

G. NICHOLSON.  
Window Ventilator.

No. 160,458.

Patented March 2, 1875.

Fig. 1.

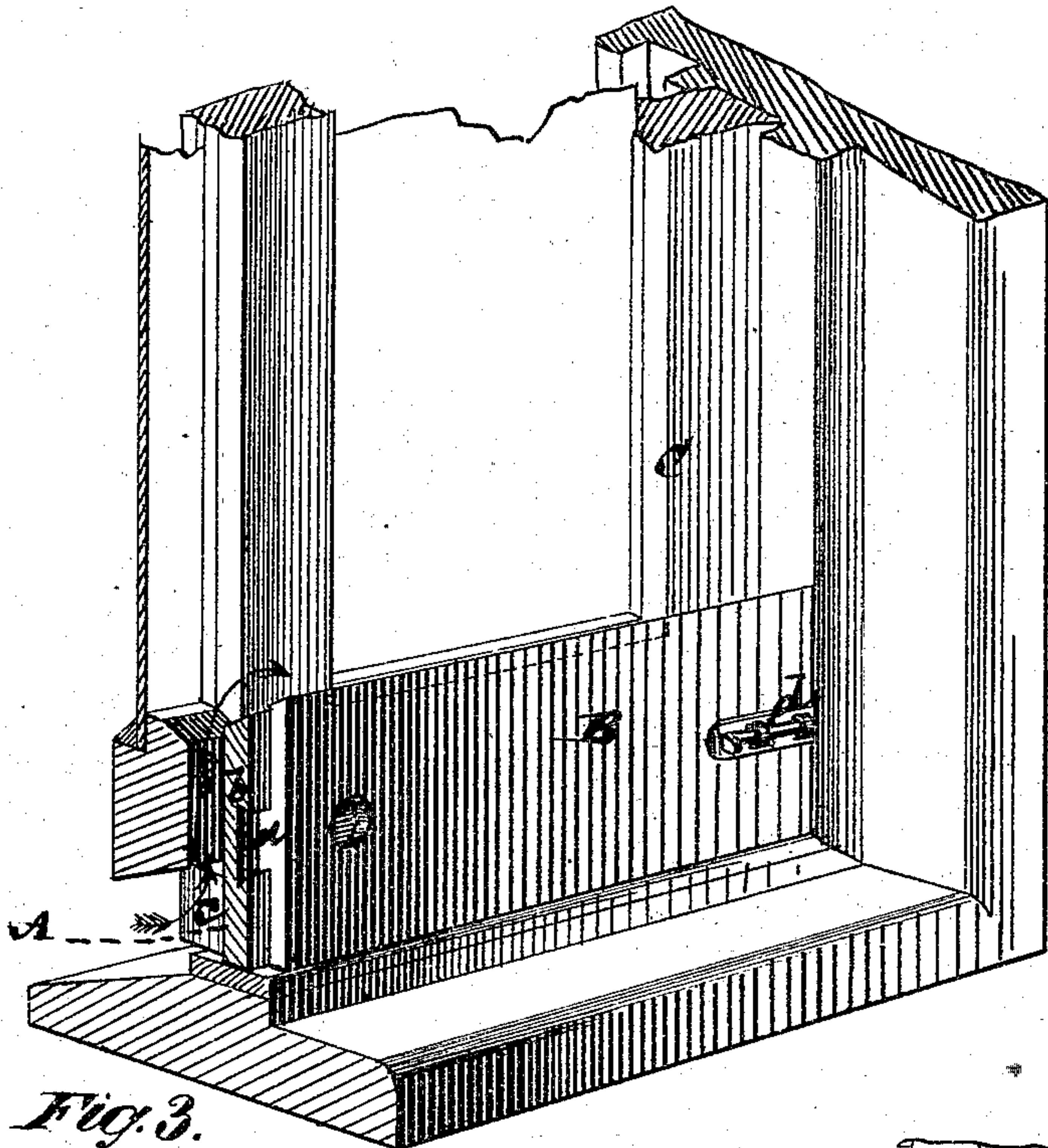


Fig. 2.

