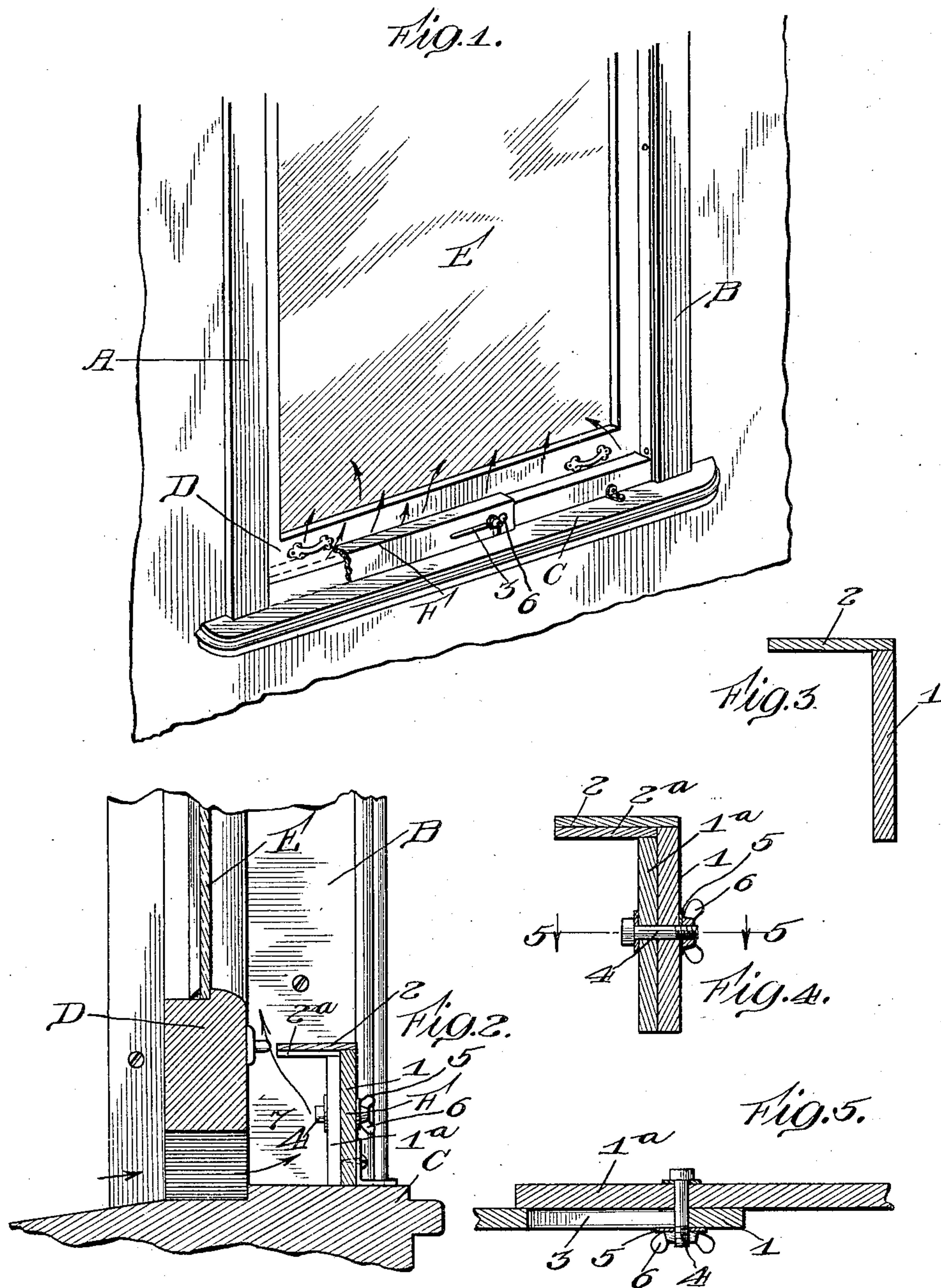


No. 886,714.

PATENTED MAY 5, 1908.

J. L. MALLORY.
WINDOW VENTILATOR.
APPLICATION FILED JAN, 13, 1906.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 6.

