

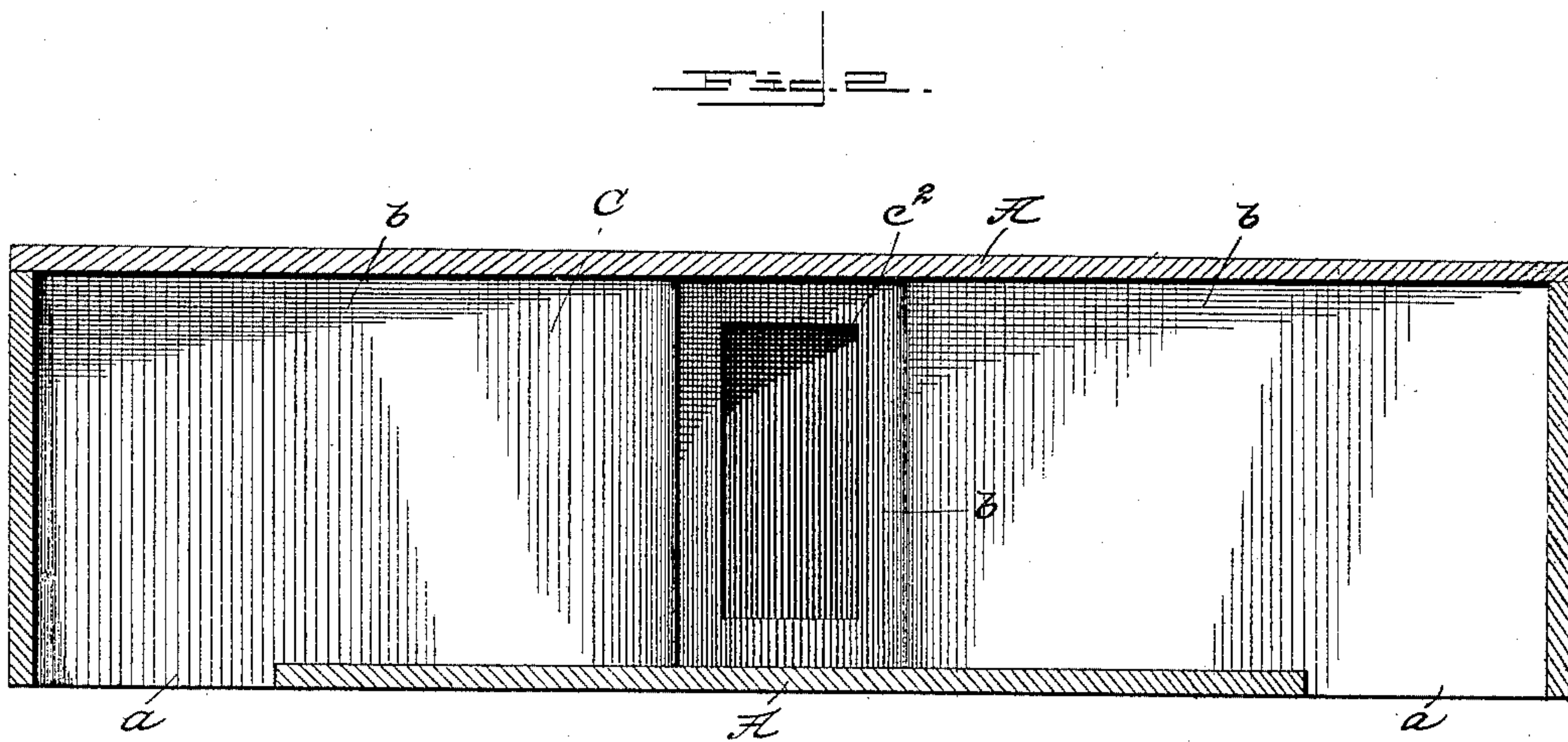
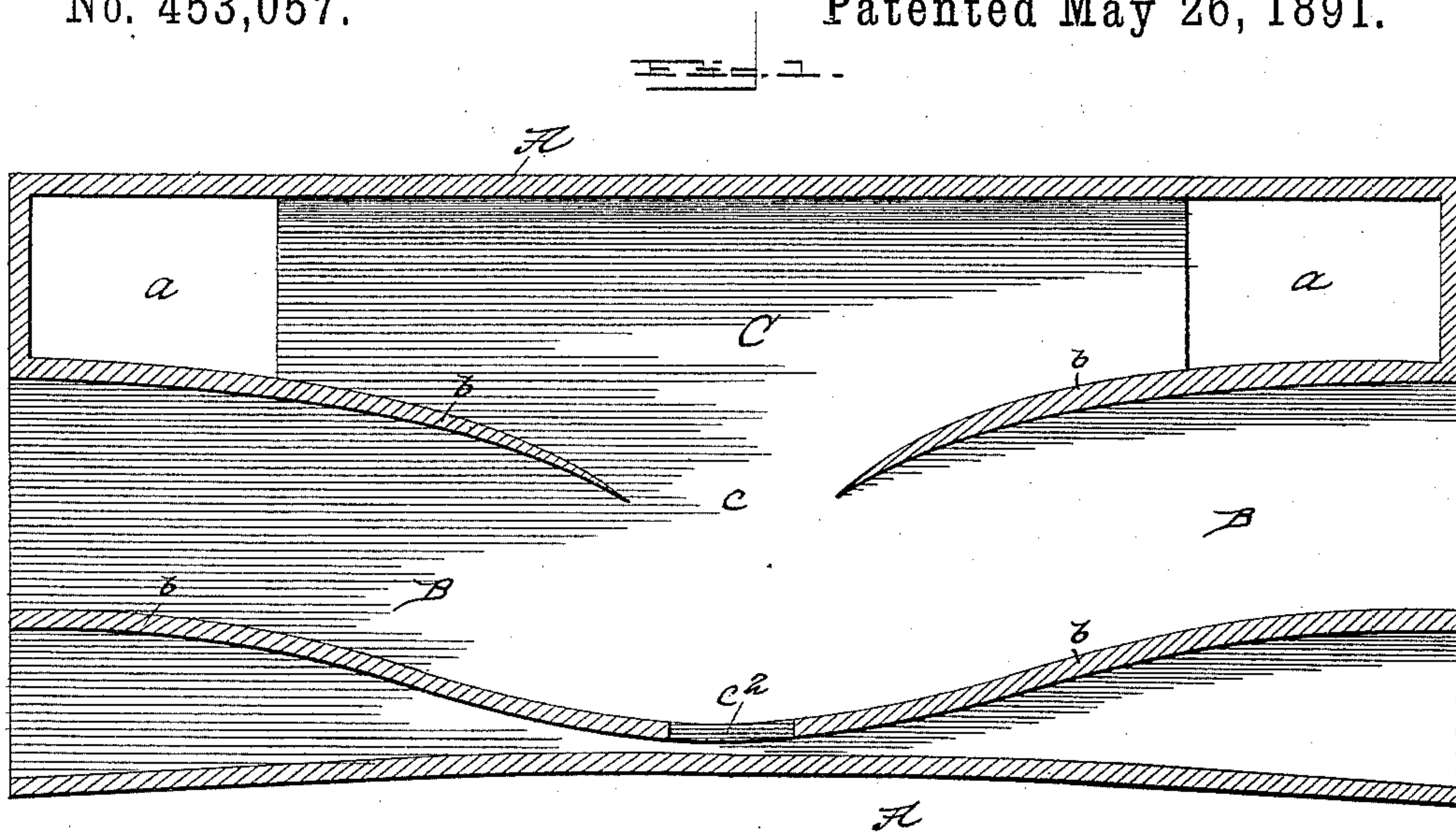
(No Model.)

