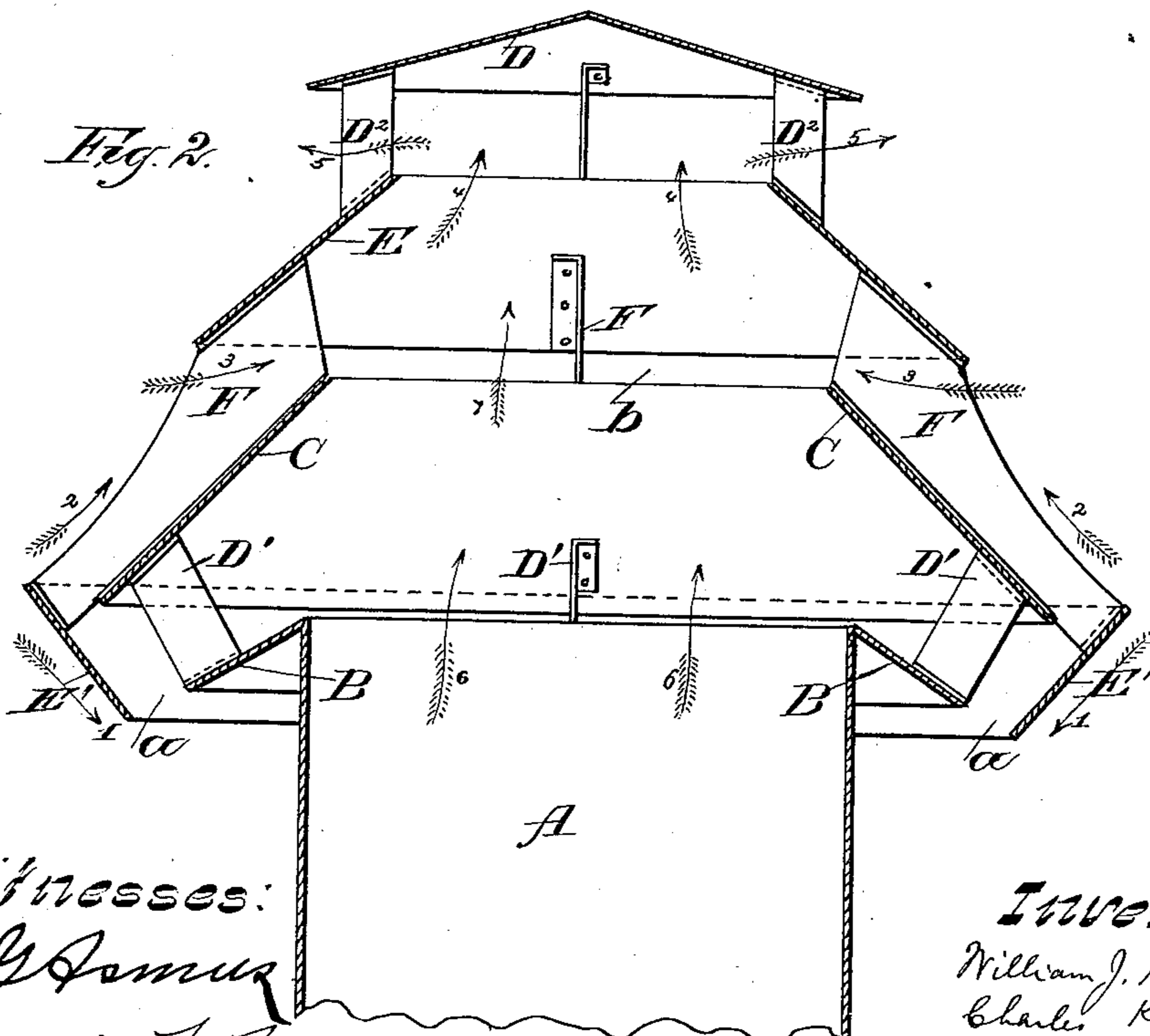
