

(No Model.)

H. F. KEEN.

CAP FOR CHIMNEYS AND SMOKE STACKS.

No. 318,749.

Patented May 26, 1885.

FIG. 1.

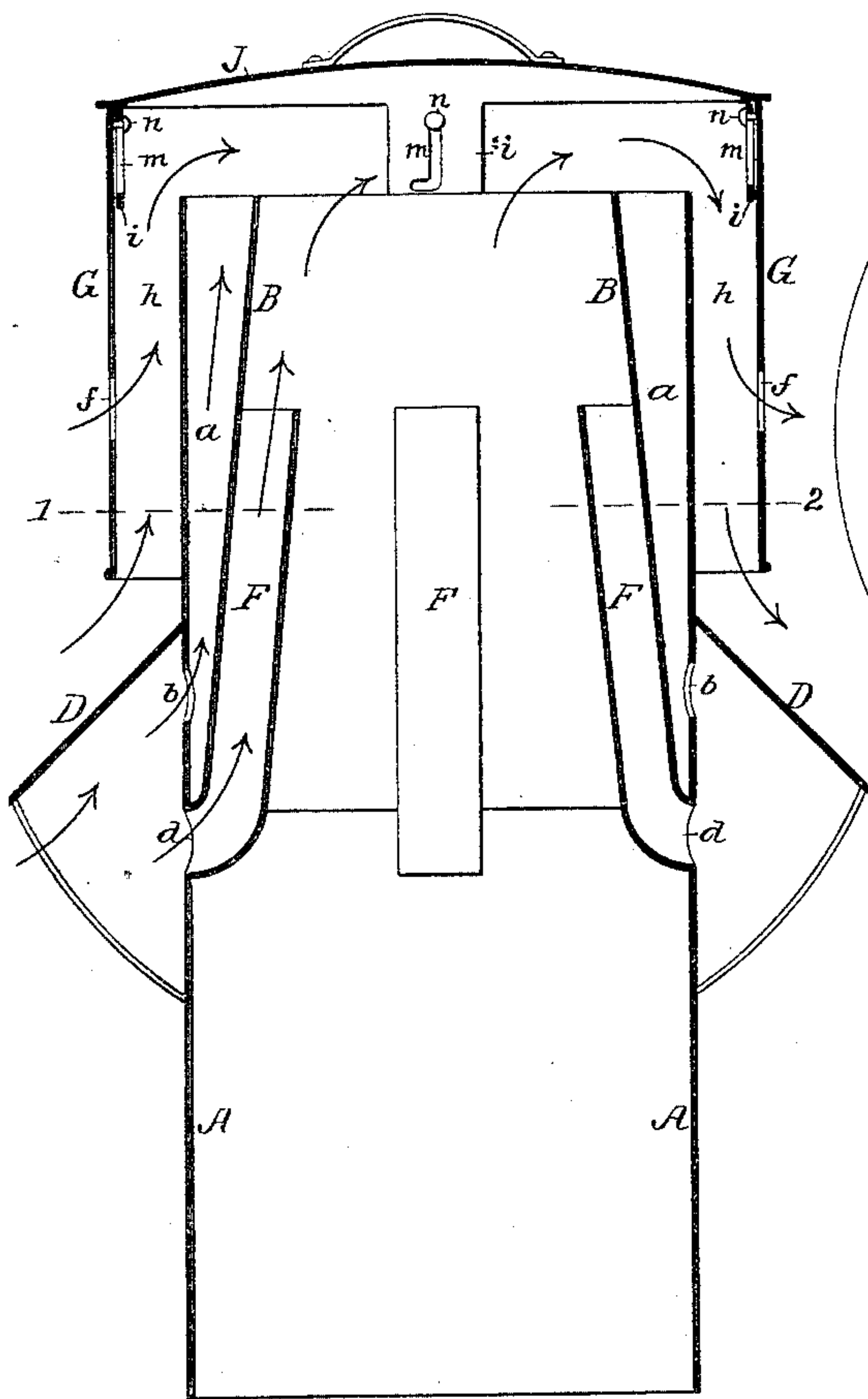


FIG. 2.

