

A. M. ARNESEN.

VENTILATOR.

APPLICATION FILED OCT. 29, 1908.

944,250.

Patented Dec. 28, 1909.

3 SHEETS—SHEET 1.

Fig. 1

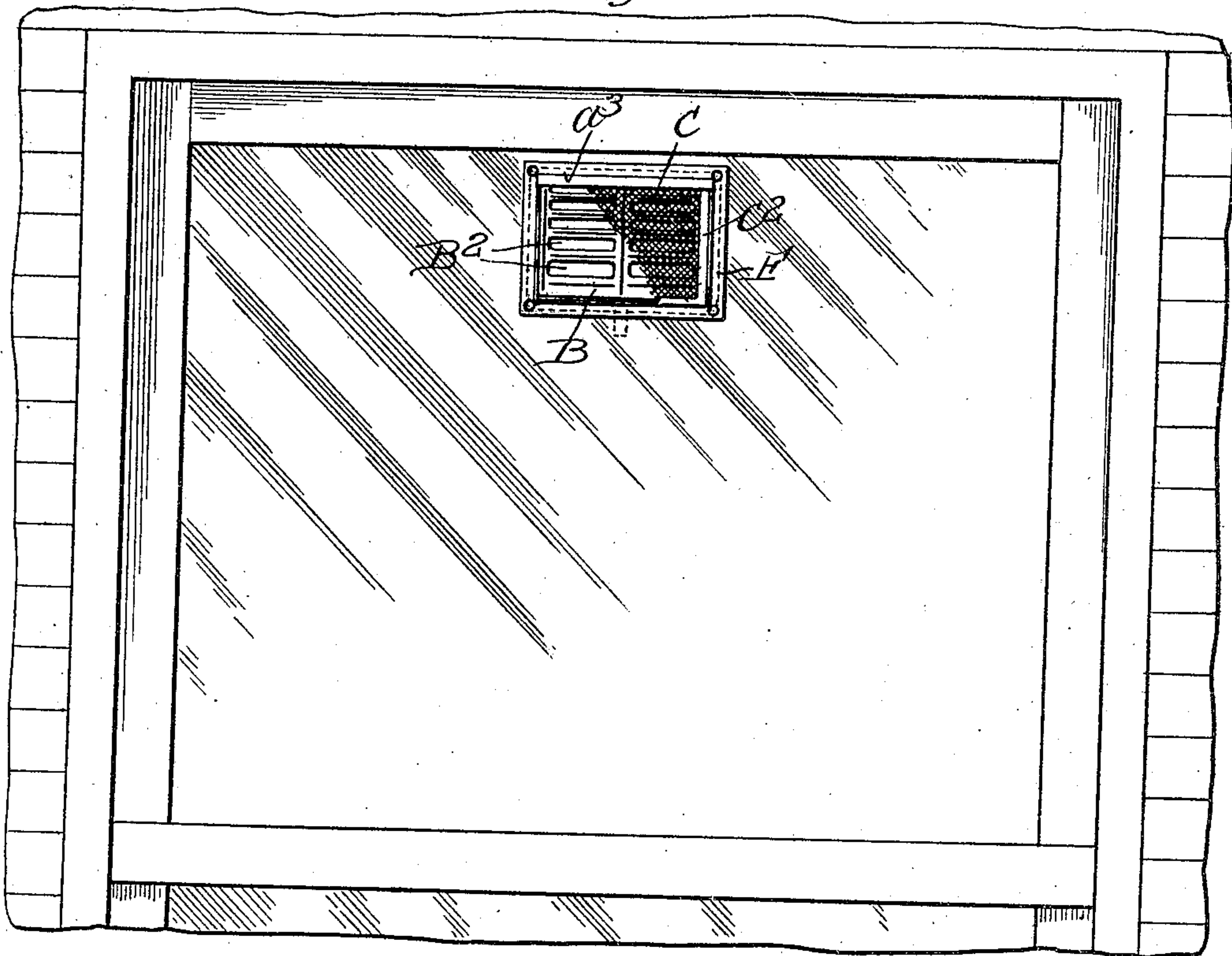
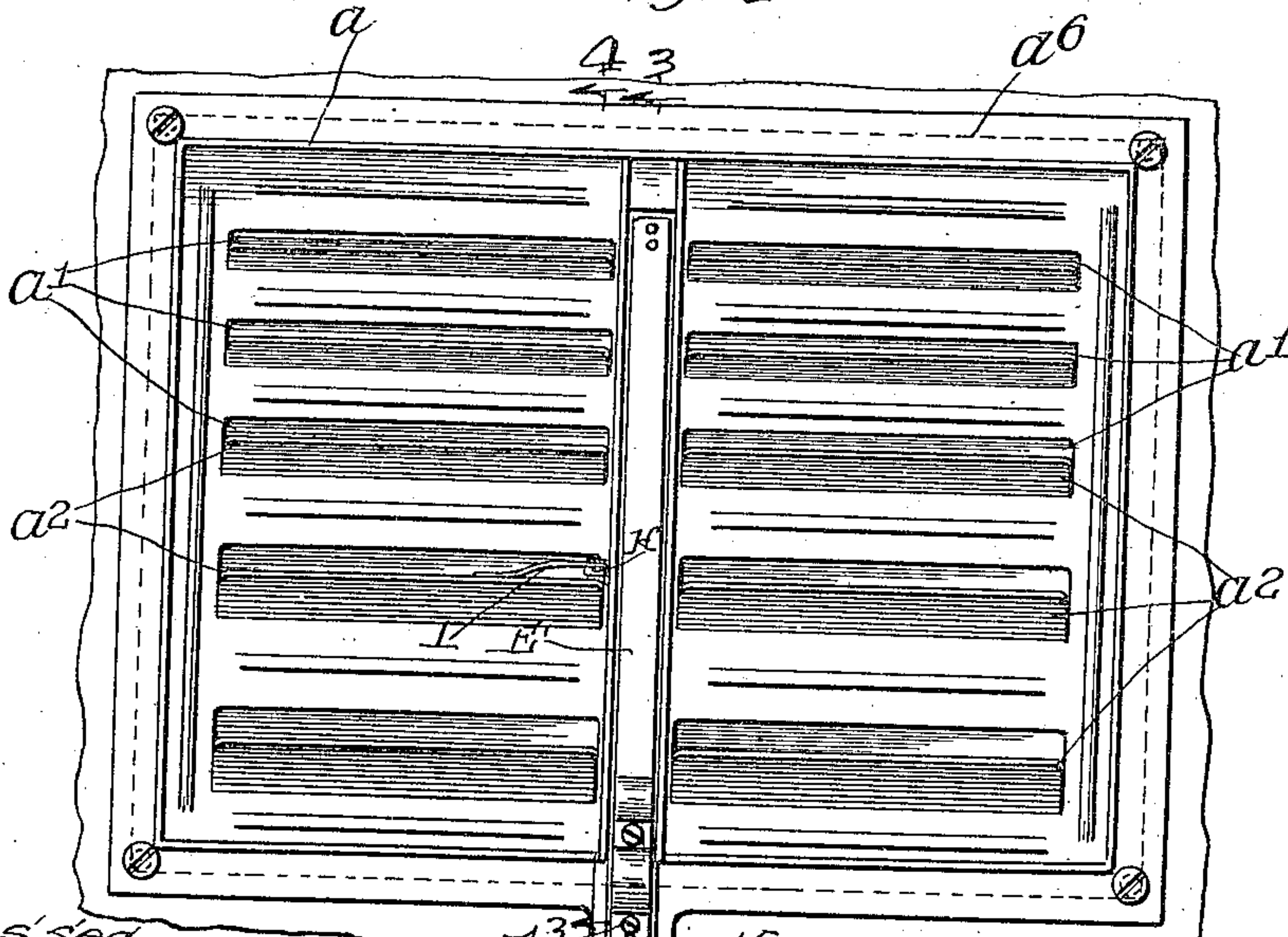


