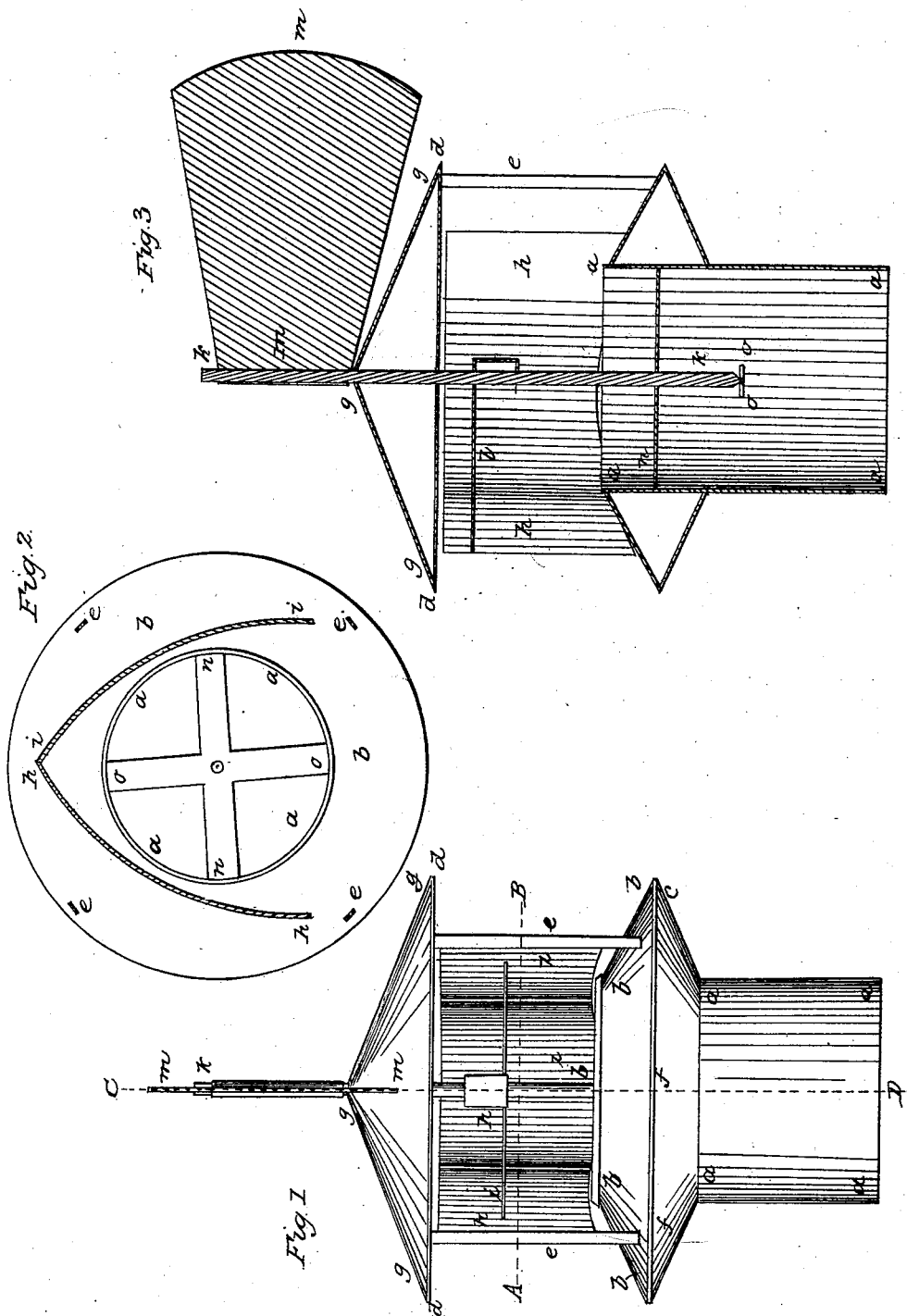


J. P. HAYES.
Chimney Cap.

No. 5,839.

Patented Oct. 10, 1848.



UNITED STATES PATENT OFFICE.

JOHN P. HAYES, OF BOSTON, MASSACHUSETTS.

CHIMNEY-CAP.

Specification of Letters Patent No. 5,839, dated October 10, 1848.

To all whom it may concern:

Be it known that I, JOHN P. HAYES, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain
5 new and useful Improvements in Ventilators, Chimney-Caps, &c., and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth
10 the nature and principles of my said improvements by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is an elevation of my improved chimney cap or ventilator. Fig. 2, is a horizontal section taken in the plane of the line
20 A B Fig. 1, and Fig. 3 is a vertical section taken in the plane of the line C D Fig. 1.

My improvements are made upon a kind of ventilator recently introduced into use in
25 which a cylindrical pipe *a a a a* is inserted and projects some distance above the top of the chimney, said pipe having all about or around its upper edge a reflecting surface *b b b b* beveled downward as shown in Figs.
30 1 and 3 and at such an angle with the axis of the cap as to reflect all the various currents of air in such directions as to make a vacuum over the mouth of the chimney, there being also in such caps, a circular plane surface or disk *d d* supported at a proper distance
35 above the reflecting surface *b b b b* on proper supports *e e e e* and directly over the mouth of the chimney.

My improvements upon this kind of ventilator consist in adapting or arranging on
40 the under side of the reflecting surface *b b b b* and also on the top of the circular plate or disk *d d* other reflecting surfaces, *f f f f* and *g g g g*, the former surface *f f f f* having the shape of a frustum of a cone and its bevel or slope being in the opposite direction to that of the surface *b b b b*,—while the shape of the face *g g g g* is that of an entire cone as
45 shown in Figs. 1 and 3, and the purpose and effect of both added surfaces being, as I conceive to deflect more effectually, the various

currents of air which impinge upon the cap from its mouth.

My other improvement consists in arranging between the circular disk *d d* and the
55 surface *b b b b* a turning cowl *h h—i i* having two curved vertical sides *h h—i i* put together as shown in Fig. 2, so as to present an apex or sharp edge to the wind and extending around about the mouth of the chimney as shown in the said figure or in any
60 other way substantially similar. The said sides, *h h—i i* of the cowl are attached firmly to a turning vertical pintle or rod *k k* by the arms *l, l, l*, as shown in the drawings, and on
65 the top of this rod there is a suitable vane *m m* which operates in the usual way to keep the sharp end of the cowl always to the windward and the open end to the leeward. The pintle *k k* is properly supported in bearings
70 in the cross ties *n n—o o*, as shown in the drawings.

The arrangement of this turning cowl between the disk *d d* and surface *b b b b*, as above described has the effect according to
75 my experience of more effectually, and invariably insuring a vacuum over the mouth of the chimney, than by any other mode.

Having thus described my improved ventilator or cap, I shall state my claim as follows.
80

What I claim as my invention and desire to have secured to me by Letters Patent is—

1. In a ventilator such as I have described, arranging a conical deflecting surface on the
85 top of the disk *d d*, and also another deflecting surface, having the shape of a frustum of a cone on the underside of the surface *b b b b*, the arrangement and purpose of the same being substantially as above set forth.

2. I also claim the arrangement of a turning cowl constructed as herein set forth, between the disk *d d* and the surface *b b b b*, in the manner and for the purpose herein
95 above described.

Boston, April 5, 1848.

JOHN P. HAYES.

Witnesses:

EZRA LINCOLN, Jr.,
LUTHER BRIGGS, Jr.