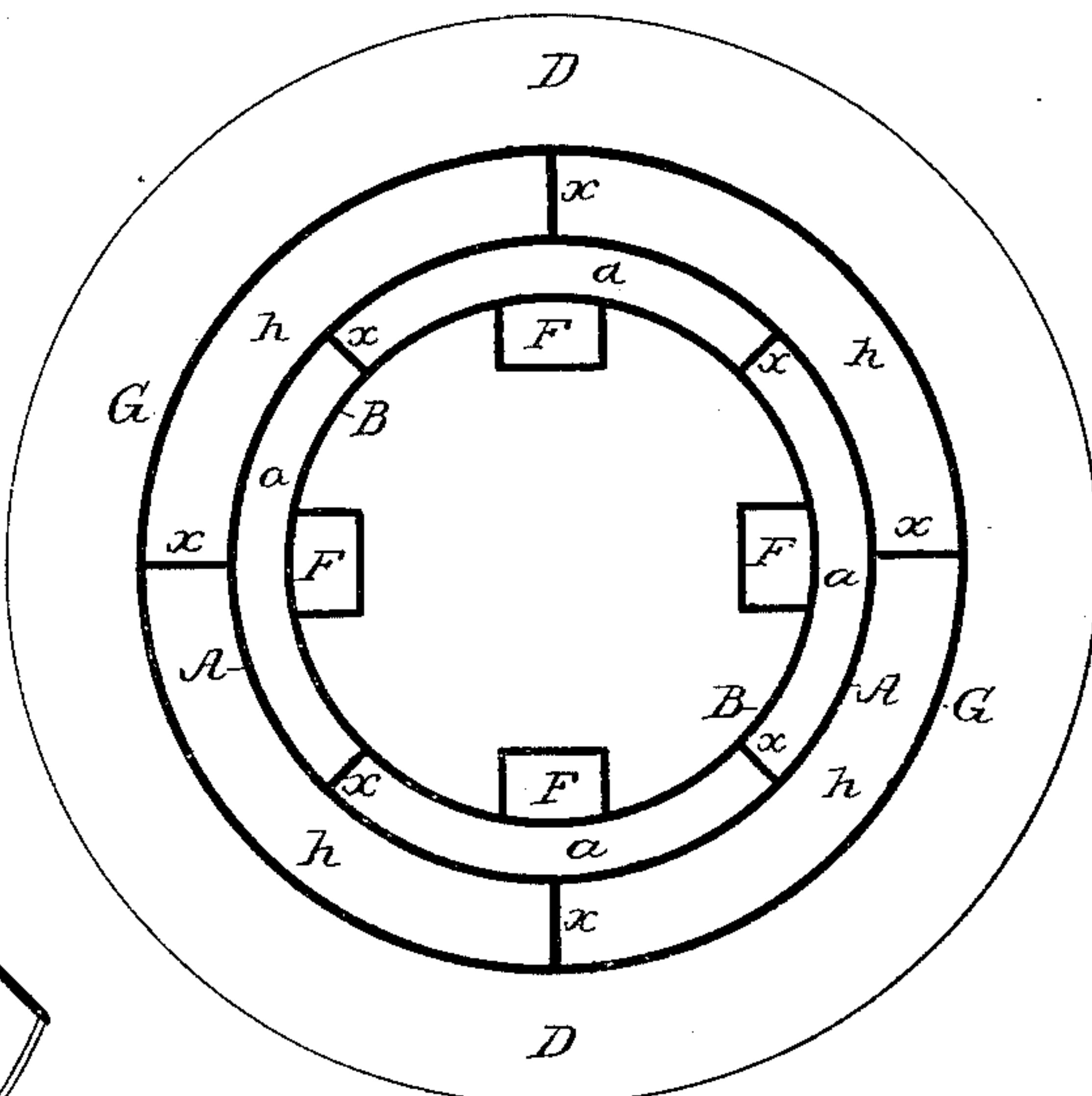


FIG. 3.

