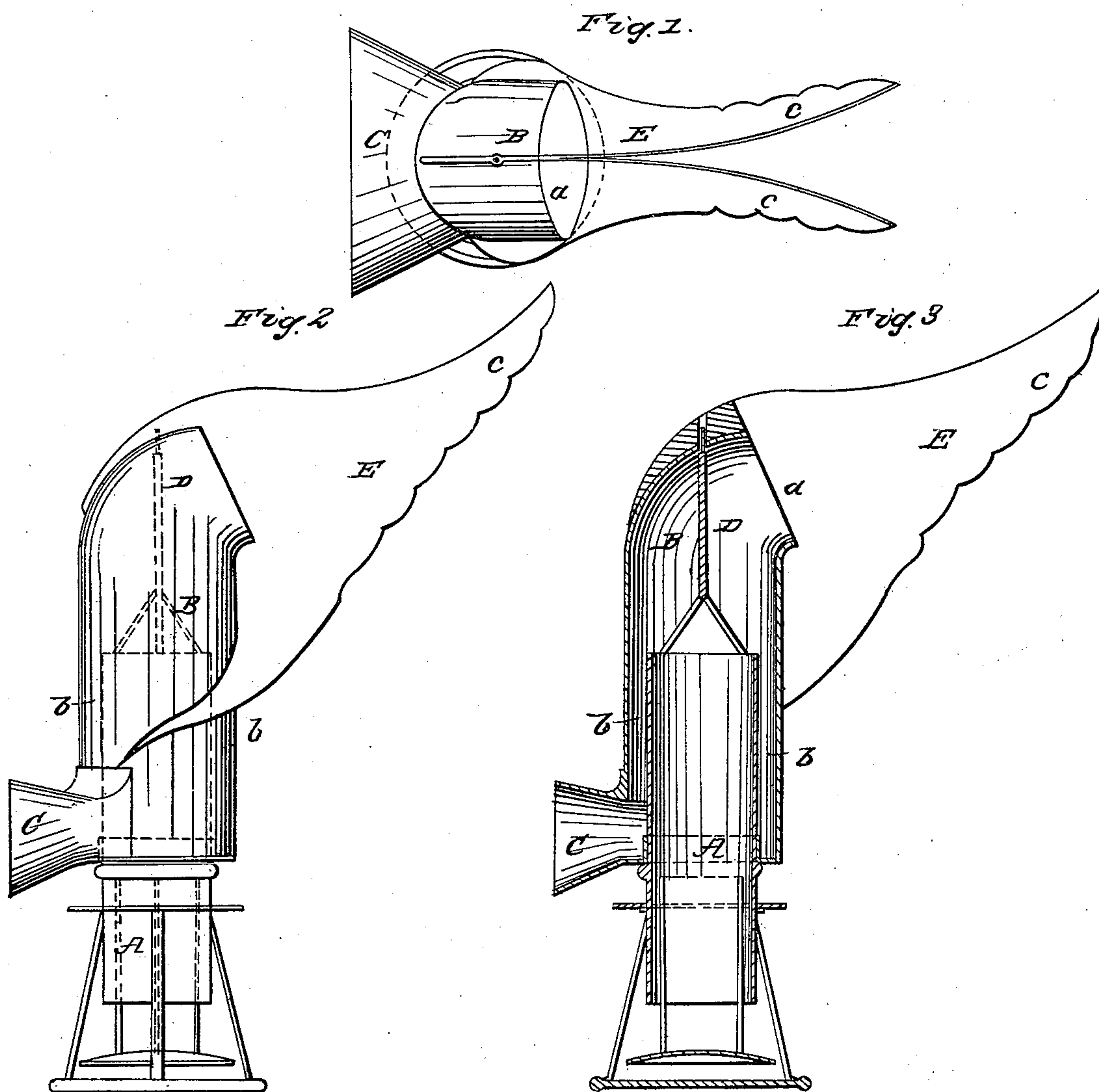


C. F. THOMAS.
Chimney Cowl.

2 Sheets—Sheet 1.

No. 14,171.

Patented Jan. 29, 1856.