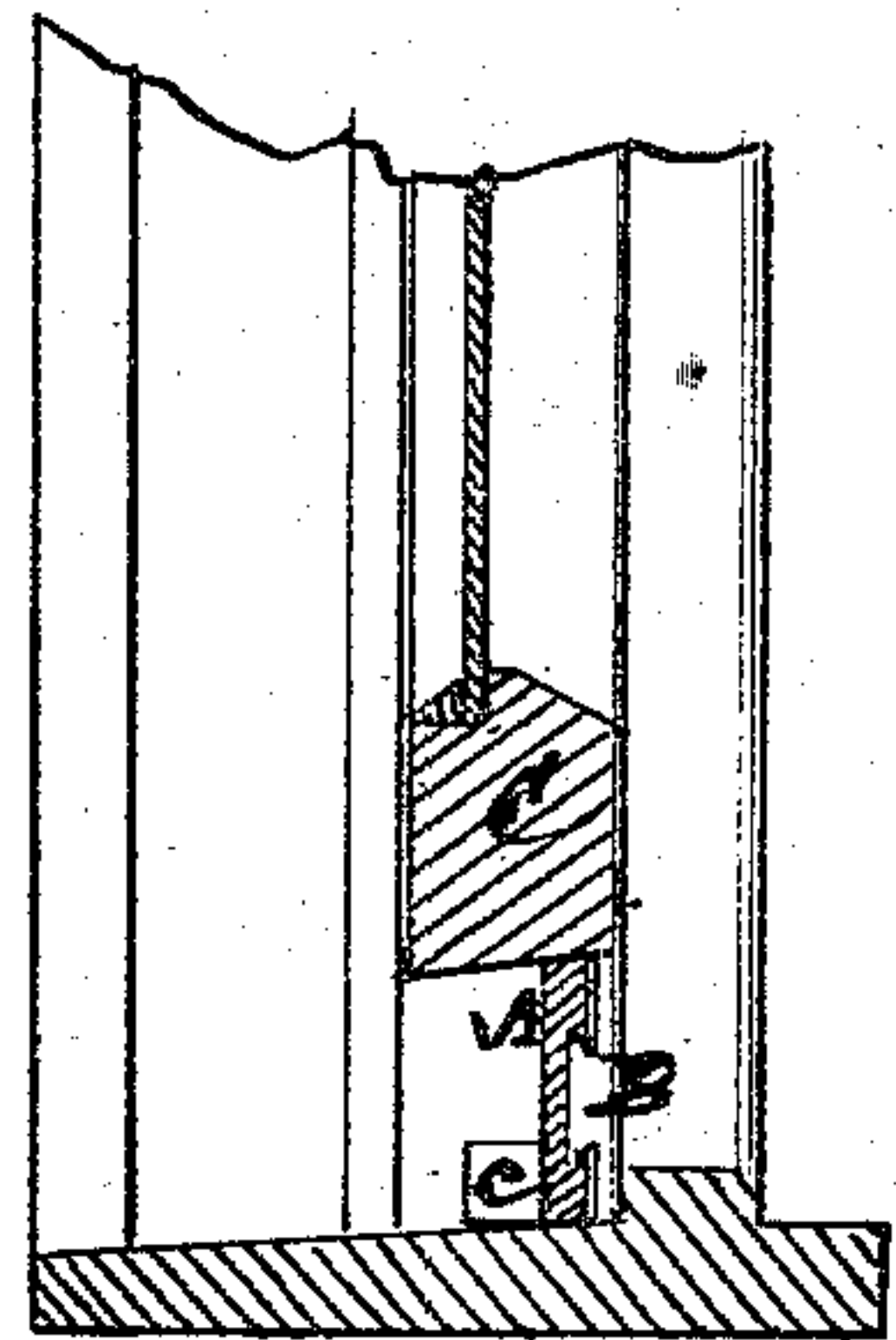


Fig. 4.

