

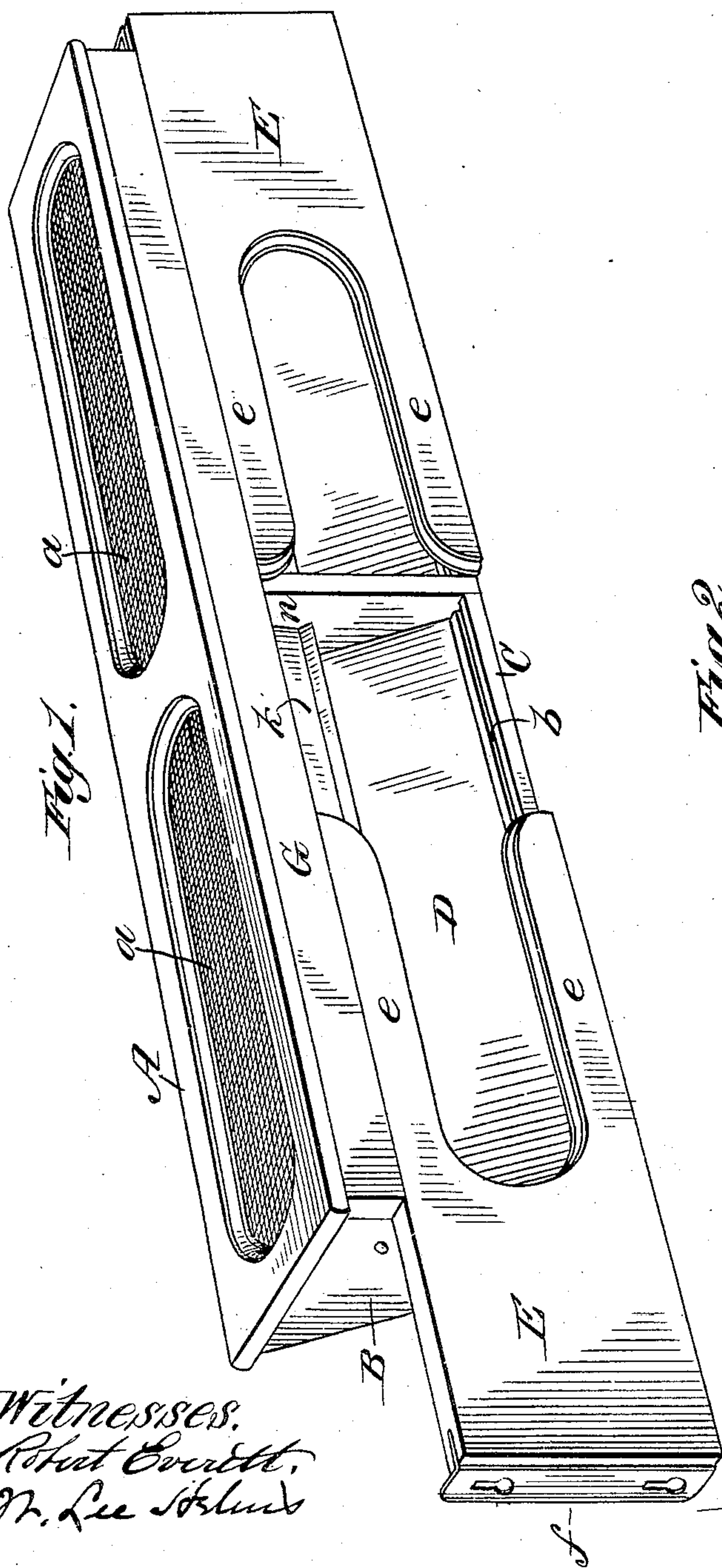
No. 877,725.

PATENTED JAN. 28, 1908.

