

(No Model.)

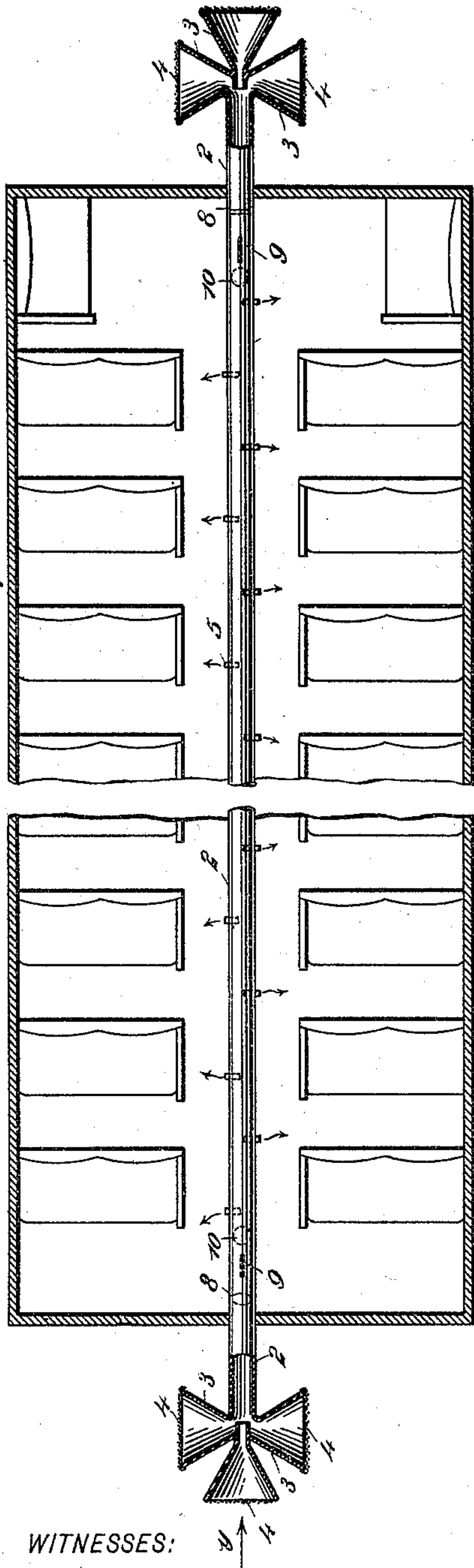
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T. GRIFFITH.
VENTILATOR.

No. 545,794.

Patented Sept. 3, 1895.

Fig. 1.



WITNESSES:

Edward Thorpe
J. H. Caplinger

Fig. 2.

