

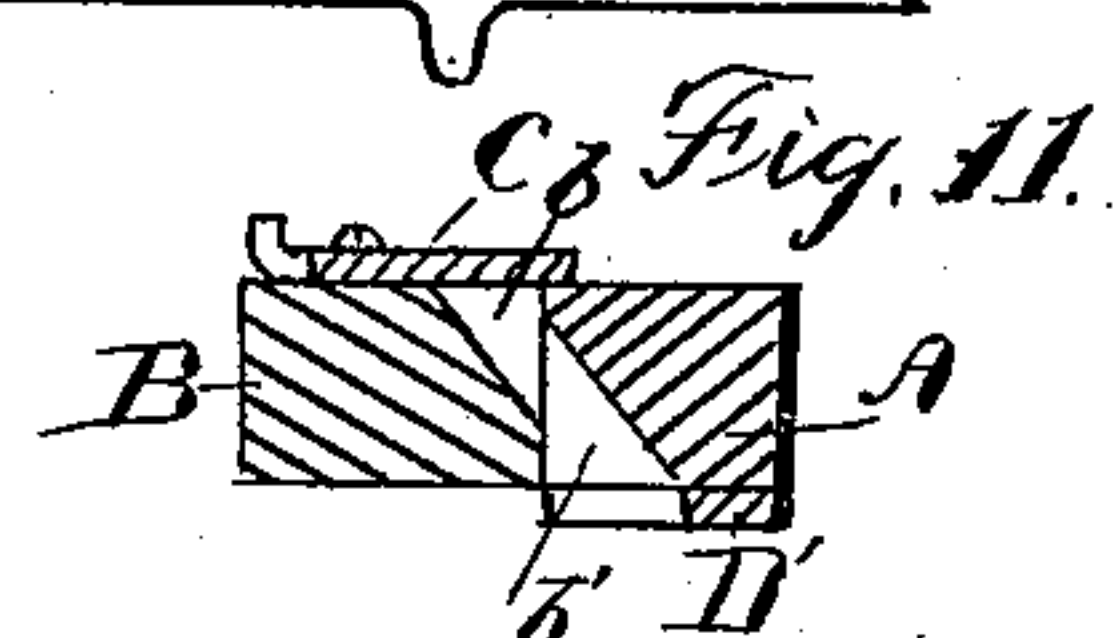
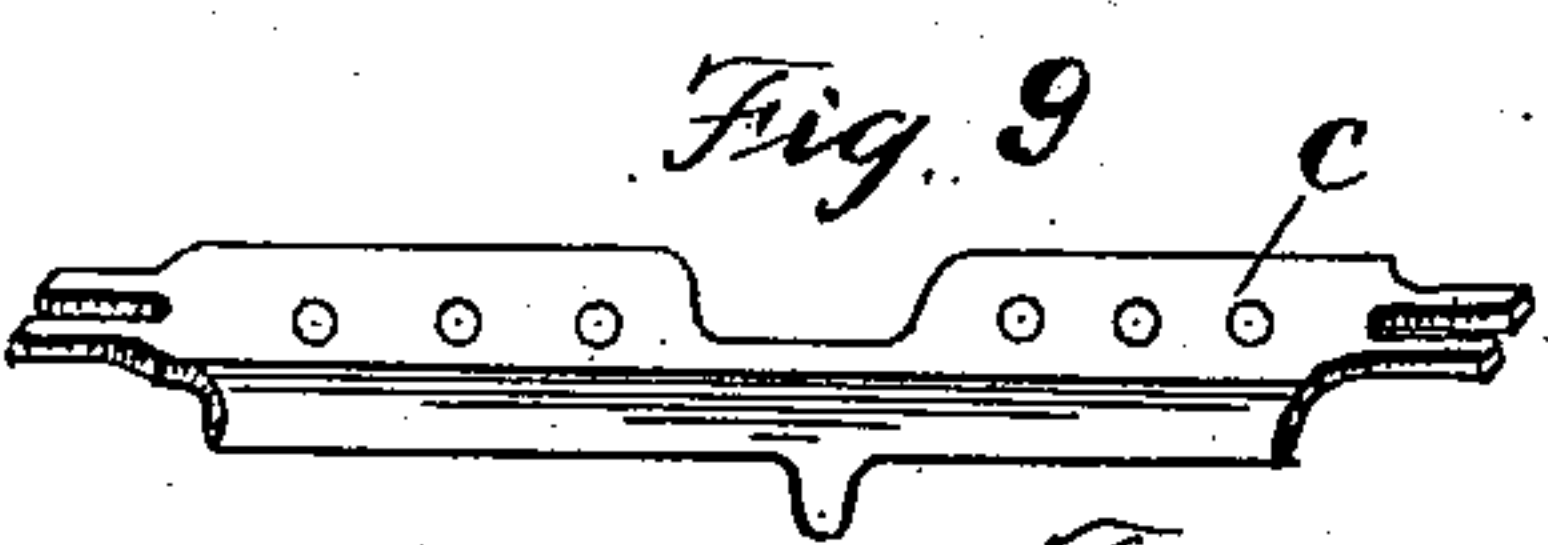