2 Sheets—Sheet 1.

W. WRIGHT.
VENTILATOR.

No. 453,057.

Patented May 26, 1891.



Witnesses
W. N. Humphrey
J. B. Kasper

Inventor
Washington Wright.
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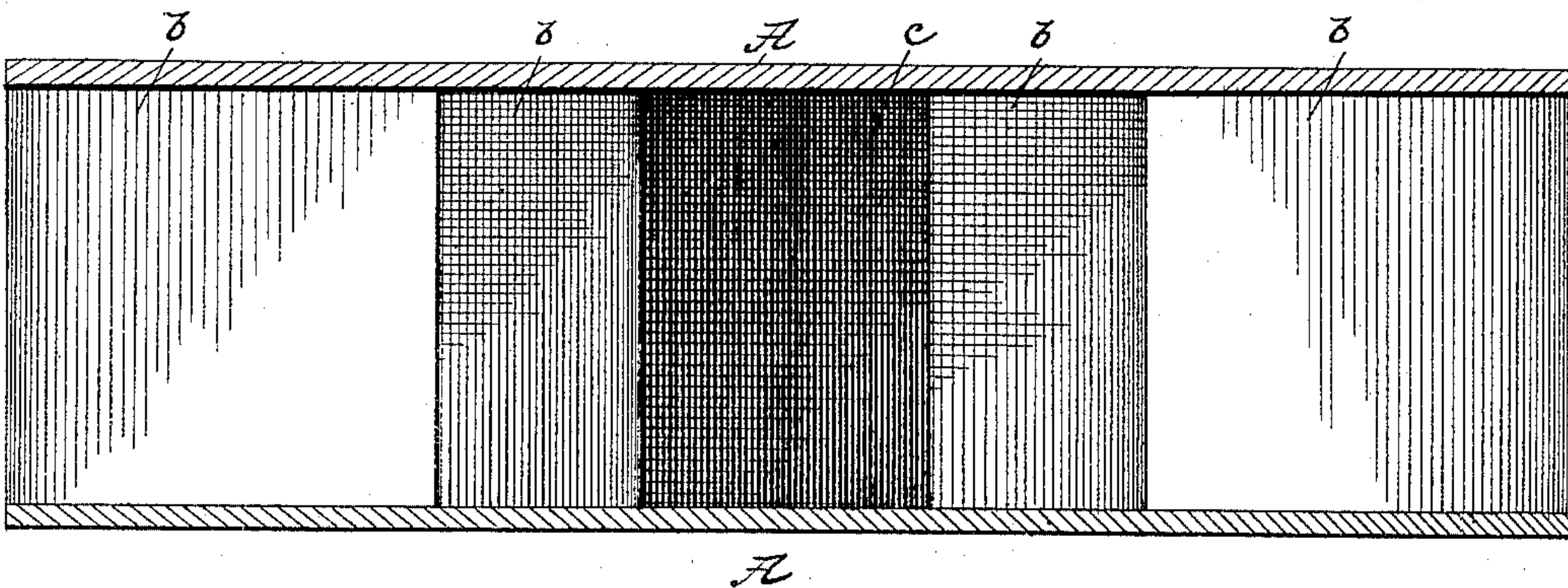