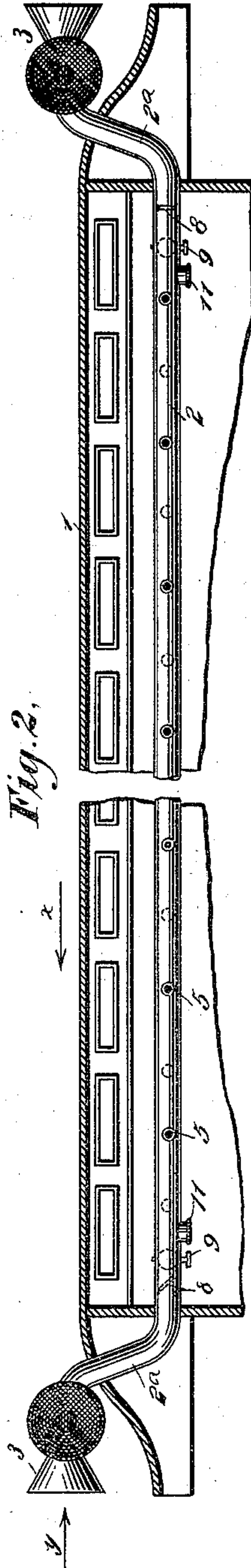
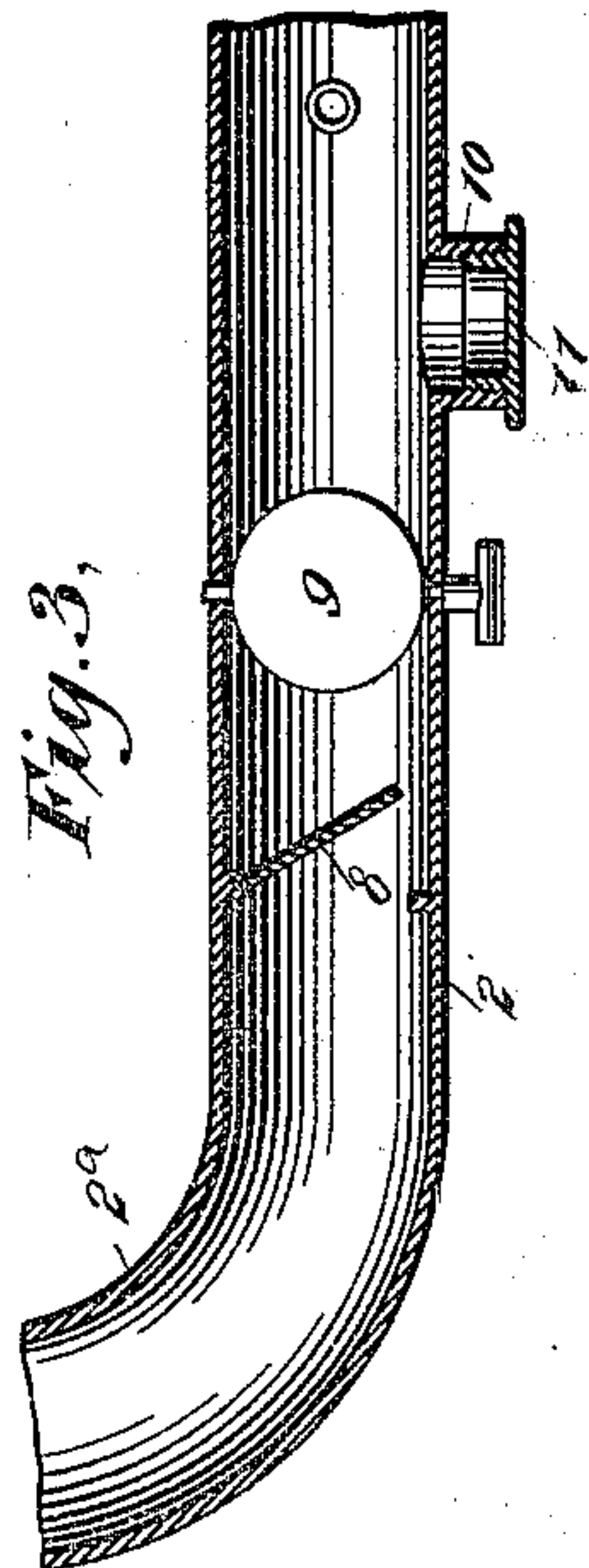


Fig. 3.



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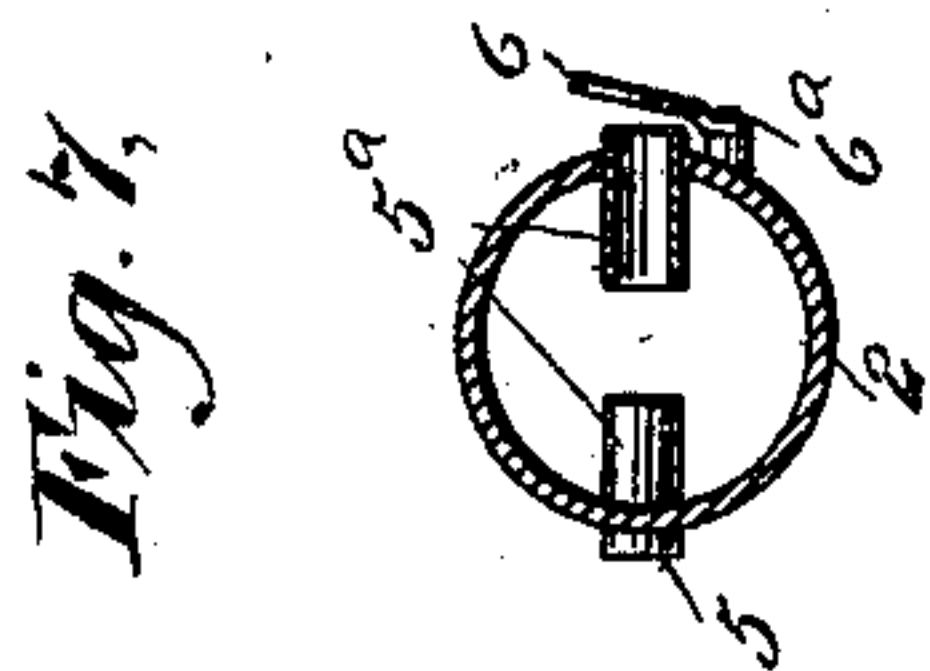