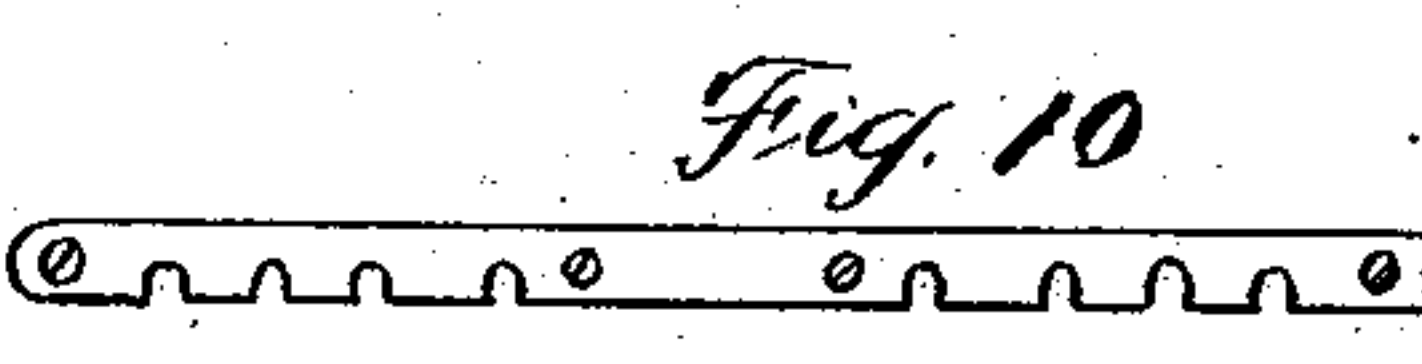