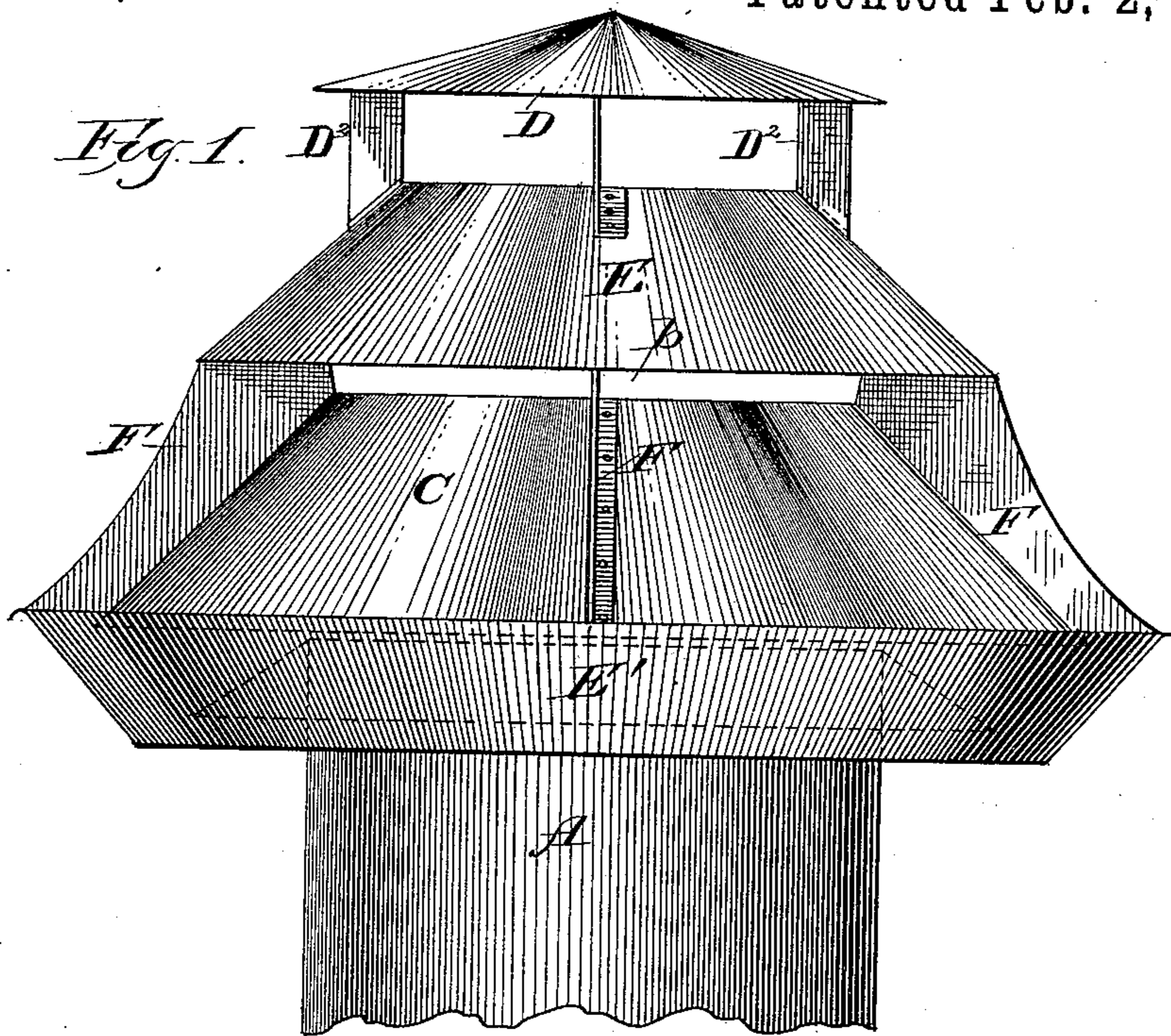


