

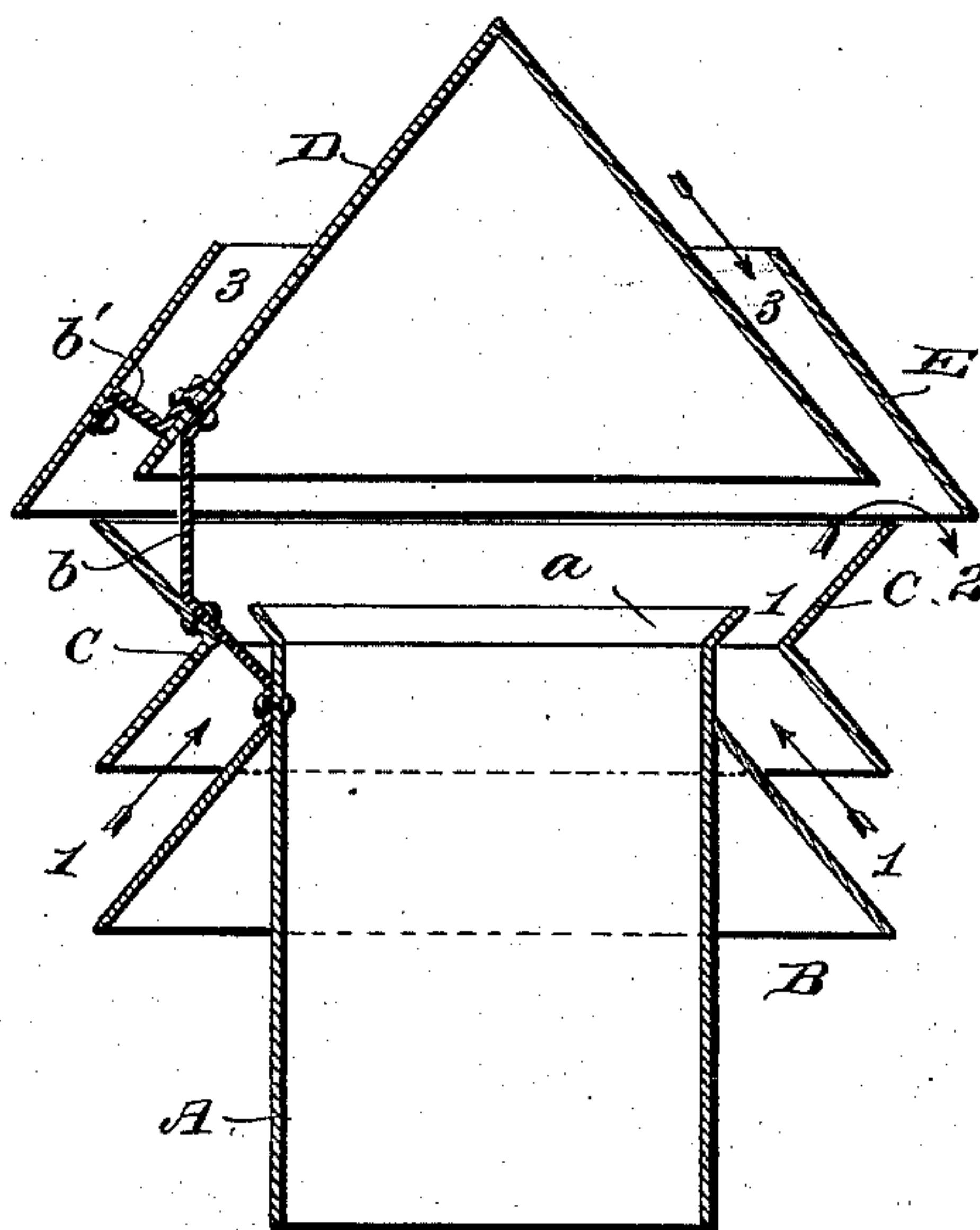
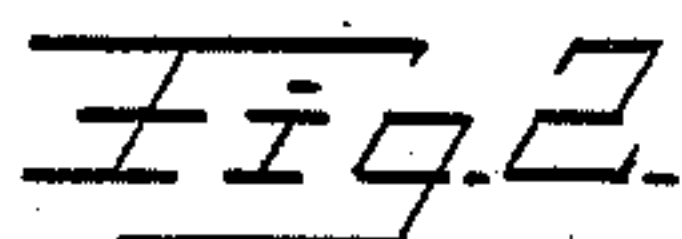
