

D. HAHN.
Chimney Cowl.

No. 101,123.

Patented March 22, 1870.

Figure 1.

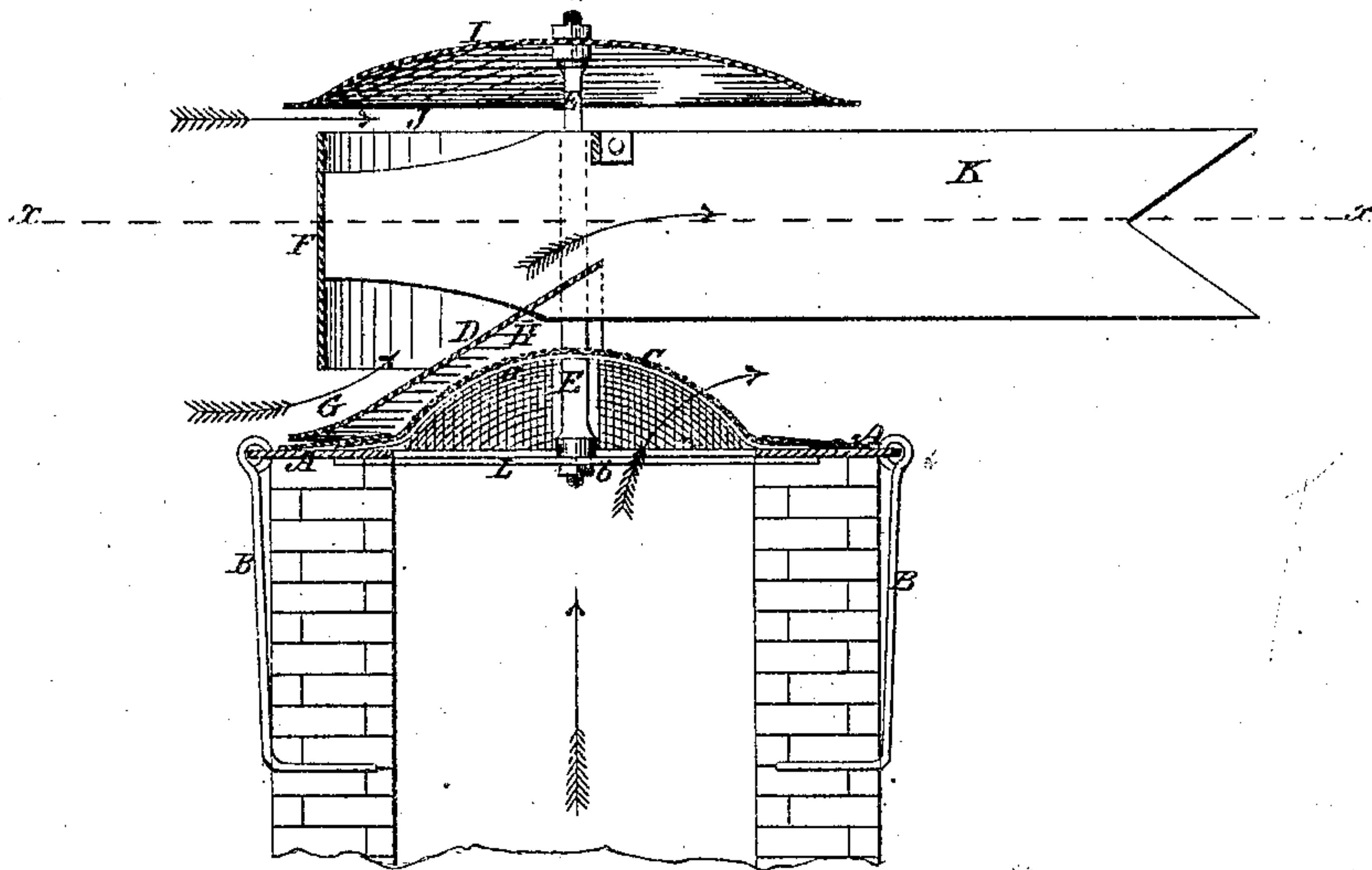


Figure 2.

