

(No Model.)

J. A. HODEL.  
CHIMNEY CAP.

No. 470,568.

Patented Mar. 8, 1892.

Fig. 1.

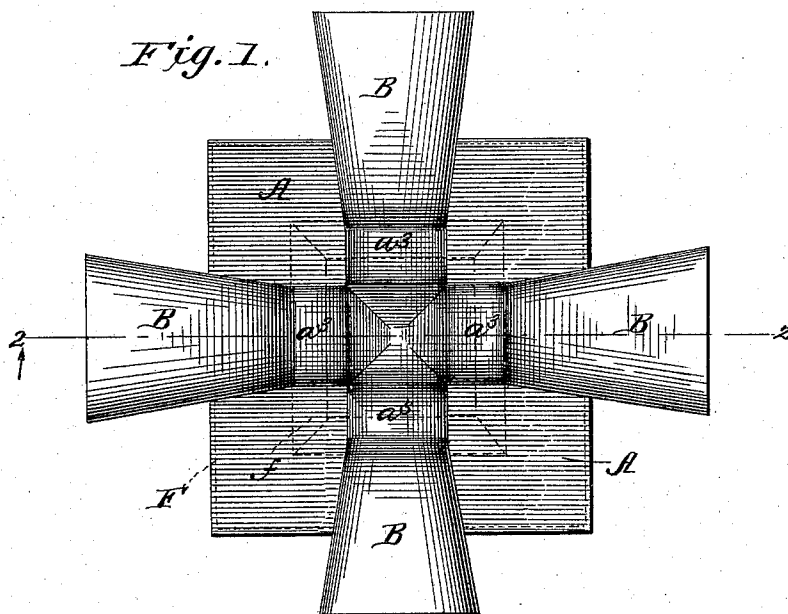


Fig. 2.

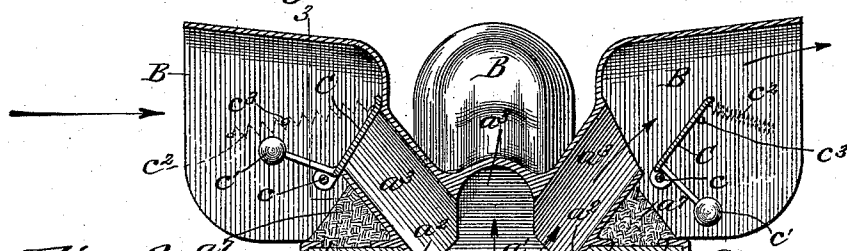


Fig. 3.

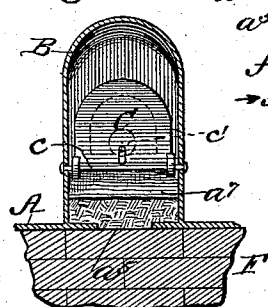
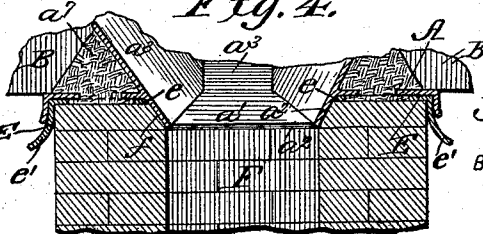


Fig. 4.



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# UNITED STATES PATENT OFFICE.

JOSEPH A. HODEL, OF CUMBERLAND, MARYLAND.

## CHIMNEY-CAP.

SPECIFICATION forming part of Letters Patent No. 470,568, dated March 8, 1892.

Application filed December 3, 1891. Serial No. 413,950. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH A. HODEL, residing at Cumberland, in the county of Allegany and State of Maryland, have invented certain new and useful Improvements in Chimney-Caps, of which the following is a specification.

My invention relates to that class of chimney-caps in which a vibrating valve is employed, which is automatically adjusted by the wind-pressure whereby to prevent a downward draft and to increase the up or suction draft; and it consists in the peculiar combination and novel arrangement of parts, all of which will hereinafter be fully described, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of my improved chimney-cap. Fig. 2 is a vertical cross-section on the line 2 2, Fig. 1. Fig. 3 is a sectional view on line 3 3, Fig. 2; and Fig. 4 is a view of a modification hereinafter referred to.

My improved chimney-cap consists, mainly, of a single casting comprising a base-plate A, formed with downwardly-projecting flanges  $a$ , which lap the outer edges of the chimney-top F, which plate is also formed with the usual central flue-opening  $a'$ . It will be noticed by reference to Fig. 2 that the said opening  $a'$  has its walls formed of inwardly and downwardly tapering flanges  $a^2$ , which seat in the tapering end  $f$  of the chimney-flue, the said flanges or walls of the opening  $a'$  being extended up from the four sides of the flue-opening, forming, as it were, direct upwardly-extended flue-sections  $a^3$ . By thus constructing the base-plate the same can be easily fitted to the top of the chimney, it being only necessary to cut the upper layer of bricks with inner beveled ends, and to provide simple and effective means for holding such plate on the chimney-top it is formed with a series of openings  $a^5$ , through which a cement filling  $a^7$  passes and ties it to the masonry on which the plate A rests, and to further provide means whereby such cement filling is prevented from being washed away such filling at the corners where the four flue-sections overlap the flue-opening is filled in solid from the base up to the upper meeting edges of the flue-sections, as clearly shown in

Fig. 1. By this arrangement it will be observed that the rain-water is always deflected over the sides of the chimney-top and prevents the cement from being washed out between the bricks.

