

F. BRENZINGER.
Ventilators.

No. 151,830.

Patented June 9, 1874.

Fig. 1.

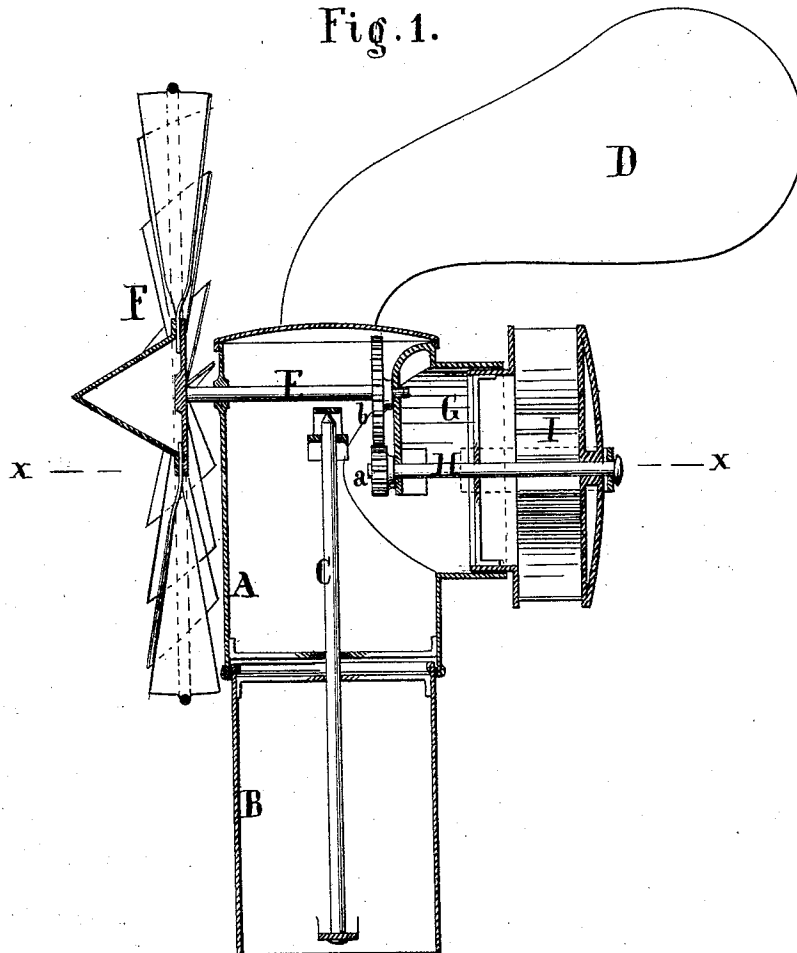
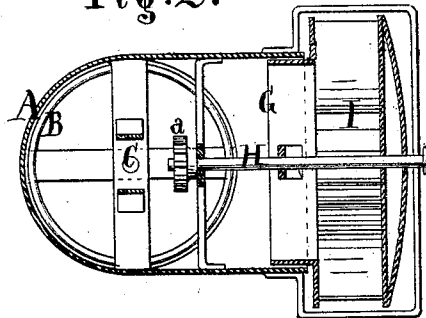


Fig. 2.



Witnesses.

Ernst Billhuter
Henry Gentner

Inventor.

Francis Brenzinger
per
Van Santvoord & Hunt
attors

UNITED STATES PATENT OFFICE.

FRANCIS BRENZINGER, OF NEW YORK, N. Y.

IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. 151,830, dated June 9, 1874; application filed April 3, 1874.

To all whom it may concern:

Be it known that I, FRANCIS BRENZINGER, of the city, county, and State of New York, have invented certain Improvements in Ventilators, of which the following is a specification:

This invention relates to certain improvements in ventilators, in which a shaft is arranged transversely through a revolving cap or drum on the top of the chimney or flue, said shaft carrying at one end a fan-wheel, and at its other end a suction-fan, in such a manner that when the fan-wheel revolves by the action of the wind it imparts a revolving motion to the suction-fan, in order to draw off the smoke or foul air in the flue and cause the same to pass off into the open air. The object of the present invention is to render such ventilators more perfect and effective in operation by a multiplying gear, so arranged that the slightest movement of the fan-wheel imparts a rapid motion to the suction-fan, and draws off the smoke or foul air with great rapidity. To this end the invention consists in arranging within the cap or drum of the ventilator two independent and separate shafts, one of which carries at one end a fan-wheel, and at its other end a gear-wheel, and the remaining shaft carrying at one end a suction-fan, and at its opposite end a pinion, said gear-wheel and pinion meshing together, so that when the fan-wheel revolves it imparts a rapid revolution to the suction-fan, causing the latter to rapidly draw off all smoke or foul air from the flue, as will be more fully hereinafter described.

In the accompanying drawing, Figure 1 represents a vertical section of the invention, and Fig. 2 a horizontal section on the line $x x$ of Fig. 1.

The cap or drum A is fitted on the top of a flue, B, and revolves freely on a vertical spindle, C, suitably supported in position. The cap or drum is closed at its top, and provided with a vane, D, by which it is turned accord-

ing to the direction in which the wind blows. Within the upper portion of the cap or drum are arranged two separate and independent shafts, E and H, the former of which carries at one end a suitable fan-wheel, F, and at its other end a gear-wheel, b , and the shaft H carries at its outer end a suction-fan, I, arranged opposite an opening or aperture, G, in the cap A, and at its inner end is provided with a pinion, a , which meshes with the gear-wheel b on the shaft of the fan-wheel. The blades of the suction-fan are curved, so that when said fan receives a revolving motion by means of the fan wheel revolving, it draws off all the air, gases, or smoke in the flue, and causes the same to pass into the open air.

It will be noticed that the pinion a on the shaft of the suction-fan is much smaller than the gear-wheel b on the shaft of the fan-wheel, by which means the slightest revolving motion of the latter imparts a rapid revolution to the suction-fan, causing the foul air or smoke to be drawn off with great rapidity, thus rendering the ventilator perfect and effective in its operation, whether the wind be brisk or not.

The gearing and shafts, as above described, are protected from the weather by being inclosed within the closed cap A, and all rain or snow is prevented from passing into the chimney or flue.

I claim as my invention—

The combination, with the revolving cap of a ventilator, of the two independent shafts E and H, one of which carries at its outer end a fan-wheel, and at its inner end a gear-wheel, and the other carrying at its outer end a suction-fan, and at its inner end a pinion, said pinion and gear-wheel meshing together, and the whole constructed to operate substantially as and for the object specified.

FRANCIS BRENZINGER.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.