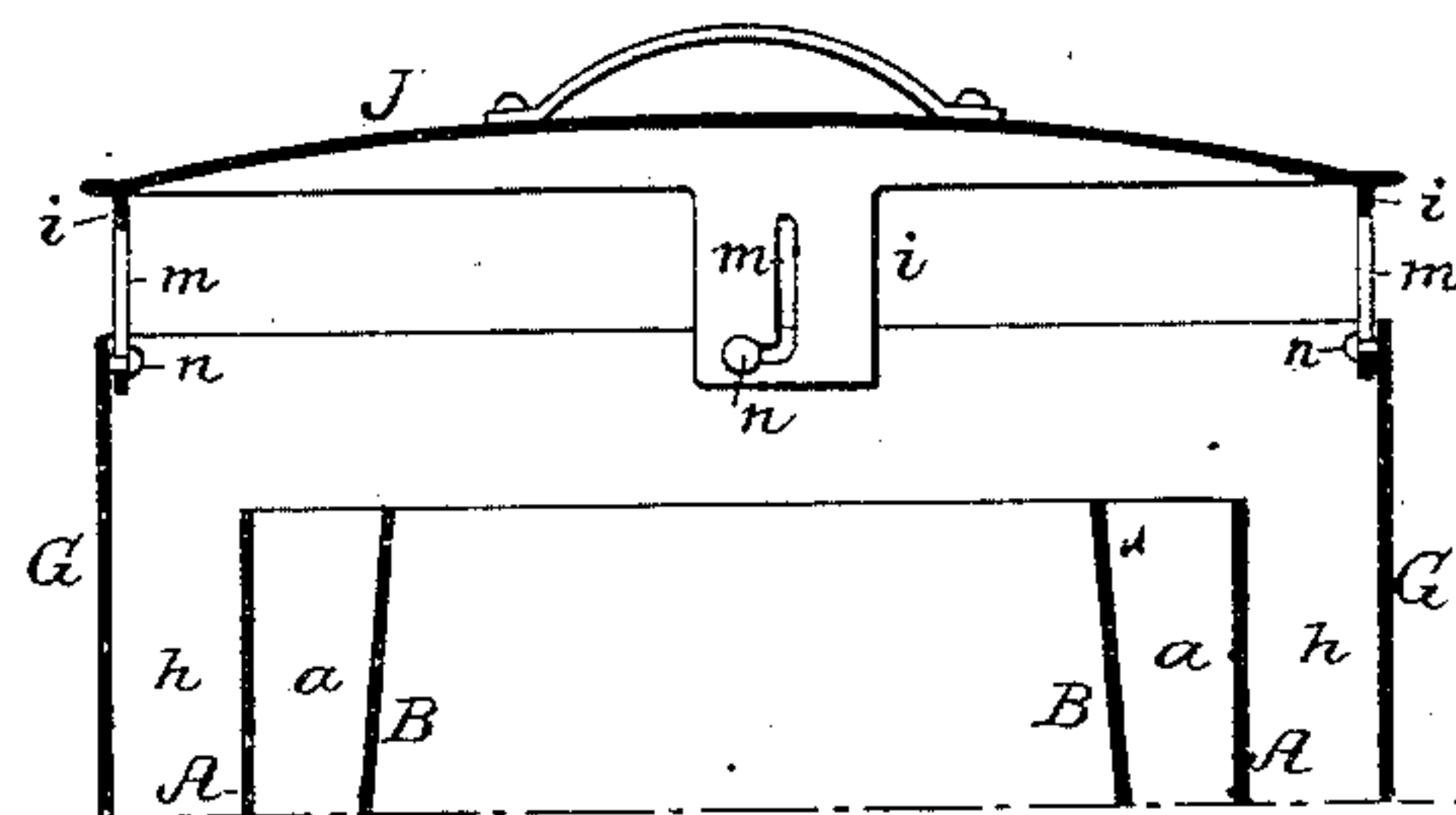
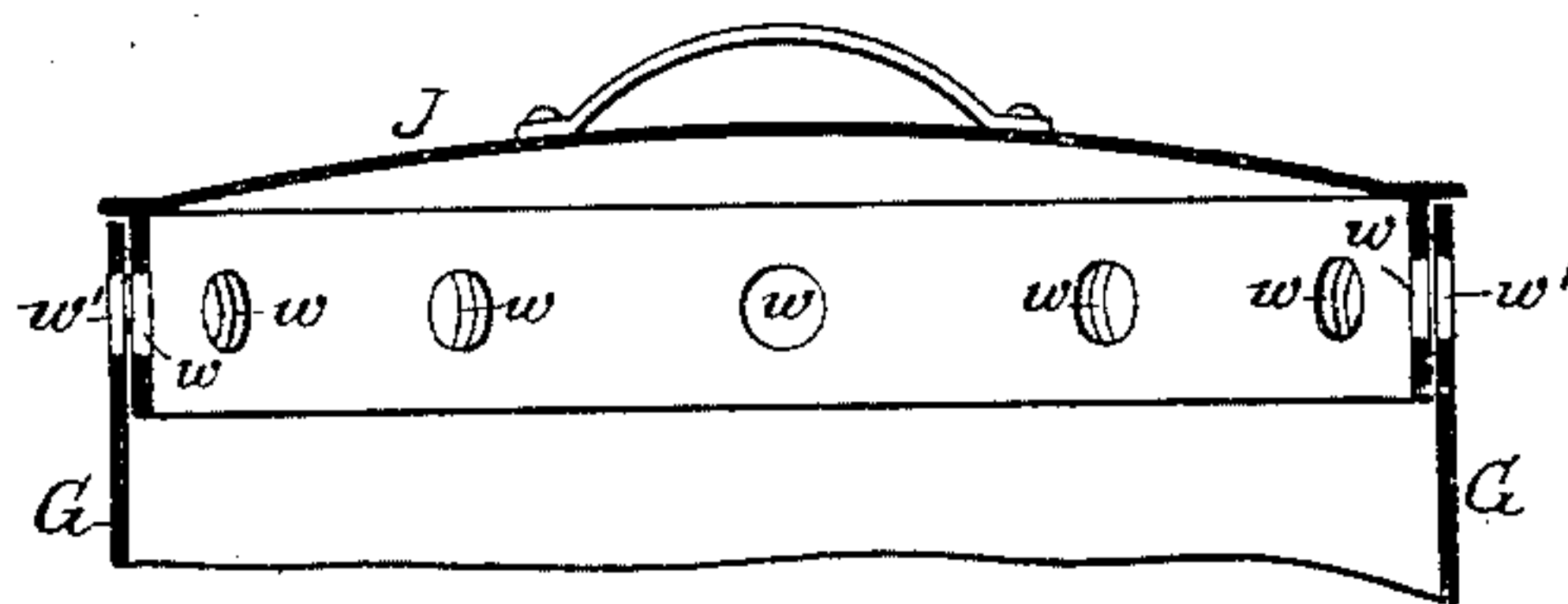