Fig. 2



Witnesses

Harry R. L. White
R. A. White.

Inventor

Alfred M. Arnesen

By Edwin Q. Howard,

Atty.

A. M. ARNESEN.

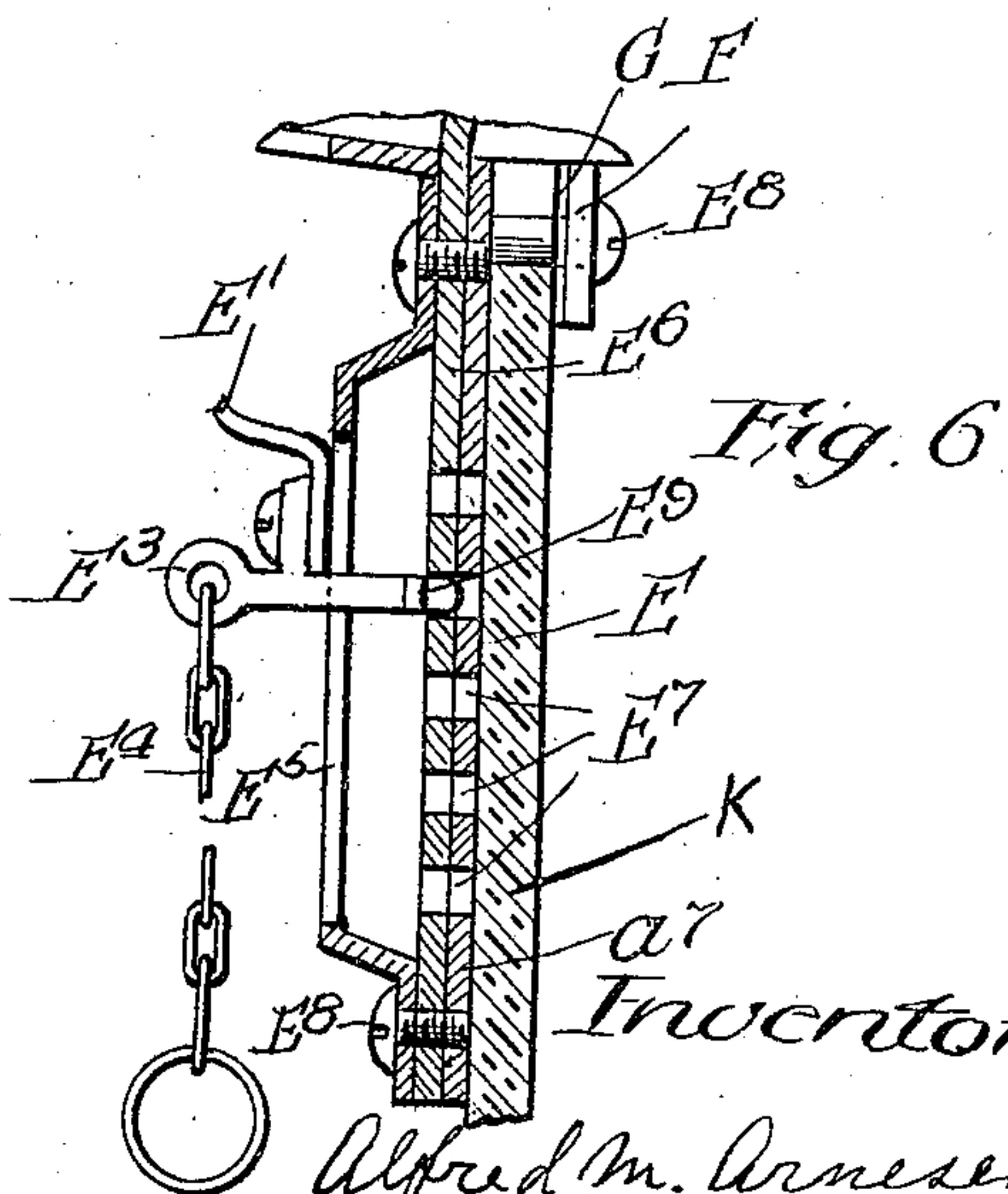
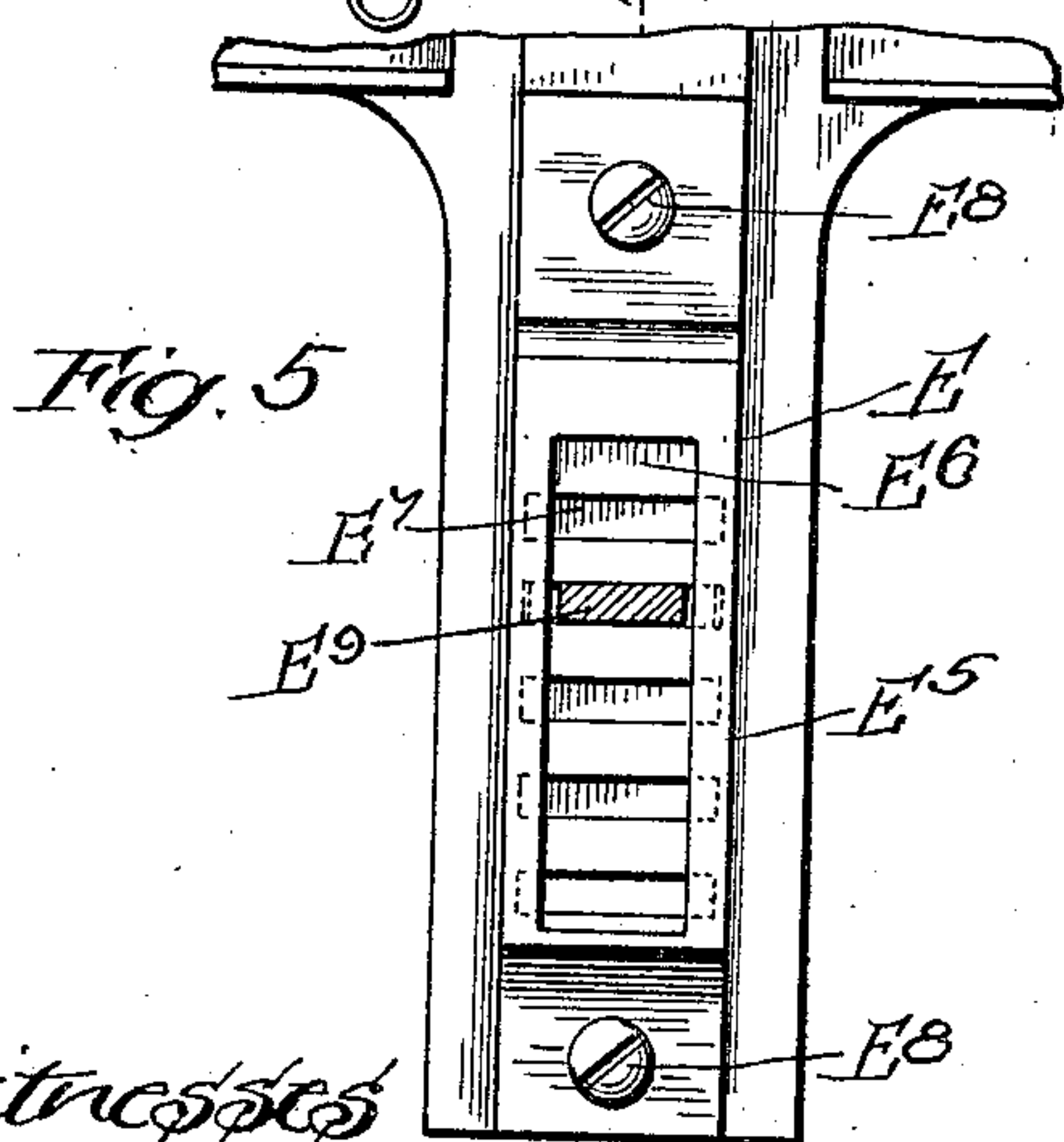
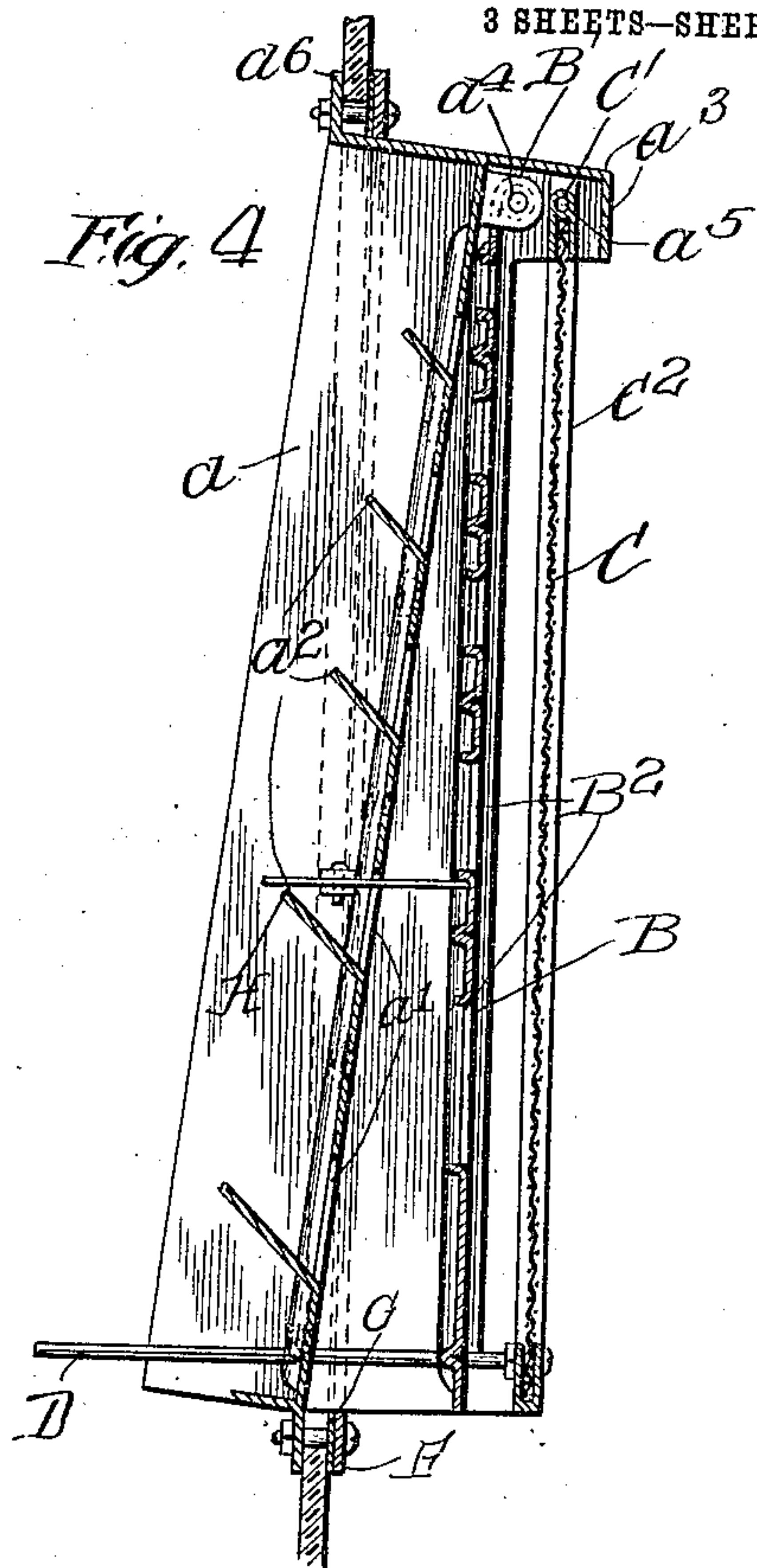
