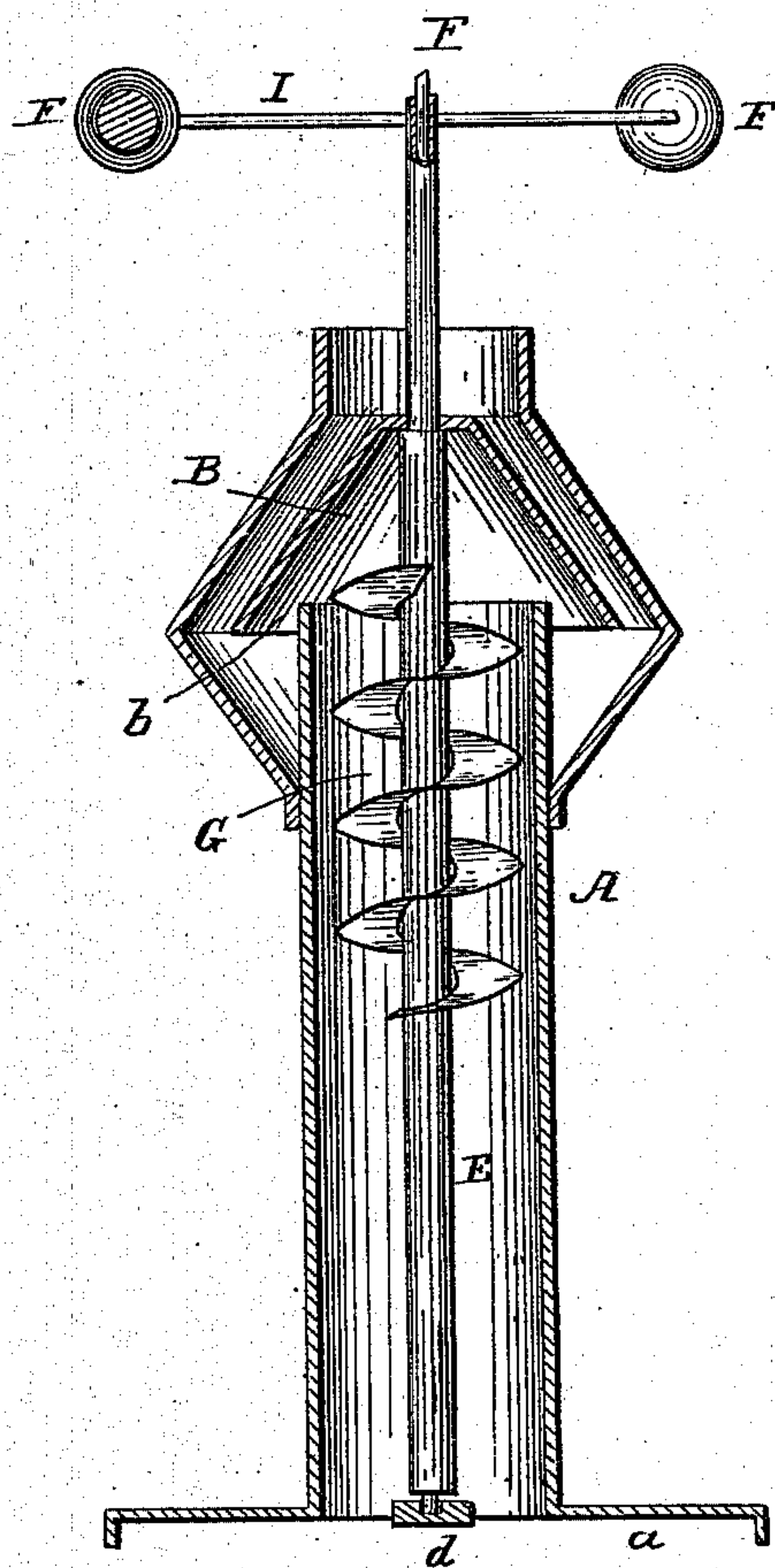


J. McGOWAN.
Ventilator and Chimney Top.

No. 112,475.

Patented March 7, 1871



Witnesses:

John S. Houston
John Terry

Inventor:

James H. McGowan

United States Patent Office.

JAMES MCGOWAN, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND DANIEL H. WARING, OF SAME PLACE.

Letters Patent No. 112,475, dated March 7, 1871.

IMPROVEMENT IN VENTILATORS AND CHIMNEY-TOPS.

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, JAMES MCGOWAN, of the city, county, and State of New York, have invented a new and improved Ventilator and Chimney-Top; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing forming a part of this specification and to the letters of reference marked thereon.

My invention relates to ventilators used upon chimney-tops for the purpose of increasing the draught in the chimney, and is so constructed as to prevent any downward draught.

It consists in a funnel-shaped cap, which projects a short distance downward over the top of the chimney, in combination with a spiral fan and shaft, the shaft being provided with cross-arms at its top, at the outer ends of which said cross-arms are hemispherical or conical fans, the mouths of which catch the wind and facilitate the rotary motion of the shaft in connection with the draught, the whole of which, with the exception of the cross-arms and conical fans, is inclosed in a suitable cylinder, which forms the extreme top of the chimney, and which is made to conform properly to the spiral fan and funnel-shaped cap.

From actual test this ventilator is a decided improvement over any other hitherto used.

To enable others skilled in the art to make and use my invention I will proceed more particularly to describe the same.

The figure represents a longitudinal sectional elevation, showing the interior construction and arrangement of my invention.

A represents the outer cylinder or casing, which incloses the funnel-shaped cap B and spiral fan C. This cylinder may be made of any suitable sheet metal, and it rests at its lower extremity on a base, *a*, which is made to fit the brick or stone-work of the chimney.

Toward its upper end the outer portion of the same is bulged so as to conform to the funnel-shaped cap B, leaving a space between these two for the escape of the smoke, while another portion extends a short distance upward in a straight line, as seen at *b*. Its

extreme upper end forms the top of the chimney or outlet for the smoke.

The cap B is secured to the upper portion of the casing A, and its lower or wider end descends a short distance below the top of the inner portion of the cylinder just mentioned, for the purpose of preventing down draughts.

Within the cylinder A is a spiral fan or worm C, secured to a shaft, E, the lower end of which said shaft rests on a bar or step, *d*, located at the lower end of the cylinder, while it has bearings toward its upper end, in the top of the cap B.

This said fan C is for the purpose of increasing the draught in the chimney and facilitating the ascent of the smoke, which object is further attained by means of conical-shaped fans F F F, secured on the ends of cross-arms I, which catch the wind and thus impart a rotating motion to the shaft E, and increase the effects of the spiral fan or worm C.

The operation is simple and readily understood.

The draught up the chimney, acting upon the spiral fan C, causes the same, together with the shaft E, to rotate, which effect is further increased by means of the conical or concave fans F F, by which means the draught is increased and the escape or ascent of the smoke is facilitated, and by means of the funnel-shaped cap B, the lower edge of which descends a short distance below the top of the inner cylinder, as seen at *b*, the possibility of down draughts is effectually prevented.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent of the United States, is—

The funnel-shaped cap B, in combination with the spiral fan or worm C, and conical or concave fans F F F, substantially as shown and described, and for the purposes set forth.

JAMES MCGOWAN.

Witnesses:

JOHN S. THORNTON,
WM. VENTZ.