(No Model.)

P. W. GARDNER.

CHIMNEY COWL.

No. 458,894. Patented Sept. 1, 1891.

Fig. 1.

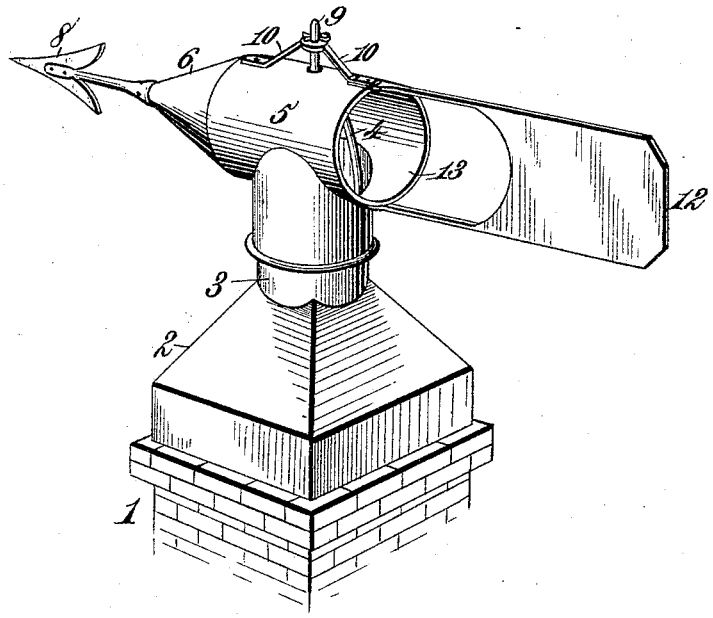
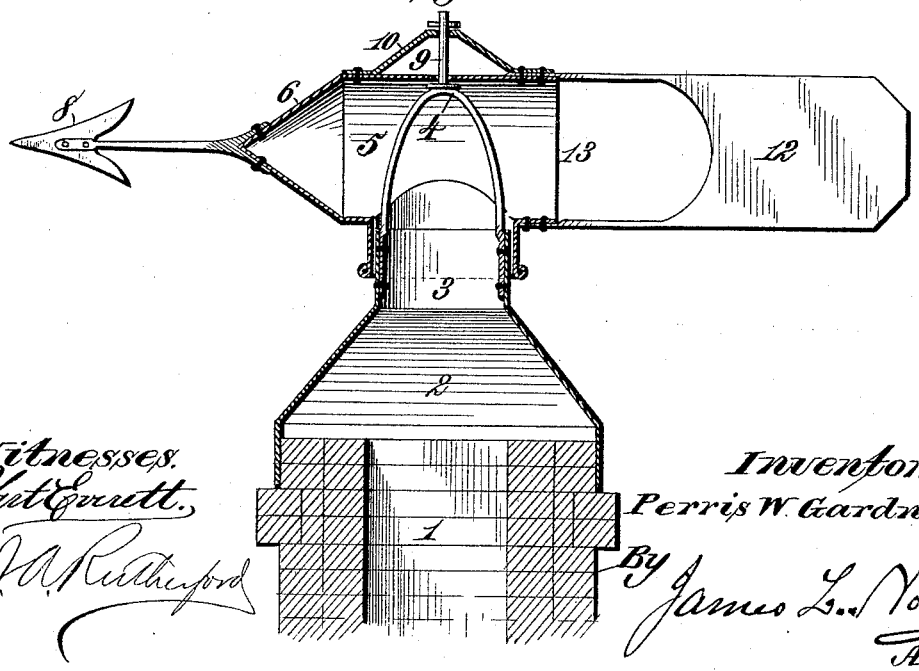


Fig. 2.



Witnesses.
Robt Garrett.
J. A. Rutherford

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UNITED STATES PATENT OFFICE.

PERRIS W. GARDNER, OF FROST, TEXAS.

CHIMNEY-COWL.

SPECIFICATION forming part of Letters Patent No. 458,894, dated September 1, 1891.

Application filed September 26, 1890. Serial No. 366,237. (No model.)