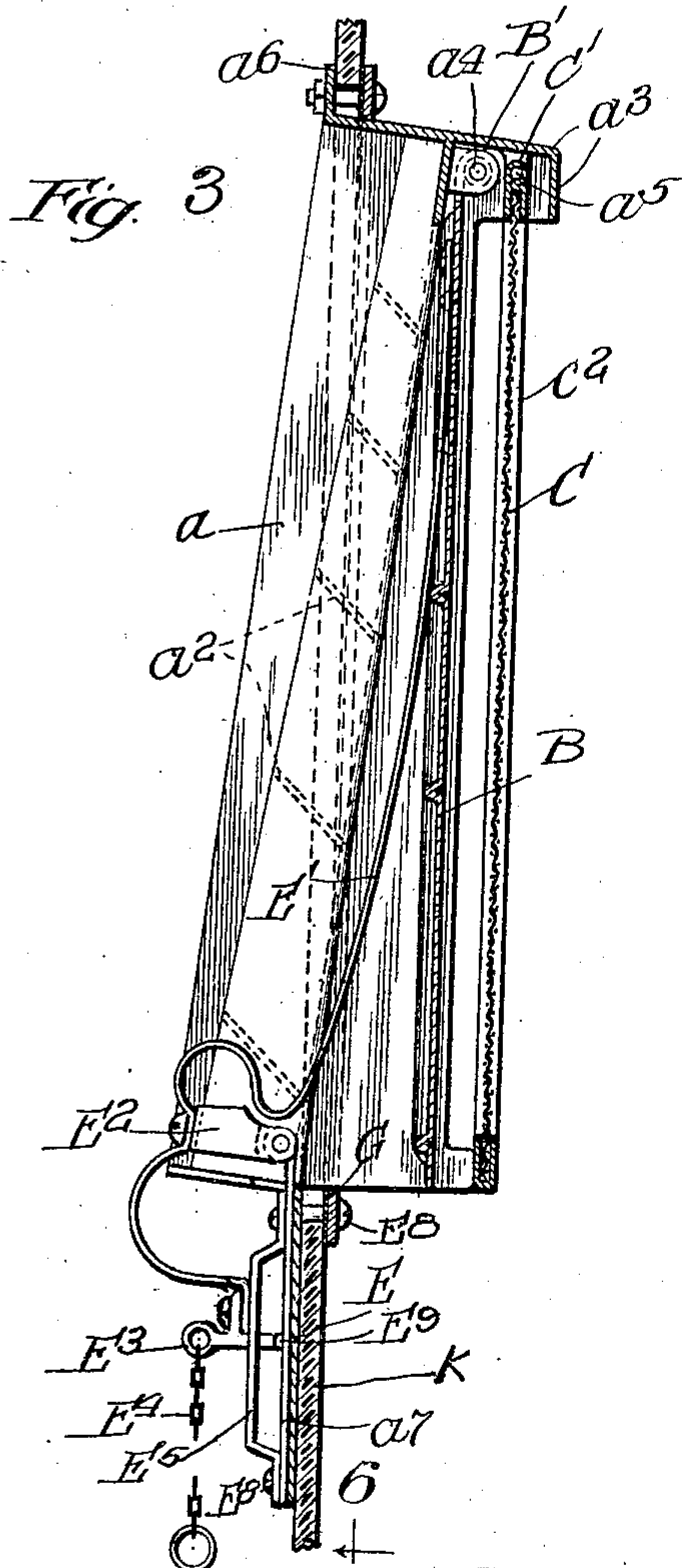
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3 SHEETS—SHEET 2.



