

No. 842,308.

PATENTED JAN. 29, 1907.

C. E. ERBY.
VENTILATOR.

APPLICATION FILED APR. 6, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

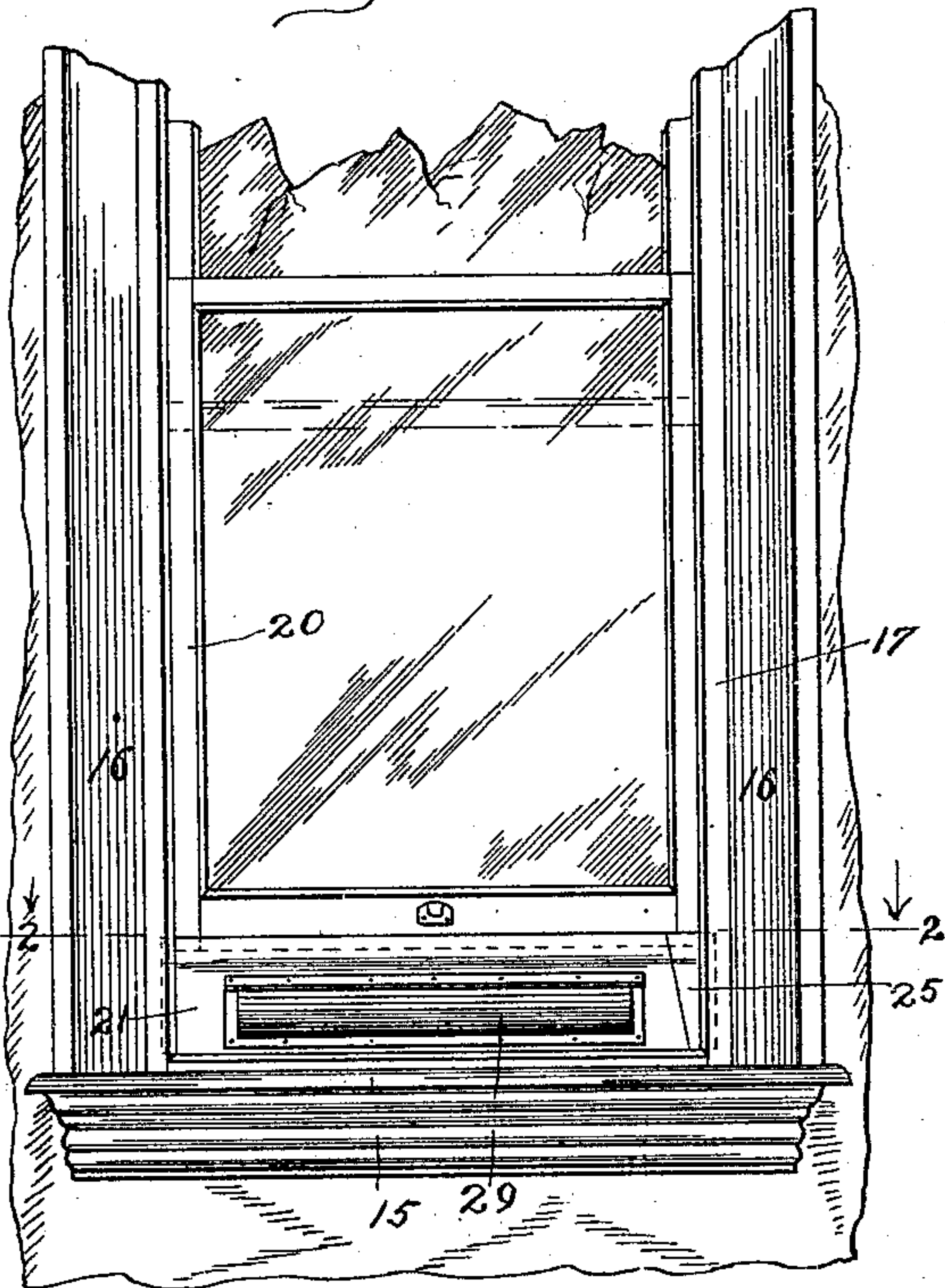


Fig. 2.

