No. 648,801. Patented May 1, 1900.

M. C. SCHUBERT.

CHIMNEY COWL.

(Application filed June 22, 1899.)

(No Model.)

Fig 1.

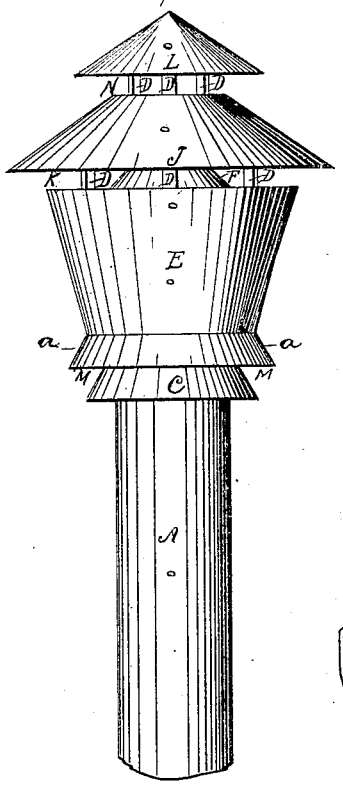


Fig 2.

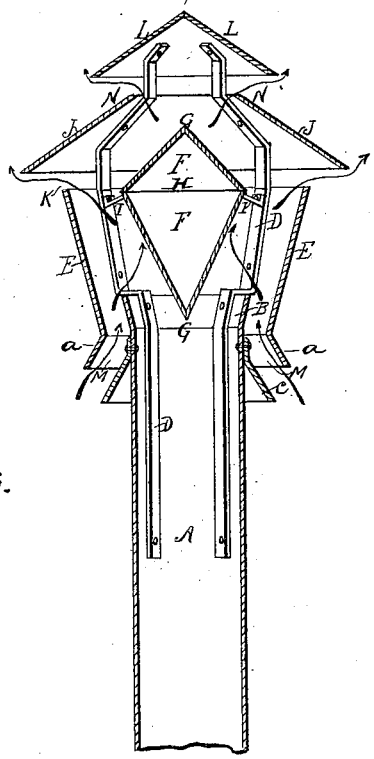
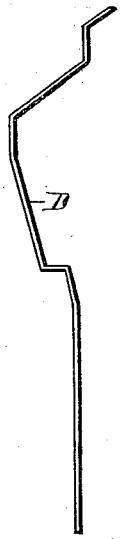


Fig 3.



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UNITED STATES PATENT OFFICE.

MAX CLEMENS SCHUBERT, OF YOUNGSTOWN, OHIO.

CHIMNEY-COWL.

SPECIFICATION forming part of Letters Patent No. 648,801, dated May 1, 1900.

Application filed June 22, 1899. Serial No. 721,456. (No model.)

To all whom it may concern:

Be it known that I, MAX CLEMENS SCHUBERT, a citizen of Germany, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Chimney-Cowls; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to chimney-cowls and caps or partial closures for the upper ends of chimney-flues, stacks, or ventilating-pipes. It comprises a systematic arrangement of deflectors and hoods designed and adapted to exclude all objectionable downdrafts or counter-currents, at same time permitting and encouraging the unrestricted egress of smoke, waste products of combustion, and gases from within.

The invention also performs the functions of a spark-arrester and serves at all times to preserve the chimney, stack, or pipe from damaging effects of the elements by closing the outlet end thereof against the admission of rain and snow.

The invention will be hereinafter described, and particularly pointed out in the claims following.

In the accompanying drawings, which form part of this specification, and whereon corresponding letters of reference indicate the same parts in the several views, Figure 1 represents a side elevation of the invention applied to the upper outlet end of a stack. Fig. 2 is a central vertical section of same, and Fig. 3 is a side view of one of the continuous angle-irons employed as a frame upon which the structure is built.

Reference being had to the drawings and letters thereon, A indicates a section of a smoke-stack slightly flaring at its upper extremity, as shown at B. Immediately below extremity B is riveted a downwardly-extending bell-shaped annulus C, which serves to arrest any upward currents of air upon the exterior of stack A. Within said stack, preferably riveted at equidistant points, is a plurality of continuous angle-irons D D D, of appropriate shape, projecting above and constituting the framework of the structure. Secured to the frame-irons D at points above stack A is an upwardly-diverging annular jacket F which practically forms a continuation of the stack, though of increased diameter, and is finished at its lower edge by a slight overhang *a*, also diverging, but downwardly extending.

Within the confines of frame D, at a point approximating the upper edge of jacket E, are secured radial straps I I I, affording the support for a hollow deflecting-drum F, thus occupying a position in the center of the structure and of double conical shape, having oppositely-disposed apexes G G and a common base H for purposes that will later appear.

Surrounding the upper end of drum F and also overhanging jacket E is a centrally-perforated converging hood J, serving principally as a deflector for outside currents and drafts. The said hood is also secured to frame D by rivets or otherwise and is surmounted by a conical cap L, serving as a closure for the upper end of the structure.

This being a description of the invention, its operation and effect are as follows: Smoke and waste products of combustion or gases rising naturally through stack A first come in contact with the lowermost end of drum F, projecting slightly into the flaring extremity B of the stack, and are thereby deflected, finding vent between jacket E and hood J through the aperture K, or if under influence of an upward exterior draft said aperture is passed they must necessarily escape through aperture N above. On the other hand, it will be observed that no direct gush or rush of air can enter at the aperture M, any upward current or suction being checked by the base of the collar C, a downward current being thrown off by the lower outward flare of the jacket E, while a horizontal or upwardly-inclined current is modified by contact with the outer side of the flaring collar C and the upwardly-flaring end of pipe A, sending a gentle current into the jacket E, which by contact with the lower portion of the drum F is deflected upward, sufficiently stimulating the draft to carry the smoke and gas upward to the aperture K, where it escapes to the atmosphere. The wind coming in at the aperture K strikes the upper portion of drum F, by which the

current is broken and deflected upwardly, and it will be observed that the draft will be disturbed only in the quarter from which the wind is blowing, leaving at least three-fourths of the annular space between the jacket E and the drum F for the free and uninterrupted escape of smoke. The aperture N between the section J and cap L allows the heat to escape to the atmosphere, while the cap L prevents the wind or rain from entering at the top.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a chimney-cowl the combination with a stack, of a frame secured thereto, an annular upwardly-diverging jacket surrounding and secured to said frame, an upwardly-converging hood also secured to the frame surmounting said jacket, and a deflecting-drum suspended centrally upon the frame aforesaid, substantially as and for the purposes set forth.

2. In a chimney-cowl the combination with a stack, of a frame secured thereto, an annular upwardly-diverging jacket surrounding and secured to said frame, an upwardly-converging hood also secured to the frame surmounting the jacket, a conical cap likewise secured in place above said jacket, and a conical deflecting-drum suspended centrally within the frame aforesaid, substantially as and for the purposes set forth.

3. In a chimney-cowl the combination with a stack, of continuous frame-irons secured thereto, a bell-shaped annulus affixed to the exterior of the stack, an annular upwardly-diverging jacket surrounding and secured to said frame, an upwardly-converging hood also secured to the frame surmounting the jacket, and a double conical deflecting-drum suspended centrally within the frame and projecting into the stack aforesaid, substantially as and for the purposes set forth.

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

MAX CLEMENS SCHUBERT.

Witnesses:

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W. C. CARMAN.