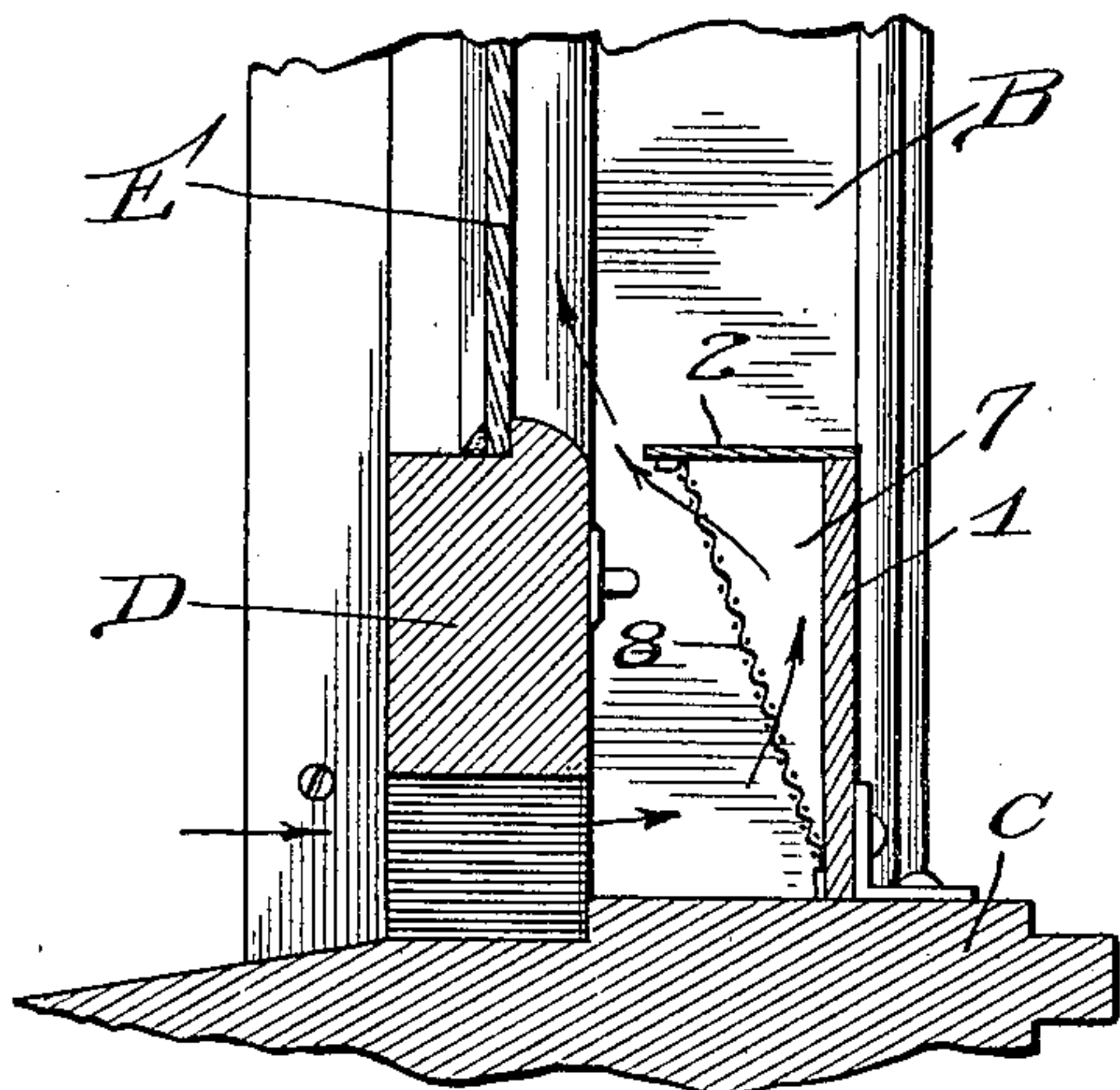


Fig. 7.