Fig. 9.

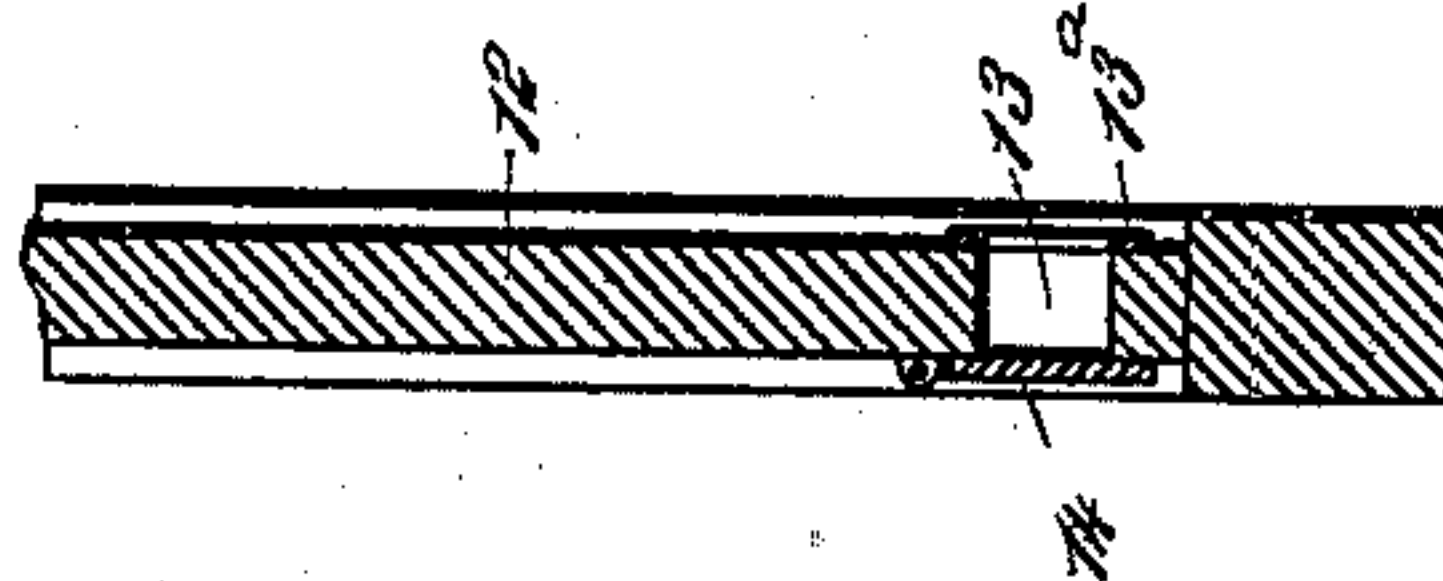


Fig. 6,

