

E. HAWKES.
CHIMNEY-CAPS.

No. 195,601.

Patented Sept. 25, 1877.

Fig. 1

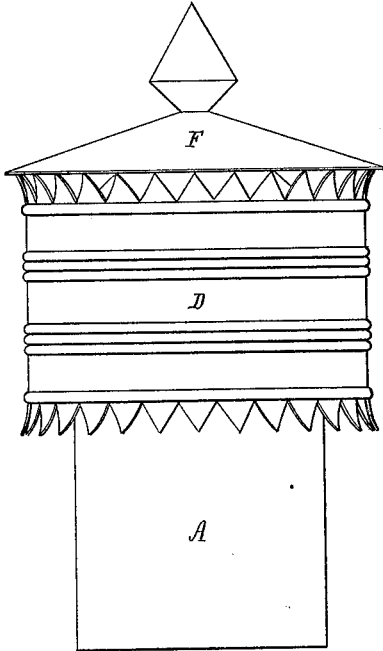


Fig. 2

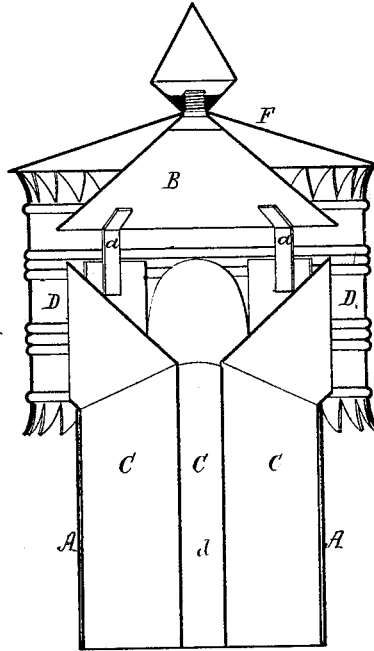


Fig. 4.

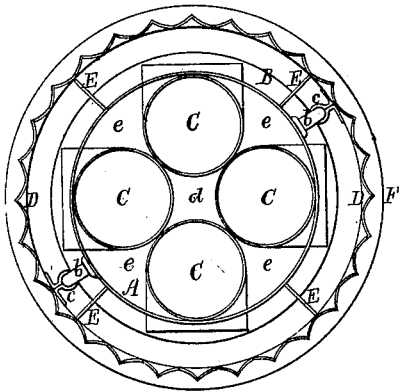
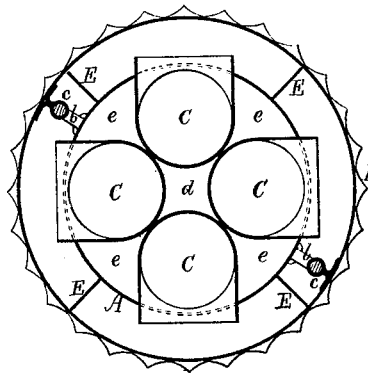


Fig. 3.



Witnesses
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EZRA HAWKES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CHIMNEY-CAPS.

Specification forming part of Letters Patent No. **195,601**, dated September 25, 1877; application filed May 17, 1877.

To all whom it may concern:

Be it known that I, EZRA HAWKES, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Ventilators or Chimney-Caps; and do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, Fig. 2 a vertical section, Fig. 3 a horizontal section, and Fig. 4 a bottom view, of a ventilator embracing my invention.

The ventilator or chimney-cap hereinafter described is, as a whole, composed of a main tube, a series of other tubes, an encompassing guard, sundry partitions, and two caps or hoods, all being arranged and combined in manner as explained and represented. It is highly effective, whether used on a chimney as a cap thereto, and to discharge smoke therefrom, or on a flue or building for aiding in ventilating it.

In such drawings, A denotes a tube, surmounted by a conical cap, B, supported by standards *a*, extending up from the top of the tube.

Within the tube A there is a series of smaller tubes, C C C C, arranged as represented—that is, about the axis of the tube A, and to touch one another and the inner surface of the said tube A, all as shown.

Each of the tubes C, at its upper part, is bent or turned obliquely through the side of the tube A and into the space between the said tube A and a circumscribing tubular guard, D. This guard is arranged concentrically with the tube A and about the upper ends of the tubes C and the base of the cap B, in the manner as represented.

Between each two tubes C a partition, E, is extended from the tube A to the inner surface of the guard.

Furthermore, the guard has a conical cap, F, arranged over and above it, and upon the upper end of the cap B, all being as shown.

The guard D may be supported in place by the partitions, or by arms *b b*, extended from the tube A into socketed projections *c*, applied to the guard.

When the ventilator is used on a chimney

the smoke, in passing through such ventilator, will not only go up the pipe C and be discharged into the space between the tube A and the guard D, but will also pass up the channels *d e e*, between and around the tubes C, and thence will flow into the inner cap B. The smoke will also rise within the guard and flow out of the cap B; and it will be discharged through the space between the upper cap F and the top of the guard.

The guard protects the pipe C from snow or rain, and also prevents air from being blown into them.

The cap B effectively protects the passages *d e e*, between and around the tubes C, from snow or rain.

The upper cap or hood covers the inner hood and the passages between the guard and the tube A, and thus protects such hood and passages from snow or rain.

The partitions so insulate the pipes C from each other as to prevent a current when passing out of one from interfering with that which may at the time be escaping from any other of such pipes.

I would observe that in lieu of four tubes, C, three of them may be used, arranged to touch, or nearly touch, each other, and about the axis of the tube A.

With a ventilator or chimney-cap thus made there is little or no danger of downdrafts therein or in the chimney. The external air or wind, in whatever direction it may blow against the ventilator, operates to produce or facilitate therein an upward draft or drafts.

I claim—

1. For a ventilator or chimney-cap, the tube A, series of tubes C, guard D, and cap B, combined and arranged substantially as set forth.

2. The combination of the caps B F, tube A, guard D, and tubes C, all arranged substantially as set forth.

3. The combination of the partitions E, tube A, guard D, tubes C, and caps B F, all arranged essentially as specified and shown.

EZRA HAWKES.

Witnesses:

R. H. EDDY,
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