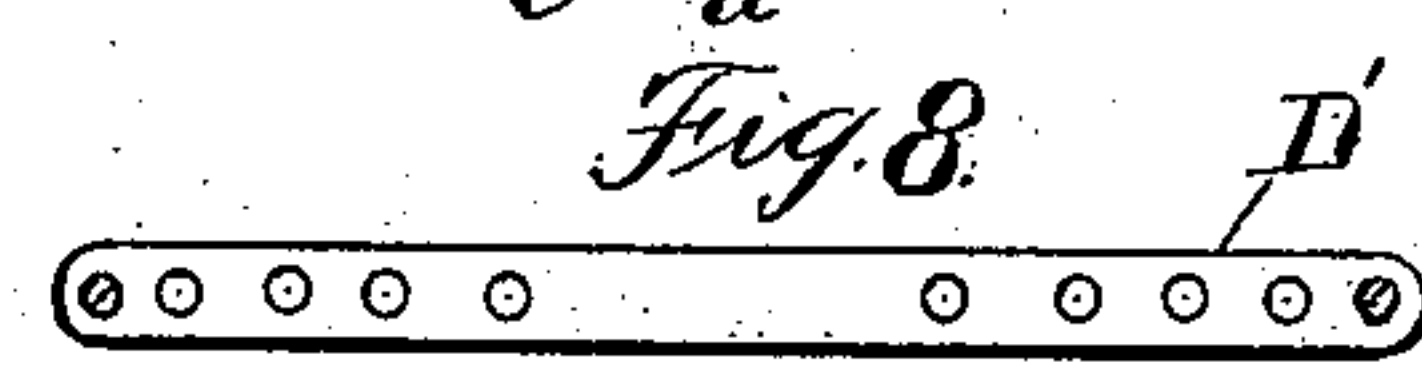
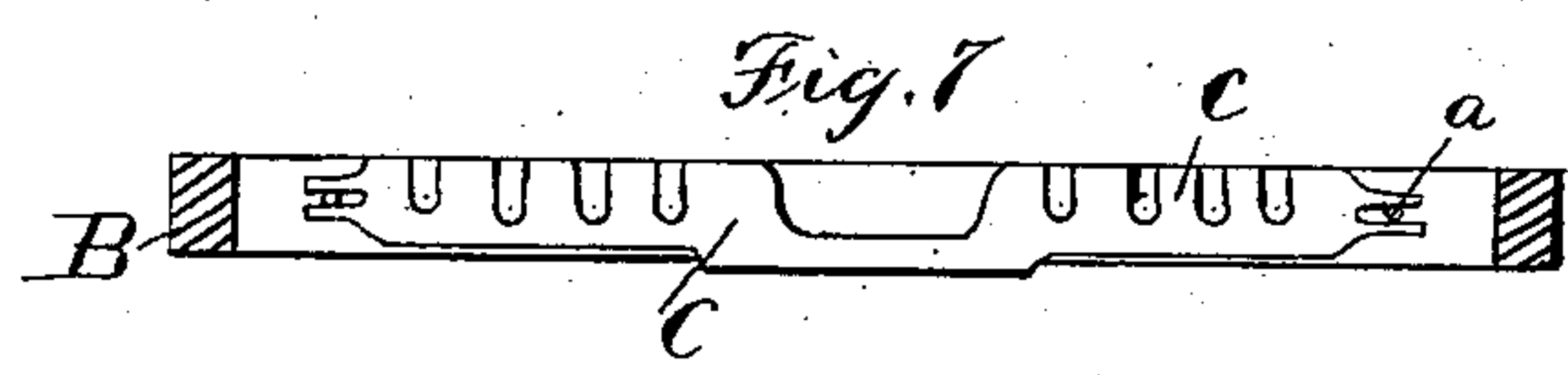
