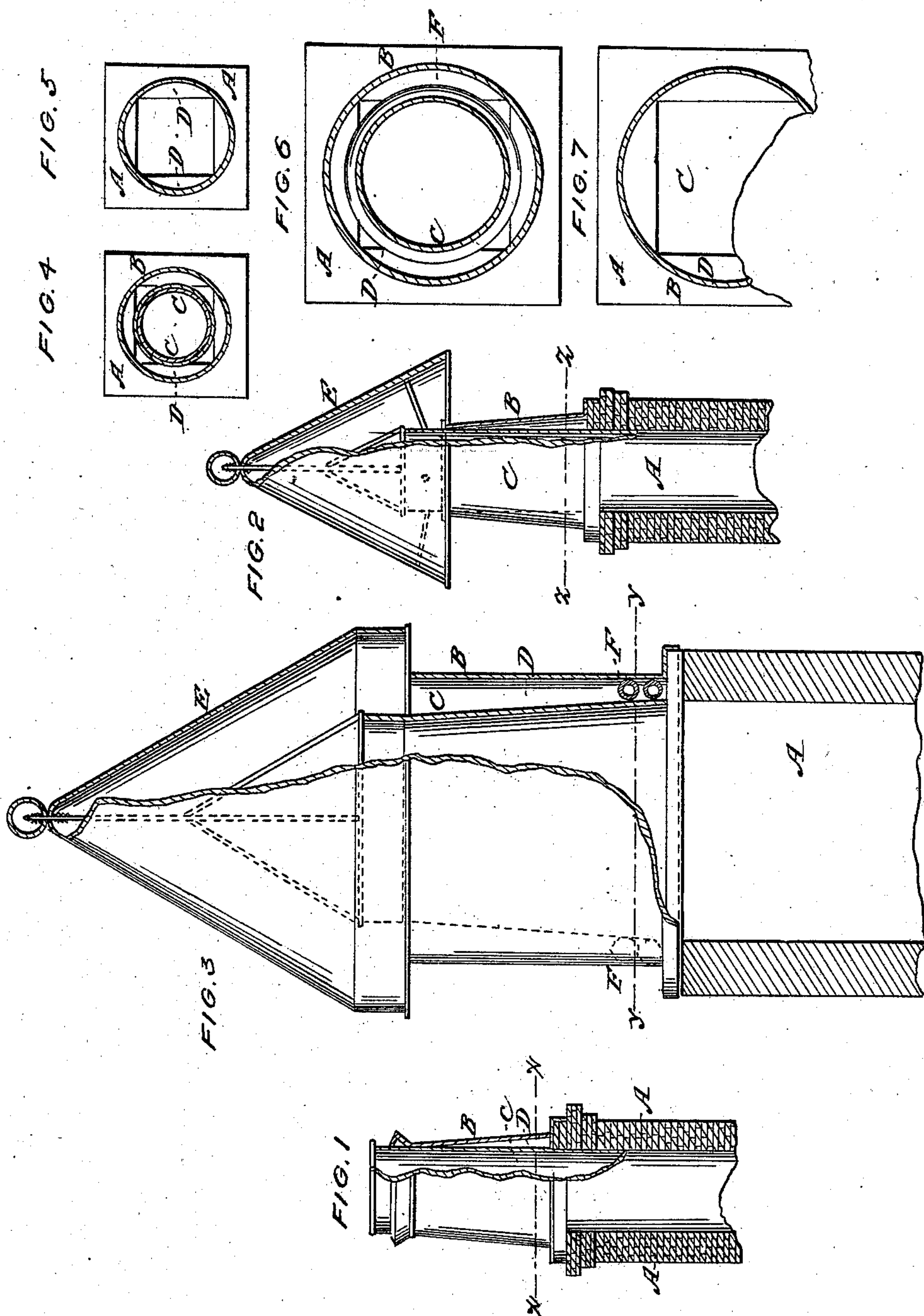


T. BOYD.
Chimney Cowl.

No. 94,864.

Patented Sept. 14, 1869.



WITNESSES:

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THOMAS BOYD, OF CAMBRIDGE, MASSACHUSETTS.

Letters Patent No. 94,864, dated September 14, 1869.

CHIMNEY-TOP.