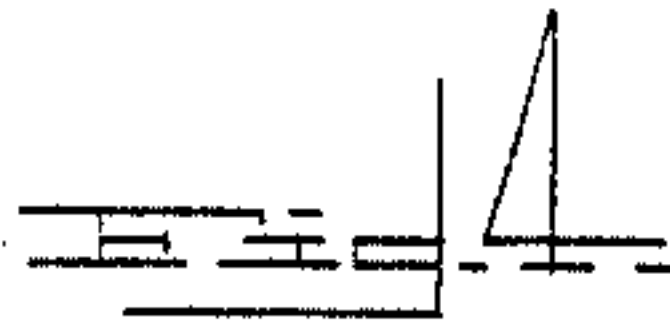
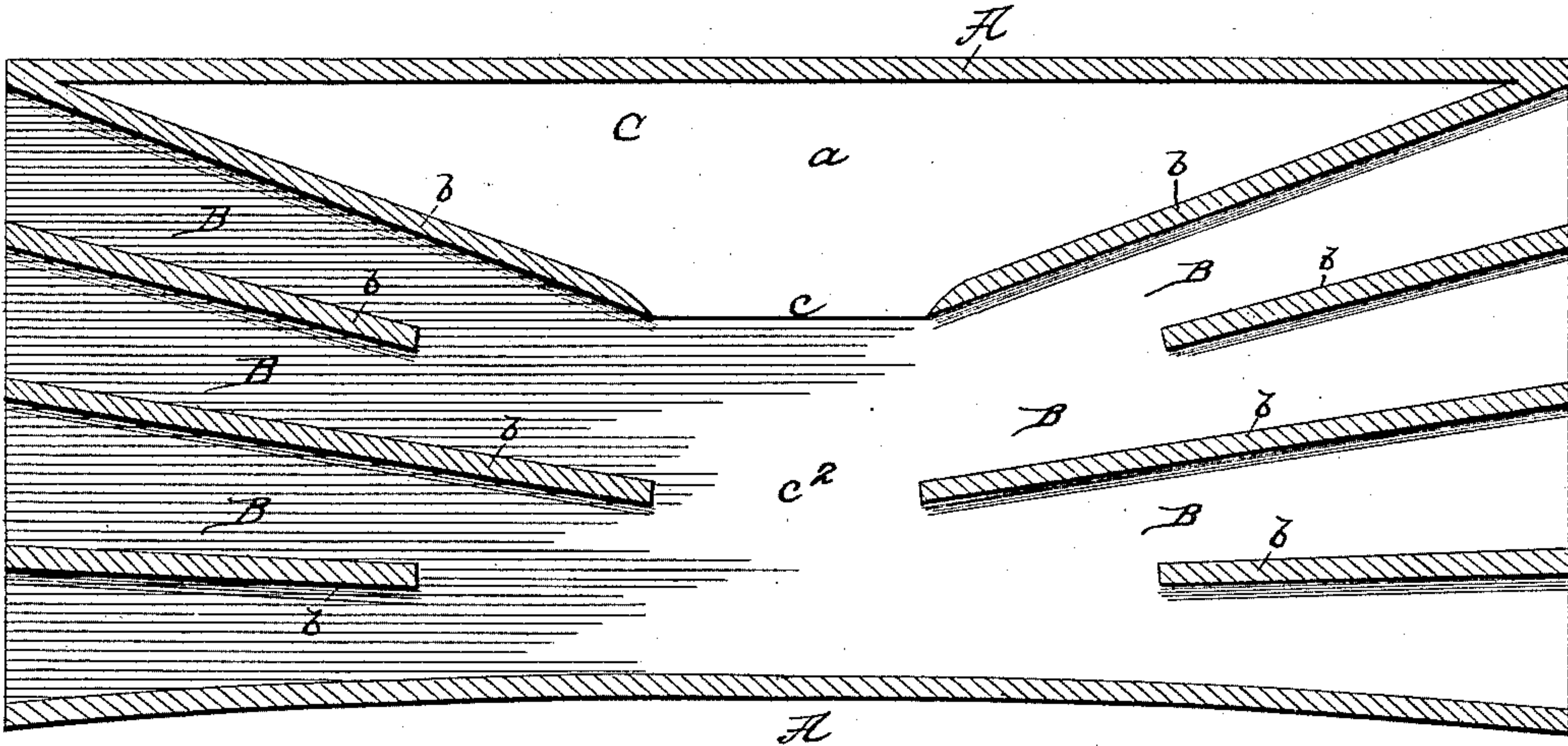
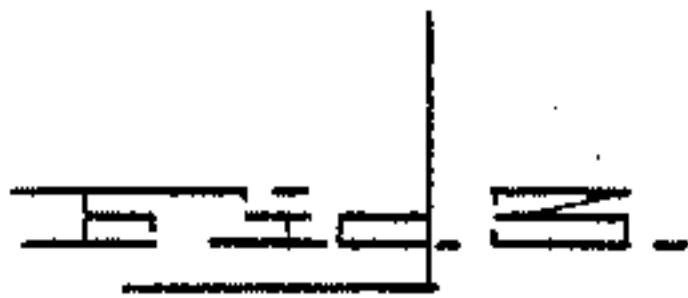
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WITNESSES;