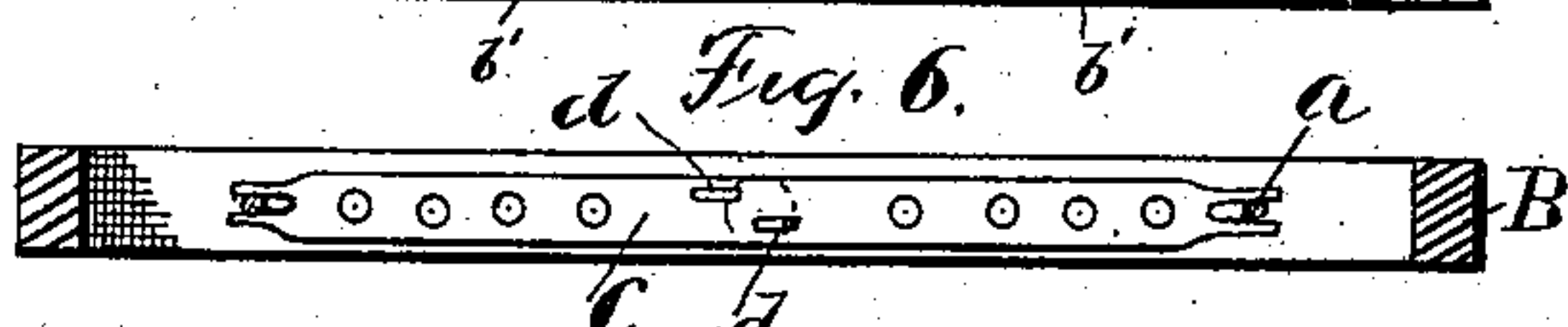
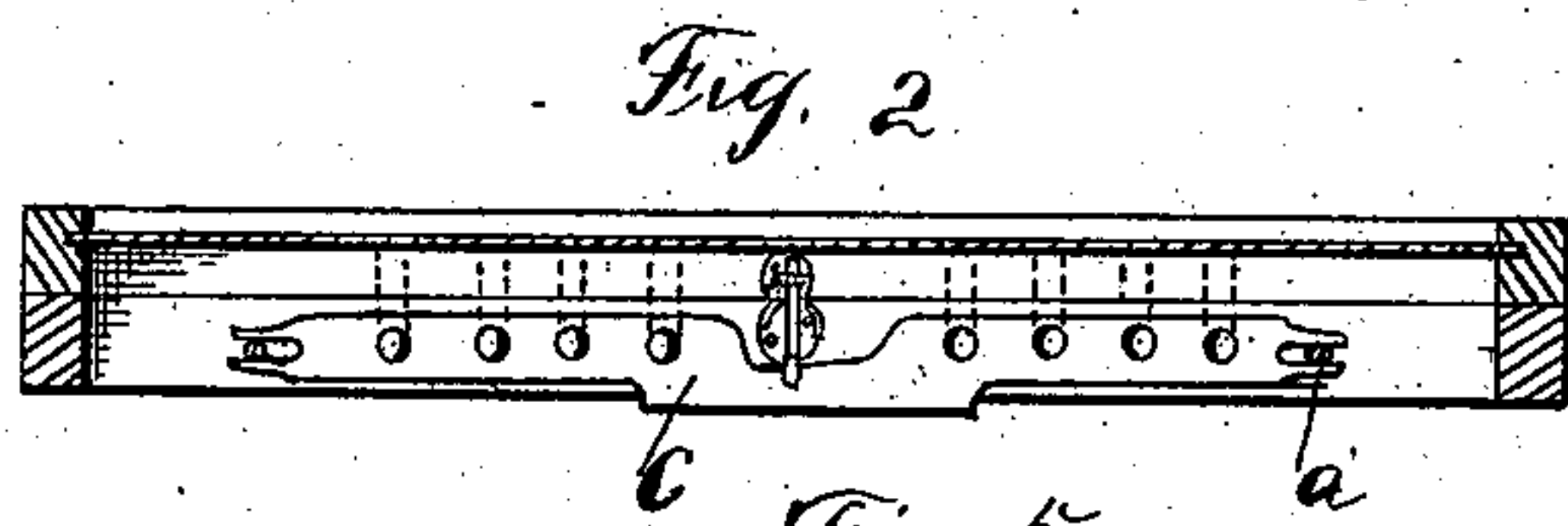
