(No Model.)

L. F. BETTS.

VENTILATOR OR CHIMNEY CAP.

No. 267,829. Patented Nov. 21, 1882.

Fig. 1

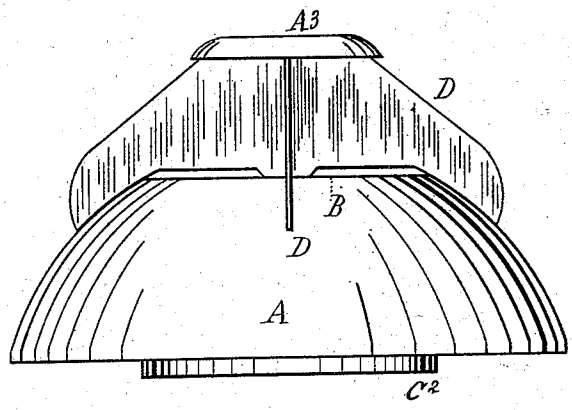
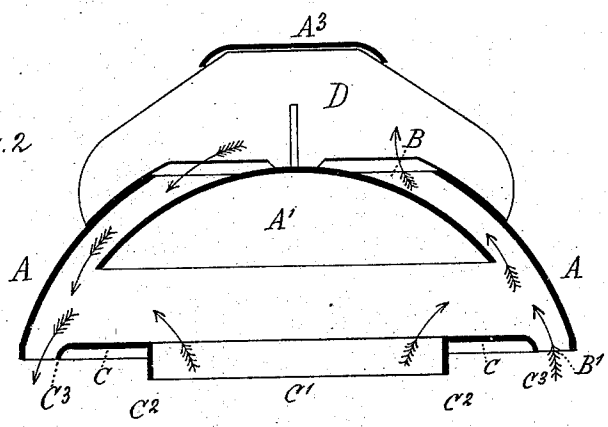


Fig. 2



Witnesses
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UNITED STATES PATENT OFFICE.

LEWIS F. BETTS, OF MORTON, PENNSYLVANIA.

VENTILATOR OR CHIMNEY CAP.

SPECIFICATION forming part of Letters Patent No. 267,829, dated November 21, 1882.

Application filed March 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, LEWIS F. BETTS, of Morton, county of Delaware, and State of Pennsylvania, have invented certain new and useful Improvements in Ventilator or Chimney Caps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates especially to caps employed upon ventilator-shafts, chimneys, &c., for promoting the flow of air, smoke, or products of combustion therefrom, and has for its object the production of a device in which the current drawn therethrough must be in one direction only, and cannot be reversed by wind or blasts of air projected against the device from any direction.

My improved cap is cheap and easy to construct, being composed of but few pieces, and consists essentially in arranging the various parts in such a manner that there are no abrupt turns or joints therein, but a gradual curve is given to the plates, which perform the most important functions in the device; and my invention involves certain novel and useful combinations or arrangements of parts and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is an elevation, and Fig. 2 a vertical axial sectional view, of my improved device.

Like letters of reference, wherever they occur, indicate corresponding parts in both the figures.

The device may be constructed of sheet or cast metal, as preferred, the parts being secured together by suitable means.

A is a hemispherical shell, cut away at the top, leaving an aperture, B, therein, corresponding in area to the cross-section of the shaft or chimney upon which the cap is to be employed.

C is a plate located at the base of shell A and secured thereto by suitable arms.

C′ is the central aperture, provided with a collar, C^2, for the purpose of engaging with the chimney or ventilator-shaft when placed in position thereon. The edges of the plate C are turned downward at C^3. The area of the opening B′ between shell A and plate C corresponds to B and C′.

A′ is a shell supported within shell A, and extending upward therein to the level of the top thereof, the space left between A and A′ corresponding to B, B′, and C.

D are wings placed at right angles across aperture B, and extending down a short distance upon the outside of shell A, the whole being surmounted by a plate, A^3.

When constructed and arranged as above described and placed in position for use, the operation of my improved cap is as follows: Currents of air striking the chimney or shaft obliquely will pass into opening B′, as indicated by the arrows upon the right side of Fig. 2, and will follow shell A directly upward, passing out at B, thereby inducing a current from or through C′, drawing the air, smoke, &c., from the flue or chimney. Should wind strike the device from any lateral direction, the current will be deflected downward by plate A^3 and wings D, and, striking shell A′, will follow down the sides of shell A, passing out at B′, inducing a current through or from C′, as indicated by the arrows upon the left of Fig. 2. It will thus be seen that, no matter from what direction impinging currents may come or strike the device, they are conducted therethrough in such a manner as to always educe a flow from the chimney or shaft through opening C′, and wind cannot strike the device in such a manner as to reverse the current therefrom, and therefore my improved cap is particularly adapted for use in cities, where the walls of buildings and chimneys are of unequal heights, and chimneys are caused to smoke by reason of walls extending thereabove, deflecting currents down the chimney when the wind is in certain directions. By the use of my device this difficulty is entirely overcome, and the draft of any chimney may be readily and effectively established in the right direction without danger of reversal.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. A ventilator or chimney cap having an outer hemispherical shell, open at top, as set forth, a bottom plate, the outer edge whereof is located upon the same plane as the base of the

shell, said plate being provided with an opening therethrough for the passage of products of combustion or air, and an inner hemispherical shell located above said opening, the curve thereof corresponding to the curve of the outer shell, as set forth, the whole being surmounted by wings bearing a top plate, substantially as shown and described.

2. In a ventilator or chimney cap of the character herein specified, the combination, with hemispherical shells A and A′, of wings D and plate A^3, substantially as shown and described.

3. In a ventilator or chimney cap of the character herein specified, the combination, with hemispherical shells A and A′, of bottom plate, C, wings D, and plate A^3, the whole arranged to operate substantially as shown and described.

4. In a ventilator or chimney cap, hemispherical outer shell, A, bottom plate, C, having inner collar, C^2, and opening C′, an annular opening, B′, being left between shell A and edge C^3 of plate C, inner shell, A′, extending upward within shell A to opening B, as specified, and wings D, surmounted by plate A^3, the whole combined and arranged to operate substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

LEWIS F. BETTS.

Witnesses:
F. W. HANAFORD,
A. M. PIERCE.