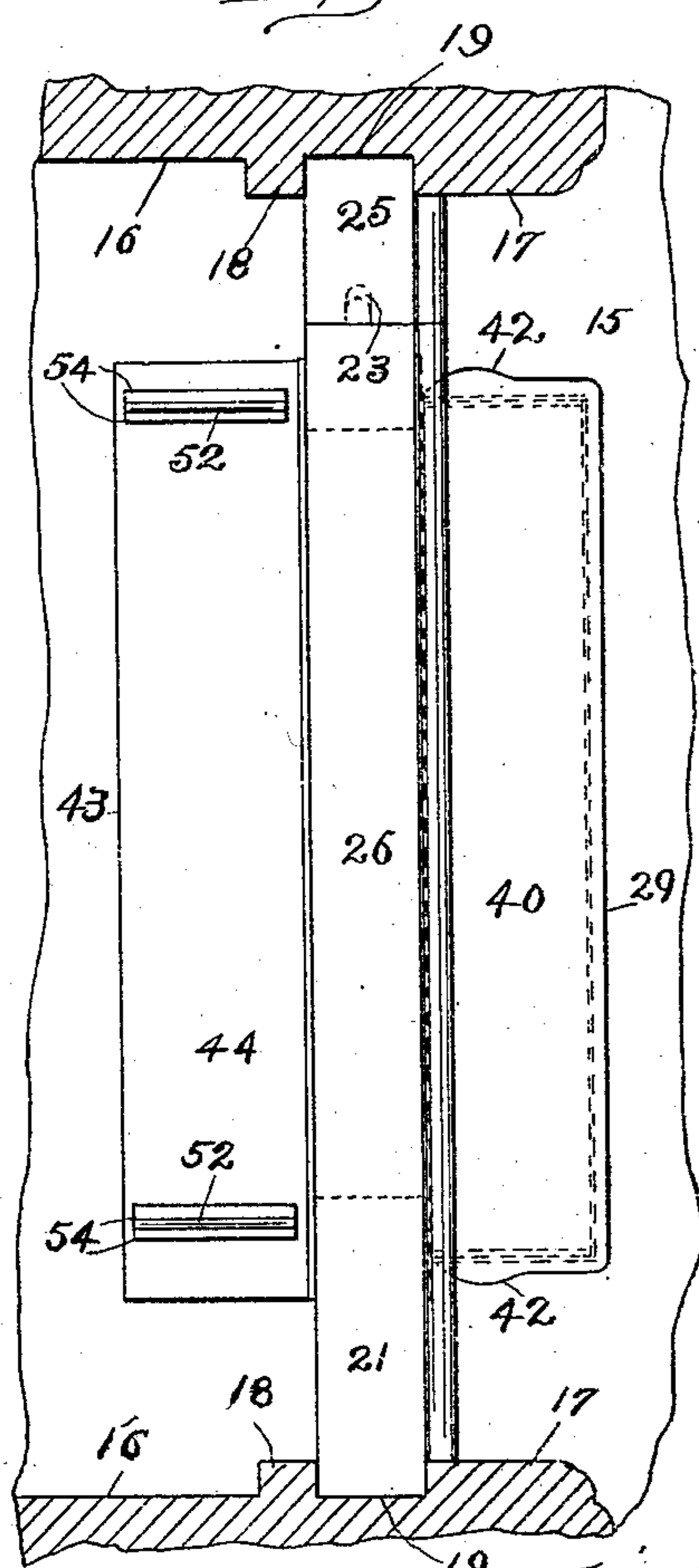


Fig. 3.

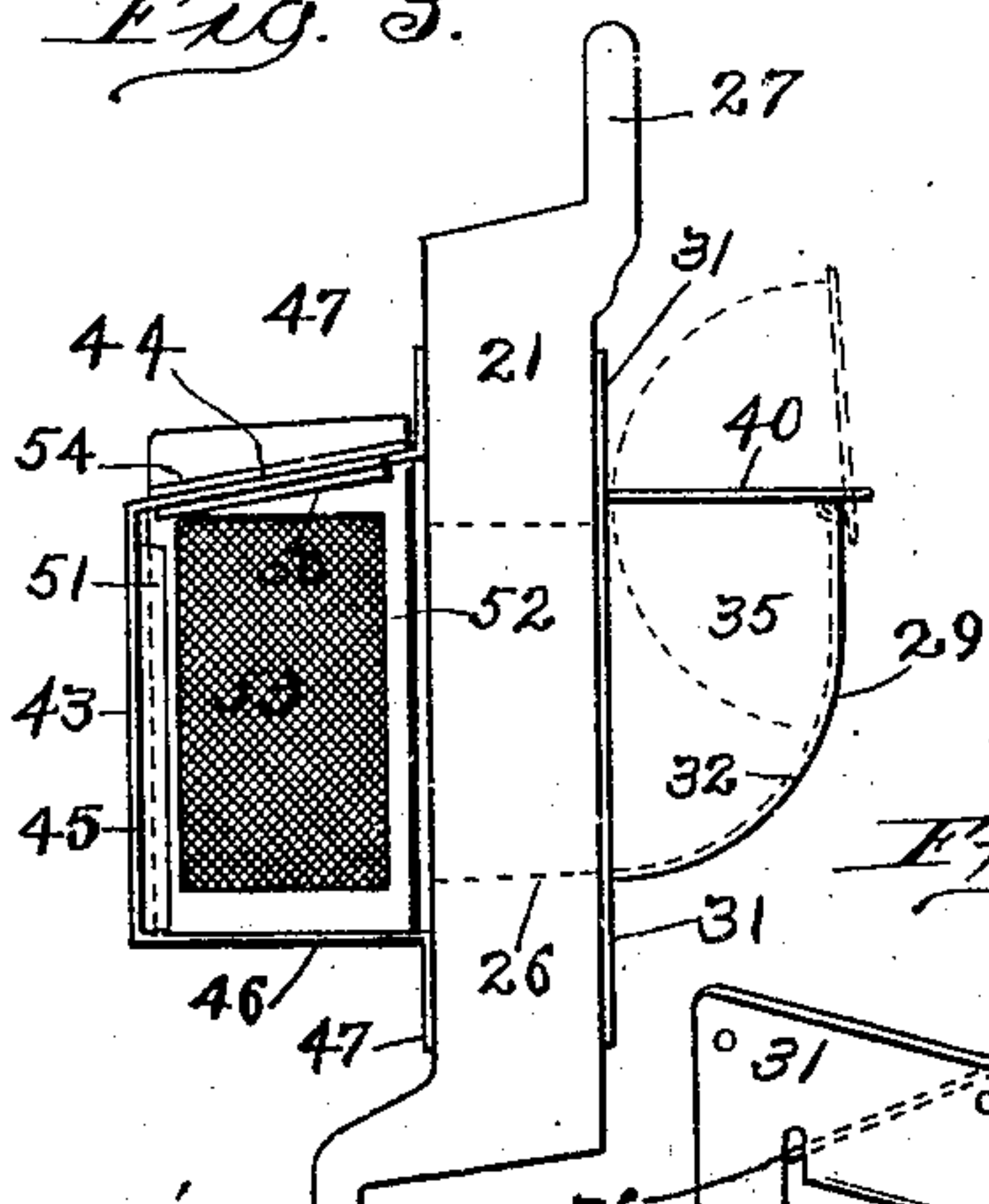


Fig. 4.

