(No Model.)

N. CLIFFORD.

CHIMNEY COWL.

No. 344,565. Patented June 29, 1886.

Fig. 2.

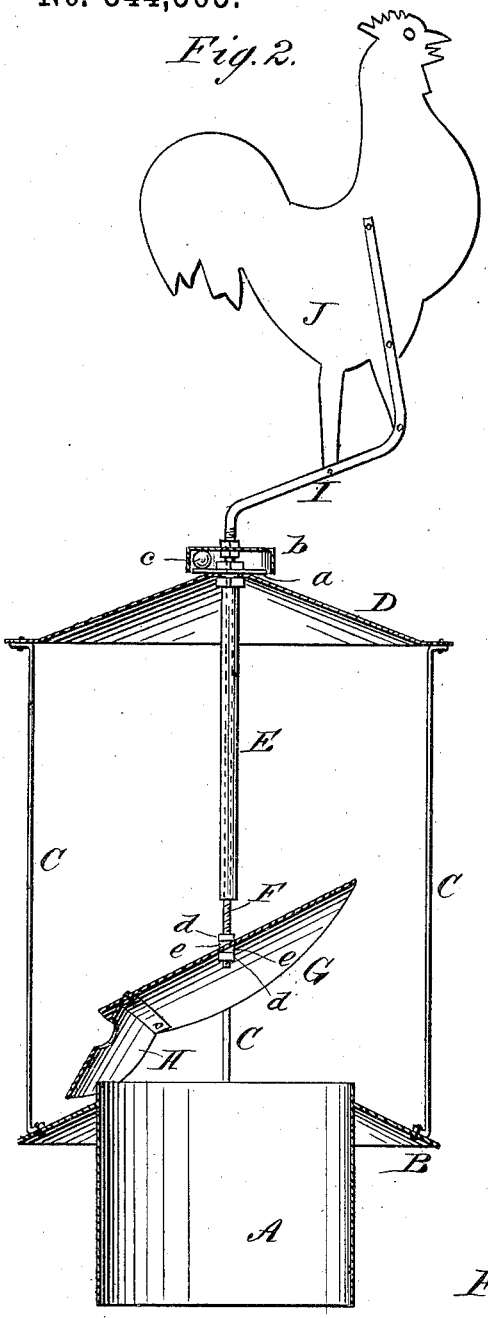


Fig. 1.

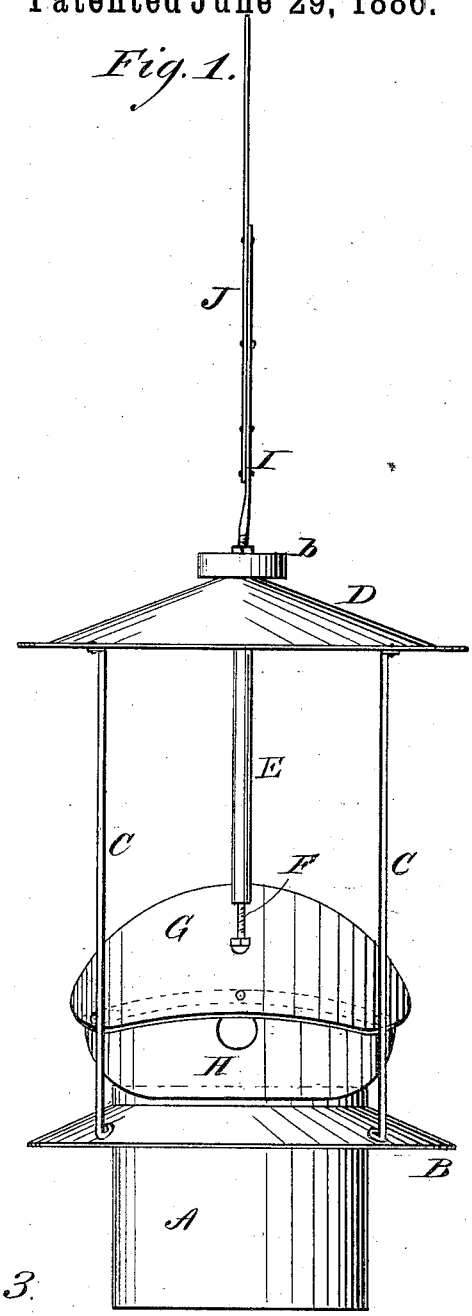
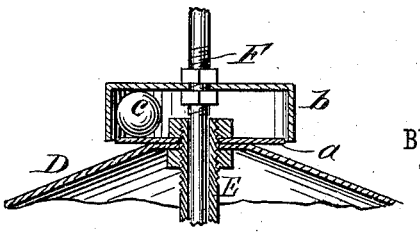


Fig. 3.



