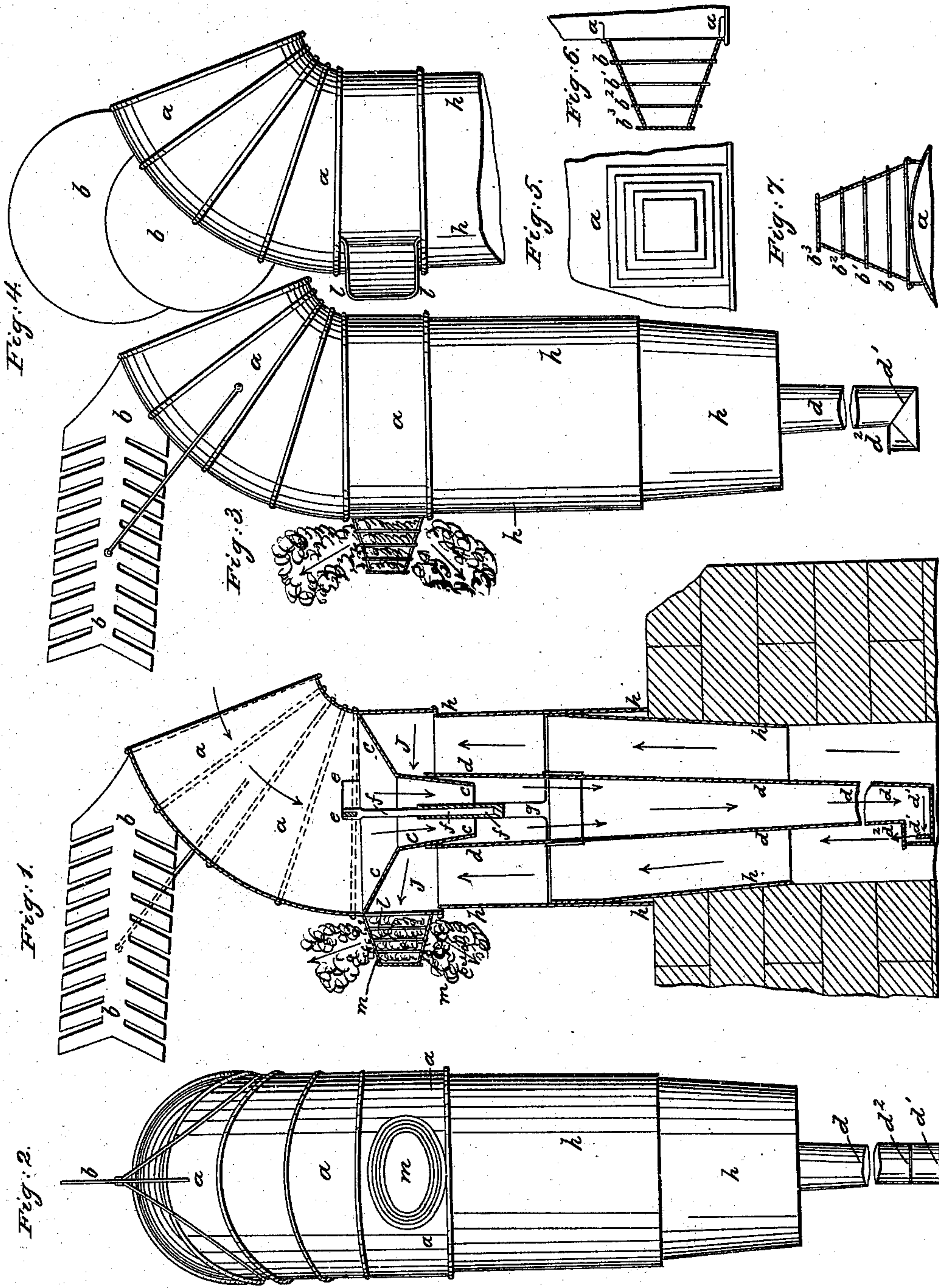


M. LOCKHART.
Chimney Cowl.

No. 100,422.

Patented March 1, 1870.



Witnesses:
J. H. Chasbrough
J. H. Chasbrough

Inventor:
M. Lockhart

United States Patent Office.

MILES LOCKHART, OF DOUGLAS, ISLE OF MAN.

Letters Patent No. 100,422, dated March 1, 1870.

CHIMNEY-COWL.

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, MILES LOCKHART, of Douglas, in the Isle of Man, do hereby declare the following statement to be a full and exact description of my invention for an Improved means or Apparatus for Ventilating, chiefly applicable to chimneys.

This, my said invention, consists in certain improvements in apparatus for ventilating, chiefly applicable to chimneys, and has for its object the more perfect ventilating of chimneys, insuring up-draught, preventing a down-draught, and rendering it next to impossible for chimneys so fitted to smoke. This apparatus also can be used for other ventilating purposes.