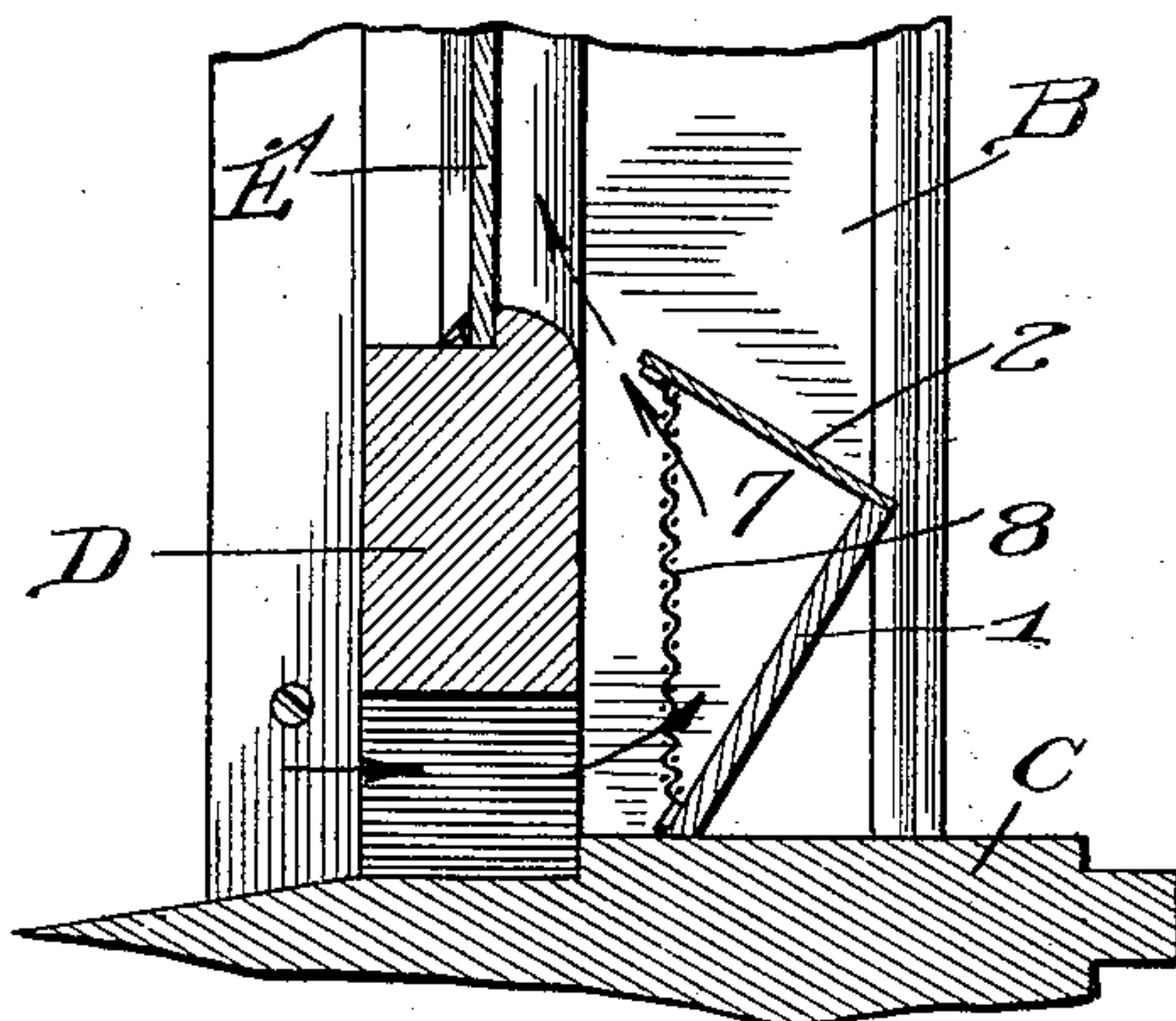


Fig. 9.