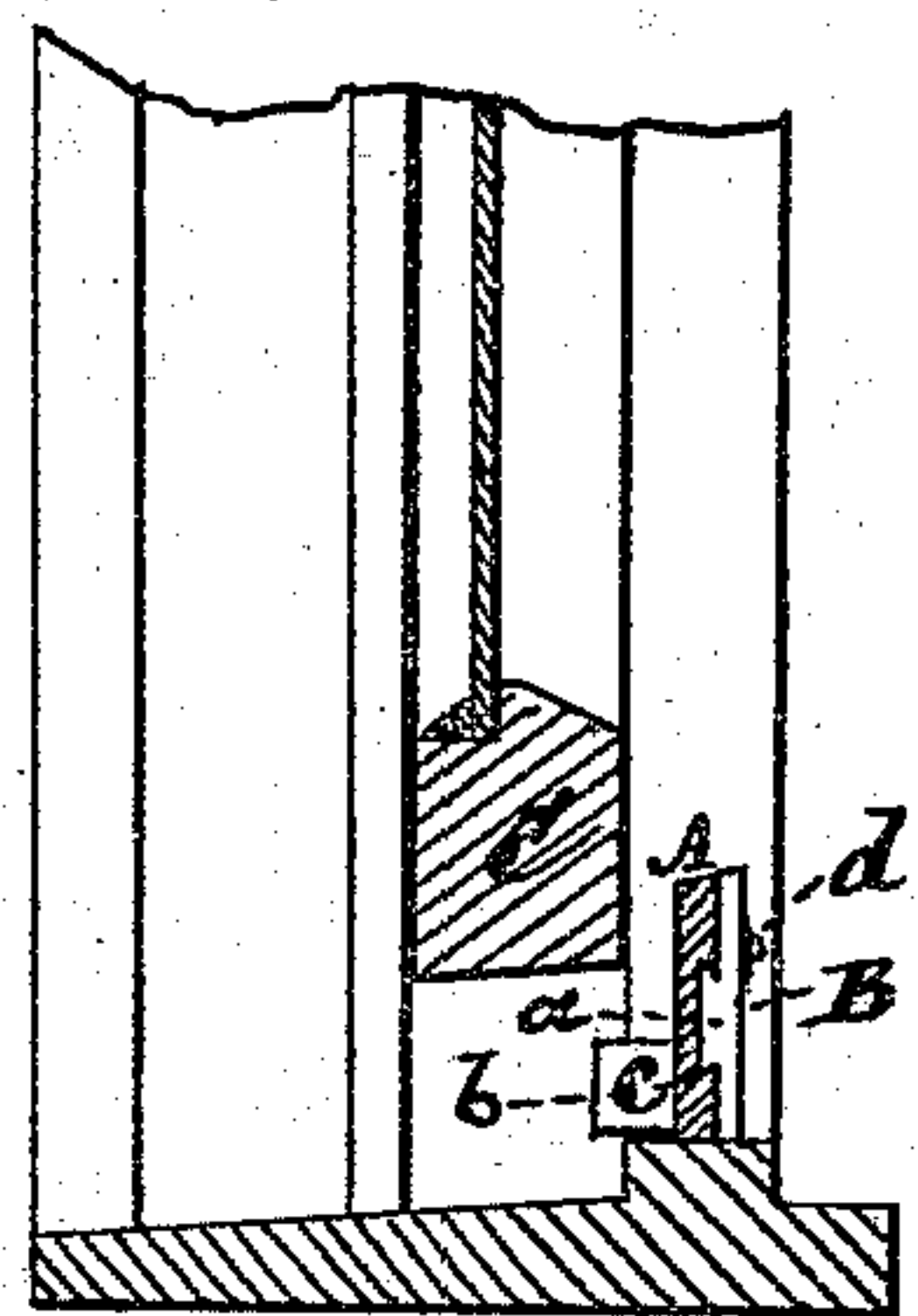


Fig. 3.