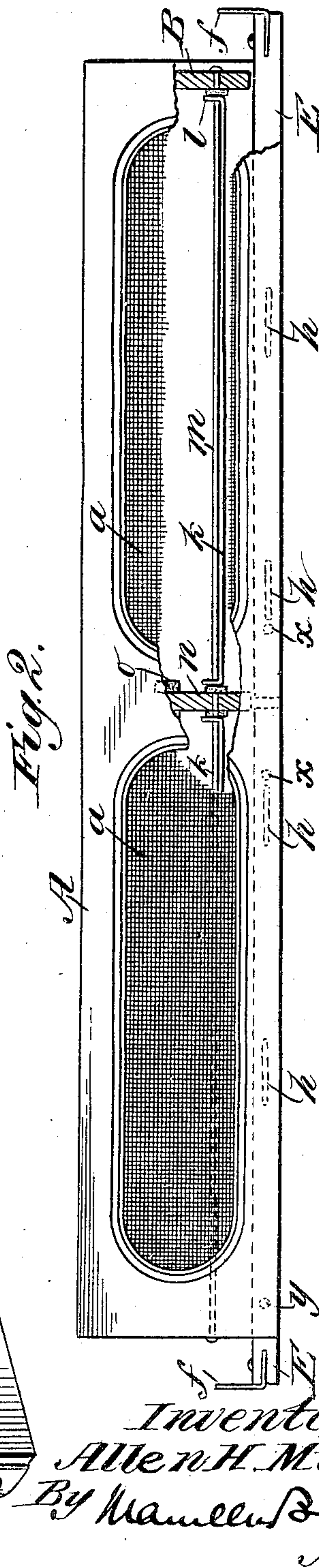
A. H. MIX.  
VENTILATOR.

APPLICATION FILED OCT. 18, 1907.

2 SHEETS—SHEET 1.



Witnesses.  
Robert Everett,  
W. Lee Stiles



Inventor:  
Allen H. Mix.  
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Atty.

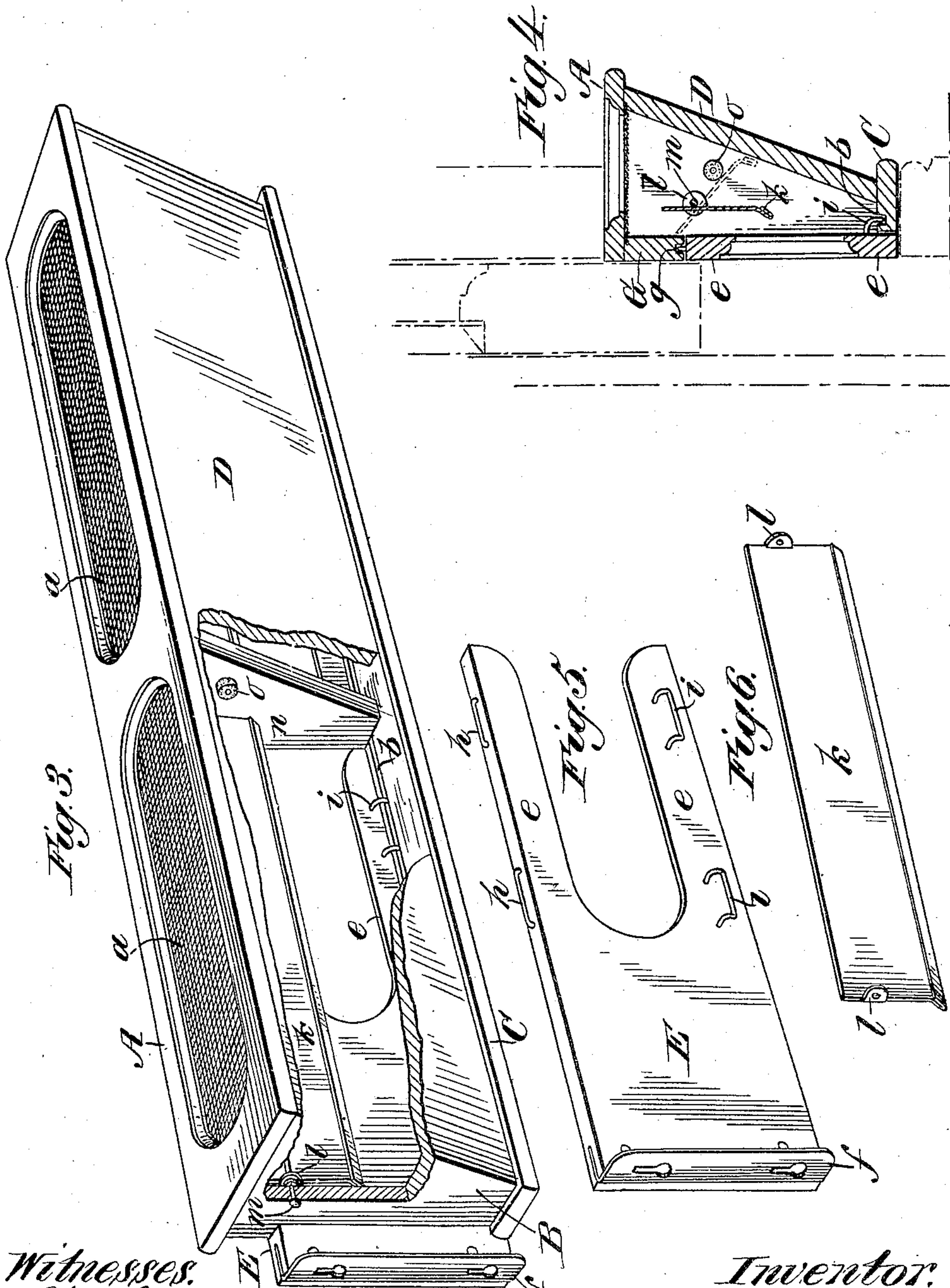
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Robert Corbett,  
N. Lee Stokes