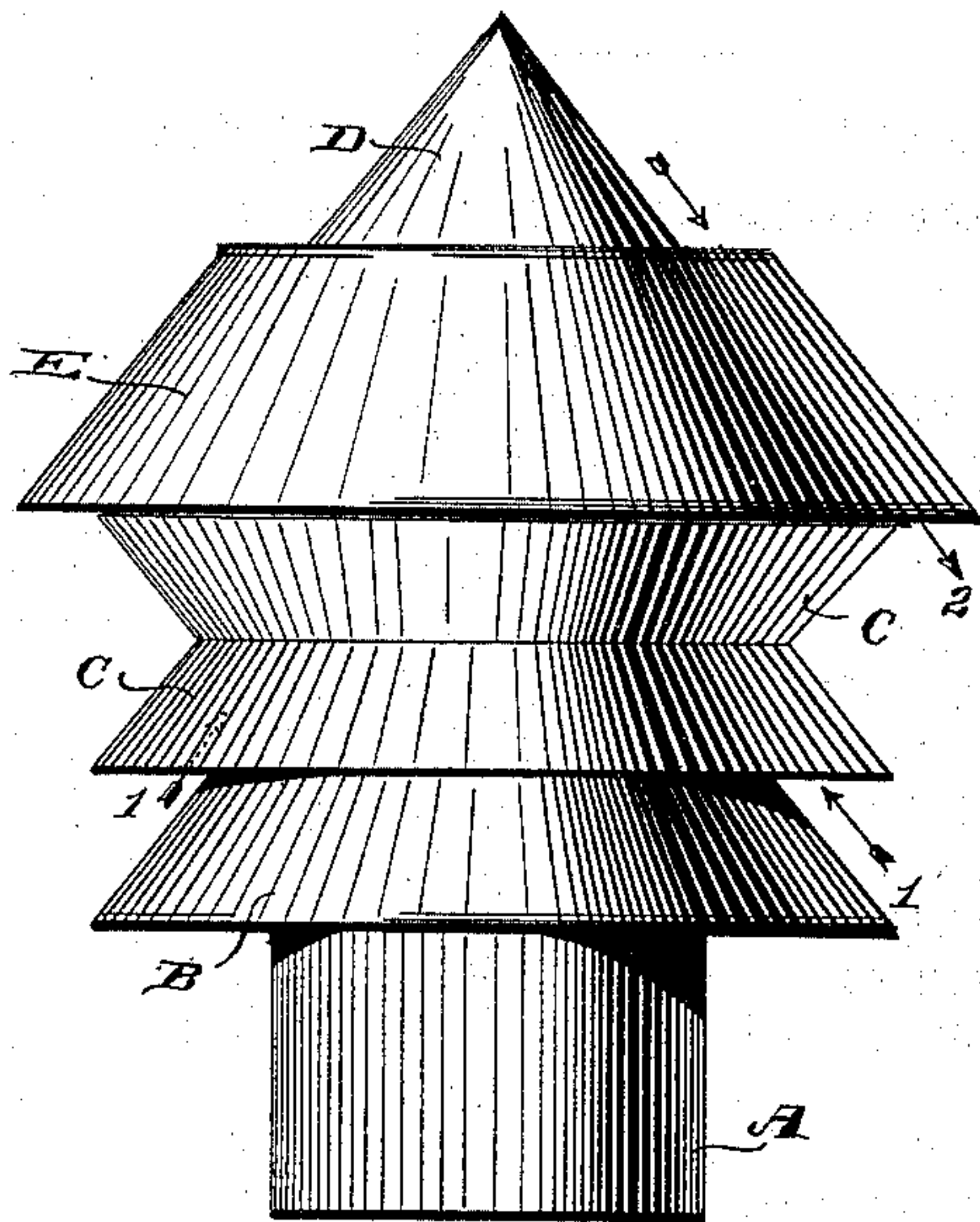
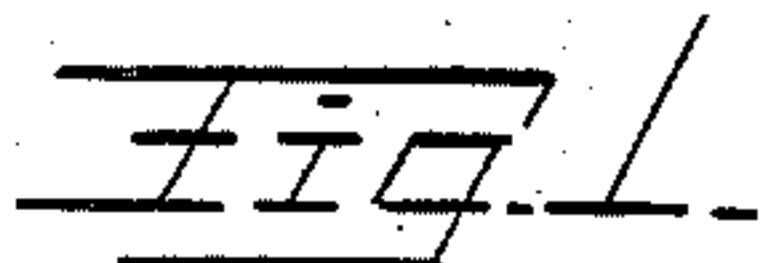
(No Model.)