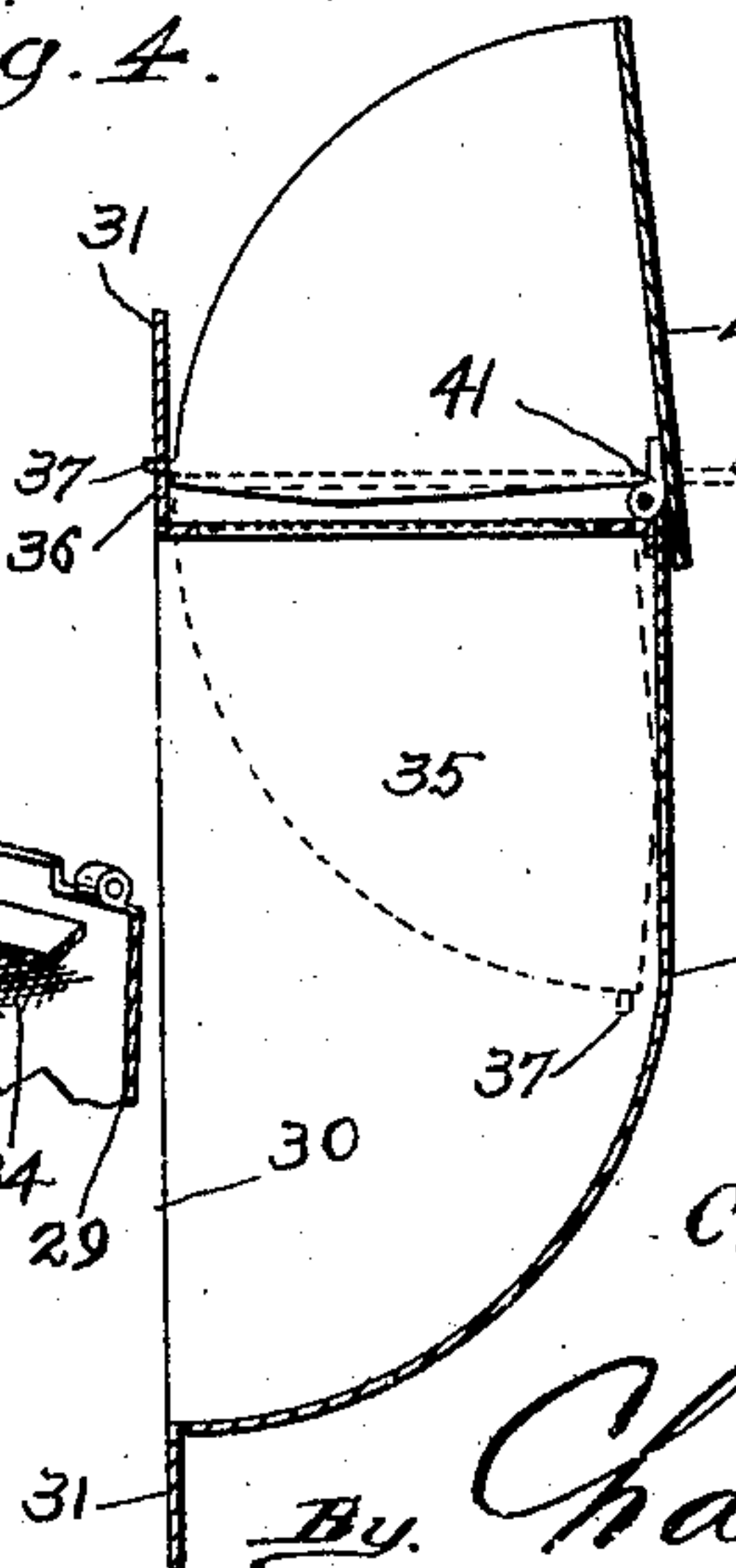
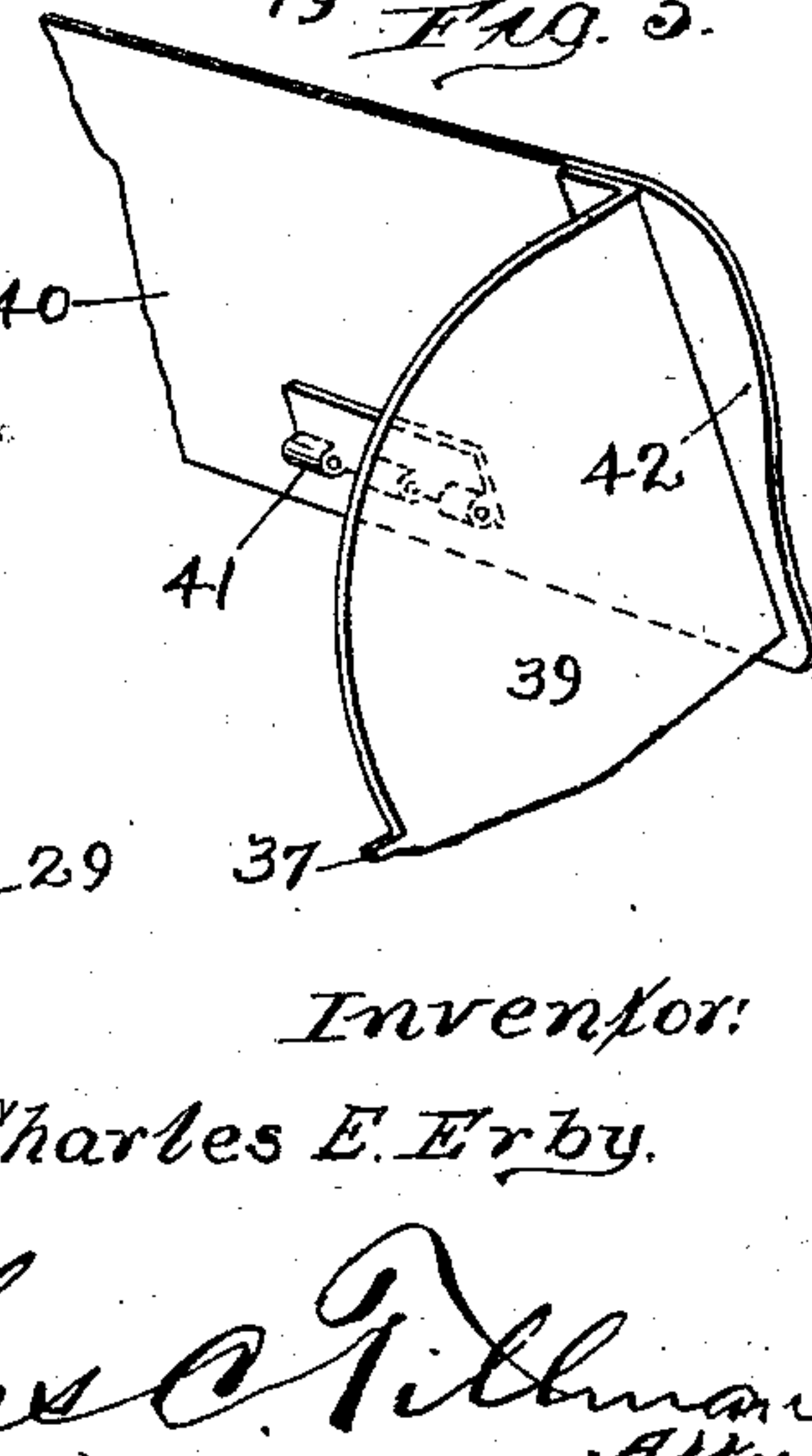


Fig. 5.



