome the external disturbance itself.

It will also be observed that an artificial current, as on a rail-car or steamboat, will increase the draught in my ventilator in proportion to the velocity of travel, and that sparks or dust are excluded from the inside of room, by the expulsion of draught. It will also, in like manner, act as a disinfectant.

I do not claim as new the hats, shields, deflectors, nor counter-current exclusively, but

What I wish to secure by Letters Patent of the United States, is—

1. The combination and arrangement of the case S with the two inner cases herein shown, so as to effect the communication of exterior air with the products of combustion, in the manner as herein set forth.

2. The case S and the tubes *n* and R, constructed and arranged substantially as herein shown and described.

3. The construction of the deflectors B, *m*, and L, in the relation to each other and the hats H and W, as herein shown.

DAVID F. JAUSS.

Witnesses:

C. A. SNYDER,

THEOPHILUS WEAVER.