G. FISCHER.

## CHIMNEY COWL AND VENTILATOR.

No. 330,883.

Patented Nov. 24, 1885.



Witnesses:

La. Conner Jr.  
H. Williams

Inventor:  
*Geo. Fischer,*

By his Attorney,

W. Cragin.

# UNITED STATES PATENT OFFICE.

GEORGE FISCHER, OF QUINCY, ILLINOIS.

## CHIMNEY-COWL AND VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 330,883, dated November 24, 1885.

Application filed September 18, 1885. Serial No. 177,494. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE FISCHER, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Chimney-Cowls and Ventilators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of my invention is to protect the draft of the chimney-flue by directing away the wind therefrom, whether the current is upward, lateral, or downward, and in such a way as to increase the draft of said flue.

To this end the details of my invention will be described below, and pointed out in the claims.

In the drawings, Figure 1 is a side elevation. Fig. 2 is a vertical section.

Like letters refer to like parts.

A is the chimney-flue, the orifice of which is bent outward to form a flaring or oblique flange, *a*. Some distance below the said orifice is an air-tight conical frustum, B, and above this and about the orifice of the flue are two conic frustums united at their smaller bases and extending partly above and partly below said orifice, forming a double-cone-shaped ring, C. The flange B, the flaring flue A, and the ring C thus form a wind-channel, 1, hereinafter referred to. Above the conical frustums is placed the open-bottom cone D, of somewhat smaller diameter, though larger than that of flue A, and so as to leave a circulating wind, &c., escape, 2, between them. About the cone is a guard or conic frustum, E, which extends from some distance below the apex of the former down to about the level of the upper rim of the ring C, and being sufficiently away from the cone and ring C to form the wind, rain, &c., channel 3.

In Fig. 2 the manner of bracing the parts together is seen. There are three sets of

braces in all at suitable intervals, and one only will be described. The brace *b* extends from the cone to the ring C and the flue A, holding by bolts all these parts together. The bolts through the upper end of the brace *b* also pass through one end of a Z-brace, *b'*, the other end of the latter being bolted to the guard E, said brace *b'* connecting the guard to the cone, so as to leave the channel 3, above mentioned.

The mode of operation will best describe the functions of the elements of the device. The frustum B will prevent an upward wind from entering the cowl to choke or eddy about the flue. A lateral wind will be deflected by ring C, or forced up the opening 1 and out at opening 2, causing an updraft in the flue. By flaring the top of the flue the smoke will deflect out obliquely to meet the current of air, but will not impinge with it. A downdraft on the cone will pass through opening 3, causing an updraft through opening 2. The guard E prevents a downdraft from blowing into the opening 2, and any updraft striking under it would pass up opening 3, aiding the draft of the flue. Much of the rain is shed by this guard; but that falling on the cone passes to ring C and off from frustum B.

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

1. The combination, with the flaring-mouthed flue, of the conic frustum having its upper rim fastened air-tight some distance below the flare of the flue, the double-cone-shaped ring of larger diameter than the flue-mouth, the open-bottomed cone of greater diameter than the mouth of the flue, and the outer guard, mostly covering the cone and extending nearly down to the upper section of said ring, and forming with the cone a wind-channel, as set forth.

2. The combination, with the flue A, having flaring mouth *a*, of the conic frustum B, fastened air-tight some distance below the flue-mouth, the double-cone-shaped ring C, of greater diameter than the flue-mouth, and forming with flue A and frustum B a wind-



channel, 1, the open-bottomed cone D, arranged next above said ring C to leave an opening, 2, between them, and the guard E, protecting said opening and forming with the  
5 cone a wind-channel, 3, also a slight circular opening between the bottom of said guard and the upper section of ring C, all the parts being held together by braces *b b'*, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE FISCHER.

Witnesses:

L. E. EMMONS,  
A. W. WELLS.