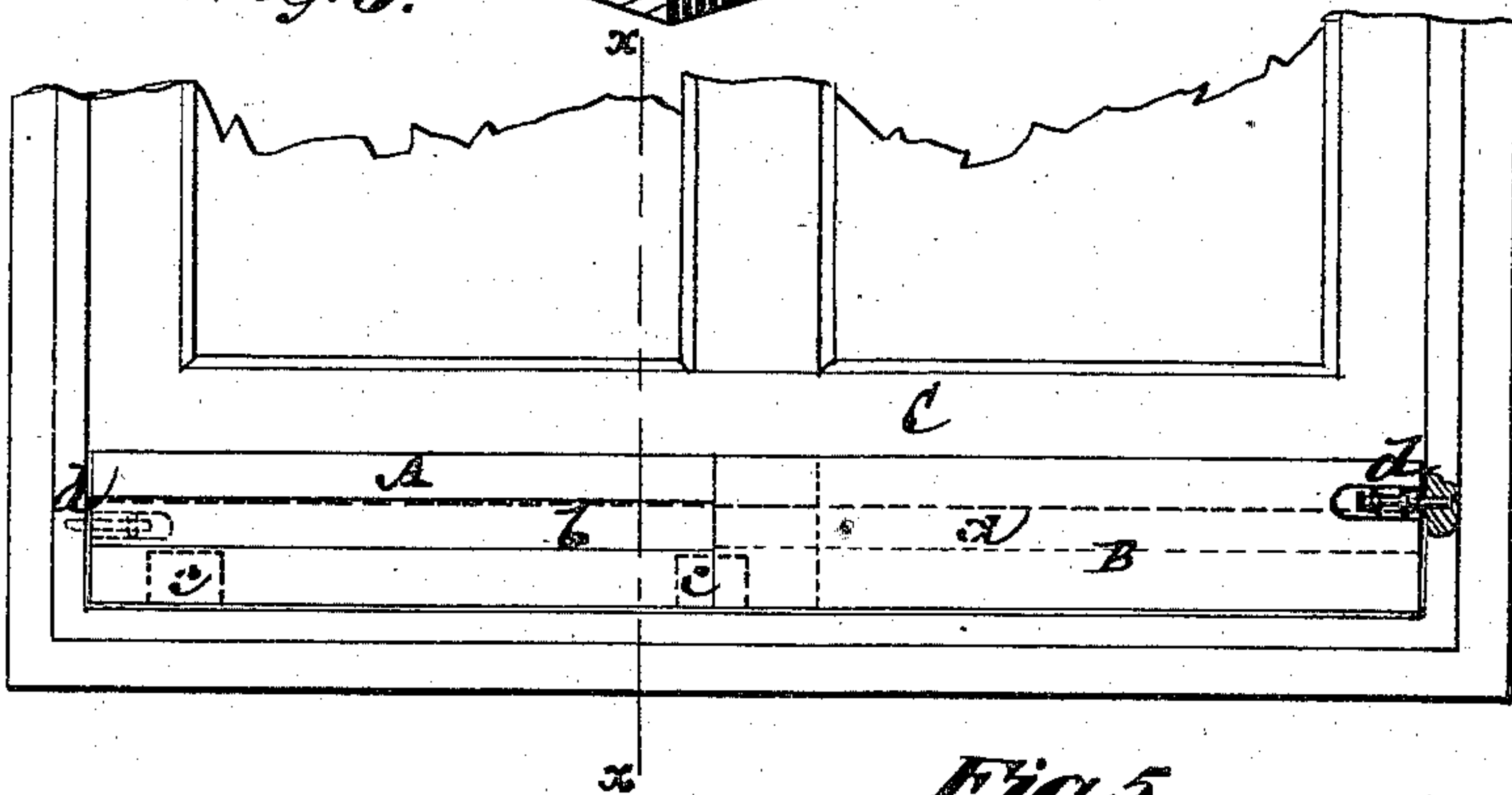
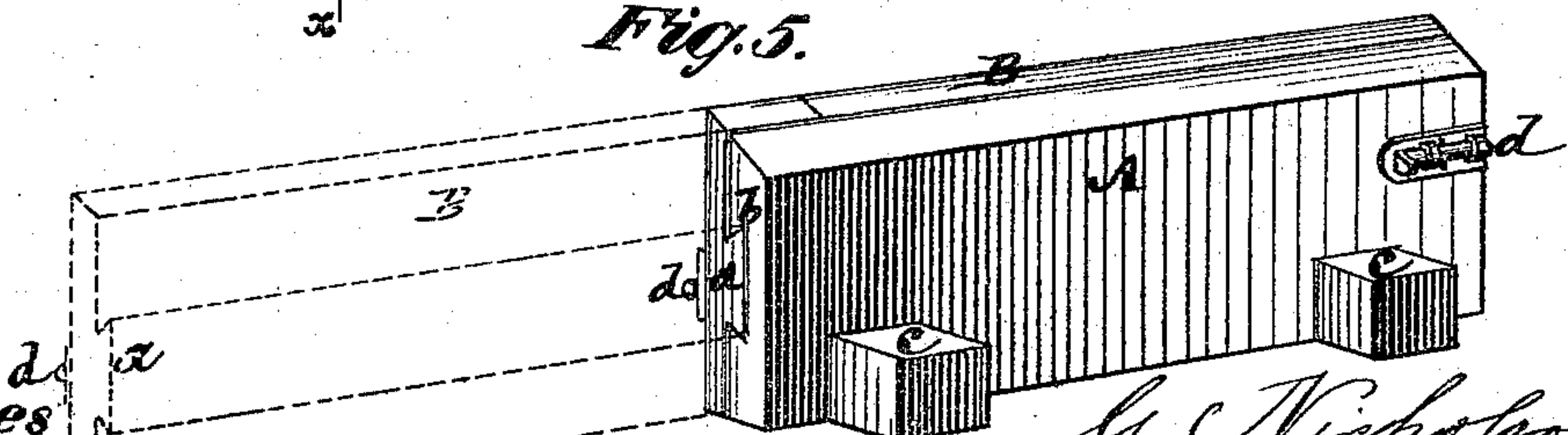


Fig. 5.



