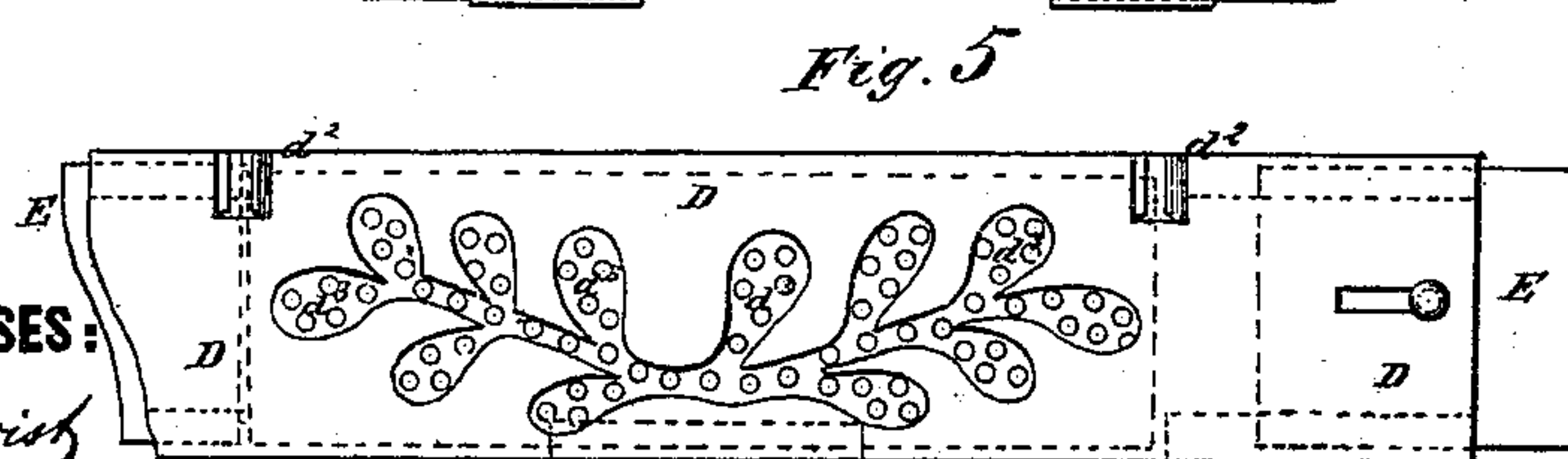
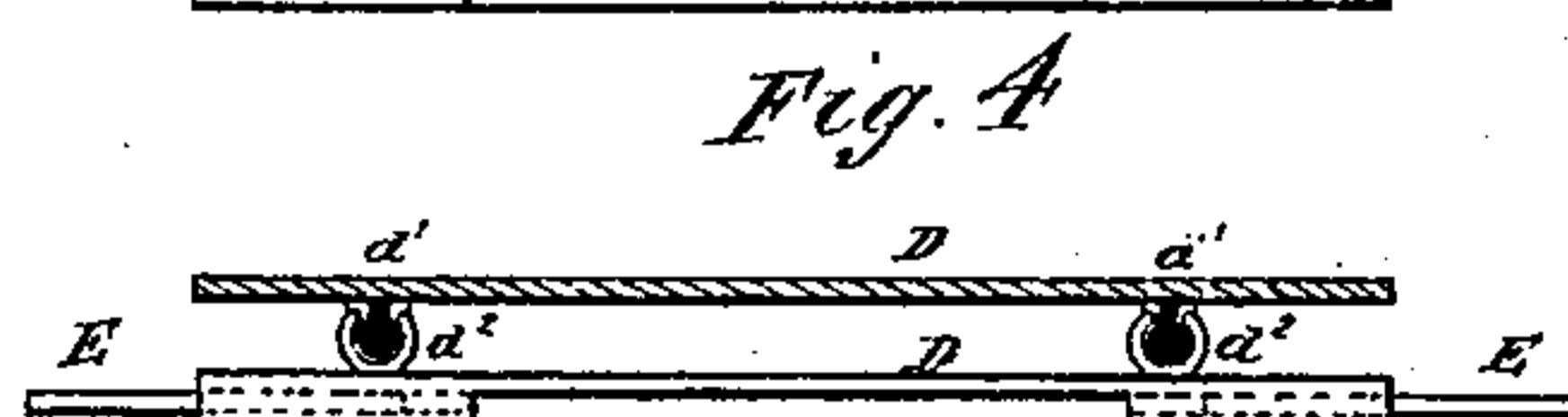