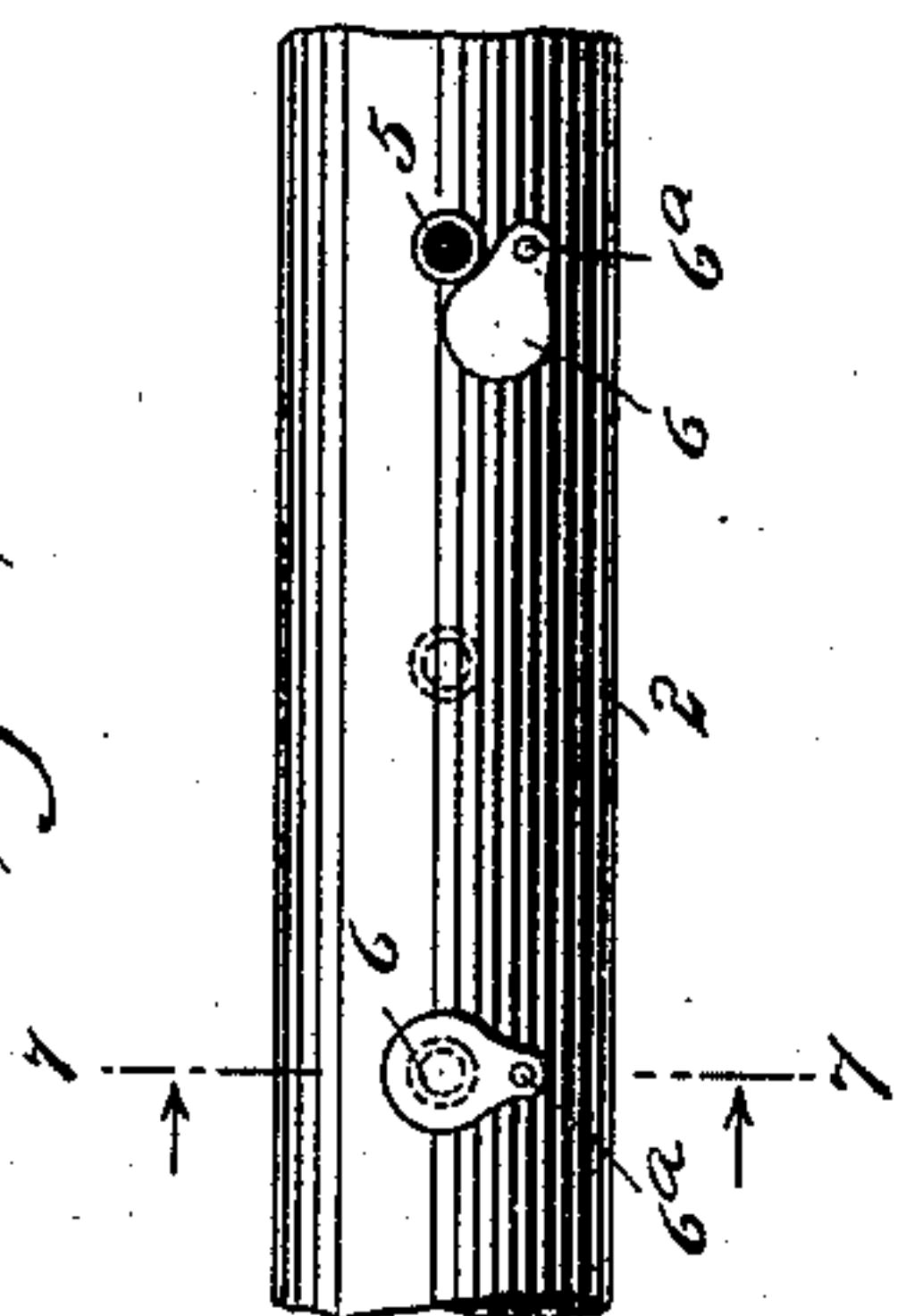


Fig. 8,

