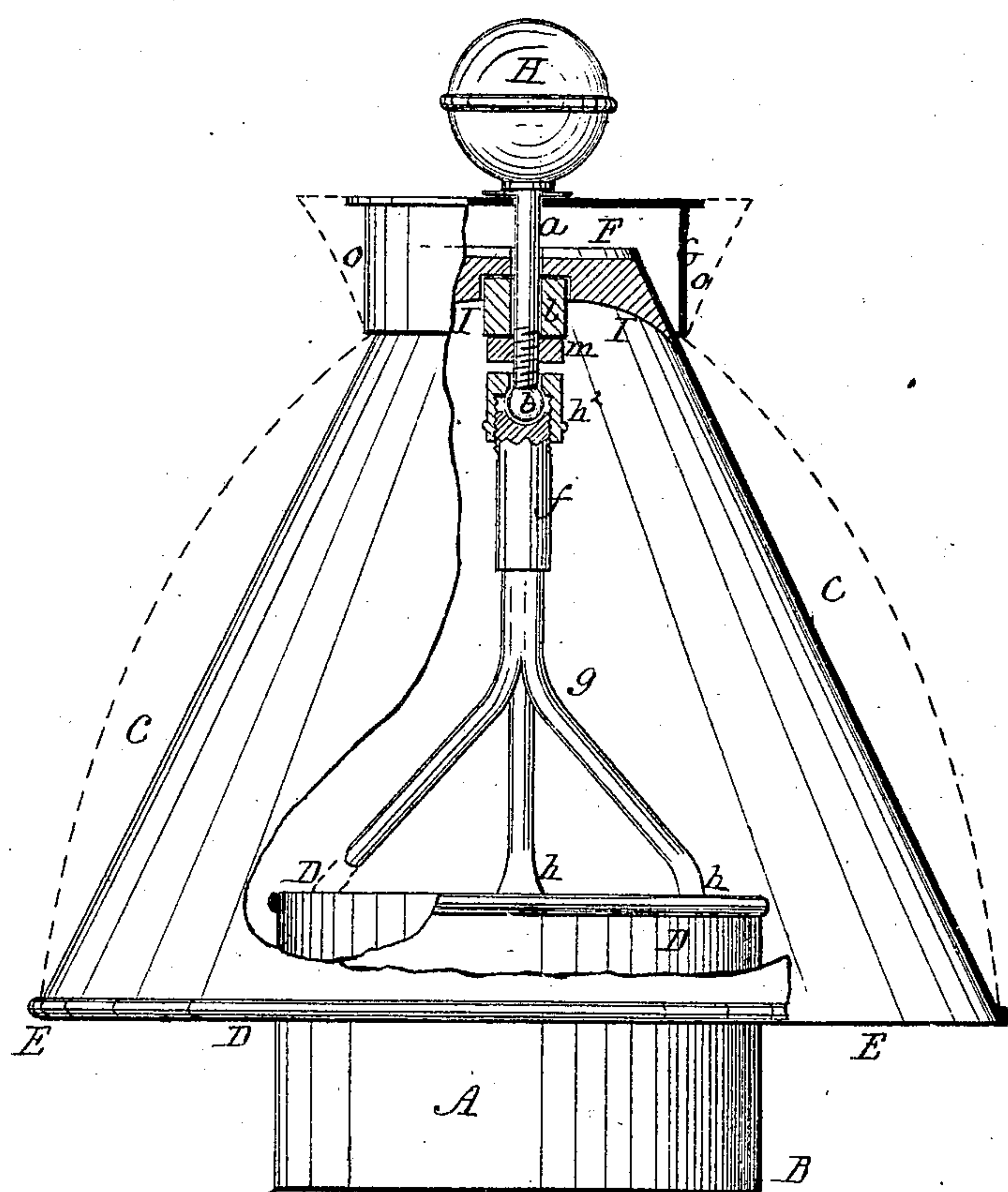


T. BOYD.  
Chimney Caps.

No. 141,107.

Patented July 22, 1873.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

THOMAS BOYD, OF CAMBRIDGEPORT, MASSACHUSETTS.

## IMPROVEMENT IN CHIMNEY-CAPS.

Specification forming part of Letters Patent No. **141,107**, dated July 22, 1873; application filed May 21, 1873.

