C. TURNER.

Chimney-Cowl.

128,514. Patented July 2, 1872.

Fig. 1.

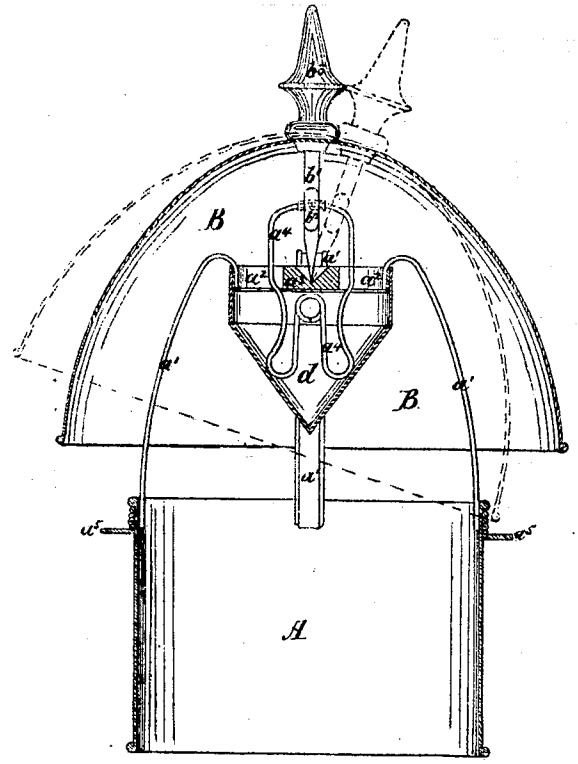



Fig. 2.

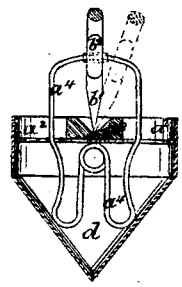
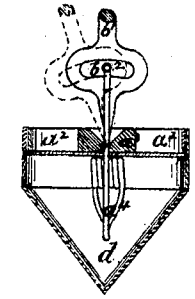



Fig. 3.




WITNESSES

Jas A Mahaffey

INVENTOR

Charles Turner

per his legal attorney

Percival Beckett

# UNITED STATES PATENT OFFICE.

CHARLES TURNER, OF SOUTHAMPTON, ENGLAND.

## IMPROVEMENT IN CHIMNEY-COWLS.

Specification forming part of Letters Patent No. 128,514, dated July 2, 1872.

SPECIFICATION.

*To all whom it may concern:*

Be it known that I, CHARLES TURNER, of Southampton, in the county of Southampton, England, have invented certain new and useful Improvements in Chimney-Cowl and Ventilator; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

My invention consists of an improved cowl capable of being deflected by the wind, for the prevention of down-draughts in chimneys, ventilating, and other shafts.

In the accompanying drawing, Figure 1 is a vertical section of my improved cowl, showing all the devices used. Figs. 2 and 3 are detail sections of the central part of same.

A is a tube having its upper part circular and the lower end either round, square, or any desired shape. From its upper end, and attached to the inner surface, spring four arms, $a^1$, converging at their upper extremities, where they are bent inward and downward, being firmly secured to the inner side of a shallow dish or tray, $a^2$. In the center of this dish or tray $a^2$ is a piece of metal having in it a conical socket, $a^3$. B is the cowl, preferably bell-shaped, constructed of zinc, iron, or other suitable metal, and hung on a central stem or pivot, $b^1$, securely fixed inside the cowl at the top, by any ordinary means, and may, if necessary, be further secured by stays from the inner side of said cowl. A slot or loop, $b^2$, is formed in stem $b^1$, which is curved to the arc of a circle described from the point of said stem or pivot $b'$. To the top of said cowl B is fixed a counter-balance, $b^3$, of any desired shape. A pair of spring-clips, $a^4$, are formed first into a small coil, bent downward, then outwardly and upward, the two ends being bent to a curve corresponding to the line of curvature in slot or loop $b^2$, and meeting therein. The junction between the two ends of this spring-clip $a^4$ may be effected by means of a short tube secured to one of its ends, into which the other limb is received. The two ends of this spring-clip $a^4$ are passed through suitable openings provided in the bottom of said dish or tray $a^2$, when the coil before mentioned is firmly secured to the under side of same, as seen in Figs. 1 and 2 of the accompanying drawing. When in position the said spring-clip $a^4$ prevents the cowl from being carried away by the wind, but it can readily be released by pressing the lower part of said spring-clip $a^4$, thus opening the two ends thereof. An inverted cone, $d$, is placed over the outside of said dish or tray $a^2$. A flange, $a^5$, upon the outer side and a little below the upper end of tube A is also provided, the space above this flange being covered externally with felt or other suitable material to prevent any noise arising from the sudden contact of said cowl B upon tube A.

To place the cowl in position, the inverted cone $d$ is withdrawn, the lower part of the spring-clip $a^4$ compressed, whereby its extremities are opened, when the point of stem $b^1$ is placed in the conical socket $a^3$ provided in dish or tray $a^2$. The cowl then hangs in a vertical position, leaving a clear space between its lower edge and the upper edge of tube A, as seen in Fig. 1 of the accompanying drawing. The curving of loop or slot $b^2$ and upper ends of spring-clip $a^4$, in the manner described, allows the cowl B to oscillate freely in any direction. When placed upon a chimney-top or other ventilating-shaft the wind impinges against the cowl, and, oscillating it to position shown by dotted lines in Fig. 1 of the accompanying drawing, depresses that side, whereby the wind is excluded from the top of chimney, and the opposite side of the cowl being raised, an exit is always provided for the smoke on the lee side. An upward current is also induced in chimney or other ventilating-shaft by the action of the wind passing the sides of said cowl B. It will be readily understood that, owing to the peculiar manner of suspending the cowl B, when it assumes the position shown by dotted lines in Fig. 1 of the accompanying drawing, the preponderance of weight is thrown upupon the raised or lee side; hence the use of counter-balance $b^3$ to assist the depression of cowl to windward.

The inverted cone $d$ not only serves to protect the lower part of spring-clip $a^4$ from soot, but also, when the air is motionless and the cowl hangs in a vertical position, to deflect outwardly the current of air or smoke. The cowl

is kept clear of soot by the almost constant jar occasioned by its coming in contact with tube A.

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

1. The combination of the oscillatory cowl B, counter-balance $b^3$, slotted pivot $b^1$, socket $a^3$, and spring-clips $a^4$, substantially as and for the purpose specified.

2. The combination of the oscillatory cowl B and inverted cone $d$, operating substantially as and for the purpose specified.

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

CHARLES TURNER.

Witnesses:
EDWARD TALK, *J. P.*,
ALFRED RUSSELL.