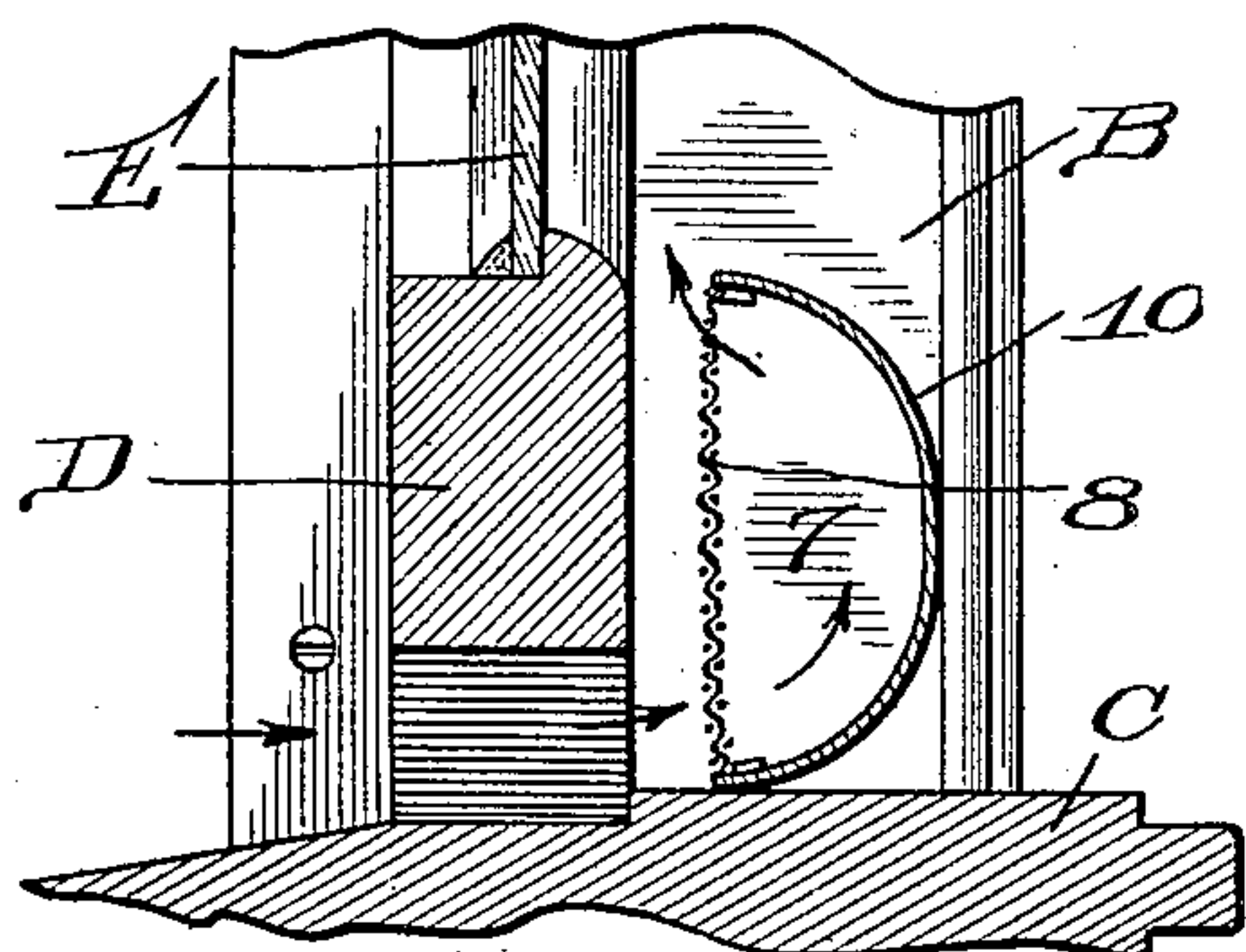


Fig. 8.