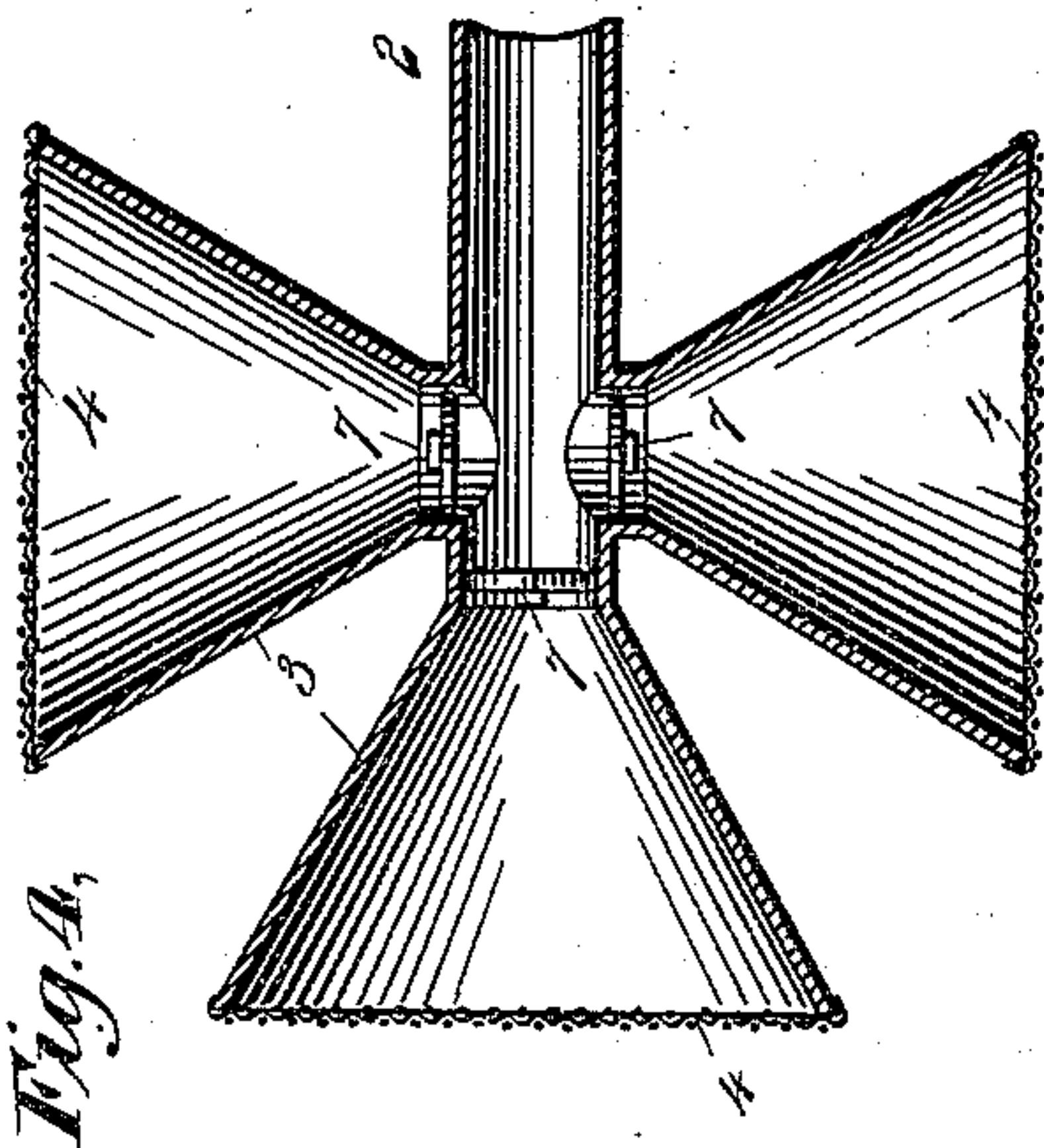
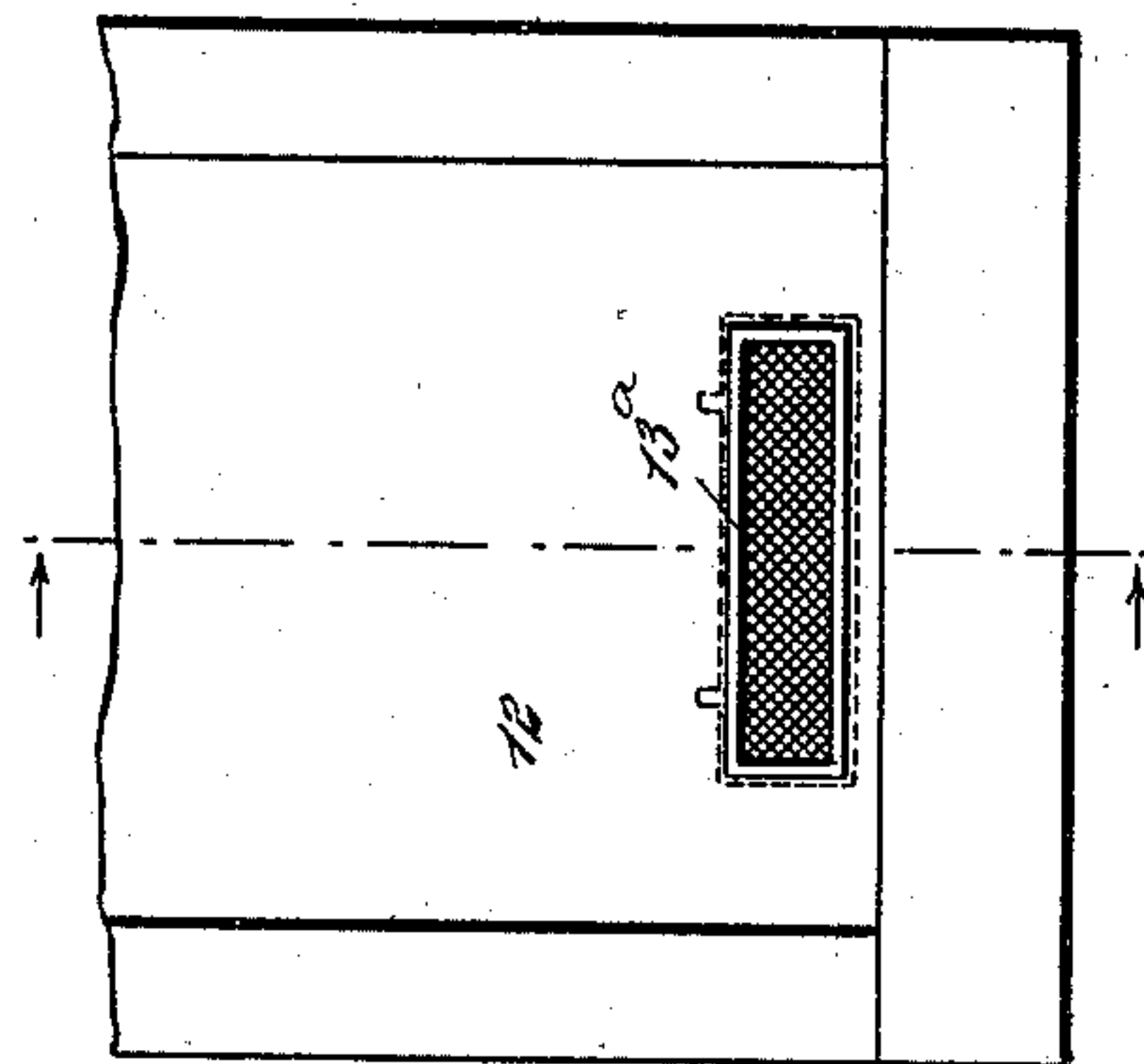