Witnesses  
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# UNITED STATES PATENT OFFICE.

GRANVILLE NICHOLSON, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN WINDOW-VENTILATORS.

Specification forming part of Letters Patent No. 160,458, dated March 2, 1875; application filed January 29, 1875.

*To all whom it may concern:*

Be it known that I, GRANVILLE NICHOLSON, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Window-Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 is a perspective view of a portion of a lower sash and window-frame, having my improved ventilator, under one application of it, attached. Fig. 2 is a vertical transverse section of the same under a different application of the ventilator; Figs. 3 and 4, a front view and vertical transverse section, showing a still further application of the ventilator, said section being on the line *xx*; and Fig. 5, a view, in perspective, of the ventilator when compacted and shut up, with the same extended in dotted lines.

This invention relates to portable or removable ventilators, composed mainly of a frame interposed between the bottom of a lower rising and falling window-sash when open, and the sill of the window or other base, for the purpose of establishing communication with the outside atmosphere below, or at the bottom of the window, as well as from above or between the sashes.

The object of the invention is to construct a cheap, simple, compact, and efficient window-ventilator of the description above referred to, which shall exclude noise and prevent objectionable draft, is not affected by rain, snow, or wind, is free from objectionable projection outside or inside the window, and which is capable of changing and limiting or varying the direction of the current without the use of elbows or valves.

The invention consists in a novel construction of the frame, whereby these several advantages are obtained in a more than usually simple and practicable form.

The ventilator-frame, as represented in the accompanying drawing, is not merely made in sections, and adjustable in direction of its length to suit different widths of window, but the sections A B, of which there may be two or more, are constructed with a tongue and

groove, *a b*, on or in their adjacent faces, whereby the sections may be slid, the one over or against the other throughout their length, thus giving great compactness to the ventilator when not in use. Unitedly these sections form a single bar or frame, extending, when expanded, across the window. The back or outer one, A, of these sections is provided with one or more stops or projections, *c*, on its exterior, reaching only a given amount of the height of the frame, and so that not only may the lower sash *c*, when not balanced, be supported thereby, but so that, if desired, air may be admitted under said sash, and between the sash and ventilator-frame, and over the latter, as well as communication with the outside air established between the two sashes, and over the top of the lower one, or the ventilation may be restricted to such top vent, by setting the sections of the ventilator-frame close up against the lower sash. In any case, however, the stops or projections *c* serve to give a fixed and limited amount of opening to the lower sash. When it is desired to give a larger amount of opening to the lower sash under support, and closure of the latter below by the ventilator-frame, restricting the vent to the passage above between the sashes, then the bottom edge of the lower sash may be made to rest upon the top edge of the ventilator frame or bar, as in Fig. 2, instead of resting on the stops or projections *c*; or, again, when the lower sash is a balanced one, and it is required to give a variable, instead of a fixed, amount of opening to it, with a vent below as well as above, but so that the draft below is an upward one, or not direct, then, as shown in Figs. 3 and 4, the ventilator frame or bar is set slightly away from the lower sash, without coming in contact, either by its stops or upper edge, with said sash, and when thus set the ventilator may be held in its place by bolts or catches *d*, made to engage with the sides of the window-frame.

Thus it will be seen that this ventilator has all the advantages hereinbefore specified for it, and that its cost is very trifling, while, when shut up, as shown by full lines in Fig. 5, it may be stowed away in a very contracted space when not in use.

I claim—

1. A contracting and expanding ventilating frame or bar having one or more stops or projections, *c*, on its back or outer surface immediately of its height, substantially as and for the purposes herein set forth.

2. In combination with the contracting and expanding ventilating frame or bar, the bolts or catches *d* applied to the adjustable sections of the bar, essentially as described.

3. The adjustable or expanding and con-

tracting sections of the ventilating frame or bar, in dovetail fit with each other throughout their length, whereby the frame may be shut up within the length of a single section, substantially as herein set forth.

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Witnesses:

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