(No Model.)

L. IWAN & W. REIFERSCHEID.

REVOLVING CHIMNEY TOP.

No. 493,430. Patented Mar. 14, 1893.

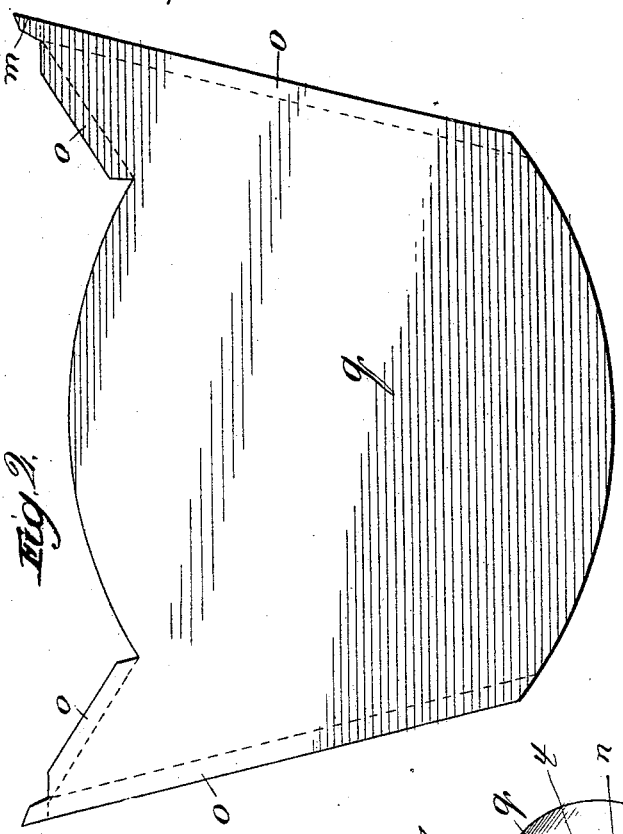

Fig. 2.

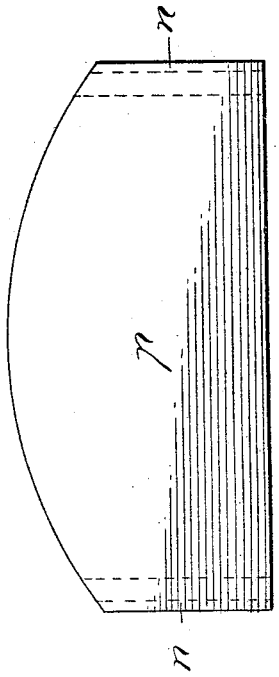

Fig. 3.

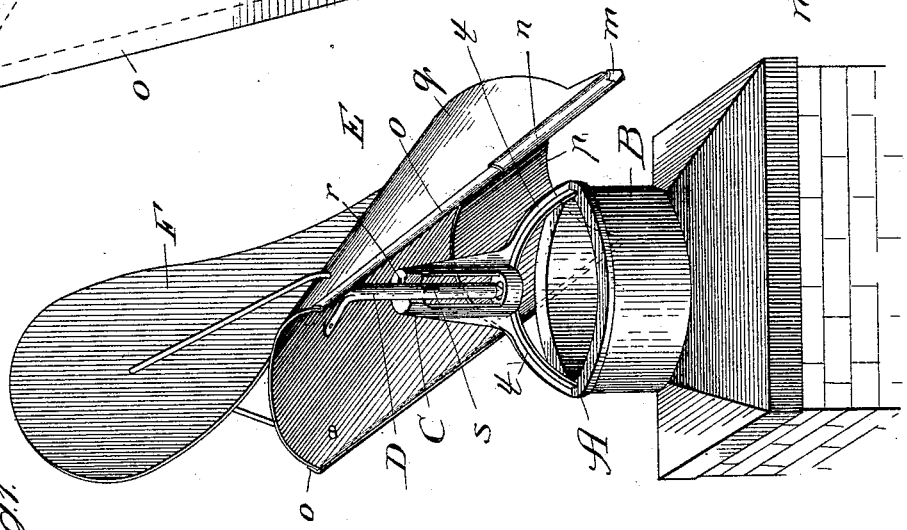

Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

LOUIS IWAN AND WILLIAM REIFERSCHEID, OF STREATOR, ILLINOIS; SAID REIFERSCHEID ASSIGNOR TO HENRY IWAN, OF SAME PLACE.

REVOLVING CHIMNEY-TOP.

SPECIFICATION forming part of Letters Patent No. 493,430, dated March 14, 1893.

Application filed October 25, 1892. Serial No. 449,969. (No model.)