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

To all whom it may concern:

Be it known that I, THOMAS BOYD, of Cambridge, in the county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Chimney-Tops and Ventilating-Flues and Caps; 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 part of this specification, in which—

Figure 1 is a view, partly in section and partly in elevation, of my improved chimney-top and ventilating-flue and cap for buildings, &c;

Figure 2 is a similar view of a modification of the same;

Figure 3 is a view, partly in elevation and partly in section, showing the chimney-top as applied and used for ventilating-purposes only, it being shown as applied to a building for that purpose, and having within the air-chamber a coil of pipe;

Figure 4 is a horizontal section on line *xx* of fig. 1;

Figure 5 is a modification of the hot-air chambers surrounding the same;

Figure 6 is a horizontal section on line *yy* of fig. 3; and

Figure 7 is a horizontal section on line *zz* of fig. 2.

Corresponding letters refer to corresponding parts in the several figures.

This invention relates to chimney-tops and ventilating-flues and caps, and consists in so combining and arranging the parts as to form a chamber around the interior funnel, which becomes filled with heated air, and thus increases the draught through the funnel.

A, in the drawings, represents a chimney and ventilating-flue, with my improved cap or top applied thereto. This chimney and flue is to be of any approved form of construction, and of any size, to suit the views of the constructor.

B represents a casing or tapering column, which may be made of cast or sheet-metal, or of brick, clay, pottery, or any other suitable material; its base being so constructed as to fit on or upon the top of the brick portion of the chimney. The diameter of this casing is to be, say, (3) three or (4) four inches greater than the flue in the chimney, and is to extend above the top thereof, say, two or three feet, and is for the purpose of forming the outside wall of the hot-air chamber D. This casing may be square, round, octagonal, or of any desired configuration, and should be, at its upper end, about one inch larger than the exterior of the pipe or funnel C, and be provided with an inwardly-projecting flange, which will reach to and form an air and water-tight joint with the surface of such funnel.

C represents a pipe or funnel, the dimensions of

which are to be such, in its cross-section, that it will fit the flange formed upon the interior of the casing B and the flue of the chimney. Its sides are to be parallel, and it should extend down into the flue in the chimney from one to three feet, or more, while its upper end projects two, three, or more inches above the top of the casing; it being provided near its upper end with a projection to fit upon the same, and thus prevent its moving downward.

D represents the hot-air chamber, which is formed or bounded by the casing B upon its outside, and the funnel C upon its inside. This chamber, as will be seen, extends from the point where the casing B rests upon the chimney K to the point where the flange thereon comes in contact with the pipe C, thus furnishing a chamber for heated air the whole height of that portion of the pipe which extends above the chimney, and also at the corners of the chimney around that portion which terminates therein. The effect of this air-chamber is to heat the pipe through which the products of combustion pass to the atmosphere, and thus to give them a more rapid movement at that point, and thus, as a consequence, to increase the draught.

E represents a cap or cowl, which, in some cases, I propose to use, (although the chimney-top may be regarded as complete without it,) for the purpose of still further increasing the draught, and preventing the wind from blowing down into the chimney. This cowl is made at an acute angle, sufficiently high to allow the discharge-pipe to extend up into it, and secured to a rod, having a nut upon its upper end, as shown in fig. 2, or it may rest upon such nut, as shown in fig. 3.

F, in fig. 2, represents a coiled pipe, which, in some instances, I propose to use for the purpose of causing the heated products of combustion to pass directly from the chimney-flue to the chamber D.

I have described the pipe or funnel C as being cylindrical in form, and the chamber D as an annular one; but it is apparent that a cylindrical casing may be used, and that the pipe may be square, as shown in fig. 7, and thus a series of chambers be formed in the form of segments of a circle; or a cylindrical pipe may be used for the casing, which pipe may enter the chimney only a short distance, or only far enough to receive a tight joint in the chimney, and a square or other formed pipe be inserted therein, so as to have a series of chambers on the sides thereof.

It is apparent that when the device is used as a ventilator only, and the wind is depended upon as the agent for producing the draught, the casing B and pipe F may be dispensed with, and only the funnel C and cap E used to produce the required result.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. The combination and arrangement of the pipe or funnel C, casing B, and cap E, substantially as and for the purpose set forth.

2. The combination of the funnel C, casing B, and coiled pipe F, substantially as and for the purpose set forth.

3. The combination of the chimney-top, consisting of the funnel C, casing B, and cap E, with the flue or

chimney A, substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

THOMAS BOYD.

Witnesses:

JOHN N. BARBOUR,
ALFRED L. BARBOUR.