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INVENTOR,

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UNITED STATES PATENT OFFICE.

WASHINGTON WRIGHT, OF CLAYTON, NEW JERSEY.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 453,057, dated May 26, 1891.

Application filed November 28, 1890. Serial No. 372,866. (No model.)

To all whom it may concern:

Be it known that I, WASHINGTON WRIGHT, a citizen of the United States, residing at Clayton, in the county of Gloucester and State of New Jersey, have invented certain new and useful Improvements in Ventilators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to ventilators.

The object is in an efficient manner to ventilate apartments, especially railway-cars, from the side by a simple device to be attached to the apartment which it is to ventilate, and composed of fixed parts, the parts being so constructed and arranged as to permit the freest through-passage of the air-current outside, to induce a current from the apartment, and at the same time give such direction to the inducing current or currents outside with proper construction of apparatus as to direct dust away from the opening from the apartment and in a measure cause the dust to be trapped.

It is not pretended that it is new to ventilate apartments of any kind from the side by a device stationary with relation to the apartment to which it is attached, and composed solely of fixed parts, the parts being so constructed and arranged as to cause passage of an air-current outside to induce a current from the apartment; but, so far as I am aware, ventilators of this kind have either not been attached directly to the sides of cars, and not having a passage entirely through them for the outside air to induce a current from the car, have been inoperative, or, if directly attached, have had their deflecting-surfaces vertical with the sides of the car, whereby inducing action of the current was less strong and certain, and by the position of the deflectors dust was liable to be carried into the apartment, as upon the opening of a door or window, it having only to pass there laterally, directly from the ventilating device.