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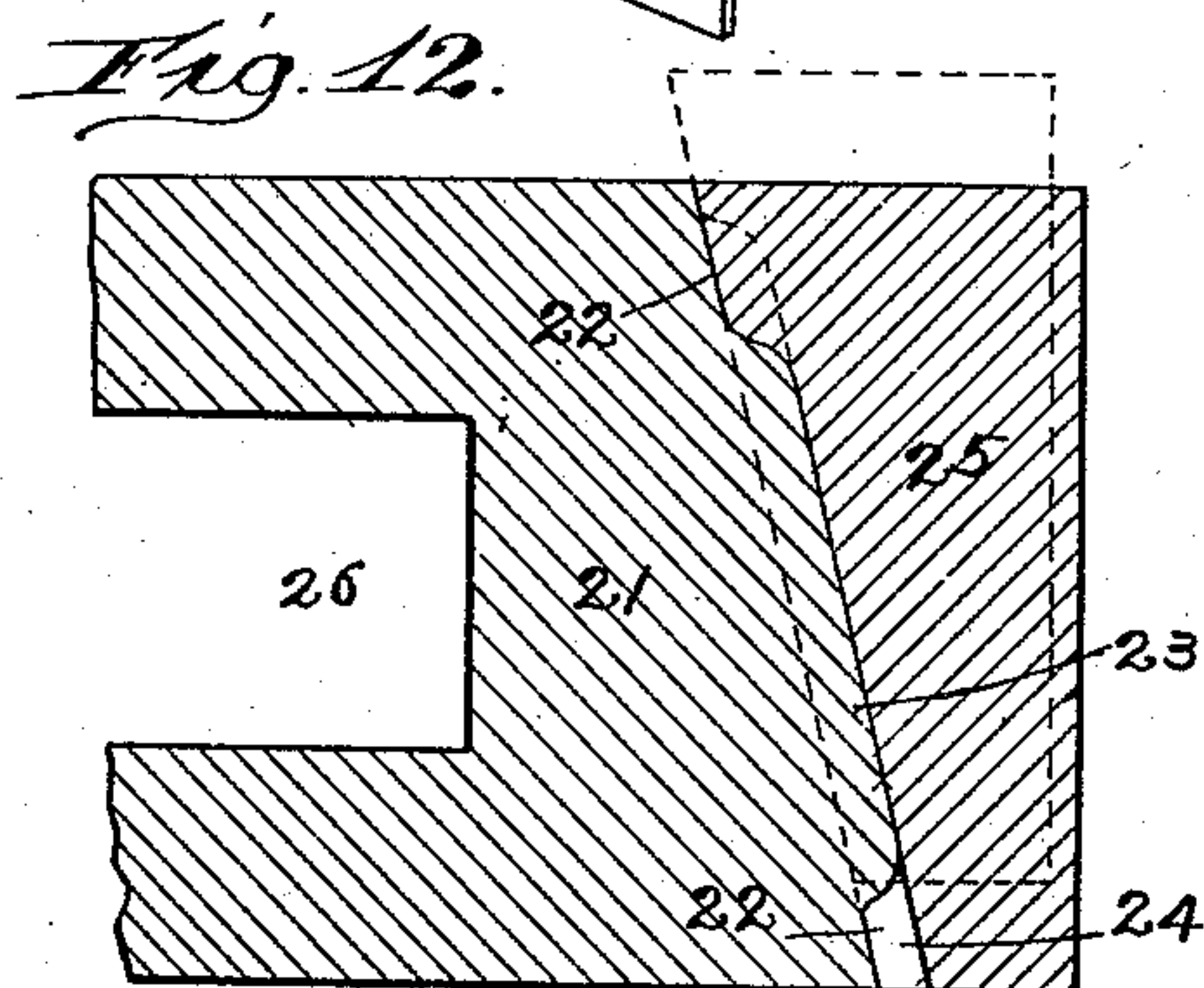
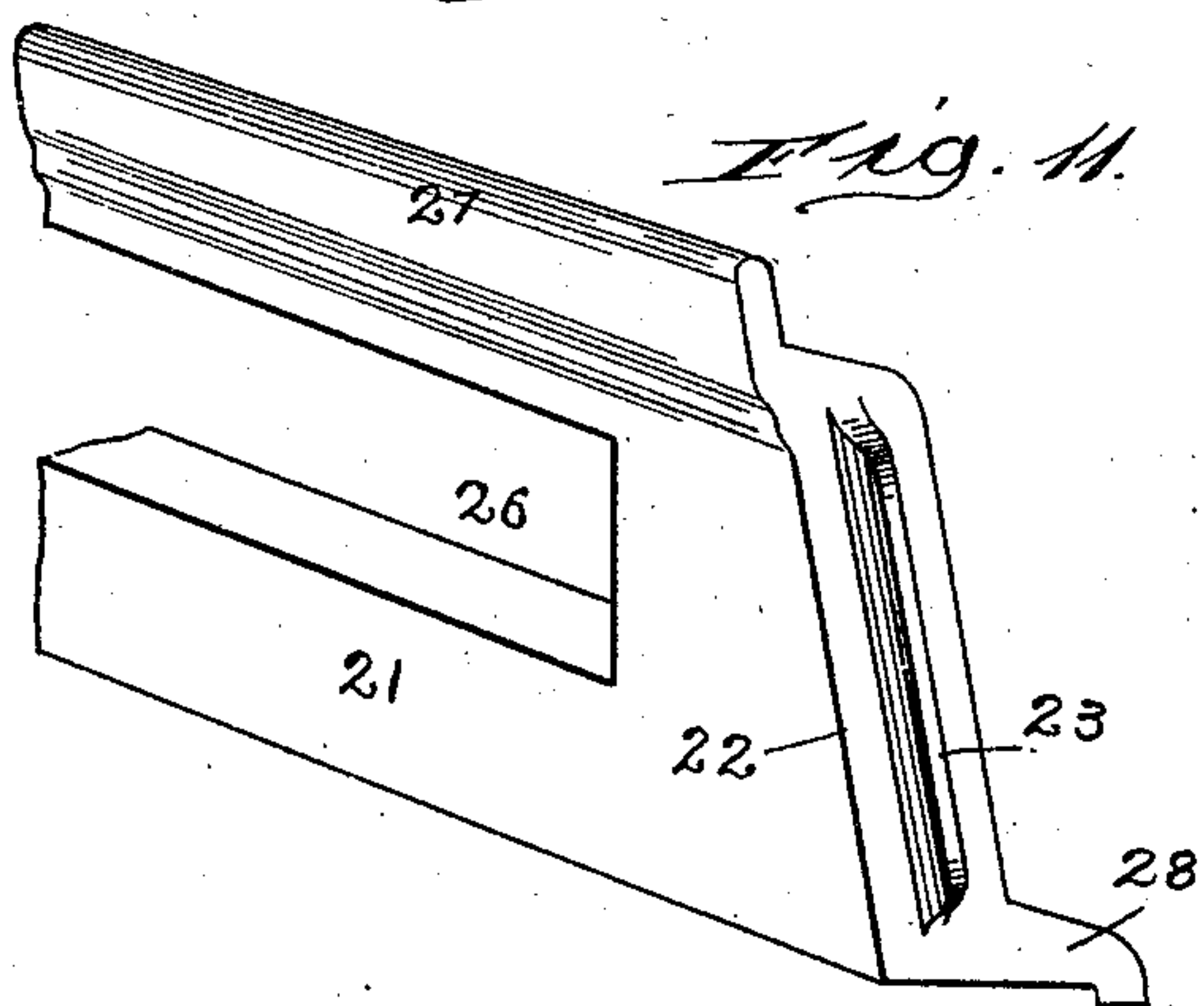