Witnesses
Harry R. Levitt.
R. A. White.

Inventor
Alfred M. Arnesen
By Einar C. Howard, Atty.

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3 SHEETS—SHEET 3.

Fig. 7

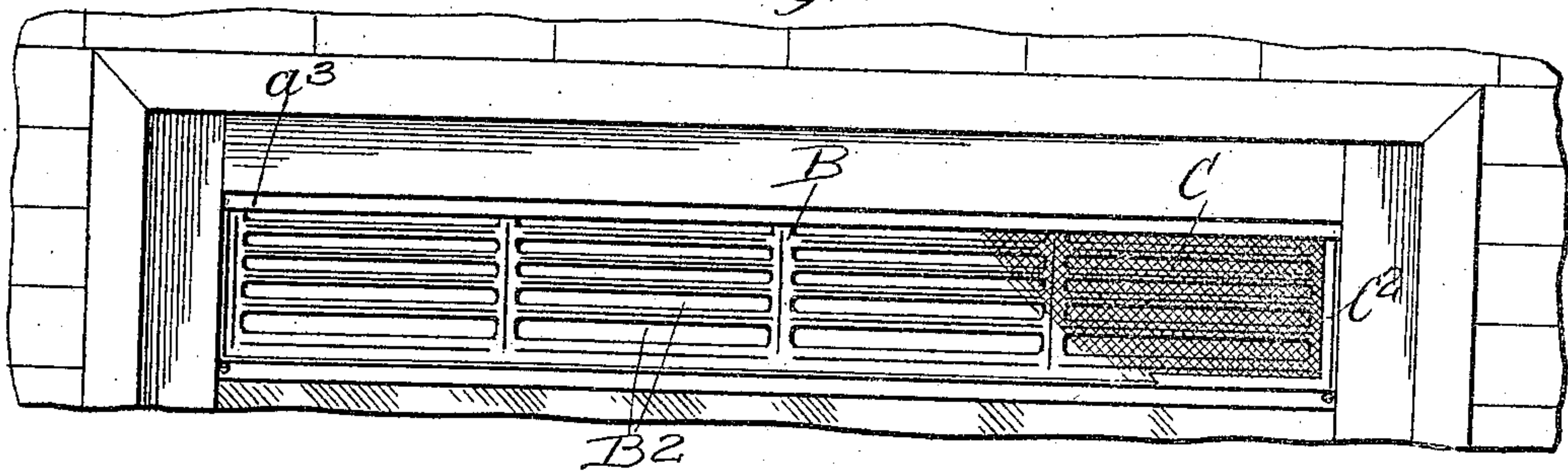


Fig. 8

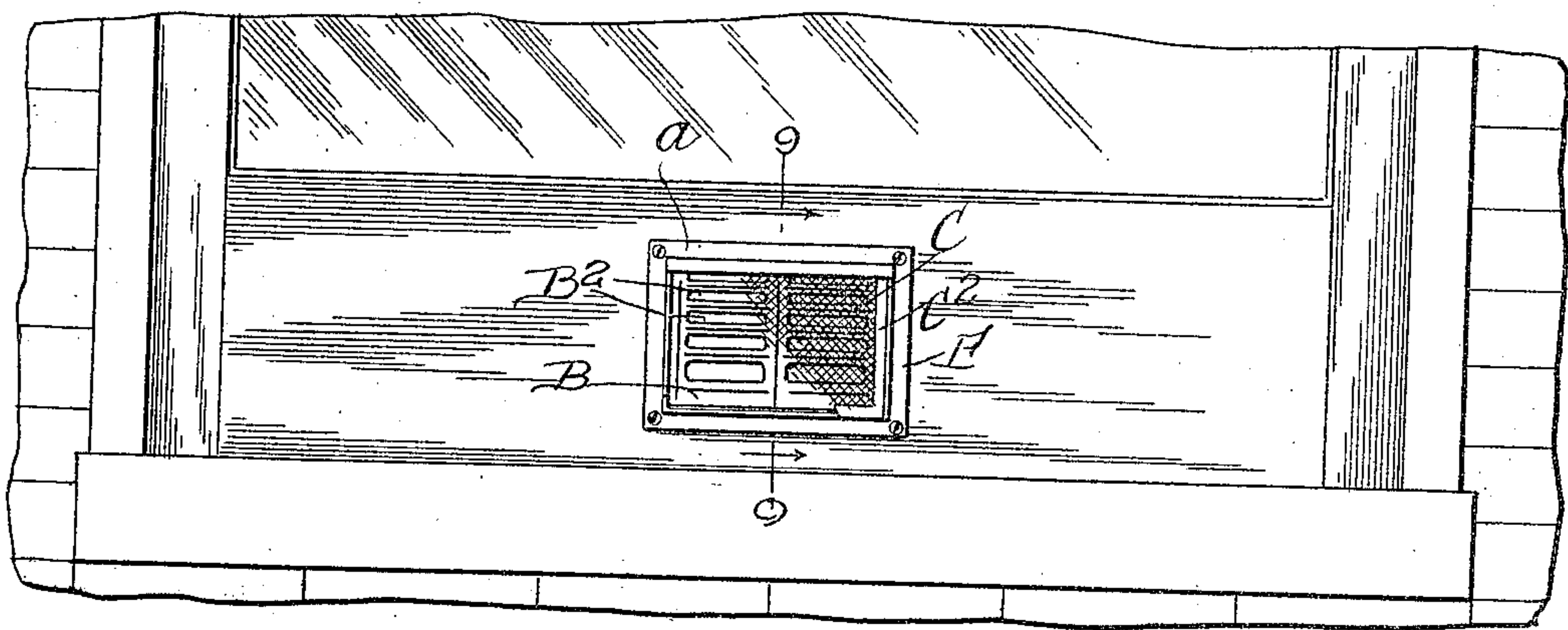
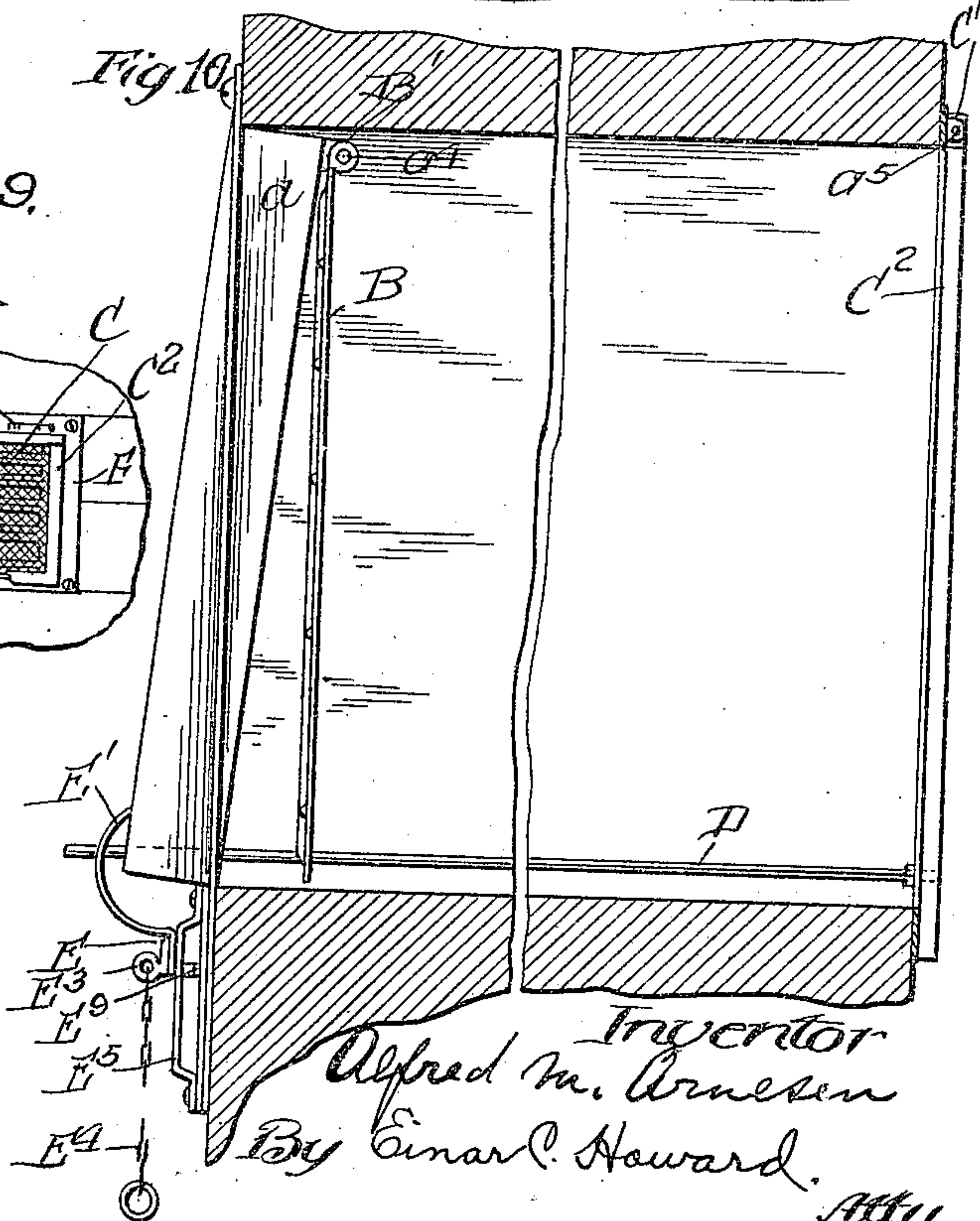
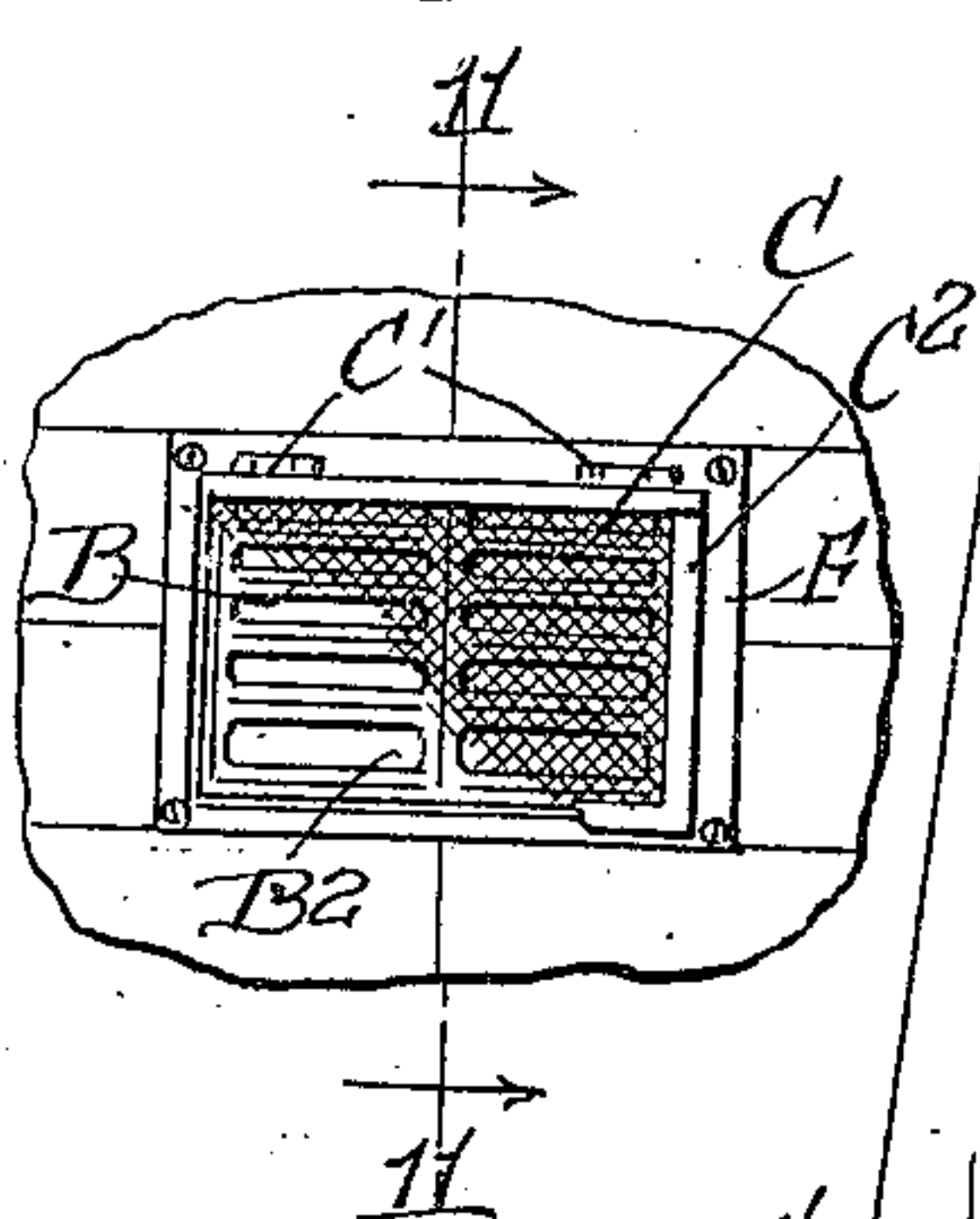