C. F. THOMAS.
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2 Sheets—Sheet 2.

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Fig. 5

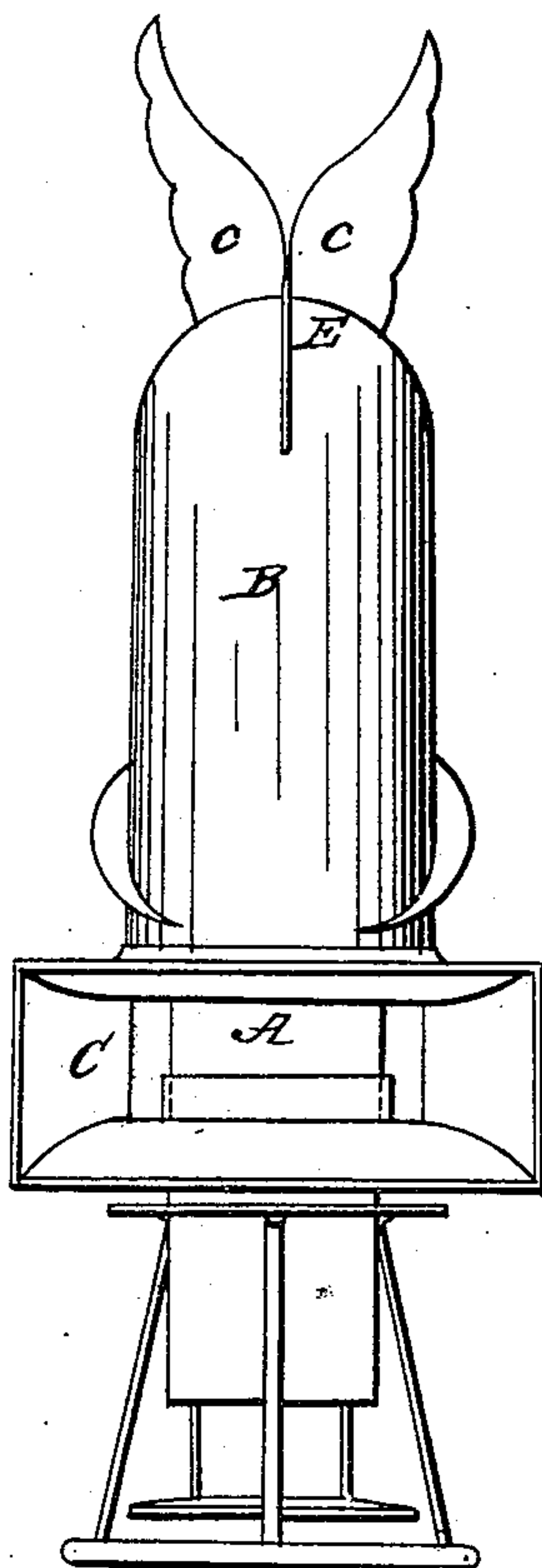
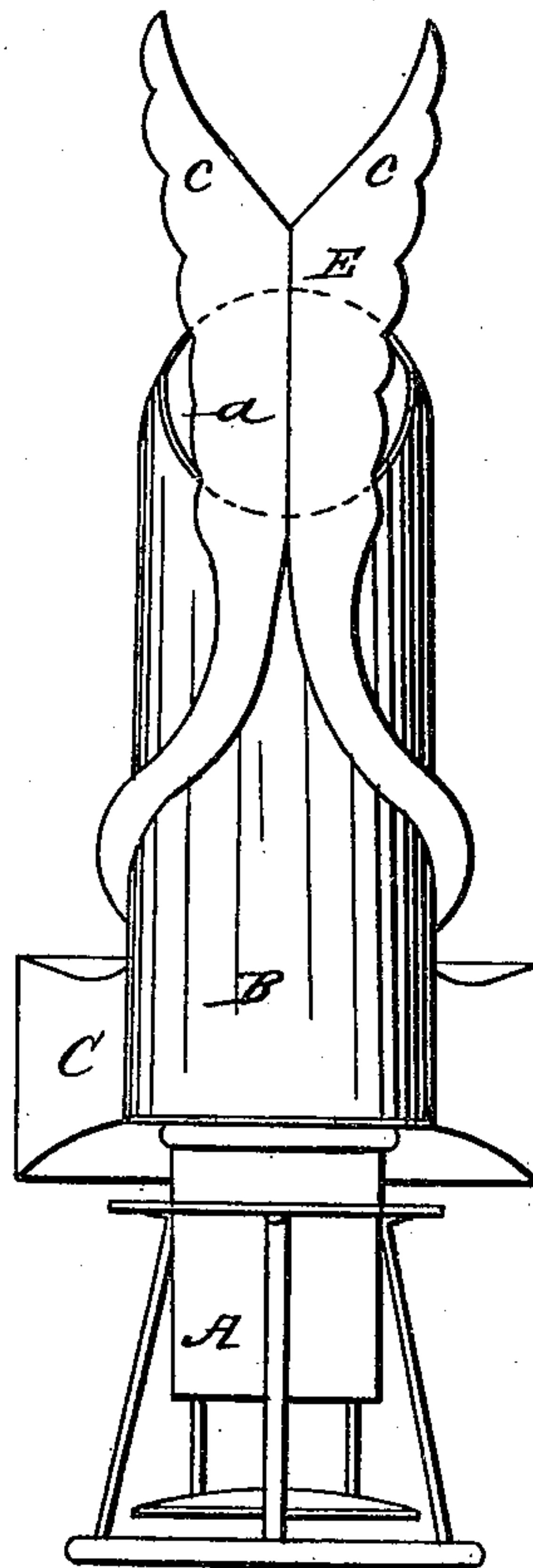


Fig. 4



UNITED STATES PATENT OFFICE.