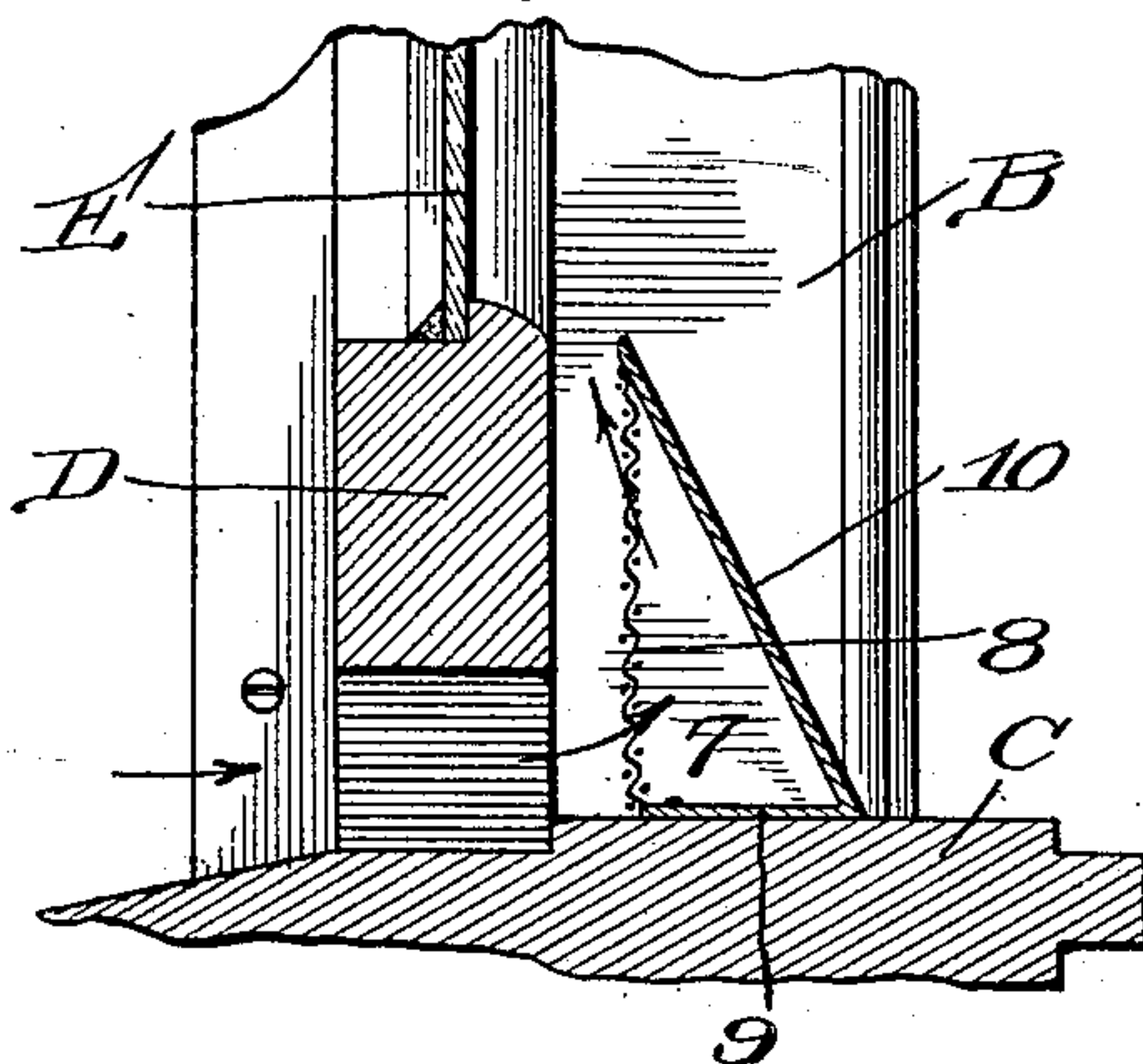