Fig. 10

Fig. 9.



Witnesses
Harry R. L. White
R. A. White.

Inventor
Alfred M. Arnesen
By Einar C. Howard.
Atty.

UNITED STATES PATENT OFFICE.

ALFRED M. ARNESEN, OF CHICAGO, ILLINOIS.

VENTILATOR.

944,250.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed October 29, 1908. Serial No. 460,003.

To all whom it may concern:

Be it known that I, ALFRED M. ARNESEN, a citizen of the United States, residing at 252 Christiana avenue, Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Ventilators, of which the following is a specification.

My invention relates to an automatic ventilator and has for its objects the ventilating of living rooms, offices, and any other rooms or halls, whereby promoting the health of persons in their houses, offices and other places inside of buildings. Furthermore, the construction of this ventilator is very simple and therefore has the additional advantageous feature of being cheap and economizing to the purchaser. I attain these objects by the ventilator as illustrated in the accompanying drawings in which—

Figure 1 represents the outside view of the complete ventilator as it is placed in the upper part of the window pane. Fig. 2 illustrates the inside view similarly situated. Fig. 3 is a sectional view of the ventilator. Fig. 4 is another sectional view showing some of the parts to better advantage. Fig. 5 is a front view of a portion of the regulator, showing particularly the slotted ear plate. Fig. 6 represents a sectional view of the regulator, with the exception of the spring, of which only the extreme lower portion is shown. Fig. 7 shows the outside view of the ventilator as it is fastened to the sash at the upper end of the window, and running across the sash. Fig. 8 shows the same at the lower portion of the window. Fig. 9 shows the outside view of the ventilator as placed in a wall. Fig. 10 is a sectional view of the ventilator as placed in a wall.

A represents the body, which may be made of metal or other suitable material. It can be made square, circular, concave or convex, or any suitable shape.

A¹ represents the openings in the body, through which the air passes. These openings may be large or small, any shape or any suitable number.

A² are deflectors which, being turned backward, turn the incoming air upward.

A³ is the upper part of the body, which

is in the nature of a box covering, preventing dust, hail, rain and snow from entering and clogging the ventilator.

A⁴ represents hinge holes in the body for fastening the lid to the body.

A⁵ represents hinge holes for fastening the screen, as shown in the drawings, but both the lid and the screen may be worked by eyes and pins or fastened in any suitable manner.

A⁶ represents the flanges of the body.

B is a lid, which should be made of some light metal or other material, so that it can swing easily with the wind.

B¹ are hinges which are used to fasten the lid to the body, but as stated above, it can be fastened in any suitable manner.

B² are openings in the lid through which the air passes. These openings may be large or small, any shape and any suitable number; however, the openings in both the body and the lid should be so placed that when the lid is pressed against the body, the respective openings should not come together and no air should come into the room.

A⁷ is the lower extension of the body.

C represents the screen on the outside, preventing snow, etc., from passing into the room.

C¹ are the spring hinges fastening the screen to the body. C² the frame of the screen.

D is a snowshaker, which may consist of a rod which, if pushed in and then suddenly let go, will cause the screen to spring back, thus shaking off the snow.