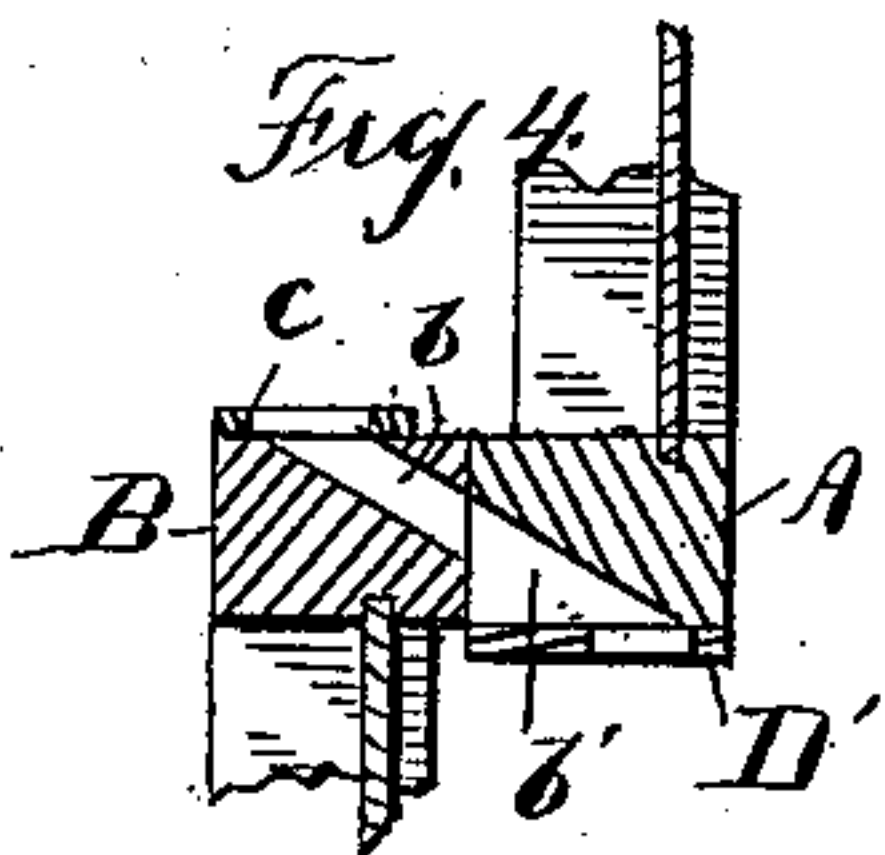
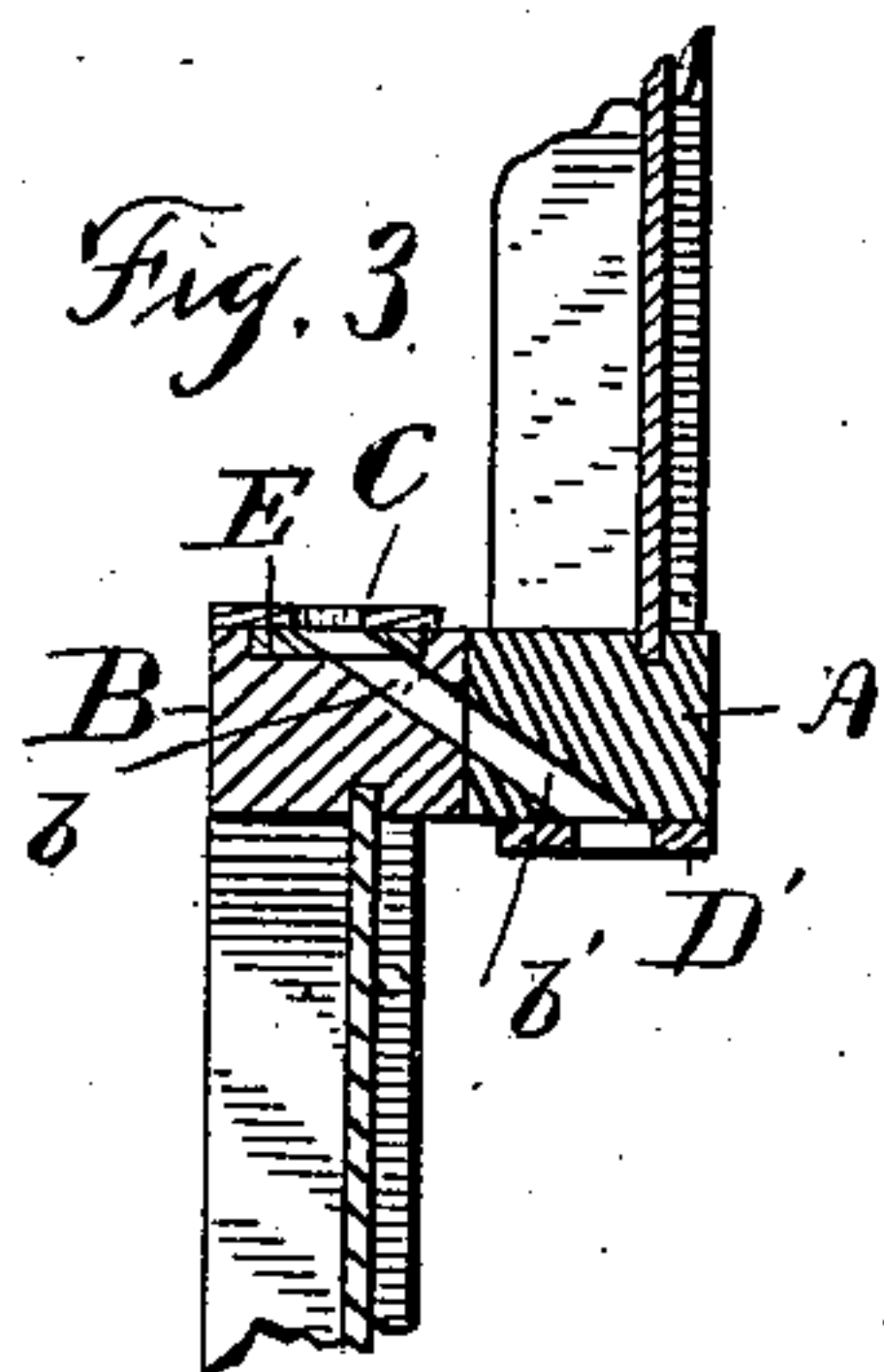
