

(No Model.)

C. KUHNHOLD & W. STEUP.
CHIMNEY TOP.

No. 587,978.

Patented Aug. 10, 1897.

Fig. 1.

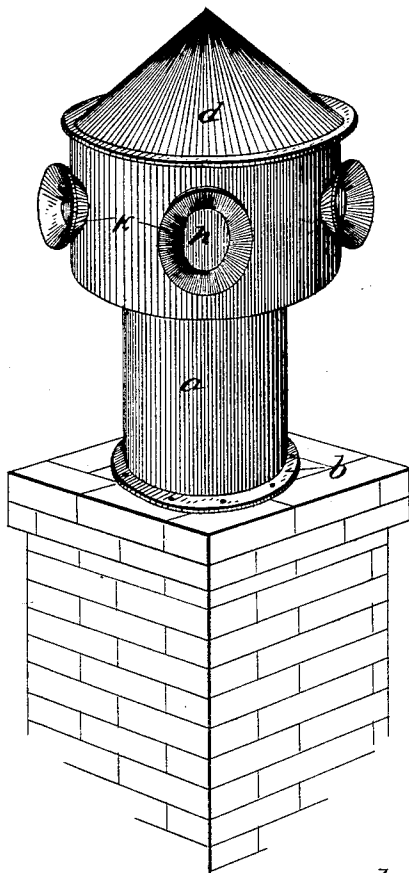


Fig. 2.

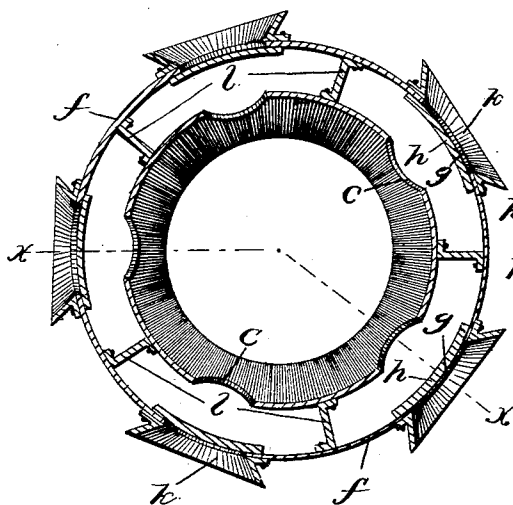
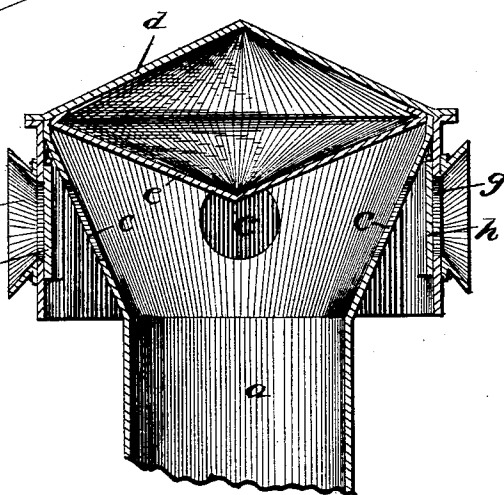


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

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CHIMNEY-TOP.

SPECIFICATION forming part of Letters Patent No. 587,978, dated August 10, 1897.

Application filed April 6, 1897. Serial No. 630,977. (No model.)

To all whom it may concern:

Be it known that we, CARLS KUHNHOLD and WILLIAM STEUP, citizens of the United States of America, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Chimney-Tops, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in chimney-cowls, and has for its object to provide a perfect draft in a chimney without necessitating the building of the chimney to a height equaling the height of the surrounding buildings and as is now necessary by reason of the downdraft that is caused by an adjacent building being higher than the chimney; and to this end the invention consists in the novel construction, combination, and arrangement of parts to be hereinafter more specifically described, and particularly pointed out in the claims.

The invention, briefly described, aims to accomplish the above result by means of flap-valves arranged in the cowl and adapted to close the outlet-ports at the side of the cowl from which the wind may be blowing, thus permitting the free and uninterrupted draft of the opposite side of the cowl and by reason of the obstacle presented to the wind forcing the same downwardly after it has entered the surrounding band of the cowl, and thereby increasing the circulation and draft of same.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like letters of reference indicate similar parts throughout the several views, in which—

Figure 1 is a perspective view of our improved cowl in position on the chimney. Fig. 2 is a horizontal sectional view. Fig. 3 is a vertical sectional view of a portion of the cowl, taken on the line XX, shown in Fig. 2.

Referring now to the drawings by reference-letters, *a* indicates the flue, which is provided with a base-flange *b*, adapted to be anchored to or within the brickwork of the chimney. The upper end of this flue-pipe is flared outwardly in cone form and is provided with a series of openings *c*, and on its upper end is secured a cone-shaped cap *d*,

while abutting against this cap and the upper end of the flue and within the same is a deflecting-frustum *e*. Secured to the underneath face of the rim of the conical cap *d* and to the upper end of the flaring portion of the flue-pipe *e* is a band *f*, which extends downward to the point of flare in the flue-pipe, said band being provided with a series of openings *g* and having hinged to its inner face flap-valves *h* to cover said openings, a bell-shaped or flared guide *k* being arranged on the band around the said openings *g*, and partitions *l* being secured to the flue and band to prevent the circulation of air around the flue.

The operation is as follows: The cowl being secured on top of the chimney, the smoke enters the flue *a* and when it comes in contact with the frustum *e* is deflected so as to force it to escape through the apertures *c* in the flared portion of the flue, and the flap-valves *h* being closed the smoke is forced downwardly and escapes at the base of the rim *f*.

It will be observed that as the wind is blowing against one side of the cowl the flap valve or valves which are engaged by the wind will be forced inwardly, and if the current of the wind is sufficiently strong the apertures *c* on this side of the cowl will be entirely closed and the wind prevented from entering within the flue, while the draft on the opposite side of the cowl remains the same and permits the escape of the smoke. Furthermore, if the flap-valve is only partly open the wind will be deflected downward by the same and increased draft will be created for the smoke that may be escaping through the apertures *c* on this side of the cowl. By this arrangement it will be observed that a perfect draft will be at all times attained, as no downdraft that may be caused by high adjacent buildings is permitted within the cowl, and the up-draft within the chimney retained at all times.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of our invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a chimney-cowl, a flue-pipe having a flared upper end, provided with openings, a deflecting-frustum within the said flared portion, a conical cap on the upper end of said flue, a band surrounding the flared portion of the flue said band being provided with openings, and flap-valve for covering said openings and preventing the passage of the wind to the openings in the flue-pipes, substantially as shown and described.

2. In a chimney-cowl, the combination of the flue-pipe having a flared upper end provided with openings, a band surrounding said flared portion which is also provided with openings opposite the openings in the flared portion, flap-valves for covering the openings in the band and a deflecting-frustum within

the flared portion, substantially as shown and described.

3. In a chimney-cowl the combination of the flue-pipe provided with openings, a band surrounding the upper portion of said flue-pipe, said band being provided with openings and flap-valves and a deflecting-frustum within the flue, substantially as shown and described.

In testimony whereof we affix our signatures in the presence of two witnesses.

CARLS KUHNHOLD.
WILLIAM STEUP.

Witnesses:

JOHN NOLAND,
GEO. B. PARKER.