W. B. AUSTIN.

Ventilator for Chimneys.

No. 202,977. Patented April 30, 1878.

Fig. 1

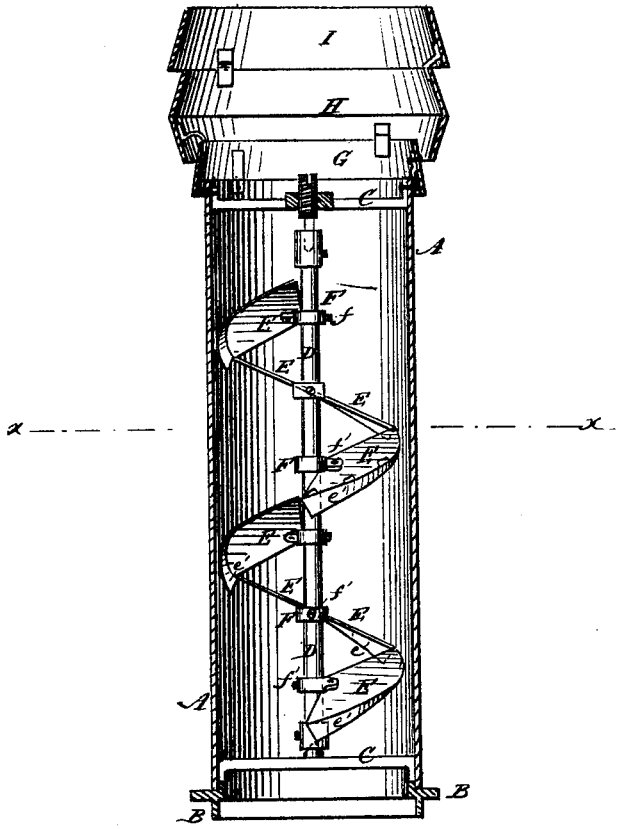
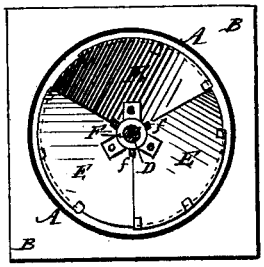


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM B. AUSTIN, OF NEW YORK, N. Y.

IMPROVEMENT IN VENTILATORS FOR CHIMNEYS.

Specification forming part of Letters Patent No. **202,977**, dated April 30, 1878; application filed April 10, 1878.

To all whom it may concern:

Be it known that I, WILLIAM B. AUSTIN, of New York city, in the county of New York and State of New York, have invented a new and useful Improvement in Ventilators for Chimneys, &c., of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved ventilator. Fig. 2 is a horizontal cross-section of the same, taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for attachment to chimney-flues, ventilating-flues, &c., for the purpose of inducing an upward draft through the said flues to remedy the smoking of chimneys, promote the draft of fires, and ventilate buildings, and which shall be simple in construction, automatic in operation, and effective in use.

The invention consists in the combination of the supporting-bars, the pivoted rod, and the segmental plates, having flanges formed upon the forward part of their convex edges and tapering to a point toward their rear parts, and provided with collars and set-screws, with the pipe; in the combination of the head, formed of the two tapering rings and the intermediate V-shaped ring, so connected as to leave ring-spaces between their adjacent edges, with the upper end of the pipe, as hereinafter fully described.

A represents a pipe, the lower end of which is attached to a base, B, which is designed to be connected with and secured to the top of a chimney or other flue to be ventilated. C are two cross-bars, the ends of which are secured to the sides of the pipe A, near its upper and lower ends.

In the center of the bars B are formed bearings to receive the pivots of the vertical rod D. One or both of the pivots of the rod D should be adjustable, to enable the wear to be conveniently taken up.

E are plates, which are made in the form of a segment of a spiral thread or screw, and which have flanges *e'* formed upon the forward part of their convex edges. The flanges *e'* are made wider at their forward ends, and taper gradually to a point toward the rear ends of the said plates E, as shown in Fig. 1.

To the angles of the plates E are attached collars F, which are placed upon the rod D, and are secured in place adjustably by set-screws *f'*, passing through them and resting against the side of the said rod D.

The plates E are arranged in spiral form around the rod D, as shown in Fig. 1. By this construction, as a current of air passes up through the pipe A, it strikes the lower sides of the plates E, and by its pressure against them gives a rotary motion to the rod D, the effect of which is to lift the air above the said plates, so as to cause it to pass out at the top of the pipe A, and induce a draft upward through the said pipe and the flue with which it is connected. The form of the flanges *e'* confines the air upon the forward parts of the plates, and prevents any back pressure as it passes off their rear ends.

To prevent the wind from blowing downward through the pipe A, it is provided with a head, G H I. The lower part, G, is a tapering ring or band, which is secured to the upper end of the pipe A in such a way as to leave a ring-space between it and the end of the said pipe. The part H is made in the form of a V band or ring, the lower edge of which slightly overlaps the upper edge of the tapering ring G, and with the upper edge of which is connected the upper ring or band I, which is also made tapering.

The rings G H I are connected together and to the pipe A by arms or brackets attached to them and to the said pipe, as shown in Fig. 1. By this construction, as the wind strikes the side of the head G H I, it is made to pass upward through the said head, so as to induce an upward draft through the pipe A, instead of blowing downward through the said pipe.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the supporting-bars C, the pivoted rod D, the segmental plates E, having the flanges *e'* formed upon the forward part of their convex edges, and tapered to a

point toward their rear parts, and provided with collars F and set-screws *f'*, with a pipe, A, substantially as herein shown and described.

2. The combination of the head, formed of the two tapering rings G I and the intermediate V-shaped ring H, so connected as to leave ring-spaces between their adjacent edges, with the upper end of the pipe A, substantially as herein shown and described.

WILLIAM B. AUSTIN.

Witnesses:

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