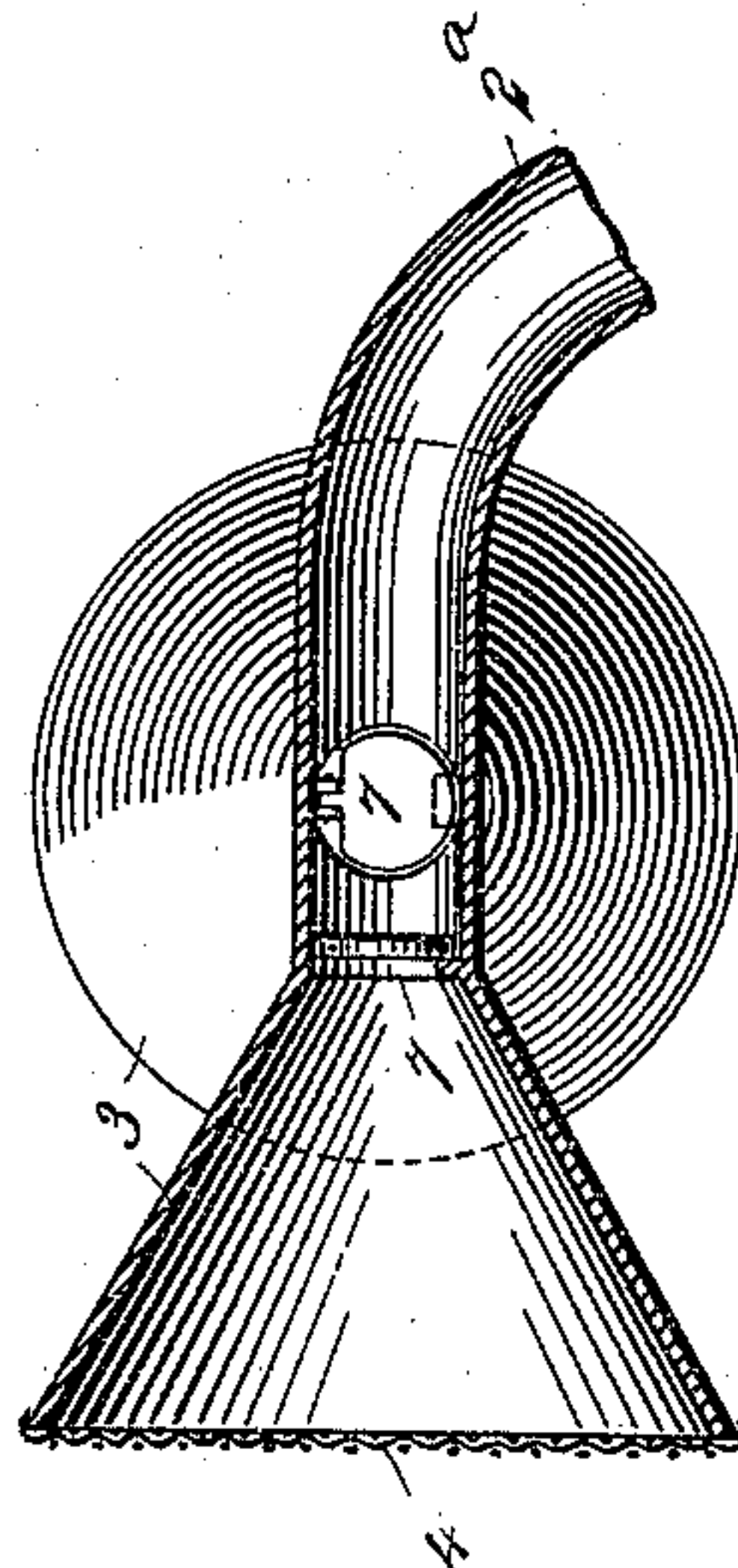


