

No. 631,652.

Patented Aug. 22, 1899.

P. A. C. MOORE.
CHIMNEY COWL.

(Application filed Sept. 16, 1897.)

(No Model.)

Fig. 3.

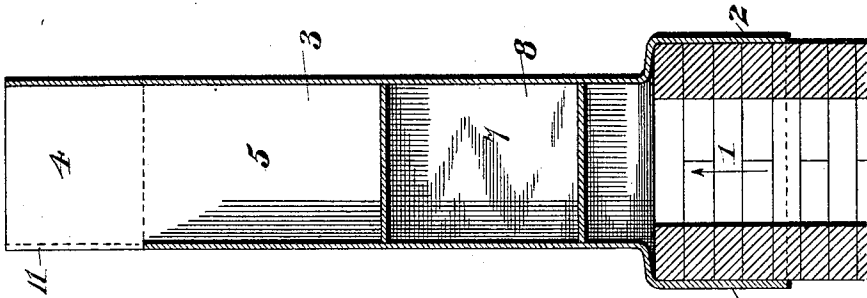


Fig. 2.

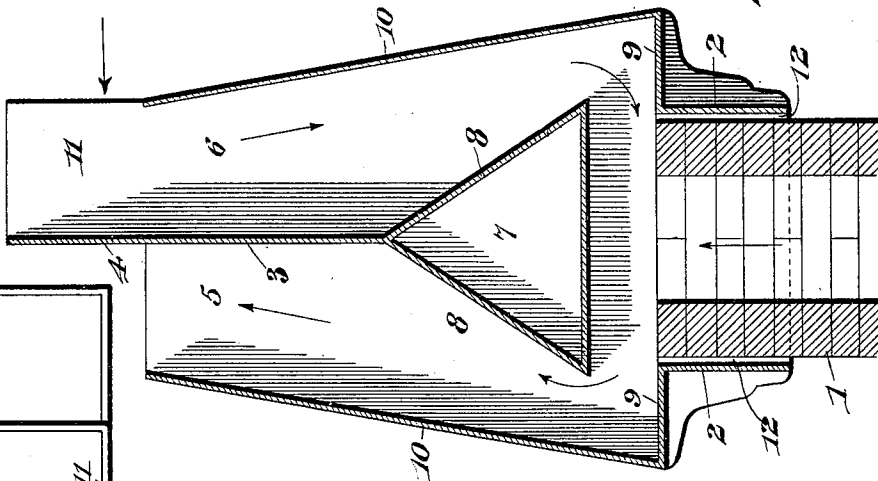


Fig. 4.

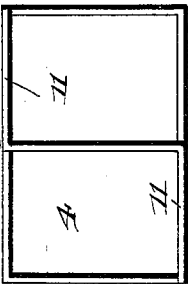
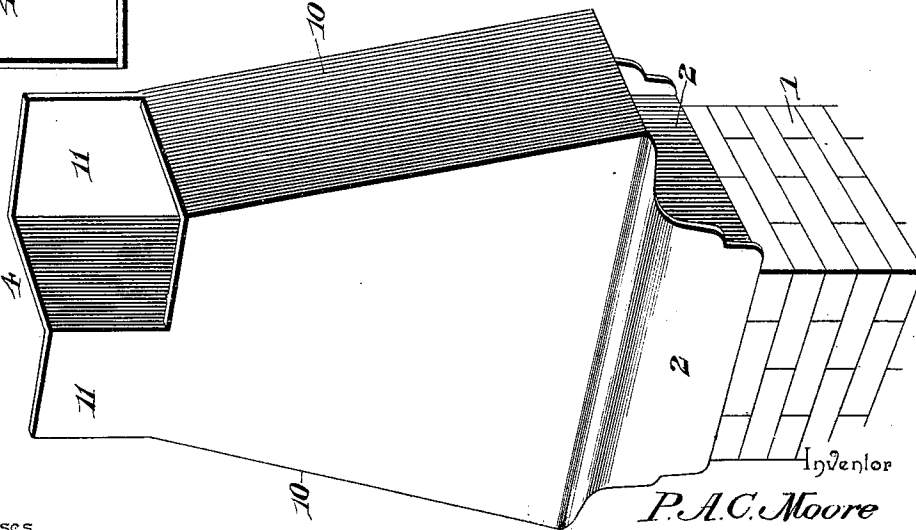


Fig. 1.