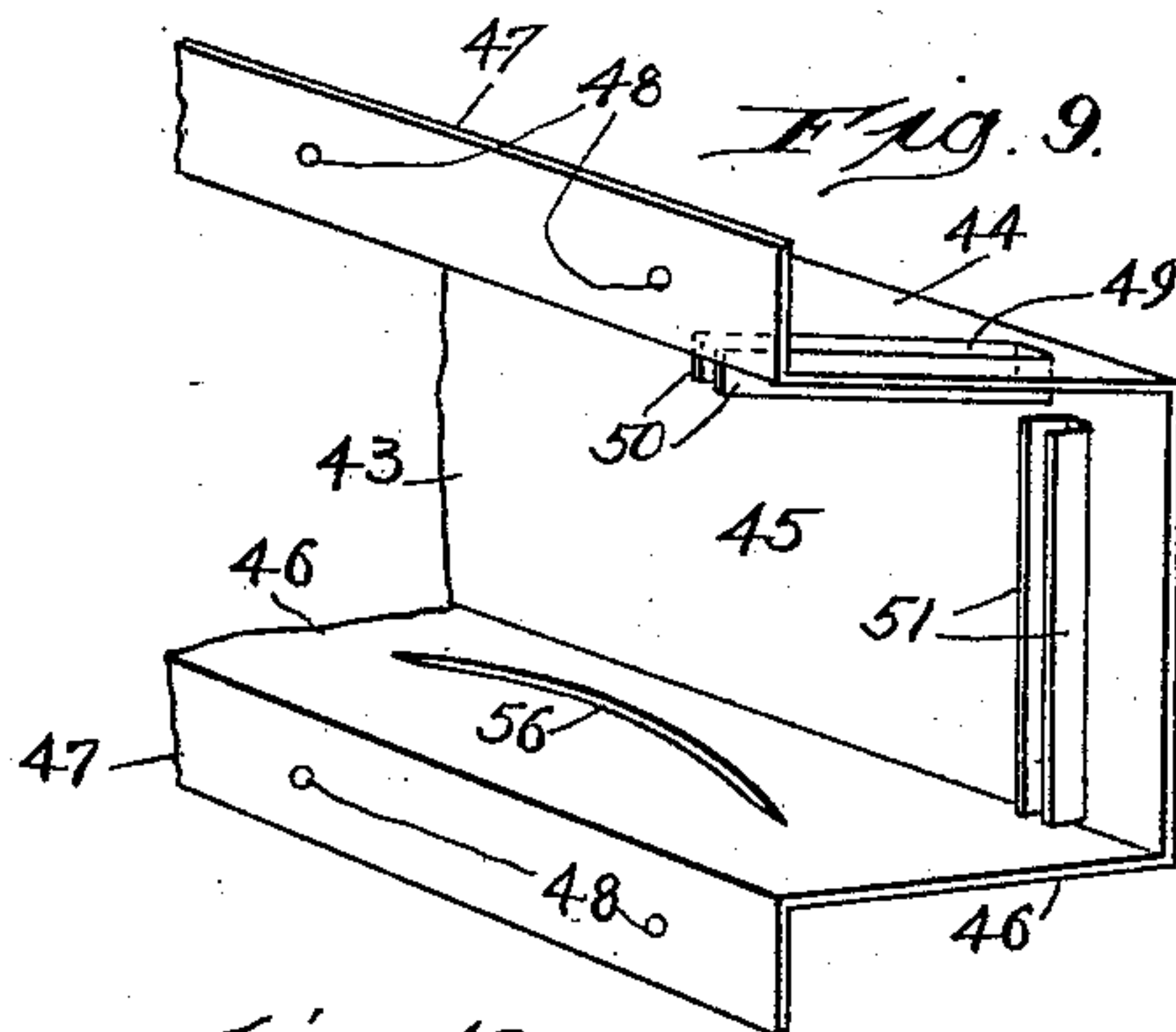
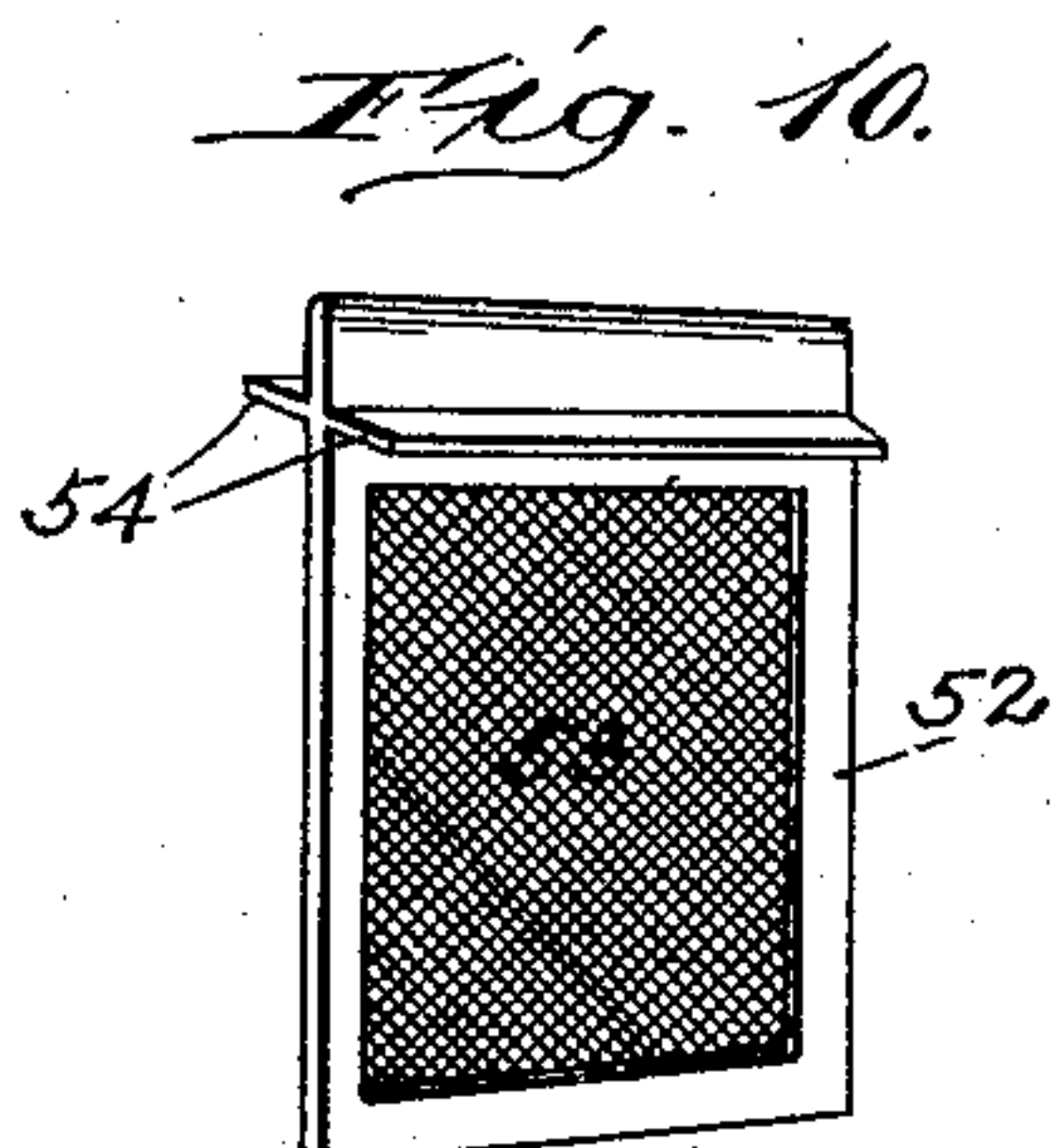
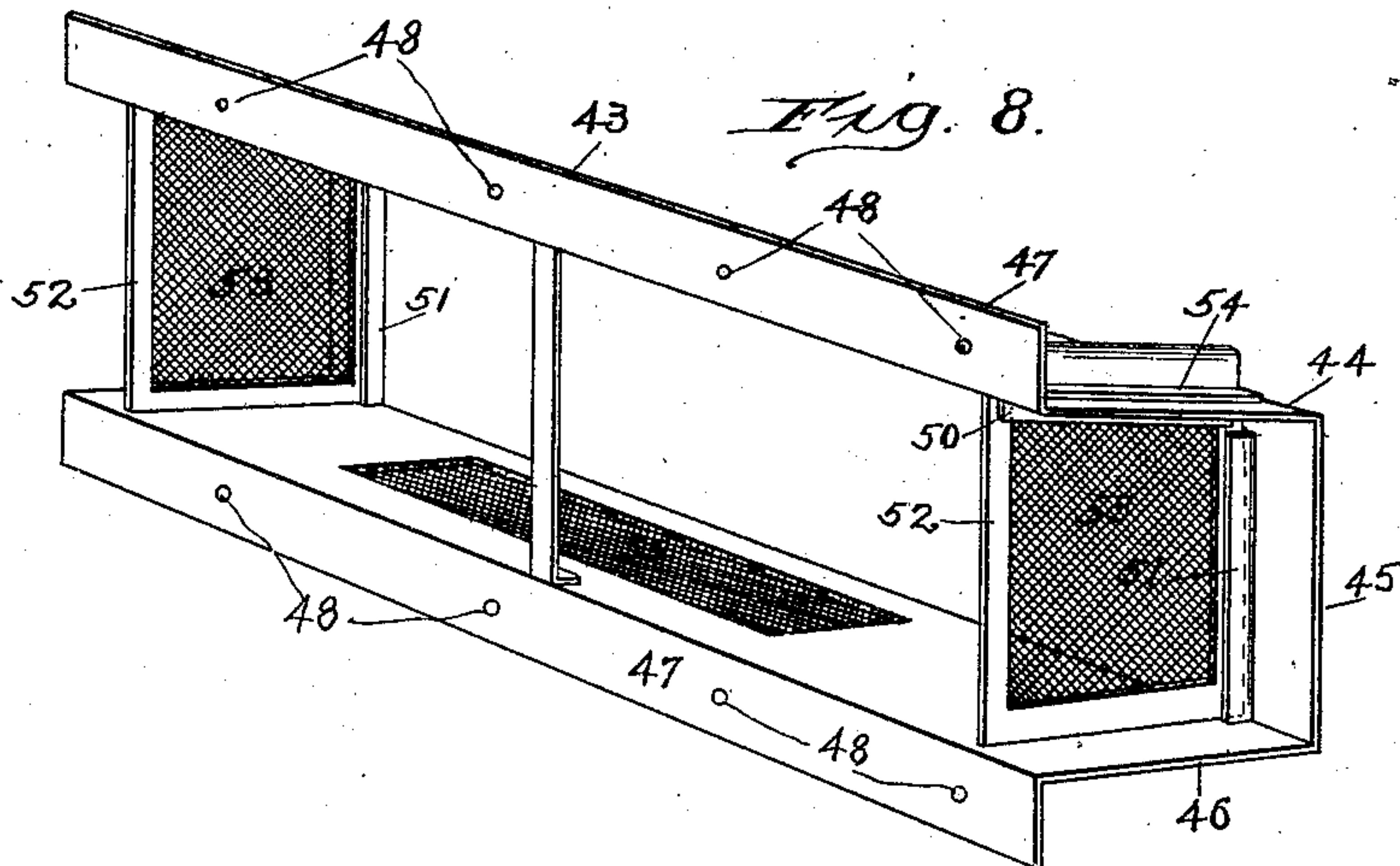
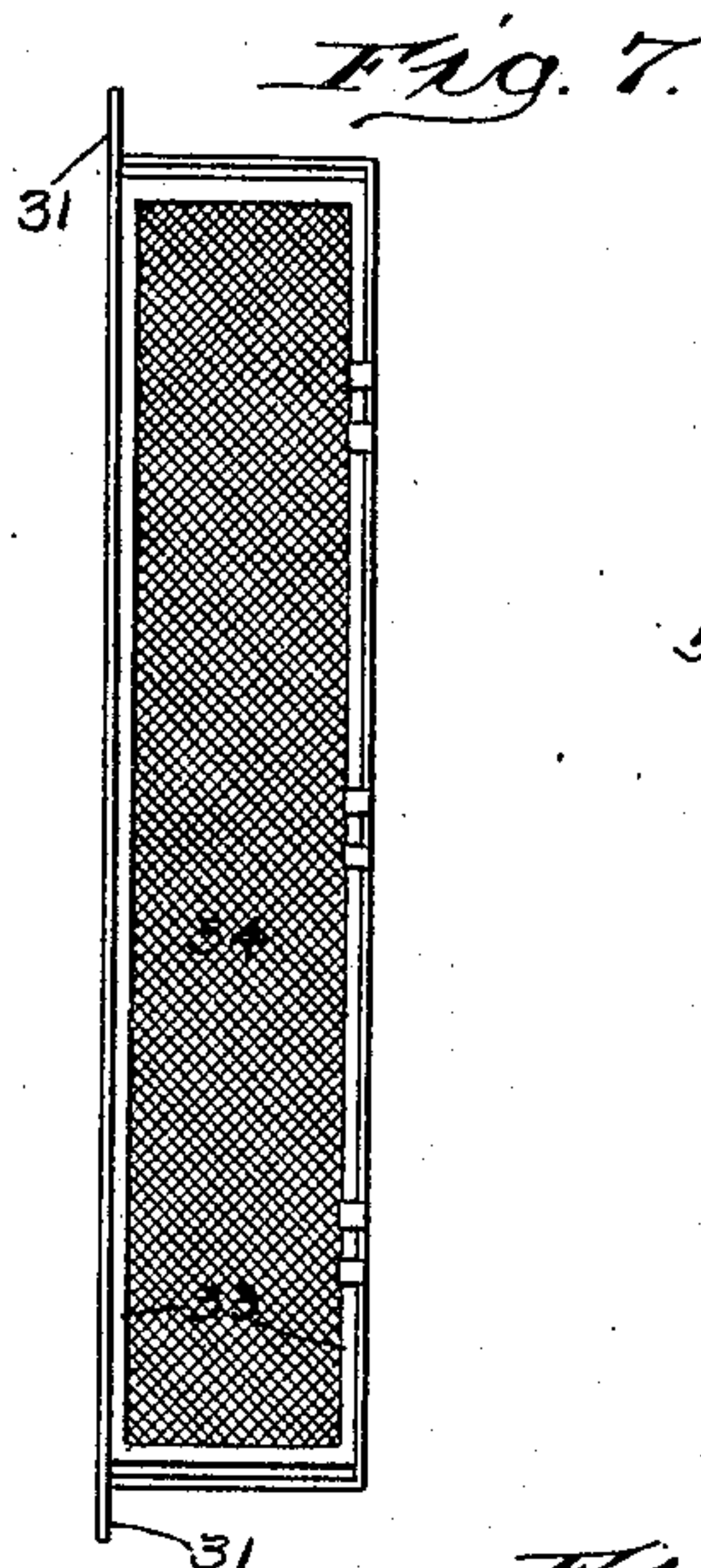
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2 SHEETS—SHEET 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES E. ERBY, OF CHICAGO, ILLINOIS.