E is the complete regulator, including the spring; this regulator is worked by hand, by putting a lug into the various lug holes in the plate attached to the lower extension of the body, causing the ventilator to be shut, partly open or fully open. E¹, the spring, one of the most important parts of the regulator. This spring begins at the upper part or any suitable part of the lid, and coming down between the body and the lid, makes a double turn, and is fastened to a movable segment, and, making another curve, is again fastened by a screw, or otherwise, to a lug with a chain attached, by which the regulator is operated. This spring may also be made with a single curve or without any

turn or curve, or any suitable shape. Two or more springs may also be used instead of one.

E^2 is a segment to which the spring is attached; this segment moves upward or downward, according to whether the chain is slackened or pulled.

E^3 is a lug to which the spring is attached on one side and a chain on the other side.

E^4 is a chain attached to the lug.

E^5 is a slotted ear plate, which keeps the lug in place, preventing the spring from being stretched too far if the chain be pulled too violently, and preventing the lug from going to either side or too far outward.

E^6 is a plate, preferably of metal, attached to the lower extension of the body. E^7 , lug holes through the plate and lower extension of the body through which the lug enters.

E^8 , as shown in the drawings, are the screws on the regulator, but any suitable method of fastening may be used.

E^9 is a shoulder on the lug to prevent the lug from going too far out or in.

F is a frame used on the outside of the glass in attaching the ventilator in a window pane; this frame is not strictly a part of the ventilator itself, but is considered one of the best methods of attaching the ventilator in a window pane.

G is a rubber inside the frame for the purpose of protecting the glass and to make it airtight; another rubber may be used on the inside of the glass; these rubbers are not strictly parts of the ventilator.

H is a stopper, which when in use, as illustrated in Fig. 4, will keep the ventilator open irrespective of the wind.

I is a little spring placed on the inside of the body; this spring presses on the rear portion of the stopper, whether the stopper is placed in an open or closed position, thereby aiding in keeping the ventilator open or closed.

K refers to the glass or window pane.

The ventilator works and is regulated in the following manner: The air passes first through the screen and through the openings in the lid, thereafter through the openings in the body and into the room. The ventilator works automatically in this respect: The lid being light and hanging loosely, a strong wind will drive it back toward the body and lessen the opening, admitting about the same amount of air into the room whether the wind is mild or strong, whereas, if this feature of the ventilator be omitted, the stronger the wind, the more air will pass into the room. If the wind be violent it may entirely close the ventilator; the distance the lid will be driven back, or whether it may close entirely, depending not only upon the velocity of the wind, but also upon the weight of the lid and how it may be fastened and also upon the distance between the lower parts of

the body and the lid when in their normal positions. This feature is very important, as, in the night, when no one can regulate the ventilator, and a very strong and cold wind comes up, the ventilator will either close entirely or let in a small amount of air, thereby preventing the large number of colds caused by open windows or imperfect ventilators.

Another feature of the ventilator is the upward turn of the deflectors in the body, causing the air to go upward instead of directly toward the person in the room.

The ventilator is regulated by hand by means of the chain attached to the lug. On the drawing are shown five lug holes, but any number at various distances can be put in. When the lug is placed in the upper hole, the ventilator is entirely open; when placed in the lower hole, it is entirely closed; when placed in any intermediary hole, it is partly open.

Another feature of the ventilator is that it is so constructed, especially when the screen and snowshaker is used, that snow, rain hail and dust are either prevented entirely from entering the room or reduced to the minimum.

The ventilator may be placed in the window, in the wall at the time or after the house is built, or in any suitable place which affords an ingress into the room.

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

1. In a ventilator, the combination of a body with openings and deflectors, a lid, with openings, fastened to the body, a screen, a snowshaker attached to the screen, a stopper with a spring pressing thereon attached to the body, a segment, a plate, with lug holes, attached to the lower extension of the body, a slotted ear plate attached to the plate, a lug extending through the slotted ear plate and into the lug holes in the plate, a chain attached to the lug, and a spring attached to the lid and fastened to the segment and lug, substantially as described.

2. In a ventilator, the combination of a body with openings and deflectors, a lid, with openings, a screen with a snowshaker, a segment, a plate, with lug holes, attached to the lower extension of the body, a slotted ear plate attached to the plate, a lug extending through the slotted ear plate and into the lug holes in the plate, a chain attached to the lug, and a spring attached to the lid and fastened to the segment and lug, substantially as described.

3. In a ventilator, the combination of a body with openings and deflectors, a lid with openings fastened to the body, a segment, a plate, with lug holes, attached to the lower extension of the body, a slotted ear plate, a lug extending through the slotted

ear plate and into the lug holes, a chain attached to the lug, and a spring attached to the lid, segment and lug, substantially as described.

5 4. In a ventilator, the combination of a body with openings and deflectors, a lid, with openings, a screen with a snowshaker, a segment, a slotted ear plate attached to the lower extension of the body, a lug extending
10 through the slotted ear plate and into the lug holes in the lower extension of the body, a chain attached to the lug, and a spring attached to the lid, segment and lug, substantially as set forth.

15 5. In a ventilator, the combination of a body with openings and deflectors, a lid, with openings, fastened to the body, a stopper with a spring pressing thereon attached to the body, a segment, a plate, with
20 lug holes, attached to the lower extension of the body, a lug extending into the lug holes

in the plate, and a spring attached to the lid and fastened to the segment and lug, substantially as set forth.

6. In a ventilator, the combination of a 25 body with openings and deflectors, a lid, with openings, fastened to the body, and a screen with a snowshaker, substantially as described.

7. In a ventilator, the combination of a 30 body with openings, a lid, with openings, a screen with a snowshaker, a segment, a plate, with lug holes, a slotted ear plate, a lug extending through the slotted ear plate and into the lug holes, a chain, and a spring at- 35 tached to the lid and fastened to the segment and lug, substantially as set forth.

ALFRED M. ARNESEN.

Witnesses:

ALBERT EISEMANN,
NOIDAHL M. BERG.