To all whom it may concern:

Be it known that I, PERRIS W. GARDNER, a citizen of the United States, residing at Frost, in the county of Navarro and State of Texas, have invented new and useful Improvements in Chimney-Cowls, of which the following is a specification.

My invention has relation to chimney-ventilators, the purpose thereof being to provide a self-operating smoke-conductor, especially adapted for use in all windy climates, to be placed over the discharge-openings of the flues, by which the smoke is carried off, whether the same be of brick, stone, or iron. It is my purpose also to provide a smoke-conductor which shall be automatically reversed or turned by the wind in any and all directions.

The invention consists in the several novel features of construction and new combination of parts hereinafter fully set forth, and then definitely pointed out in the claim following this specification.

To enable others skilled in the art to make and use my said invention, I will proceed to describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view showing my invention. Fig. 2 is a central vertical and longitudinal section of the cowl mounted on a chimney of any ordinary construction.

In the said drawings the reference-numeral 1 denotes the chimney having any ordinary or preferred construction and within which one or more flues may have exit.

The reference-numeral 2 denotes the lower section of the flue, which is seated upon said chimney and covers the ends of all the square or oblong flues which discharge therein. Upon the lower section is formed or mounted a central vertical collar 3, having a yoke-shaped standard-bearing 4, upon which is supported the ventilator 5. This portion of the apparatus is of substantially-cylindrical form having a closed end 6, preferably of conical form, and being provided with what may be termed a "pointer" 8. Upon the apex of the standard-bearing 4 is mounted a pivotal standard 9, from which braces 10 are extended in both directions in the line of the longitudinal axis of the ventilator and riveted to the latter at any suitable distance from said standard 9. These braces form part of the ventilator, to which they are riveted, and while forming practically two braces they may be formed, as shown, in a single piece having a central opening, through which the pivotal standard 9 passes, a cross-pin being inserted above to prevent the ventilator from being blown off.

Upon the end of the ventilator opposite to the pointer 8 is formed or mounted a wind-vane 12, between which and the standard 9 is the open or exit end 13, through which the smoke, heated air, and products of combustion escape in a direction contrary to the pointing of the vane, thereby affording a valuable protection against fire, inasmuch as the sparks and other live products of combustion which may issue from the chimney and which may contain incendiary or inflammable material are driven or drawn out through the opening, preserving the tops of the flues covered by the cowl.

Depending from the ventilator 5 is a collar 3^a, engaging the collar 3 on the lower section 2, in order to give a steady pivotal movement to the ventilator. This collar is substantially concentric with the pivotal standard 9, and both are arranged between the conical closed end and the open or exit end of the ventilator to balance the weight and enable the latter to turn freely.

The wind-vane 12 is arranged substantially in line with the ventilator and is provided with a smoke-opening 13^a, adjacent to the open or exit end of the ventilator, or, in other words, between the latter and the solid portion of the vane, to permit the free passage of the smoke and other products of combustion as they leave the open end 13 in the line of the vane or at an angle thereto. By this construction I am enabled to extend the vane to some distance beyond the open end of the ventilator, and thereby obtain an increased leverage for the vane without materially increasing its weight. Moreover, in sudden shifts of the wind the smoke can pass freely through the opening 13^a, instead of being pressed against the body of the vane and being driven over or under the latter. I prefer to form a depending flange upon the lower end of the lower section 2 of a size to surround the exterior of the chimney-top. When

a round flue only is used, the standard-bearing is riveted to the end of the pipe, the lower section 2 being dispensed with.

It will be readily seen that a breeze from any quarter will direct the conical end of the ventilator toward the direction from which the wind proceeds, and when this takes place the passage of the air around the pivoted ventilator brings the same into a position in which its longitudinal axis is in the line of direction of the wind, thereby drawing the smoke out of the chimney, increasing the draft, and decreasing the danger of fire.

What I claim is—

In a chimney-cowl, the combination, with a lower section having a collar, of a cylindrical ventilator pivotally mounted thereon and having a closed end on one side and an open or exit end on the other side of the point of support and provided also with a wind-vane arranged in line with the ventilator and having a smoke-opening adjacent to said open or exit end, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

PERRIS W. GARDNER.

Witnesses:
W. A. WALLACE,
J. F. BOLDING.