FIG. 4.



Witnesses.

Alex. Barkoff

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UNITED STATES PATENT OFFICE.

HORACE F. KEEN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO JOHN CHAMPION, OF SAME PLACE.

CAP FOR CHIMNEYS AND SMOKE-STACKS.

SPECIFICATION forming part of Letters Patent No. 318,749, dated May 26, 1885.

Application filed August 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, HORACE F. KEEN, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Caps for Chimneys and Smoke-Stacks, of which the following is a specification.

The object of my invention is to so construct a chimney cap or ventilator as to promote the draft, prevent downdraft, and provide for the direct escape of the products of combustion when required; and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of my improved chimney-cap; Fig. 2, a sectional plan on the line 1 2; Fig. 3, a section of the upper portion of the cap with the cover elevated for direct draft, and Fig. 4 a section of a modified form of direct-draft device.

A is the tubular casing of the cap, constructed for adaptation to a chimney-top or stove-pipe.

Within the upper portion of the casing A is a conical tube, B, secured to the casing at the lower edge, and forming, with the said casing, an annular chamber, *a*, communicating at the lower end through openings *b* in the casing with the space beneath a flaring deflector, D, on the outside of said casing.

Inside the tube B, and terminating some distance below the top of the same, are a series of flues, F, also communicating through openings *d* with the space beneath the deflector D.

Surrounding and extending some distance above the top of the casing A is a hood, G, open at the bottom, and having side openings, *f*, but provided at the top with a cover, J, having projections *i*, with right-angled slots *m*, for the reception of pins *n* on the hood. When the cap is in place on the chimney or stove-pipe, air from the windward side passes under the deflector and is directed thereby to the openings *b d* and into the chamber *a* and flues F, which it ascends, and on escaping from the top of the same increases the draft by serving as an ejector. Air also passes up under the hood, and, blowing over the top of the casing A, directs the products of combustion to the leeward side of the cap, where

they escape from beneath the hood and through the openings *f* therein, as indicated by the arrows. Some of the products of combustion may pass down through the chamber *a* and escape from the openings *b* on the leeward side of the casing, and in order to prevent the incoming and outgoing currents from interfering with each other, the chamber *a*, and also the annular chamber *h*, between the casing A and hood G, are divided by a series of annular partitions, *x*, into independent flues, as shown in Fig. 2. Downdrafts are prevented by the closed cover J; but when no air is stirring, and it is desired to have as free a draft as possible, said cover is raised, as shown in Fig. 3, so as to permit the direct escape of the products of combustion.

A cap having a damper-ring with openings *w*, as shown in Fig. 4, may replace the vertically-movable cap J, if desired, the openings *w* coinciding with openings *w'* in the hood when a direct draft is required.

I claim as my invention—

1. The combination of the casing A, the external hood, G, extending above the same, and of greater diameter than the said casing, so as to form a discharge-passage, H, around the same, and the cap or cover J, adjustable so as to provide an opening above the hood for a direct draft, as set forth.

2. The combination of the casing A, having openings *b* and *d*, the internal tube, B, and flues F, and the external hood, G, extending above the casing, as set forth.

3. The combination of the casing A, having openings *b* and *d*, the external hood, G, extending above the casing, the internal tube, B, and flues F, and the deflector D, as specified.

4. The combination of the casing A, having openings *b*, the internal tube, B, external hood, G, extending above the casing, and the partitions *x*, between the hood G and the casing and between the latter and the tube B, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HORACE F. KEEN.

Witnesses:

JOHN M. CLAYTON,
HARRY SMITH.