Fig. 5,



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UNITED STATES PATENT OFFICE.

THOMAS GRIFFITH, OF THE UNITED STATES ARMY.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 545,794, dated September 3, 1895.

Application filed March 18, 1895. Serial No. 542,201. (No model.)

To all whom it may concern:

Be it known that I, THOMAS GRIFFITH, of the United States Army, have invented a new and Improved Ventilator, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in ventilators, and particularly to that class of ventilators which are employed in railway-coaches and the like; and the object of the invention is to provide a device of this character of an inexpensive and simple construction, which shall present certain features of novelty and advantages for use over other similar devices heretofore employed, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a sectional plan view of a railway coach or car provided with my improved ventilator. Fig. 2 is a vertical mid-section of the same. Fig. 3 is a detail view drawn to a larger scale and showing the devices for regulating the air-current and removing cinders from the air-conducting channel of the ventilator. Figs. 4 and 5 are sectional views taken at right angles with one another, showing a modified form of the cowls or hoods located at the ends of the air-conducting channel outside the car. Fig. 6 is an enlarged detail view showing the air-deflecting plates mounted on the conducting-channel. Fig. 7 is a cross-section of the channel on the line 7 7 in Fig. 6, showing the outlets for the air inside the car and the arrangement of the said deflecting-plates; and Figs. 8 and 9 are partial detail views showing the air-outlet usually arranged in the door of the car.

In the views, 1 represents the railway car or coach as a whole, which is provided near its upper part with one or more longitudinal conducting-channels 2, (there being but one, as shown,) having opposite bent ends 2^a extending outside the car and provided at their extremities with cowls or hoods 3. As seen in Figs. 1 and 2, at each end of the channel 2 there are three of the cowls 3, one at each side and one at the extremity of said channel, and the said cowls are of conical or funnel shaped

form, being covered at their mouths with wire netting or gauze 4.