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NEAL CLIFFORD, OF ST. JOSEPH, MISSOURI.

CHIMNEY-COWL.

SPECIFICATION forming part of Letters Patent No. 344,565, dated June 29, 1886.

Application filed November 20, 1885. Serial No. 183,413. (No model.)

To all whom it may concern:

Be it known that I, NEAL CLIFFORD, of St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and useful Improvement in Chimney-Cowls, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side elevation. Fig. 2 is a vertical transverse section. Fig. 3 is a detailed view of the step or bearing of the spindle which supports the revolving cowl.

Similar letters of reference indicate corresponding parts in all the different figures of the drawings.

My invention relates to cowls attached to the tops of chimneys for preventing a downward draft to the chimney, and for increasing the upward draft; and it consists in a frame adapted to the chimney-top, and in the combination therewith of a revolving cowl-shield supported by the frame with its bearings entirely above the cowl-shield and exterior to the chimney or smoke-pipe.

To the upper end of the smoke-chimney or exit-pipe A is secured a conical collar, B, to which are attached a number of vertical standards, C, supporting at their upper ends a conical cap, D.

Above the mouth of the chimney A, in the center of the cap D, is secured a tube, E, which projects downward toward the chimney-top A, axially in line with the axis of the chimney.

The tube E consists of a gas-pipe secured to the cap D by nuts turned on the threaded end thereof above and below the cap, as shown in the drawings.

Between the upper nut on the pipe and apex of the cap D is secured a circular plate, *a*.

The pipe E forms the bearing of the spindle F, which extends below the lower end of the pipe E, and is secured to the cowl-shield G. The upper end of the spindle F carries a cylindrical cap, *b*, which shuts down over the plate *a*, and receives between it and the plate one or more balls, *c*, which support the cap *b*, the spindle F, and parts attached thereto.

The cowl-shield G consists of a metal plate, in the present case of elliptical form, which is secured in an inclined position on the spindle F by nuts *d* and beveled pieces *e*.

To the under surface of the cowl-shield G, at or near the lower edge thereof, is secured a curved apertured flange, H, which projects down over the edge of the chimney-top A.

The upper end of the spindle F carries an arm, I, to which is secured a vane, J, which is above the highest part of the cowl-shield G, and upon the same side of the spindle as the highest portion of the cowl-shield G. With this construction the wind blowing across the chimney-top directs the cowl-shield G, so that the open side of the cowl is in the direction of the wind, and the wind blowing over the top of the cowl-shield will produce a partial vacuum under the cowl-shield and in the chimney-top, thereby increasing the upward draft of the chimney.

The cowl-shield is shifted with the wind by means of the vane J, so that the wind is always prevented from blowing down the chimney.

The ball *c*, placed between the cap *b* and the plate *a*, forms a frictionless bearing for the spindle F, which requires no lubrication.

It will be observed that by the construction which I have described I have entirely removed the bearings of the vane and cowl-shield from the chimney, so that they are not subjected to the action of the acids contained by the smoke escaping from the chimney. This arrangement insures the free movement of the vane. It also renders the bearing-surfaces very durable.

The aperture of the flange H allows a jet of air to pass under the cowl-shield to increase the draft of the chimney.

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

1. In a chimney-cowl, the combination of the collar B, secured to the chimney-top, the cap D, the standards C, secured to the collar B and supporting the cap D above the collar, the tube E, supported over the center of the collar by the cap, the spindle F, journaled in the tube E, the inclined cowl-shield G, at-

tached to the lower end of the spindle, and the vane J, secured to the upper end of the spindle, substantially as herein specified.

2. In a chimney-cowl, the combination of the frame formed of the collar B, standards C, and cap D, the tube E, supported by the cap D, the circular plate *a*, secured to the cap D, the spindle F, and cowl C and vane J, carried thereby, the circular cap *b*, secured to the spindle, and one or more balls, *c*, placed between the cap *b* and plate *a*, substantially as herein specified.

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Witnesses:
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