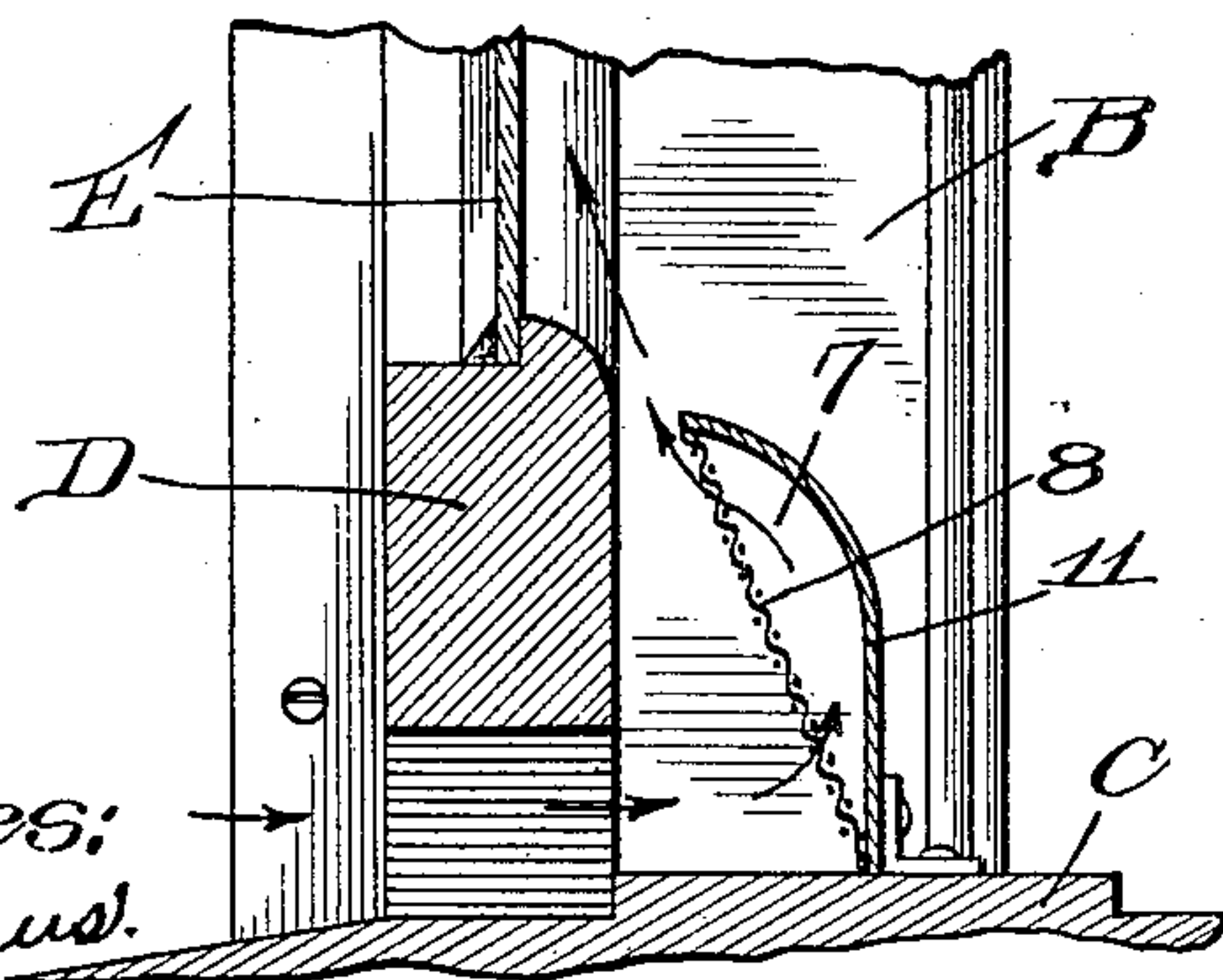