The present invention consists in a ventilator comprising a casing to be placed on the outside at the side of a car or other apartment and forming a continuously-extending passage, the casing having one or more open-

ings at one side above the passage and being provided with one or more sets of fixed deflectors or floors inclining downward and extending laterally across the casing, whereby they will not be in a vertical plane as regards the side of the apartment, and draft through the passage will first be downward, tending to deposit dust by gravity, and then upward away from the opening into the apartment, providing effectual means for preventing dust from being carried into the apartment.

The invention may be embodied in various forms.

In the accompanying drawings, forming part of this specification, and in which like letters of reference indicate corresponding parts, I have shown two forms of embodiment of the invention.

Figure 1 is a representation of one form of ventilator embodying my invention, being a view in central vertical longitudinal section through the ventilator, showing the interior. Fig. 2 is a horizontal section taken on the line $x x$ of Fig. 1, looking from below upward. Fig. 3 is a representation of another form of ventilator embodying my invention, being a view in central vertical longitudinal section, showing the interior; and Fig. 4 is a horizontal section taken on the line of $y y$ of Fig. 3, looking from below upward.

It is very desirable in ventilating apparatus, especially in such to be attached to railway-cars, that the same should be constructed as substantially as possible, with few, if any, movable parts and with the best possible provision, while drawing air from the car or other apartment with efficiency, yet should this action ever for an instant cease, still to keep dust from entering the apartment through the ventilator. To do this and at the same time to obtain a strongly-induced current, it is best to have the inducing current or draft downward away from the ventilating-opening and then ascending away from the ventilating-opening, the draft or current being in flattened stratum or strata, following nature rather than in the artificial form of vertical sheet or sheets.

In the drawings, A indicates a suitable casing closed at the sides and top or in use to be closed at the sides and top, the case having

open ends, affording a continuous or through passage B for air. The casing is provided at one side with an opening or openings *a*, or at this side at suitable height opens over an opening or openings in the side of the structure to be ventilated.

As above said, the passage extends continuously from one end of the ventilator to the other, so that the air entering at one end passes out at the other, and the passage is provided with one or more pairs of fixed deflectors or floors *b* below the lateral opening or openings, the deflectors at opposite ends inclining downward toward each other and extending laterally across the casing or flatwise.

It will be observed that the lateral openings are above the topmost pair of deflectors, converging from opposite ends of the casing, and that these deflectors form with the ends of the casing a chamber C. These deflectors really form the top of the continuously-extending passage. From the chamber an opening *c* leads downward into the continuously-extending passage, and in this may be a valve to flap either way and additionally exclude dust.

It is desirable to have the deflectors at each end substantially parallel, and through one of the lower deflectors there may be an additional opening or well *c*² in the nature of a dust-trap, which with open ends will be self-clearing. It also serves to drain the ventilator should water get in. The deflectors may be either straight or curved and may be in two or more tiers, whichever way the wind enters the ventilators, the direction being downward away from the ventilating-opening to deposit dust, and then upward away from this opening, but tending to the bottom.

It is obvious that the casing may be ar-

ranged to mouth in any direction toward the wind, and that one side may be left off, only so that the ventilator be placed over openings in the structure to be ventilated in such manner that the opening will be into the ventilator above the uppermost set of deflectors.

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

1. In a car-ventilator, the combination, with a casing to be placed on the outside of a car or other compartment, and having a continuously-extending air-passage, of one or more sets of fixed approximately horizontal deflectors or floors inclined downward and inward, the uppermost deflectors forming a chamber with the top and sides of the casing, an opening in the side of the chamber for communication with the interior of the car or other compartment, and an opening downward into the continuously-extending passage, substantially as described.

2. In a car-ventilator, the combination, with a casing to be placed on the outside of a car or other apartment and forming a continuously-extending passage, of one or more sets of fixed deflectors or floors inclining downward and inward and extending laterally across the casing, the uppermost set of deflectors forming a chamber with the top and sides of the casing, and this chamber opening laterally and having an opening downward into the continuously-extending passage, the passage having a dust-trap, all substantially as and for the purpose described.

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

WASHINGTON WRIGHT.

Witnesses:

WILLIAM F. MAYNARD,
JOSEPH N. DUFFIELD.