In the cases of churches, theaters, sheds, dwelling-houses, or other buildings, it will be found of great service, as by its means all heated air (which naturally collects near the roof or ceiling of any building or room) will be carried away.

It also applies to ventilating mine-shafts, tunnels, and railway-carriages, and to ventilating purposes generally.

An apparatus constructed according to this my said invention consists in a cowl or cup-shaped head, which has a vane attached to the top, which vane always keeps the mouth of the cowl or cup-shaped head facing the wind.

The cowl or cup-shaped head is supported by means of a stay, to which is attached a rod, which rod descends down from the head, and ships into a pipe or tube which is attached to a chimney-top or pipe which rises from and is fixed to the brick-work or masonry of the chimney.

The cowl or cup-shaped head is made to ship over the chimney-top or pipe, and by means of the rod shipping into the before-mentioned pipe or tube, is allowed to revolve round the chimney-pot or pipe according to the direction of the wind.

To the inside of the cowl or cup-shaped head is attached a pipe which descends a short distance into the chimney-pot or pipe. This pipe revolves with the cowl and fits into, at its lower end, a pipe which leads down the chimney, and which pipe terminates in an elbow having a mouth on the top side.

Round the pipe which is attached to the inside of the cowl or cup-shaped head is formed a smoke-box, and at the back of the cowl or cup-shaped head is an opening or outlet for the smoke.

In cases of high buildings being near chimneys to which this cowl or cup-shaped head is fitted, or in mountainous districts it is preferred to fit this opening or smoke outlet with a guard formed of a series of circular, square, or other shaped plates, having their center part cut away and kept some small distance apart from each other, and terminating in a solid plate, or a Venitian or other guard may be used, as found most convenient in practice.

In order that this invention may be more readily seen and understood, there are hereunto attached drawings which illustrate a cowl or cup-shaped head with pipes attached, as hereinbefore described.

Figure 1 is a sectional view of an apparatus according to my invention.

Figure 2 is a back view of same.

Figure 3 is an outside view.

Figure 4 is an outside view of the cowl-shaped head or cup without guard, and shown with butterfly wing-shaped vane.

Figures 5, 6, and 7 illustrate a guard to be used when required, as hereinbefore mentioned.

Like letters in each and every figure denote like parts.

Arrows denote the direction the wind takes.

a, cowl or cup-shaped head.

b, vane which keeps the cowl or cup-shaped head with its mouth or open part facing the wind.

c, pipe which is attached to cowl or cup-shaped head, and revolves together with it, and fits into

d, a pipe which leads down the chimney and terminates in an elbow *d*¹, with a mouth, *d*² on its top part.

e, stay, to which is attached

f, rod which descends into

g, pipe or tube-stay, which is attached to

h, chimney-pot or pipe, which is fixed onto the brick-work or masonry.

j, smoke-box.

l, aperture or smoke-outlet.

m, guard.

Figs. 5, 6, and 7, *a*, part of cowl or cup-shaped head.

b *b*¹ *b*² *b*³, plates forming guard to be used as hereinbefore described, when required.

The action of this apparatus is as follows:

The cowl or cup-shaped head is kept with its mouth or open part facing the wind by means of the vane *b*. The wind blows into the mouth or open part of the cowl, thence down the pipe *c*, attached to the cowl, thence through pipe *d*, turning at the elbow *d*¹, and blowing up the chimney and thereby causing an up-draught. It blows up the chimney, taking the smoke or hot air with it into the smoke-box *j*; it thence escapes into the open air through the aperture *l* and guard *m* when fitted.

The arrows indicate the direction of the wind, as just described.

In cases of churches, theaters, sheds, dwelling-houses or other buildings, also in mine-shafts, tunnels, railway carriages and general ventilating purposes, the operation of the apparatus is similar to that hereinbefore described for chimneys, only the wind blows the foul gas or heated air away in place of the smoke.

Such being the nature and object of my said invention, and I having now fully described and ascertained the object and purposes of the same, together with

the manner in which the same is to be or may be performed or carried out into practical effect, I wish it to be distinctly understood that I do not confine myself to the several proportions and relative dimensions of the various parts of the construction, as it will be readily seen that the same may be considerably varied without departing from my invention; but

What I claim as new and my invention, is—

The combination of a cowl or other cup-shaped head, being kept with its open part or mouth facing the wind, and having connected with it a pipe which leads down the chimney (ventilator in other cases) having an elbow with a mouth facing upward at its end, and

this cowl or cup-shaped head revolving round the casing or chimney-top, (or ventilating pipe) and the action of the several parts being for the purposes hereinbefore described and set forth.

In witness whereof, I, the said MILES LOCKHART, have hereunto set my hand and affixed my seal this 25th day of May, in the year of our Lord one thousand eight hundred and sixty-nine.

MILES LOCKHART. [L. s.]

Witnesses:

F. J. CHEESBROUGH,

I. H. REDMOND,

Both of 43 Castle Street, Liverpool.