CHARLES F. THOMAS, OF TAUNTON, MASSACHUSETTS.

CHIMNEY-COWL.

Specification of Letters Patent No. 14,171, dated January 29, 1856.

To all whom it may concern:

Be it known that I, CHARLES F. THOMAS, of Taunton, in the county of Bristol and State of Massachusetts, have invented an
5 Improved Chimney Cowl or Ventilator; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

10 Figure 1, is a top view of the same; Fig. 2, a side elevation of it; Fig. 3, a central, vertical and longitudinal section of it; Fig. 4, a rear side view, and Fig. 5, a front side view of it.

15 In these drawings A, exhibits a cylindrical tube to be fixed on the top of a common chimney or to form part of a flue for discharging either smoke or foul air, from some apartment or place. The said tube A, I provide with a revolving cowl or head B, which
20 I extend concentrically around the tube and make open at its upper end as seen at *a*, in Fig. 1, such opening being arranged so as to stand about vertically. The lower part
25 of the cowl, I furnish with a trumpet or flaring mouth C, which is arranged thereon, and with respect to the discharging aperture *a*, as seen in the drawings, there being a space *b, b*, left between them, the tube A,
30 and the cowl B, for the purpose of leading upward the air which may blow into the mouth C.

The cowl may be supported by and so as to revolve upon a pintle or spindle D, extending upward from the top of the discharge tube A. To the cowl and its orifice
35 *a*, I apply a vane E, which I arrange about vertically and extend directly across the discharging aperture *a*, so as to divide it into
40 two parts, and this vane I construct of two wings *c, c*, made to meet together at the discharging aperture, *a*, and to extend therefrom and to flare outward with respect to each other as seen in Figs. 1 and 5. Each
45 wing also extends down below the discharging aperture *a*, and is curved somewhat like the mold board of a plow, and extends partially around and projects from the outer surface of the cowl as seen in the drawings.
50 The extension of both wings around the cowl being about 240° of a circle, supposed to bisect the cowl horizontally and to have a diameter corresponding with that of the cowl.

A ventilator chimney, cowl, or smoke dis- 55
charger of the above kind when arranged upon a chimney or discharge flue will be turned or rotated by the wind, the trumpet mouth C, by the action of the wind on the
60 vane being maintained in a direction toward the wind so that the latter can pass into it and upward through the space *b, b*, and over the top of the tube A, and out of the aperture *a*, and so as to increase the draft up the chimney or flue A. 65

The object of extending the vane across the discharging aperture of the cowl as described, is to divide the effluent current of smoke or foul air into two currents and so that the lateral currents of wind when striking the vane may not blow back into the chimney cowl, the whole of the current which may be issuing therefrom. When a
70 vane is so applied and a part of the current of smoke or foul air is suddenly blown back into the cowl it will pass into the same and be forced out of the protected half of the open end of the cowl, or that half of the opening which is in rear of that side of the vane against which the wind may strike. 80

Constructing the vane with two flaring wings as specified not only protects the discharging aperture of the cowl from the action of a sudden current of wind blown directly backward toward the mouth of the
85 cowl, but serves to maintain the cowl more steady or still than a single vane would. This will be obvious, for it is well known that a vane with a single wing is so liable to be affected by slight changes in the direction of the current of air as to keep the
90 cowl more or less in constant vibration or motion.

When two wings are used and arranged as above described steadiness of position will
95 be better insured to the cowl, while it will still be turned or rotated by any considerable veering of the wind. Extending each of the wings down below the discharging aperture of the cowl, and around and so as
100 to project beyond the external surface of the cowl as specified, causes the wings to operate so as to gather the wind and condense it as it passes by the discharging aperture, thereby promoting the draft up the
105 chimney. Besides this arrangement and application of the wing with respect to the cowl, serves to strengthen the wing and pre-

vent it from being injuriously bent or warped under the action of the wind.

I do not claim a turning cowl applied to the top of a chimney or flue and having a wind vane attached to it, but

What I do claim is as follows, that is to say:

1. I claim arranging the vane so that it shall extend directly across the discharging aperture of the cowl or ventilator and divide such aperture in manner and for the purpose as hereinbefore explained.

2. I also claim constructing the vane of two wings flaring from one another as they extend from the cowl as specified, the same

being for the object or objects as herein before stated.

3. I also claim arranging each of the wings so that it shall extend down below the discharging aperture of the cowl and from and around the external surface of the cowl substantially as described. 20

In testimony whereof I have hereunto set my signature this 18th day of December, A. D. 1855.

CHAS. F. THOMAS.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.