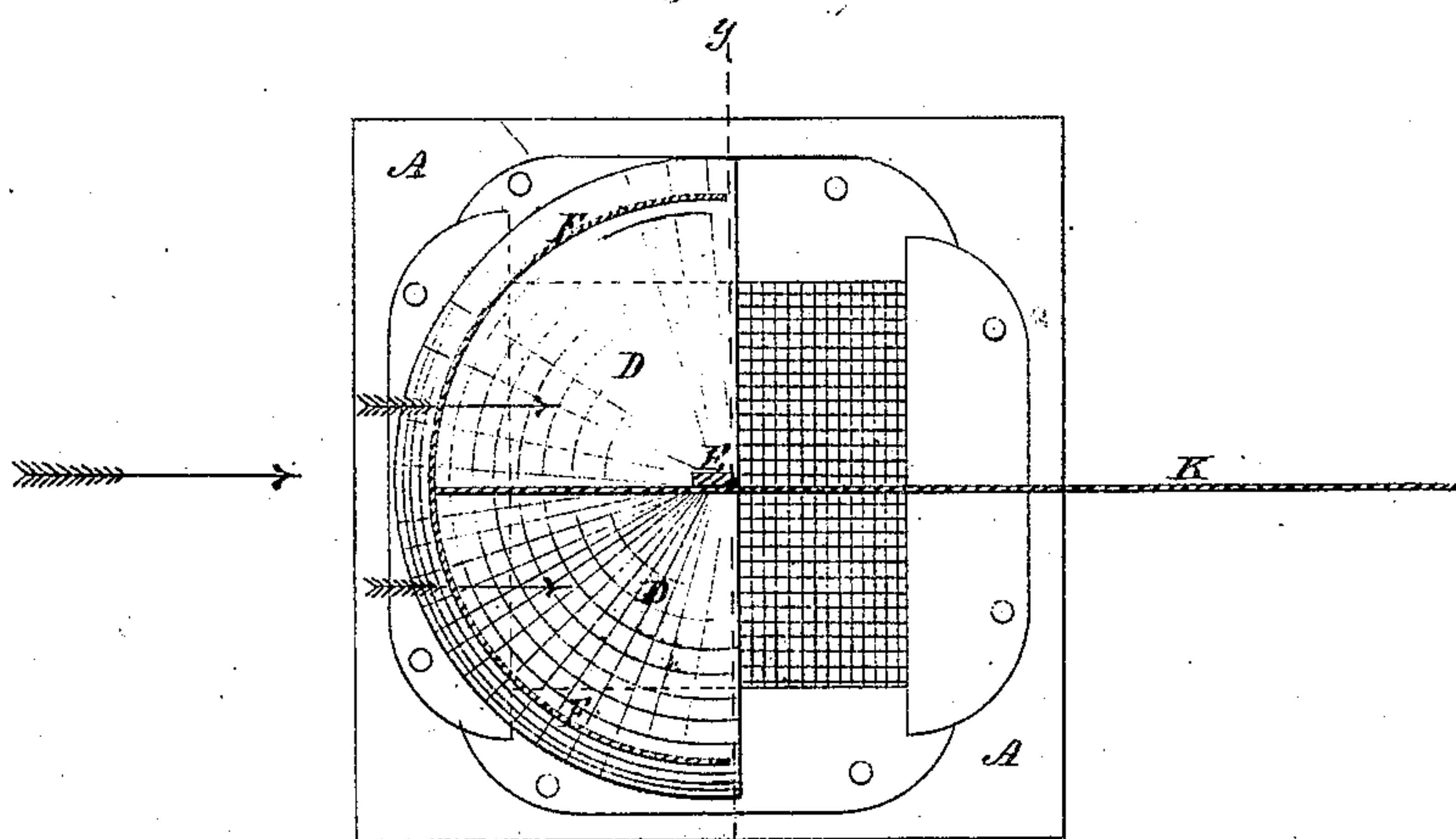