VENTILATOR.

No. 842,308.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed April 6, 1906. Serial No. 310,224.

To all whom it may concern:

Be it known that I, CHARLES E. ERBY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

This invention relates to improvements in that type of ventilators used in connection with windows for ventilating rooms; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a ventilator which shall be simple and inexpensive in construction, strong, durable, and efficient in operation, readily and securely placed in position on the window-casing, and easily removed therefrom.

Another object of the invention is to so construct and arrange the parts thereof that the air admitted through the ventilator will be freed from dust, soot, and the like, and also in such a manner as to enable the parts to be readily cleaned or the dust, dirt, and soot which may collect therein removed.

A further object is to provide means for regulating the passage of air and also to prevent water in the form of rain or snow passing or being blown into the room through the ventilator.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is an inner view, in side elevation, of a portion of the window-casing, showing a ventilator embodying my invention in place thereon. Fig. 2 is an enlarged sectional plan view taken on line 2 2 of Fig. 1 looking in the direction indicated by the arrows and showing the ventilator in place but the window-sash removed. Fig. 3 is an end view of the ventilator detached from the casing, showing by dotted lines the cover of the inner box or compartment of the ventilator raised to permit of the free passage of air. Fig. 4 is a cross-sectional view of the inner box or compartment of the ventilator, showing it detached from the body and illustrating it by

continuous lines, its cover raised. Fig. 5 is an inner perspective view of a portion of the cover of the inner box or compartment. Fig. 6 is a similar view of one of the end portions of said box or compartment. Fig. 7 is a plan view of the inner box. Fig. 8 is a detached inner perspective view of the outer box or receptacle, showing one form of its construction. Fig. 9 is a perspective view of a portion of the outer box, showing a modification in its construction. Fig. 10 is a detached perspective view of one of the removable and screened end pieces or frames of the outer box. Fig. 11 is a perspective view of a portion of the body of the ventilator, showing one of its ends provided with means for engaging an adjustable block used for securing the body in position on the window-casing; and Fig. 12 is a longitudinal sectional view of a portion of the body and block, showing them by continuous lines in their adjusted positions and the latter by dotted lines in the act of being adjusted.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The reference-numeral 15 designates the sill or bottom of the window-casing, and the numerals 16 the jambs or sides thereof, each of which is formed, as usual, with vertically-disposed inner and outer stops 17 and 18 to provide a vertical groove 19 for the reception and operation of the lower sash 20 of the window, within which groove the ends of the body 21 of the ventilator fits when the lower sash is raised to permit its insertion.

As is clearly shown in Figs. 2, 3, 11, and 12 of the drawings, the body 21 of the ventilator consists of a board or piece which is somewhat shorter than the distance between the sides of the window-casing and has one of its ends downwardly and outwardly inclined, as at 22. (See Figs. 11 and 12.) The inclined portion of the body 21 is formed with a vertically-disposed rib 23 to fit in a correspondingly-formed groove 24 in the adjustable block 25, which is tapered from its upper to its lower end. By reference to Figs. 11 and 12 it will be seen that the rib 23 on the piece 21 and that the groove 24 in the block 25 do not extend to the top of said parts, but stop short thereof, so that when the block 25 is pressed downwardly into place, as shown in Figs. 1 and 12, the upper surface thereof will be flush with the upper surface of the body 21, thus affording practically an unbroken