Fig. 10.



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UNITED STATES PATENT OFFICE.

JAMES L. MALLORY, OF EVANSTON, ILLINOIS.

WINDOW-VENTILATOR.

No. 886,714.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed January 13, 1906. Serial No. 295,941.

To all whom it may concern:

Be it known that I, JAMES L. MALLORY, a citizen of the United States, residing at Evanston, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window-Ventilators, of which the following is a specification.

This invention relates to improvements in window ventilators and has special reference to such ventilators as are adapted to be used in connection with sliding windows, and it consists in the features of construction hereinafter described and claimed.

The object of my invention is to provide a device of this class which is adapted to direct the incoming air current entering below the partly raised window-sash upwardly and outwardly, or toward the sash, whereby undesirable drafts of cold air are eliminated.

In the accompanying drawings, Figure 1 is a perspective view of a portion of a window provided with a form of ventilator embodying my invention, one end of the ventilator being broken away. Fig. 2 is an enlarged vertical sectional view of the same, showing the ventilator in transverse section. Fig. 3 is an enlarged cross-sectional view of the ventilator removed from the window. Fig. 4 is a view similar to Fig. 3 but with the section taken through the ventilator at a different point. Fig. 5 shows a horizontal longitudinal section on the line 5—5 of Fig. 4, looking downward. Figs. 6, 7, 8, 9 and 10, are views similar to Fig. 2, but show modified forms of the ventilator.

Like reference characters refer to similar parts throughout the several views.

In the several figures A and B are side-styles of a window-frame.

C is the sill.

D is the bottom rail of the lower sash E of the window.

F is the ventilator forming the subject of the present invention.

The ventilator F, when constructed as shown in Figs. 1, 2, 3, 4, 5 and 6 comprises an upright deflecting board 1, and an overhang member 2 secured to the top thereof along one edge and extending toward the sash D. The width of the space between the outer edge of the overhang member 2 and the sash D may be varied, if desired, by moving the ventilator toward or away from the sash D, but ordinarily the ventilator will be permanently secured in place upon the sill C in such a position that this space will be relatively re-

stricted. The deflecting board 1 and the overhang member 2 may be formed of any convenient material, such as wood or the like, or, if desired, may be formed of sheet metal or other suitable material in a single piece. The device may, if desirable, be so constructed as to be adjustable to windows of varying width. This result is conveniently attained by forming the device in two separable parts adapted to have sliding or telescopic adjustment longitudinally of each other, and providing means for locking said parts in adjusted position to prevent changes in the length of the device.

When constructed as shown in Figs. 1 to 5 inclusive, the structure comprising the deflecting board 1 and overhang member 2 is made somewhat shorter than the width of the window, and a second structure consisting of an inner or secondary deflecting board 1^a and corresponding overhang member 2^a is adapted to slide within the first-named structure. The outer deflecting board 1 is formed with a slot 3 extending longitudinally thereof, and the inner deflecting board 1^a is provided with a bolt 4 extending therethrough and adapted to move along the groove 3 as the parts of the device are moved to lengthen or shorten the device. The outer end of the bolt 4 is provided with a washer 5 and thumb-nut 6 by the tightening of which the parts are securely locked together.

It will be seen that when this device is applied to a window, a chamber will be formed between the ventilator F and sash D. This chamber, designated 7, will have, when the sash is slightly raised, two openings, first an inlet opening below the sash D through which the air entering from outside the apartment must pass, and, second, an opening at the top of the chamber 7 between the edge of the overhang member 2 and the sash D. It is to be observed also that this latter opening, leading to the interior of the apartment, is, in form, long and relatively narrow, and is located adjacent the sash.

With the ventilator in place and the sash slightly raised, as shown in Fig. 2, the air current entering from outside the apartment will first strike the deflecting board 1 and will be given an upward turn, and will then be further deflected by the overhang 2 and directed outwardly or toward the window-sash. By reason of the peculiar rotary movement imparted to the air current and the location of the opening through which the air is admit-

ted to the apartment, the current is directed upward and toward the sash instead of toward the interior of the apartment as with older constructions. The air is thus made
 5 to rise along the face of the window before distributing itself about the apartment, instead of, as with older forms of ventilators, being permitted to enter the room in a divergent stream. The advantages accruing
 10 from this peculiar feature of the operation of my ventilator are obvious.

If desired, suitable means may be provided whereby dust, cinders and the like contained in the air entering below the sash may be arrested.
 15 rested.

In Fig. 6 is shown a ventilator of substantially similar construction to that shown in Figs. 1 to 5 inclusive, but having combined therewith means adapted to free the air of
 20 dust. In this device a strip of reticulated or perforated material 8 is secured along one of its edges to the overhang member 2, near the outer edge of the latter, and is secured along its lower edge to the deflecting board 1, near
 25 the lower edge of the same. This strip 8 may conveniently consist of wire netting. The incoming air current entering below the sash D will pass through the screen 8 before impinging the deflecting board 1, and, after receiving its peculiar rotary movement as here-
 30 inbefore explained, will again pass through the screen before issuing to the apartment. Part of the dust will be arrested on the outer side of the screen. By reason of the fact
 35 that the air is suddenly arrested in its movement and baffled in the pocket behind the screen, the finer dust that has passed through the screen will be deposited in this pocket. This combined screening and baffling action
 40 thus results in the practical elimination of all dust from the incoming body of air.