Inventor:  
Allen H. Mix,  
By Wm. Lee Stokes  
Att'y.



# UNITED STATES PATENT OFFICE.

ALLEN H. MIX, OF BURLINGTON, VERMONT, ASSIGNOR TO PORTER SCREEN MANUFACTURING COMPANY, OF BURLINGTON, VERMONT.

## VENTILATOR.

No. 877,725.

Specification of Letters Patent.

Patented Jan. 28, 1908.

Application filed October 18, 1907. Serial No. 398,040.

*To all whom it may concern:*

Be it known that I, ALLEN H. MIX, of the city of Burlington, in the State of Vermont, have invented a new and useful Improvement in Ventilators, of which the following is a specification.

My invention has reference to what are known as window ventilators.

It relates more particularly to means for adjusting the ventilator to the width of window casing in which it may be placed, and also to means for automatically closing the ventilator when there is an abnormally strong inward air current, such as a gust of wind, thus excluding the dirt and dust which often accompany the same. I am aware that a window ventilator provided with either, or both, of these instrumentalities, is not new broadly considered.

My invention resides in the particular construction and arrangement of devices for the purposes mentioned, which will first be described, in connection with the accompanying drawings, and will then be more precisely pointed out in the claims.

In the drawings—Figure 1 is a perspective view of the ventilator looking at its back or outer face. Fig. 2 is a plan of the same with portions of the wire cloth which screens the openings in the top of the box removed to expose the structural details of the automatic shutter arrangement. Fig. 3 is a perspective front view of the ventilator with portions of the front wall of the box removed. Fig. 4 is a cross section on line 4—4 Fig. 2. Fig. 5 is a perspective view of one of the panels detached. Fig. 6 is a perspective view of one of the shutters detached.

A is the top of the ventilator box provided as usual with air admission openings screened by wire cloth *a*. B are the end boards, C is the bottom and D is the inclined front wall of the box. The rear face of the box—that is to say the face which is on the outside of the window to which the ventilator is applied—is open, and to it is applied two sliding panels E which partially close it, constituting in effect a divided cover provided with openings through which the outside air can enter the box, and which at the same time constitute extension panels, which may be pushed together or drawn apart, so that at their outer ends they may fit snugly against the sides of the window casing in which the ventilator is placed. These panels on their vertical outer

edges are armed with metallic plates *f* provided with eyes to engage pins on the sides of the casing and hold the ventilator in place, as will be understood without further explanation. Each sliding panel for that portion of its length which may be drawn out beyond the end of the ventilator box is solid; the other portion is forked, with a wide air admission opening between the upper and lower parallel legs *e* of the fork.