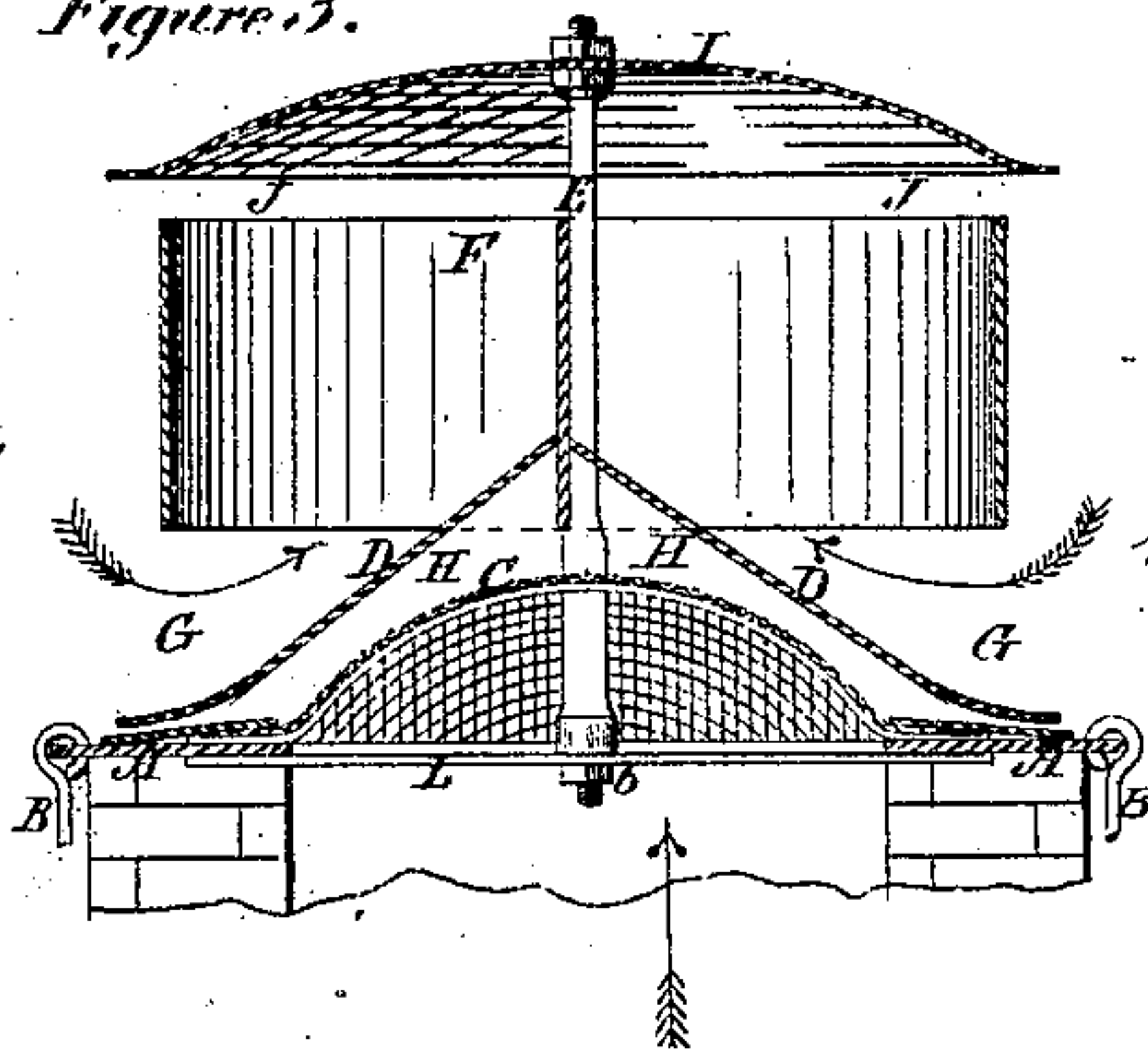