Witnesses

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UNITED STATES PATENT OFFICE.

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CHIMNEY-COWL.

SPECIFICATION forming part of Letters Patent No. 631,652, dated August 22, 1899.

Application filed September 16, 1897. Serial No. 651,836. (No model.)

To all whom it may concern:

Be it known that I, PRESSLEY ANDERSON CARTER MOORE, a citizen of the United States, residing at Woburn, in the county of Bond and State of Illinois, have invented a new and useful Chimney-Cowl, of which the following is a specification.

My invention relates to chimney-cowls, and has for its object to provide a simple and efficient construction of device adapted to be applied to a chimney-flue for preventing downdraft and inducing an increased updraft, all of the parts of the device being fixed to avoid adjustment to suit the direction of application of wind thereto.

Further objects and advantages of this invention will appear in the following description and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a chimney-cowl constructed in accordance with my invention. Fig. 2 is a vertical central section of the same. Fig. 3 is a vertical section at right angles to the plane of Fig. 2. Fig. 4 is a plan view of the upper end of the chimney-cowl.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The cowl embodying my invention is shown applied in the operative position to a flue 1, said cowl being provided with a depending collar 2 to embrace the upper end of the flue. The upper end of the chimney-cowl is of oblong construction in plan, and arranged centrally and transversely therein is a vertical partition 3, which extends above the upper end of the cowl to form one member or leaf 4 of a wind-break, said partition serving to divide the interior of the cowl to form passages 5 and 6, corresponding approximately in plane with the interior of the flue 1. The partition 3 terminates at its lower end in a deflector 7, having downwardly-divergent inclined surfaces 8, which in turn terminate above the plane of the bottom 9 of the cowl. The side walls of the cowl are preferably parallel, while the end walls 10 converge toward the open top or approach the plane of the partition 3, and said side walls are respectively extended in opposite directions from

the transverse plane of the deflector member 4 to form side leaves 11. Said leaves are connected with opposite ends of the member 4 and extend to the upper edges of the end walls of the cowl to form a double L-shaped construction, of which the members or leaves are disposed in relatively perpendicular planes. Thus each two connected leaves or members of the wind-break, including the intermediate or central member 4 and one of the angularly-disposed side members 11, combine to form a reëntrant angle, of which the parts face in two directions arranged at right angles to each other, said reëntrant angle formed by the central or intermediate member and one of said side leaves serving to deflect wind striking either or both of them into the contiguous passage of the cowl and cause a downdraft therein. The other leaf 11, on the other hand, protects the opposite passage of the cowl from the direct application of wind, and hence allows an updraft to be induced in said other passage by the downward pressure of the descending draft in the first-named passage.

The base of the deflector 7 is of greater area than the interior of the flue to prevent a downdraft of air from being applied in alignment with said flue and also to prevent water entering said passages from finding its way into the interior of the flue. To carry off moisture thus entering the cowl, I provide drains 12 in the bottom of the cowl approximately under the lower edges of the downwardly-divergent surfaces 8.

It is obvious from the above description that a circulation of air down one of the passages of the cowl and up the other passage, as above indicated, will induce an upward current of air in the flue 1, and thus increase rather than diminish the draft of the chimney. Furthermore, it will be seen that all of the parts of the cowl embodying my invention are fixed or non-adjustable, the described positions thereof adapting the structure to perform the described function irrespective of the direction of application of wind thereto.