(No Model.)

W. J. & C. KAYSER.
CHIMNEY CAP AND VENTILATOR.

No. 335,362.

Patented Feb. 2, 1886.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM J. KAYSER AND CHARLES KAYSER, OF CHICAGO, ILLINOIS.

CHIMNEY CAP AND VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 335,362, dated February 2, 1886.

Application filed September 29, 1885. Serial No. 178,510. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. KAYSER and CHARLES KAYSER, of Chicago, in the county of Cook, and in the State of Illinois, have invented certain new and useful Improvements in Chimney Caps and Ventilators; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to chimney caps and ventilators; and it consists in certain peculiarities of construction, as will be fully set forth hereinafter.

In the drawings, Figure 1 is an elevation of our improved device, and Fig. 2 is a vertical central section thereof.

Our present invention is an improvement on the device for which we obtained a patent on the 7th day of July, A. D. 1885, numbered 321,729; and the said improvements consist, chiefly, in a different relative arrangement of the lower truncated cones and deflectors of the said device, as well as in a modified construction of the upper portion of the device, particularly designed to divide the currents of air, so as to insure a downward as well as an upward draft, as hereinafter fully disclosed.

A is the chimney-pipe, which is fastened in any suitable manner on top of a chimney—as, for instance, in the manner shown in our Patent No. 320,794, dated June 23, 1885.

B is a truncated cone, but instead of being inverted and attached to the chimney-pipe in such manner as to leave an annular air-space between it and the said chimney-pipe, the said cone B is closely joined to the top of the chimney-pipe and extends downward therefrom, with its greatest diameter below said chimney-pipe top instead of above the same, as in our Patent No. 320,794, or practically about level therewith, as in our Patent No. 321,729, hereinbefore named.

C is an open truncated cone, supported by brackets D' D' , secured to and rising from the cone B, the base of the said cone C being on a horizontal plane above the truncated top of the said cone B.

E' is an inverted conical band or truncated cone, flaring outward and upward, and with its base below the base of the cone B and its top above the base of the cone C, and it is supported by brackets F F, secured to the outside of the cone C, and said brackets F also sup-

port another truncated cone, E, of less diameter than the cone C, and raised wholly above said cone C, the brackets F being secured to the inner surface of the cone E, and the said brackets F constitute shields or partitions and form air-chambers of the spaces between them, as in our last-named patent, except that they are beneath the cone E, instead of immediately beneath the cap D, which in our present device is supported on brackets D^2 D^2 , rising from the upper outer surface of the cone E.

In our patent of July 7, 1885, any currents of air which strike the outside cone (marked B' in said patent) would have given to them a natural upward and inward tendency, which would carry them wholly in under the cap, and in some cases would tend to obstruct the free circulation of air under the cap or cover, and would also sometimes head off or retard the upward draft within the ventilator. In our present device we have obviated this by means of the conical band or cone E' , which projects at an opposite direction to the other cones of the ventilator, and tends to divide any air-currents striking against it, the greater part of said currents being directed downward, as indicated by the arrows marked 1 1 in Fig. 2, and by rushing down past the opening a between the bases of the cones B and E' will create suction at such point, and thereby facilitate the upward discharge of smoke, &c., out of the chimney-pipe A, (indicated by the arrow 6,) while such portion of the air-current from the outside as is divided at the top line of the band E' (indicated by the arrows marked 2 2) will travel along up the surface of the cone C and enter the space b between the base of cone E and top of cone C, as indicated by the arrows marked 3 3, and, mingling with the smoke-discharge, (arrow 7,) will be compressed between the shields or partitions F and rushed up, arrows 4 4, into the space beneath the cap D, through the cone E, and finally out beneath said cap D, as indicated by arrows 5 5.

In our last patent, No. 321,729, in order to guard the interior of our device from downward currents of outside air, it was necessary to make the cap D very large; but in our present device the said cap need only be of the diameter of the chimney-pipe, as we now interpose the cone E, which forms an effectual shield or protection against such cur-

rents, which strike the cap obliquely, and then are deflected onto the outer surface of the cone E, and thence off, free from the interior of the device, and if any portion of said currents strikes against the outer side of the cone C they will pass down through and out the passage or opening *a*, and thereby add to the draft at said point, and facilitate rather than retard the upward passage of the smoke and other products of combustion from the chimney pipe and ventilator.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a chimney cap and ventilator, the combination, with the chimney-pipe, of a truncated cone closely secured thereto and extending downward and outward with its greatest diameter below the top of said chimney-pipe, and an open truncated cone supported above the top of the first-named cone and above the top of the chimney-pipe, and an outwardly and upwardly flaring conical band extending below and above the bases of the cones named and adapted to divide any air-currents striking against it, whereby a downward as well as upward draft is insured, substantially as set forth.

2. In a chimney cap and ventilator, the com-

ination, with the chimney-pipe, of a truncated cone closely secured to the top thereof and extending downward and outward, an open truncated cone supported above said chimney-pipe top, another open truncated cone of lesser diameter supported above the last-named cone by brackets constituting air shields or partitions and forming air-spaces between them, an outwardly and upwardly flaring conical band extending above and below the bases of the first and second cones named, and a cap or cover supported on brackets rising from the uppermost cone of the ventilator, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands, at Chicago, in the county of Cook and State of Illinois, and Milwaukee, in the county of Milwaukee and State of Wisconsin, respectively, in the presence of two witnesses.

WILLIAM J. KAYSER.
CHARLES KAYSER.

Witnesses to signature of Wm. J. Kayser:

LOUIS HAMMERSCHLAG,
F. W. FRITZ UBBELOHDEN.

Witnesses to signature of Charles Kayser:

H. G. UNDERWOOD,
G. A. PLATZ.