*To all whom it may concern:*

Be it known that I, THOMAS BOYD, of Cambridgeport, in the State of Massachusetts, have invented Improvements in Ventilators and Chimney-Caps for Buildings, &c., of which the following is a specification:

This invention relates more particularly to improvements in chimney-caps and ventilators for buildings, &c., for which several Letters Patent of the United States have been already issued to me, respectively dated August 20, A. D. 1861; reissued July 27, A. D. 1869; January 1, 1867; December 7, 1867; and September 14, 1869, to which reference is made, although the improvements embraced herein are susceptible of application to chimney-caps and ventilators of other constructions which employ a swinging cap to or cover to the ventilating or chimney flue, as will be obvious from the description hereinafter given thereof. This invention relates to the construction and hanging of the cap, and the main object is to secure substantially a perfect balance of the cap, so that, while it can swing under the slightest movement of the wind, its return in all cases to its normal position will be slow, thus preventing noise and clatter, now so commonly experienced with such caps when subjected to winds of varying force and power. For the object stated the cap is constructed and suspended in a novel manner, to be hereinafter described, and, in addition thereto, the cap interiorly is constructed with a concave top, and in its fastening to its suspension-spindle an elastic or yielding cushion is used, whereby important advantages, to be hereinafter specified, are obtained.

In the accompanying plate the drawings are a partial central vertical section and elevation of a ventilator or chimney-cap, constructed and suspended in accordance with this invention.

In the drawings, A represents a ventilating flue or passage, to be connected at its lower end B with the room or other apartment to be ventilated. This cap A may be connected to the chimney-flue of a building in lieu of a ventilator-flue, as above stated; C, a cap, in the present case made of a conical shape, and vertically located at the upper end D of the flue-extension A. This cap C, at its larger and open base E, is below and about the mouth or

upper end D of the flue A, and at its smaller and closed base F it is suspended by a central vertical spindle or stem, *a*, through a ball and-socket joint, *b*, to the upper straight portion *f* of a vertical tripod frame, *g*, fastened at its feet *h* to the mouth D of flue-extension A. The joint *b* of the suspension-stem *a*, with the tripod *g*, is held to its place by a screw-nut, *h*<sup>2</sup>, and the flue-cap C rests, through an India-rubber or other elastic cushion, *l*, upon a screw-nut, *m*, of the suspension-stem *a*. By properly screwing the nut *m* on the stem *a*, obviously the extent to which the larger open base E of the flue-cap C is below the mouth of flue A can be adjusted at pleasure. The suspension-stem *a* passes through the smaller base or top of the cap A; G, a hollow cylindrical cap, concentrically surmounting the smaller base F of the cap C, to which it is secured by the spherical ball H screwed to the outer end of the suspension-stem *a*. The cap C is made concave at the upper portion of its interior, as shown at I in the drawings.

In suspending the flue-cap C, as herein described, the point of suspension *b* is, as shown, within the cap, and is, as evident it must be, nearer the upper than the lower end, or otherwise, with a proper space between the flue and the cap, the movement or swing of the lower end of the cap would be so limited that it could not move sufficiently toward the flue to secure the action desired; but by such a suspension obviously the preponderance of leverage and of weight, if not otherwise provided for, is at the lower portion of the cap, making a quick return and play of the cap upon the least decrease in the force of the wind, and producing, as a consequence, an exceedingly disagreeable and annoying clatter or noise, and so much so that, in many cases, it has been necessary to firmly fix the cap against this motion. Under this invention this preponderance of the leverage and weight of the lower portion of the cap is overcome partially by the spherical ball H, but more particularly by the enlargement or cylindrical cap G, which at its periphery or edge *o* is weighted. By this enlargement obviously the leverage of the upper end to the cap can be and is greatly increased with but a small addition of weight, thus rendering the cap more



convenient to handle as well as more efficient in action as to a perfect balance of the cap than would be the case were the preponderance overcome by simply weighting the ventilator-cap.

The elastic cushion upon which the ventilator-cap rests obviously relieves the cap as well as its suspension-stem of undue strain or torsion, and the concave formation of the interior of the cap manifestly will greatly assist the escape of the foul air or smoke from the cap, and prevent its accumulation and remaining in the same.

It is intended by me to call a flue-cap, constructed and suspended substantially as herein described, "The Monitor Cap for Ventilators, Chimneys, &c.;" and furthermore, it may be well to here observe that the cap from end to end may be curved, as shown by dotted lines in the drawings, and that the enlargement G may be in diameter at its upper end

greater than at its lower end, as also shown by dotted lines.

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

1. A cap for ventilator and chimney flues, suspended and provided with an upper outside enlargement, G, substantially as and for the purpose described.

2. The elastic cushion *f*, against which the cap *l* is confined on its suspension-stem *a*, substantially as described, for the purpose specified.

3. The concave top I to the inner part of the cap, substantially as described, for the purpose set forth.

THOMAS BOYD.

Witnesses:

ALBERT W. BROWN,  
EDWIN W. BROWN.