Inside the car the channel 2 is provided at intervals along its opposite sides with air-outlets consisting of short tubes 5, having their inner ends 5^a projecting into the channel beyond the inner wall thereof, as clearly seen in the sectional view, Fig. 7, and adjacent to the outer ends of these outlets are pivoted, at 6^a, deflecting-plates 6, adapted to be swung so as to deflect the air, issuing from the said outlets, upward said plates being arranged at an inclination to the mouth of the outlets, as clearly seen in the drawings. These deflecting-plates 6 are especially adapted for use in sleeping-cars and the like to prevent drafts.

At opposite ends of the car the channel 2 is provided with valves 8 adapted to be opened by the entry of the current of air into the channel in one direction and to be closed by the entry of a current of air in the other direction, and adjacent to these valves are arranged dampers 9, serving to regulate the air current through the said channel. The respective cowls 3 may be in some cases each provided with a valve 7, opening inwardly, as seen in Figs. 4 and 5, whereby, should a current of air enter at one of the lateral cowls 3, it would be prevented from passing out at the other cowl and be compelled to pass along the channel 2.

To permit the removal of cinders and the like from the channel 2, I provide at each end thereof a collecting-chamber having a removable bottom, and this chamber, as seen in Fig. 3, is formed of an interiorly screw-threaded boss 10, extending from the under side of the channel 2 and provided with a screw-cap 11, having an interior recess adapted to receive and hold the cinders falling therein.

To regulate the outflow of air from the car, I preferably provide in each door 12 at the lower part thereof an outlet 13, having a covering 13^a of wire gauze or netting at one side and having at the other side a hinged cover-plate 14, adapted to close said opening said cover-plate opening outward.

In operation, supposing the car to be moving in the direction indicated by the arrow X in Figs. 1 and 2, the air enters the forward cowl or hood 3, as indicated by the arrow Y in Figs. 1 and 2, opening the valve 7 of said

cowl and the forward valve 8 of the conducting-channel inside the car and passing out at the respective outlets 5, the valve 8 at the opposite end of the car being meanwhile held closed by the air-pressure in the channel. Should any cinders or dust enter the channel 2, the same will be deposited in the collecting-chambers and may be removed by unscrewing the caps 11. The outflow of air from the coach is permitted by raising the hinged cover 14, whereby the air is permitted to pass through the outlet 13.

Should the wind be blowing in a direction at an angle to the line of the railway, the air will enter one of the latter hoods 3 and be directed inside the car in a similar manner to that above described.

It is evident that the invention is susceptible of considerable modification as to its details, and for this reason I do not wish to be understood as limiting myself to the exact construction and arrangement of parts herein shown.

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

1. The combination with a car, of a conducting channel mounted therein and adapted to receive air outside the car, said channel being provided at points inside the car with outlet tubes having their inner ends projecting interiorly beyond the inner wall of the channel, substantially as set forth.

2. The combination with a car, of a conducting channel mounted therein and adapted to receive air outside the car, said channel

being provided at points inside the car with outlet tubes having their inner ends projecting beyond the inner wall of the channel, and deflecting plates pivoted to the outer side of the conducting channel and adapted to deflect the air issuing from said outlet tubes, substantially as set forth.

3. The combination with a car, of a conducting channel mounted therein and adapted to receive air outside the car, said channel being provided at points inside the car with outlet tubes having their inner ends projecting beyond the inner wall of the channel, and deflecting plates pivoted to the outer sides of the channel, said deflecting plates being inclined to the mouths of the outer tubes and being adapted to be moved on their pivots thereby deflecting the air issuing from said tubes, substantially as set forth.

4. In a ventilator, the combination of a conducting channel provided at its end with laterally-projecting funnel-shaped hoods having their outer ends open and their inner ends communicating with the interior of the said channel, said hoods being arranged at opposite sides of the channel and being provided at their points of communication therewith with valves adapted to open and close in opposite directions, said valves being adapted to be opened and closed respectively by the entry of air through one of the hoods, substantially as set forth.

THOMAS GRIFFITH.

Witnesses:

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