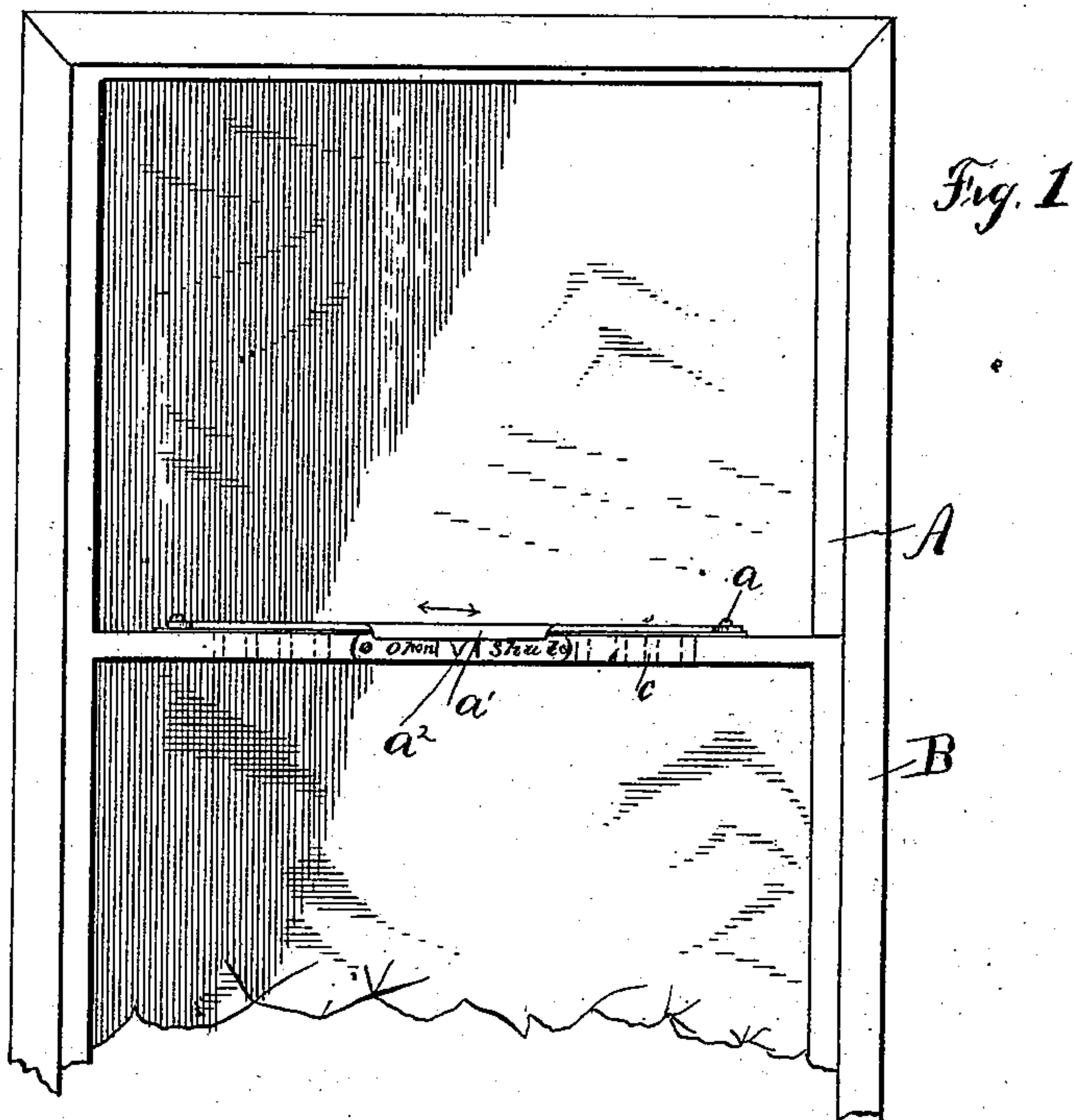
(No Model.)

