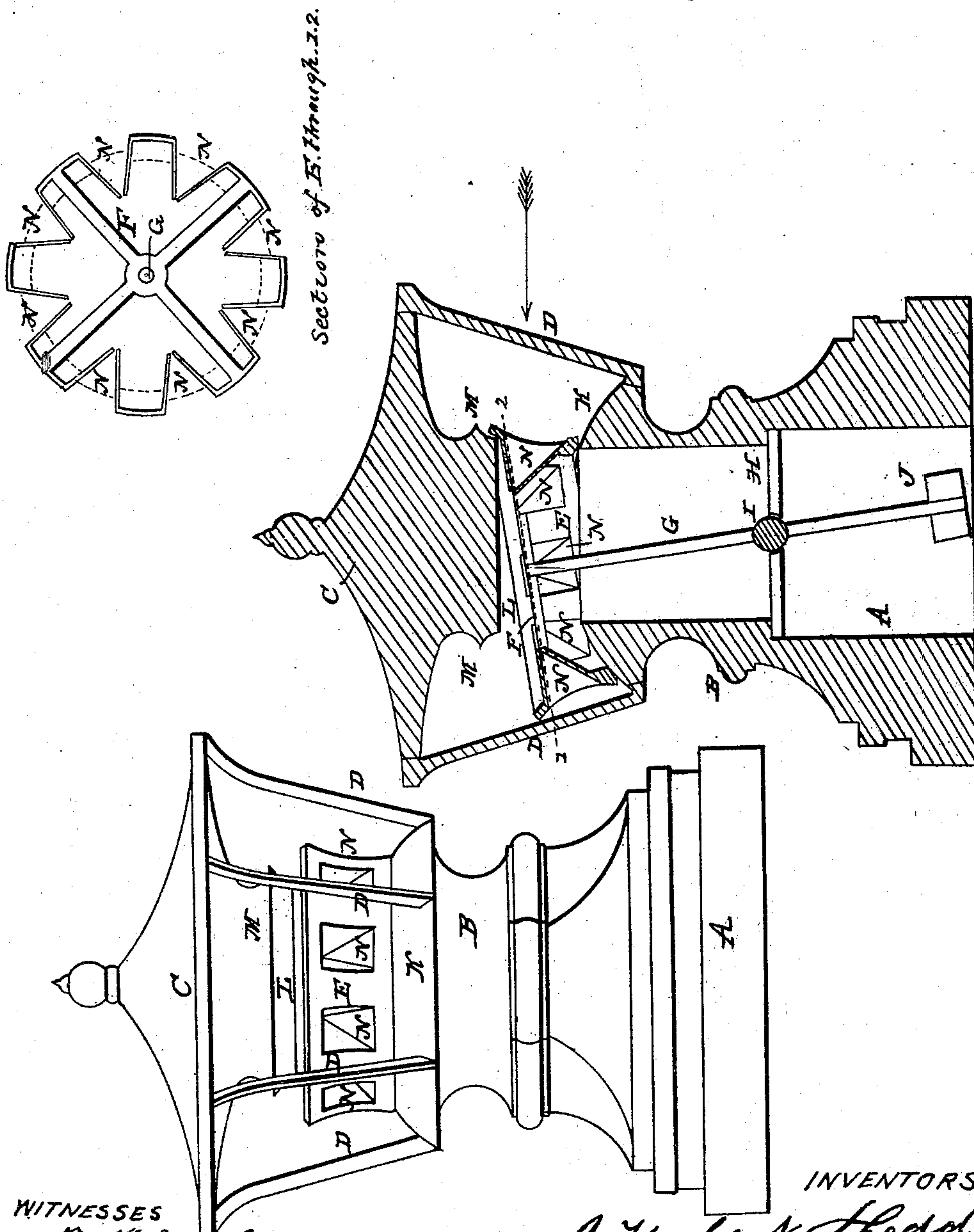


SHEDD & WORCESTER.

Chimney Cap.

No. 56,109.

Patented July 3, 1866.



WITNESSES

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UNITED STATES PATENT OFFICE.

J. HERBERT SHEDD AND BENJAMIN WORCESTER, OF WALTHAM, MASS.

CHIMNEY-CAP.

Specification forming part of Letters Patent No. **56,109**, dated July 3, 1866.

To all whom it may concern:

Be it known that we, J. HERBERT SHEDD and BENJ. WORCESTER, both of Waltham, in the State of Massachusetts, have invented a new and useful Improvement in Chimney-Caps; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of our invention consists in protecting the horizontal opening of a cylindrical covered chimney-top with a movable shield or guard in such a manner that the wind will move the shield to cover and close the opening on the windward side, while the leeward side is left open.

The construction and operation of the cap, as represented in the drawing, are as follows:

A is the top of a chimney. B is the hollow base of our cap, made by preference of cast-iron. C is a horizontal cover, supported over the flue by the standards D D, which rest on B, not very unlike a common form of cap.

E is a movable ring, of thin metal, applied by us, which is horizontal when free, and then surrounds the opening between B and C at such a distance as to leave a free space for the passage of the contents of the flue around the bottom L of the cover C.

F is a spider, of crossed metal bars, attached to the ring E, and supporting it by means of the rod G and ball I on the spider H, inside the flue. The spider H is attached to the sides of the flue in the base B.

I is a ball on the rod G, playing in the socket of the spider H, which socket, by preference, we make of glass.

J is a weight attached to the end of the rod G below the spider H, and so adjusted as to slightly overbalance the ring E and bring it, when unaffected by the wind, to a horizontal position.

K is a spherical upper surface to the base B, whose center is in the ball I, and over which the lower edge of the ring E plays, without touching, uniformly at the distance at which it is set.

L is the bottom of the cover C, of the same diameter as the opening of the flue through

K, against which the top of the ring E strikes when blown to one side.

M is a horizontal projection on C, a little above the bottom L, with a curved surface above of such form as to turn or deflect over the openings the wind that strikes against the under side of C.

N N are tunnel-shaped openings through the ring E, through which the wind may drive small jets to facilitate the discharge of the contents of the flue.

The operation of the cap thus represented is as follows: When there is no wind the ring E remains horizontal and the smoke or other contents of the flue escape upward on all sides between the ring and the cover C. When the wind blows, from whatever quarter, as shown by the arrow, the ring E is moved by it till it touches L, and thus closes the opening effectually to the windward side, while the opening on the opposite side is increased. A partial vacuum being then formed by the parting of the wind by the shield or ring, an upward draft is created in the flue. This effect is increased by the jets through N N.

In this description we have set forth one form of the shield we use and one mode of supporting it; but we do not wish to limit ourselves to this particular form of shield or to this mode of supporting it, for the shield may be made of various forms and be supported in various ways, as by suspension or by resting free on a horizontal surface, or it may be made to fit close about the opening, with one open side, and rest on its edge or on a pivot in the middle, so as to revolve by the action of the wind and keep its close side to windward, in all such ways having substantially the same effect as the shield or ring above described.

We do not claim the horizontal opening to a cylindrical flue formed by placing over it a fixed horizontal cover, for this is a common device.

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

1. The combination of a fixed cover above a flue with a movable shield so adjusted as to be made by the force of the wind to close the opening between the flue and the cover

on the windward side, while the leeward side is left open.

2. The construction and arrangement of the base B, with its spherical surface K, and of the cap C, with its curved under surface and projection M, substantially as described.

3. The ring E, with the tunnel-shaped jets

N N, in combination with the base B and cap C, substantially as described.

J. HERBERT SHEDD.
BENJ. WORCESTER.

Witnesses:

R. R. BISHOP,
L. S. DABNEY.