In practice the wind-break or dividing obstruction by which the opening at the top of the cowl is divided extends approximately twelve inches above the upper edge of said cowl; but it is obvious that the proportion of

this part may be varied and that numerous other changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

The essential feature of my invention resides in a wind-break having oppositely-facing deflecting-surfaces, each of which in the construction illustrated consists of the interior angle formed between the intermediate leaf 4 and one of the terminal leaves 11. It is obvious that said intermediate leaf, with either of the side leaves, forms a horizontal angle, of which one arm is in the plane of the partition between the passages and the other is in the plane of one of the side walls of a passage. Also it will be seen that the two deflecting-surfaces (formed, respectively, between the intermediate leaf and one side leaf and between the intermediate leaf and the other side leaf) face in opposite directions—that is, the deflecting-surface at one side of the wind-break faces diagonally across one passage of the cowl and the deflecting-surface at the other side of the wind-break faces diagonally across the other passage upon a line parallel with the line indicating the direction in which the first-named surface faces.

In the construction illustrated, the drains 12, by which moisture is adapted to be conveyed from the interior of the cowl to a point outside of the flue, are formed by spacing the end walls of the collar 2 from the corresponding walls of the masonry flue, thereby producing channels which extend entirely across the width of said masonry flue approximately under the lower ends of the deflecting-surfaces 8. Obviously moisture cannot reach the bottom of the cowl at any other points than those provided with said drains, for the reason that the width of the cowl in the plane of the partition 3 is but slightly greater than the width of the bore of the masonry flue, as will be seen by reference to Fig. 3.

A further advantage of the above-described chimney-cowl resides in the fact that it may be used in connection with vehicles for creating upward draft or suction to ventilate the interiors of the vehicles and that the same is particularly adapted for use in connection with cars, boats, and analogous vehicles.

Having described my invention, what I claim is—

1. An open-topped chimney-cowl having passages open at their lower ends for connection with a chimney-flue, and an upstanding wind-break, extending above the upper edge of the cowl, and having oppositely-facing deflecting-surfaces, each of which is adapted to produce a down draft in one of said passages, substantially as specified.

2. An open-topped chimney-cowl having passages open at their lower ends for con-

nection with a chimney-flue, and an upstanding wind-break, extending above the upper edge of the cowl, to deflect air into one passage of the flue, and protect the other passage, substantially as specified.

3. An open-topped chimney-cowl having passages open at their lower ends for connection with a chimney-flue, and an upstanding double L-shaped wind-break, consisting of intermediate and side leaves disposed in relatively perpendicular planes, and of which the intermediate leaf is arranged in the plane of the partition between said passages, substantially as specified.

4. An open-topped chimney-cowl having a central transversely-disposed partition, forming separate passages open at their lower ends for connection with a chimney-flue, said partition being extended above the top of the cowl to form an intermediate wind-break member or leaf, in combination with side members or leaves, connected with opposite ends of said intermediate member or leaf, and extending respectively in opposite directions from the plane thereof, in the planes of the side walls of said passages, substantially as specified.

5. An open-topped chimney-cowl having independent passages, open at their lower ends for connection with a chimney-flue, and separated by a central transverse vertical partition, terminating at its lower end in a deflector provided with downwardly-divergent surfaces, the area of the base of said deflector being in excess of that of the chimney-flue to which the cowl is applied, and terminating at its upper end in a wind-break comprising intermediate and side leaves disposed in relatively perpendicular planes, substantially as specified.

6. An open-topped chimney-cowl having an enlarged base and a contracted upper end, and divided in plan to form separate passages by a central transverse partition, which terminates at its lower end in a deflector having downwardly-divergent deflecting-surfaces, said passages being open at their lower ends for connection with a chimney-flue, drains located in the bottom of the cowl at points approximately under the lower extremities of said deflecting-surfaces, and a wind-break arranged at the upper end of said partition, and comprising intermediate and side leaves, disposed in relatively perpendicular planes, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PRESSLEY ANDERSON CARTER MOORE.

Witnesses:

ALBERT S. COOK,
JNO. S. GORDON.