Just below the top A, on the rear or outer face of the box, is a narrow strip or back board G. The upper longitudinal edges of the panels fit against the under edge of this board; and the panels along their lower portions fit laterally against the outer edge of the bottom board B, with their under edges flush with the under face of the bottom board. The outer vertical faces of the panels are flush with the corresponding face of the back board G.

Various means for making the sliding connection between the panels and the box may be employed; those shown in the drawing are those which I now prefer. In the under edge of the back board is formed a longitudinal guide groove *g*, and fast on the upper edge of each panel are upright staples *h* which enter and can move longitudinally in the grooves and form guide runners for the upper edges of the panels. In the top face of the bottom board B, adjoining the panels, is another longitudinal guide groove *b*, and this groove is engaged by staples *i* which are secured to and project laterally from the inner face of the panels, so as to overhang the groove *b*, and have their outer or free ends bent down to enter said groove, thus forming guide runners for the lower edges of the panels. Suitable stops *x*, *y*, for regulating the extent of inward and outward movement of the panels, are provided.

In Fig. 1 one of the panels is drawn out, the other is pushed in. It will be noted that they can easily be adjusted, and have very long bearings which greatly lessen the liability of the panels to stick or jam. It will also be noted that they can readily be drawn out to their full extent so as to expose practically the whole interior of the box, whenever it is desired to clean the same, or to have access to it for any other purpose. The extension panels thus become also in effect a back for the box, which has openings for the admission of outside air, and is divided into



two portions movable outwardly from each other to open up the interior of the box whenever desired.

When the ventilator is in place in the window casing, the inner face of the window sash fits up close against the back of the ventilator, the lower edge of the sash rail coming just a little below the top of the panels, thus excluding all outside air except that which may enter through the ventilator.

The automatic shutter arrangement for the exclusion of dust, etc. during gusts or high winds, consists of two flap shutters *k*, stamped preferably from sheet tin, and having end ears *l* by which they are loosely hung at or near their upper edges upon a wire rod *m* on which, as an axis, they freely swing. Their weight is so distributed that normally they hang in open position so as not to interfere with the free passage of air through the box. The wire rod *m* is of small gage, is secured at its ends in the ends of the box, and is also supported at its middle in a vertical bearing block *n* suitably located and secured in place within the box.

This automatic shutter arrangement is cheap, simple, readily applied to the ventilator, and effective in operation.

Having described my invention and the best way now known to me of carrying the same into practical effect, what I claim and desire to secure by Letters Patent is as follows:

1. The window-ventilator box having an

open back or outer face, and provided with extension panels which are slidably mounted upon the open back of the box, are provided with openings through which air may enter the box, and are movable endwise to and from one another, so as to constitute at once a movable partial cover for the back of the box and extension panels for adjusting the width of the ventilator to that of the window to which it may be applied, substantially as and for the purposes as hereinbefore set forth.

2. The ventilator box having an open back, in combination with end panels *E* slidably mounted on the open back of the box so as to be capable of endwise movement to and from each other, and formed with solid outer portions, and forked inner portions *e e*, substantially as hereinbefore set forth.

3. The ventilator box provided with bottom board *B* having groove *b* in its upper face, and top back board *G* having groove *g* in its under edge, in combination with the extension panels *E* fitting against the outer edge of the bottom board *B* and the under edge of the back board *G* and provided with runners *h, i* to enter said grooves *g b* respectively, substantially as hereinbefore set forth.

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

ALLEN H. MIX.

Witnesses:

JAMES O. WALKER,  
JAMES H. JACOBS.