In Fig. 7 is shown a ventilator substantially similar in construction to that shown in the preceding figures, but mounted in the
 45 window casing in a different position. The operation of the device is practically similar, when thus placed, to that already described in connection with Figs. 1 to 6 inclusive. This device may, if desired, be fitted with the
 50 strip of screen 8.

In Fig. 8 is illustrated a modified form of ventilator embodying my invention. This device comprises a base board 9 adapted to rest upon the sill C, and a deflecting board 10
 55 secured to the outer edge of the base board 9. This deflecting board is inclined toward the window-sash, so that its upper edge forms, in combination with such sash, a long, narrow opening for the passage of the air current.
 60 The action of this form of ventilator is similar to that of the forms hereinbefore described. The screen 8 may be employed with this form of device if desired.

In the modification shown in Fig. 9, the
 65 casing or shell 10 consists of a strip of some

suitable material, as sheet metal, bent to form a half circle. This casing or shell is placed in the window casing with its open side toward the sash, and serves, when in such position, to impart to the incoming air
 70 current the peculiar rotary movement pointed out in connection with the other forms of the device. The screen 8 may be used with this device if desired.

The form of ventilator shown in Fig. 10
 75 may conveniently be constructed of sheet metal, and consists of a strip 11 of suitable material, having one of its edges bent on a curve. When this device is placed in the window-casing with its concave side toward
 80 the sash, the air current will first strike the upright part of the strip 11 and be given an upward turn and will then be given an outward turn by the overhanging upper edge of the same, the air current being thus given
 85 the desired rotary and outward movement. This device, as shown, is provided with the strip of screen 8, but may, like the other forms shown, be used without such strip if
 90 desired.

It will be seen that the invention disclosed in the illustrative forms shown and described herein contemplates, in its broad aspect, the use, in combination with a window-sash, of a
 95 casing or shell having an open side and adapted to be placed in the window-casing with its open side toward the sash, this casing or shell being so formed as to impart to a current of air entering below the sash an up-
 100 ward and outward movement, so that the current is directed toward the sash and all objectionable drafts are eliminated. The combination with this casing or shell of the strip of perforated or reticulated material
 105 extended across the open side thereof and adapted to be twice traversed by the air current is regarded as a new and valuable feature in devices of this class.

I claim:

1. A ventilator to govern the passage of
 110 air through an opening, comprising a deflector and a screen, the deflector and screen so arranged relative to the opening that the air from said opening passes twice through the
 115 screen.

2. A ventilator to govern the passage of air through an opening, comprising a deflector which forms a pocket, and a screen extending across the pocket, said pocket arranged opposite to said opening, so that the
 120 air therefrom passes in and out of the pocket through the screen in reverse directions.

3. A ventilator to govern the passage of air through an opening, comprising a deflector consisting of an upright part and an over-
 125 hanging part constituting together a pocket, and a screen across said pocket, said ventilator adapted to be arranged with the pocket opposite said opening.

4. The combination with a window frame 130

and sash, of a ventilator adapted to be placed
opposite the opening made by raising the
sash, said ventilator consisting of a deflector
which forms a pocket, and a screen across
5 said pocket, whereby incoming air passes
twice through said screen.

5. The combination with a window frame
and sash, of a ventilator adapted to be placed
opposite the opening made by raising said
10 sash, said ventilator consisting of a deflector
having an overhang approaching close to the
sash and constituting a pocket in front of
said opening and a screen across said pocket.

6. The combination with a window frame

and sash, of a ventilator adapted to be placed 15
opposite the opening made by raising the
sash, said ventilator consisting of a vertical
deflecting member, a horizontal deflecting
member which approaches close to the sash,
so as to form a relatively narrow slot between 20
the ventilator and the sash, and a screen ex-
tending from the vertical member to the
horizontal member.

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