M. A. W. LOUIS & C. T. MURRAY.

VENTILATOR.

No. 376,827.

Patented Jan. 24, 1888.



Witnesses
C. W. H. Brown,
E. A. Bond.

Inventor
M. A. W. Louis
Chas. T. Murray
By their Attorneys
Stout & Vanderwood

UNITED STATES PATENT OFFICE.

MICHAEL A. W. LOUIS AND CHARLES T. MURRAY, OF WASHINGTON,
DISTRICT OF COLUMBIA.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 376,827, dated January 24, 1888.

Application filed December 12, 1885. Serial No. 185,507. (No model.)

To all whom it may concern:

Be it known that we, MICHAEL A. W. LOUIS and CHARLES T. MURRAY, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Ventilators; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to ventilators for windows, and will be fully described hereinafter.

In the drawings, Figure 1 is an inside elevation of a window having our invention applied thereto. Fig. 2 is a horizontal section taken above the meeting-rails of the upper and lower sashes shown in Fig. 1; and Figs. 3 to 11, inclusive, are details of modifications.

A is the upper and B the lower sash. The upper rail of the lower frame and the lower rail of the upper frame are made with inclined coinciding slots or perforations *b b'*, and on top of the upper rail of sash B is placed a perforated register-plate, C, which may be secured thereto by bolts *a*, passing through slots therein, or by any other device that will permit the plate C to move in the direction of its length to open or close the perforations. On its front edge the plate C is provided with a flange, *a'*, having an index, *a''*, and the face of the rail beneath the flange and index is reinforced by a plate, *c*, on which the words "Open" and "Shut," or any other word of corresponding import, may be displayed. The flange *a'* may extend along the entire length of the plate, as in Fig. 9, or may extend only a short distance along its middle, as in Figs. 1 and 2; and the plate C may be bowed, as in Figs. 2 and 7, or may be straight, as in Fig. 6, and slotted, as at *d*, to take the sleeved screws that secure the lock D in place.

In Fig. 3 the adjacent rails of the sashes are shown as perforated.

In Figs. 4 and 5 the rail of sash A is beveled off, and in Fig. 11 both sashes are beveled.

Re-enforce plates E may be placed upon the upper rail of sash B to receive the plate C and form a bearing for it, and we generally secure plates like the one shown in Figs. 8 and 10 (marked D) on the under side of sash B; but these last may be dispensed with.

The plate C may be either perforated, as shown in Figs. 2 and 6, or slotted, as in Fig. 7, and may slide longitudinally; or this plate may be without slots, as in Fig. 11, and may move at right angles to its length, as in Fig. 11. In this modification a thumb-piece, *c'*, might be provided to facilitate its operation.

When the openings through the sashes are entirely covered by the plate C, the air from without is of course shut off, and the amount to be admitted can be regulated by exposing the openings to the extent deemed necessary.

Our device is cheap and durable and fully accomplishes the purpose for which it was designed.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination, with an upper and lower window-sash, of their meeting-rails provided with oblique perforations registering with each other when the sashes are both closed, and a plate provided with openings registering with said perforations in the meeting-rails and adapted to slide longitudinally upon one of said rails to open or close the said perforations.

In testimony that we claim the foregoing we have hereunto set our hands, at Washington, in the District of Columbia, in the presence of two witnesses.

M. A. W. LOUIS.
CHAS. T. MURRAY.

Witnesses:

S. S. STOUT,
CHRISTINA CALLAN.