To further protect the layers of brick of the chimney, a plate E is interposed between the base-plate A and the chimney-top, as shown in Fig. 4, such plate consisting of a skeleton-like frame formed with a central flue-opening  $e$  and downwardly and outwardly extending flanges  $e'$ .

When in the position as shown in Fig. 4, the plate E is tied to the chimney by the cement filling, and as the flanges  $e^2$  project under and beyond the flanges  $a$  of the plate A it will be readily seen that the water as it flows over the sides of the chimney will be deflected from the chimney-walls.

It will be observed by reference to Fig. 1 that the flue-sections  $a^3$  are extended from all four sides of the flue  $a'$ , and each of such sections has an enlargement or hood portion B, which extends over the discharge end of the flue-sections down to the base-plate A, as shown.

In each of the hood portions B is a valve C, journaled on a transverse bar  $c$ , which valve is normally held open by means of a gravity-weight  $c'$  or a spring  $c^2$ , (shown in dotted lines,) the outward movement of the valve being limited by a stop-lug  $c^3$ .

In operation, assuming the wind to be in the direction indicated by the arrow in Fig. 2, it will serve to close the valve, as shown, which thereby prevents a downdraft. It will also be noticed that by arranging the other flue-sections as shown an updraft will be created not only for the opposite flue-section, but also for the side sections.

From the foregoing description, taken in connection with the drawings, the advantages of my improvement will be readily understood. The same is very simple and inexpensive in its construction and very effective for the purpose desired.

Having thus described my invention, what I claim as new is—

1. A chimney-cap comprising a base-plate having an upwardly and outwardly flared flue-opening, oppositely-projected hood por-

tions formed with inwardly and downwardly extended flue members communicating with the central flue-opening, valves mounted in the hood portions, adapted to be closed over  
 5 the flue members by the wind-pressure, and means for normally holding the said valves open, substantially as and for the purpose described.

2. A chimney-cap formed of a main plate  
 10 having a central opening, the side walls of which are extended upwardly and flared outwardly to form contracted flue members extended in opposite directions and at right angles to each other, hood portions formed over  
 15 such flue members, into which they discharge, said hood portions and base-plate and flue-sections formed integral, and the wind-valves hung in the hood portions, normally held open and adapted to be closed over the discharge  
 20 ends of the flues, substantially as and for the purpose described.

3. In a chimney-cap, the combination of the main plate A, formed with flared flanges  $a$ , adapted to lap over the edges of the chimney,  
 25 a central opening  $a'$ , having inwardly-flared flanges  $a^2$ , said flanges extended upward and formed into flue-sections  $a^3$ , the hood portions B, forming enlarged extensions of the flues  $a^3$ , and the valves C, operating in the hoods B,  
 30 all arranged substantially as shown, and for the purpose described.

4. In a chimney-cap, the combination, with the chimney-flue, of the base-plate A, formed with a series of perforations  $a^5$  and a downwardly-projecting flange on its edges and  
 35 with inwardly and downwardly projecting

flanges  $a^2$ , forming the central flue-openings, said openings extended upward and outward, as at  $a^3$ , and projected over the base-plate, the hood portions B, and the cement or analogous  
 40 material for securing the base to the chimney-top, all arranged as shown and described.

5. The combination, with the chimney-top having its flue flared outwardly at its discharge end, of the cap base-plate A, formed  
 45 with a flared opening  $a'$ , its flanges adapted to seat in the flared mouth of the chimney-flue, outwardly-flared flue-sections  $a^3$ , extended up from the opening  $a'$  laterally outward and formed into enlargements or hood portions  
 50 B, and the wind-valves C, journaled in such hoods B, adapted to operate to close the flues  $a^3$  by wind-pressure, substantially as and for the purpose described.

6. The combination, with the chimney and  
 55 a skeleton plate E, held on the upper edge thereof, having a central flue-opening and formed with downwardly and outwardly projecting flanges  $e$ , overlapping the edges of the chimney, of the base-plate A, formed with  
 60 openings  $a^5$  and outwardly and downwardly projecting flanges  $a^3$  and a central flue-opening  $a'$ , said plate supported on the skeleton plate E, the flues  $a^3$ , the hood portions formed on the base A, and the cement or analogous  
 65 fastening for securing the plates E and A to the chimney-top, substantially as and for the purpose described.

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Witnesses:

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