To all whom it may concern:

Be it known that we, LOUIS IWAN and WILLIAM REIFERSCHEID, citizens of the United States, residing at Streator, in the county of La Salle and State of Illinois, have invented a new and useful Improvement in Revolving Chimney-Tops, of which the following is a specification.

Our invention relates to the class of revolving chimney tops employed for the purpose of increasing the draft of chimneys, as well as for protecting the chimney from downward currents of air and from the ingress of rain and snow. As is the case with all revolving chimney tops, our improved device embodies a sloping cowl revolubly mounted upon the chimney and surmounted by a vane, the effect of which is to cause the lower end of the cowl always to confront the wind, thereby causing an upward deflection of the air current.

Our present invention consists wholly in a novel construction of the cowl, hereinafter fully explained, the effect of which is to cause the device to perform the required functions with greater certainty and effectiveness than former devices for the same purpose.

In the drawings Figure 1 is a perspective view of our improved chimney top and Figs. 2 and 3 plan views of the blanks employed for the construction of the cowl.

The device for revolubly mounting the cowl and vane upon the chimney comprises a flanged rim A, fitting the upper end B of the chimney, and provided with two arched arms *t*, which converge to a vertical socket C receiving the spindle D, to the upper end of which the cowl is riveted. The spindle is provided with a pin *s*, and the top of the socket is provided with a groove *r*, for the passage of this pin, so that when the spindle is inserted the pin may lodge under the shoulder on the inside of the top of the socket, thus rendering the parts readily attachable and separable, while not subject to displacement by the wind. The parts thus far described form no part of our present invention, but are the subject of a separate application for a patent, Serial No. 332,910, filed December 7, 1889.

E is our improved cowl, the upper part of which we prefer to make from a sheet metal plate *q*, having in the blank the shape shown in Fig. 2, and bent to the form represented in Fig. 1 of the drawings, or approximately that shape, since while the curved form is preferred it will be obvious, when the invention is fully explained, that the bending may be angular instead. To the edges of the bent plate *q* a plate *p*, which may be conveniently formed from the blank represented in Fig. 3, is secured in any convenient manner, the plate *p* being of such length as to extend from the lowermost part, or thereabout, of the bent plate *q* to within a short distance of the socket piece C when the cowl is in position upon the chimney. Thus the plate *p* projects below the deflecting portion of the plate *q* and it is advantageous to give the plate *p* such a curvature as to form an arc approximately concentric with the rim A. To construct the cowl from the blanks shown the margin *o* of the blank, Fig. 2, is turned up to form a stiffener, and the margin *n* of the blank, Fig. 3, is bent around to sheathe the stiffener. The parts are fitted together by sliding the plate *p* into place from the lower end of the bent plate *q*, and then by bending up the extensions *m* of the margin *o*, the plate *p* is secured against displacement. This mode of attachment is preferable to soldering or riveting. The cowl E is surmounted by the vane F, which is of the usual construction and is secured in place in the usual manner, or in any convenient manner.

The effect of the cowl, constructed and mounted as above described, is to concentrate the air current received and give it an upward deflection over the chimney top by the positive action of the upper surface of the plate *p*. The lower surface of the plate *p* serves as an upward deflector for such air as may pass between it and the chimney top, thereby in a measure performing the office of chimney cowls as they have usually been constructed heretofore; but the quantity of air thus deflected and its effect upon the draft are secondary. The main function is performed by the considerable volume of air which passes directly through the cowl. The plate *p* ef-

fectually prevents any down current of air into the chimney, and since it extends only part way over the outlet of the chimney, and that in an oblique direction, it offers no appreciable obstruction to the escaping smoke. The smoke as soon as it emerges from the chimney encounters the secondary current upon the under side of the plate *p*, and upon reaching a point beyond the upper terminus of the plate *p* it encounters the main current. Obviously the effect of the current crossing the outlet of the chimney is to produce a tendency toward a vacuum about the upper end of the chimney, and thus increase the draft, and the cowl, by completely overlapping the chimney opening, prevents the ingress of rain and snow; so that our chimney top performs all the functions of an ordinary revolving chimney top and performs some of these functions with increased effectiveness.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a revolving chimney-top, the combination of the bent plate *q*, plate *p* extending from a point below the deflecting portion of the plate *q* partway up the same, a vane surmounting the cowl, and means for supporting the cowl revolubly upon a chimney, substantially as described.

2. In a revolving chimney-top, the cowl E, comprising the bent plate *q* having the upturned margin *o* and holding extensions *m*, and curved plate *p*, having its margin *n* bent into sheaths for the upturned margin *o*, in combination with a vane surmounting the cowl and means for supporting the cowl revolubly upon a chimney, substantially as described.

LOUIS IWAN.
WM. REIFERSCHEID.

In presence of—
GEO. W. ROSE,
W. B. LUNDY.