upper surface. The body 21 is provided with a longitudinally-elongated opening 26 and has on the front portion of its upper surface a longitudinally-extending flange 27 to overlap the lower rail of the lower sash when the latter is in place on the body. The lower portion of the body 21 is preferably provided with a downwardly and outwardly inclined extension 28 to rest on the sill of the window-casing. Secured to the inner surface of the body 21 is the inner box 29, which is preferably made of metal and is provided with an opening 30 in its wall adjacent to the body, which opening is of substantially the same size and shape as the opening 26 in the body, and said box has extending around its opening a perimetral flange 31, by means of which the box 29 may be secured to the body. The inner lower portion of the box 29 is downwardly curved, as at 32, so as to guide the entering air upwardly through the box and to guide the dust or soot which may be deposited in said box outwardly through the opening 26 in the body. The upper portion of the box 29 is provided with an inwardly-extending perimetral flange 33, to which is secured a horizontally-disposed screen 34, of wire-cloth or other suitable material. Just inside of the end portions 35 of the box 29 the lower portion of the upper part of the flange 31 is provided with recesses 36 to receive projections 37, one of which is produced on the lower portion of each of the end parts 39 of the cover or lid 40 for said box, which lid is secured to the upper inner edge of the box 29 by means of hinges 41, so that it may be raised and lowered from over the screen 34, which extends over the opening in the top of the box. By reference to Figs. 2 and 5 of the drawings it will be seen that the ends 42 of the lid 40 project a slight distance over the downturned end portions 39 thereon and also a slight distance over the ends 35 of the box, so that said lid may be easily raised thereby, and when raised to the position shown by dotted lines in Fig. 3 and by continuous lines in Fig. 4 it is apparent that the projections 37 will engage the recesses 36 and restrict its further upward or inward movement. Secured to the outer surface of the ventilator-body 21 is an outer box 43, which is preferably made of sheet metal, formed to produce three sides 44, 45, and 46 of substantially a rectangular figure, the outer surface of the body 21 forming the other side of the box or figure. The edge of each of the portions 44 and 46 adjacent to the body 21 is provided with a flange 47, having openings 48 for the passage of screws or nails used for securing it to the body.

As shown in Figs. 8 and 9, the box 43 is formed so that its portion adjacent to the body 21 will be open throughout its entire length, so that when it is secured to the body 21, as shown in Figs. 1 and 2 of the drawings,

said opening will surround yet communicate with the openings 26 and 30 in the body and inner box. The upper portion 44 of the box 43 is preferably downwardly and outwardly inclined, as shown, and has near each of its ends a transverse opening 49, provided at its side edges with downwardly-extending flanges 50, which are preferably made integral with the portion 49 by stamping or cutting them out of the same. The portion 45 or outer wall of the box 43 is provided near each of its ends, in vertical alinement with the outer ends of the flanges 50, with parallel flanges or ribs 51 to act as vertical guides and supports for the end pieces or frames 52 for said box, which end pieces are substantially rectangular in shape and each is provided with a screen 53, of wire-cloth or other suitable material. The upper portion of each of the end pieces or frames 52 is provided with laterally or horizontally extending flanges 54 to rest on the upper surface of the portion 44 of the outer box, so as to prevent water passing through the openings 49 into said box, and also to provide means by which the frames 52 may be readily removed when it is desired to clean the box. As shown in Fig. 8, the bottom 46 of the box 43 is provided with a screened opening 55, through which air may pass, as well as any water which may enter the box through its screened end pieces. In Fig. 9 I have shown the bottom 46 provided with an open slot 56, through which water may be allowed to pass.

From the foregoing and by reference to the drawings it will be readily understood and clearly seen that by raising the lower sash to a suitable distance from the bottom or sill of the window-casing the body 21 may be placed thereon, with one of its ends in one of the grooves 19 in the sides of the casing, when its other end will approximate the groove 19 in the other side of the casing, when the block 25 may be placed in the last-named groove and pressed down so that its groove 24 will engage the rib 23 on the inclined end of the body, thus firmly holding it in position until it is desired to remove the ventilator, which may be done by raising the block, as is apparent. It is evident that by using a ventilator constructed as above set forth and according to my invention the lid 40 to the inner box may be raised to the desired position to regulate the passage of air, in which operation it is obvious that the various screens located in the inner and outer box will free the air as it passes into the room from soot, dust, and dirt and that if any of the same shall collect in either of the boxes it may be readily removed therefrom by removing the end frames 52 from the outer box, which will permit of access thereto, as well as to the inner box, through the opening 26 in the body.

While I have shown the body equipped

with a single box on the inner and outer surfaces thereof, yet it is apparent that I may supply the body with one or more of such boxes on each side thereof. The parallel
5 flanges or ribs 51 on the inner surface of the wall 45 of the outer box are preferably formed integral therewith by being cut out of the same and bent inwardly, as is clearly shown in Figs. 8 and 9 of the drawings.

10 The screens 34 and 53 in the top of the inner box and in the end pieces or frames of the outer box are preferably made with finer meshes than that of the screen 55 in the bottom of the outer box, so as to prevent the
15 passage of dust, soot, or dirt into the room, and the screens 53 may also be made of a plurality of layers of wire-cloth or like material in order to stiffen or render the sliding frames 52 more rigid and at the same time
20 producing finer meshes.

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

1. In a ventilator, the combination with a
25 body portion having a transverse opening therethrough, of an inner box secured around said opening and having at its top a hinged lid to regulate the passage of air, an outer box secured to the outer surface of the body
30 portion and provided in its top near each of its ends with a transverse slot, parallel flanges on the inner surface of the outer wall of the outer box near each of its ends and in vertical alinement with said slots, and a
35 screened frame removably located in each of said slots and guide-flanges, substantially as described.

2. In a ventilator, the combination with a body portion having one of its ends downwardly and outwardly inclined and provided with a transverse opening, of a block
40 tapered from its upper to its lower end and having means to engage the inclined end of the body portion, an inner box secured around said opening on the inner surface of
45 the body portion and having at its top a hinged lid to regulate the passage of air, an outer box secured to the outer surface of the body portion around the opening therein and having detachable and screened end frames, 50
substantially as described.

3. In a ventilator, the combination with a body portion, having one of its ends downwardly and outwardly inclined and provided with a transverse opening, of a block
55 tapered from its upper to its lower end and provided with means to engage the inclined end of the body portion, an inner box secured to the inner surface of the body portion and having an opening to register with
60 the opening therein and provided in its upper portion with inwardly-extending perimetral flanges, a screen horizontally located on said flanges, a lid to close the upper portion of the box and hinged thereto, an outer
65 box secured to the outer surface of the body portion around the opening therein, and detachable and screened end frames mounted on said box, substantially as described.

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Witnesses:

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M. A. NYMAN.