Figure 3.



Witnesses
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DAVID HAHN, OF RESERVE, INDIANA.

Letters Patent No. 101,123, dated March 22, 1870.

CHIMNEY-COWL.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DAVID HAHN, of Reserve, in the county of Miami and State of Indiana, have invented certain new and useful Improvements in Chimney-Cowls; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings which make part of the same, and in which—

Figure 1 represents a vertical section of a cowl embracing my improvements, and showing its application to a chimney-top.

Figure 2 represents a horizontal section of the same through the line of xx of fig. 1.

Figure 3 is a vertical section at the line yy of fig. 2.

My invention relates to caps or cowls applied to chimney-tops for increasing their draught; and

It consists in the employment of a semi-conical deflector secured to a vertical pivotal rod in connection with a semicircular screen located and arranged so as to leave a passage between it and said semi-conical deflector for the ingress of the blast, in such manner as to cause it to be deflected upward over the flue, so as to produce a suction and to prevent its tendency to descend the flue, while at the same time it is directed against the sides of the wind-vane, and thereby assists the latter in maintaining the screen and the conical deflector always to the wind.

Also, in the arrangement of a cap-plate mounted upon the pivotal stem, in such manner as to leave an opening between it and the semicircular screen, for the free passage of a horizontal blast immediately above the semi-conical deflector, so that it will meet the angular blast from said conical deflector, and thus greatly increase the suction, which is so necessary to produce the proper draught of the chimney.

In the accompanying drawings—

A represents the bed-plate of the cowl, fitted and secured to the top of the chimney by means of two hinged hooks B, driven securely into the sides thereof, and provided with a central opening equal in area to the flue, which is covered by an arched wire netting, C, secured to the bed-plate, and sustained by two elliptical plates a , for the purpose of preventing the escape of sparks, and thus avoiding all danger of fire from this cause.

The semi-conical deflector D is secured to a vertical central pivotal stem, E, in such manner as to extend midway over the flue, so that its circumference will nearly touch the bed-plate A. Its radius is greater than the area of the flue, and, therefore, extends beyond the opening thereof.

Directly above this semi-conical deflector, a vertical screen, F, is arranged, and supported also upon the pivotal spindle, so as to leave a passage, G, be-

tween it and the convex side of the deflector for the entrance of the blast, which, striking the cone, is deflected upward.

To facilitate this action, the radius of the screen F is somewhat less than that of the conical deflector.

The screen and deflector thus constructed are arranged so as to leave a space, H, between the latter and the top of the flue, for the free escape of the smoke from the under side of the semi-conical deflector.

A cap-plate, I, is secured to the upper end of the pivotal stem E, so as to leave an opening, J, between it and the semicircular screen, through which the blast is directed horizontally above the semi-cone, which, meeting the blast deflected upward by the latter, forms a very strong current directly above the flue, producing, as it were, a suction, and greatly increasing the draught of the chimney.

This cap I is of semi-elliptical form, with its concave side downward, so that it will act, in connection with the semi-cone, to prevent the descent of the blast into the flue.

The vane K is secured to the vertical pivotal stem E, the screen F, and the semi-conical deflector D, so that the several parts are firmly braced together, and the air is directed upon it from beneath and above the screen, and at either side thereof, thus maintaining, at all times, the presentation of the conical deflector and its screen to the wind.

The vertical spindle E is supported by a horizontal bar, L, to which it is secured by nuts b fixed to the under side of the bed-plate A.

The arrangement of the semi-conical deflector and screen at the heel of the vane above the flue, leaves half the area of the flue always uncovered, while the space beneath the cone is covered in such a manner by the conical deflector as to produce an outlet-flue upward above the chimney.

Having thus described my invention,

I claim—

1. A semi-conical deflector, D, in combination with a semicircular screen, F, arranged so as to leave an opening, G, between the lower edge of said screen and the deflector, for the passage of the blast into and upon the latter, by which it is deflected upward over the flue, in the manner and for the purpose substantially as hereinbefore described.

2. In combination with the semi-conical deflector D and the semicircular screen F, the wind-vane K, arranged and operating substantially as herein described.

3. In combination with the semi-conical deflector D and the semicircular screen F, arranged as described, the semi-elliptical cap-plate I, secured upon the vertical pivotal stem E, so as to leave an open-

ing, J, between it and the said semicircular screen, for the passage of a horizontal blast, so that a junction may be effected with the blast directed upward by the semi-conical deflector D, for the purpose of increasing the draught of the chimney, in the manner herein shown and described.

4. The combination, in a chimney-cowl, of the semi-conical deflector D, the semicircular screen F, the

semi-elliptical cap I, the wind-vane K, with their supporting pivotal stem E and arched netting O, the whole constructed, arranged, and operating as herein shown and described.

DAVID HAHN.

Witnesses:

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