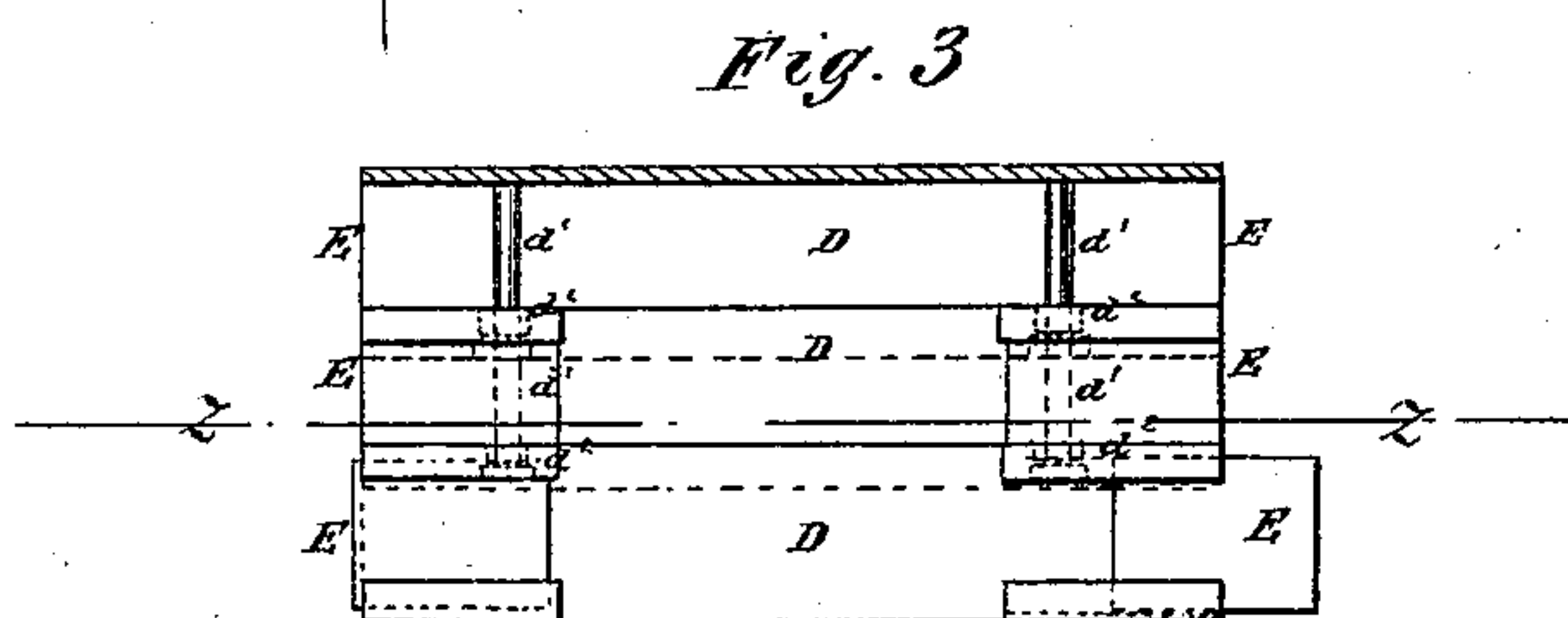
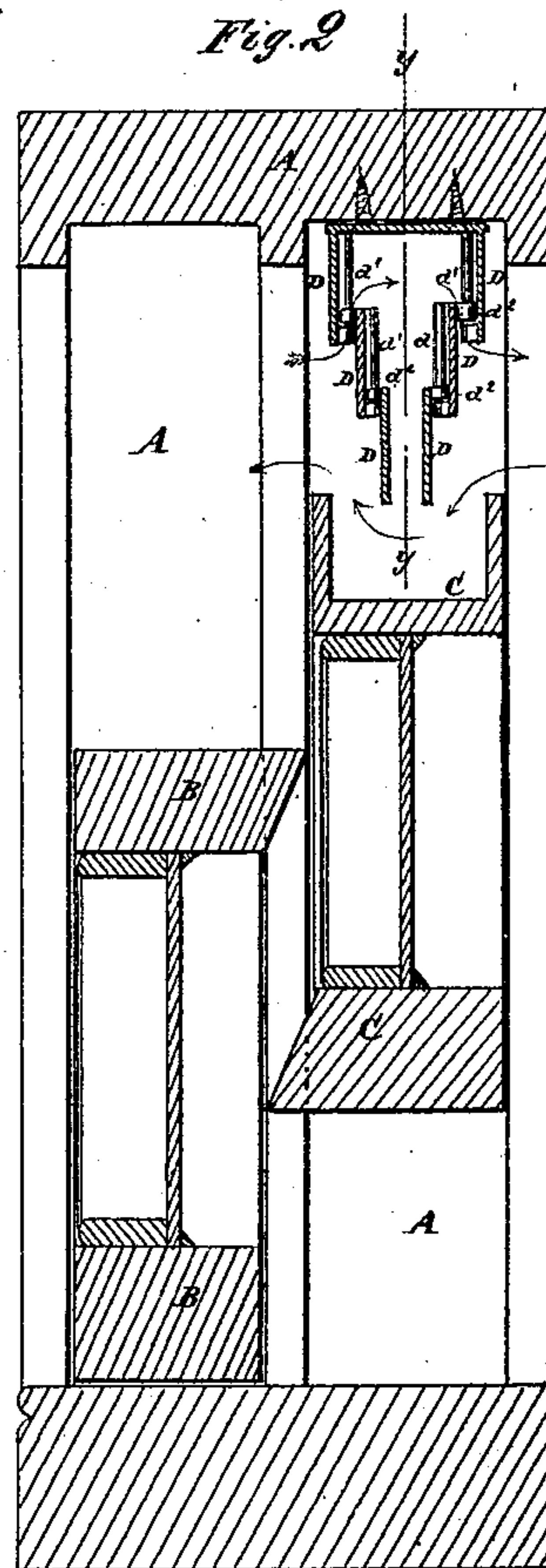
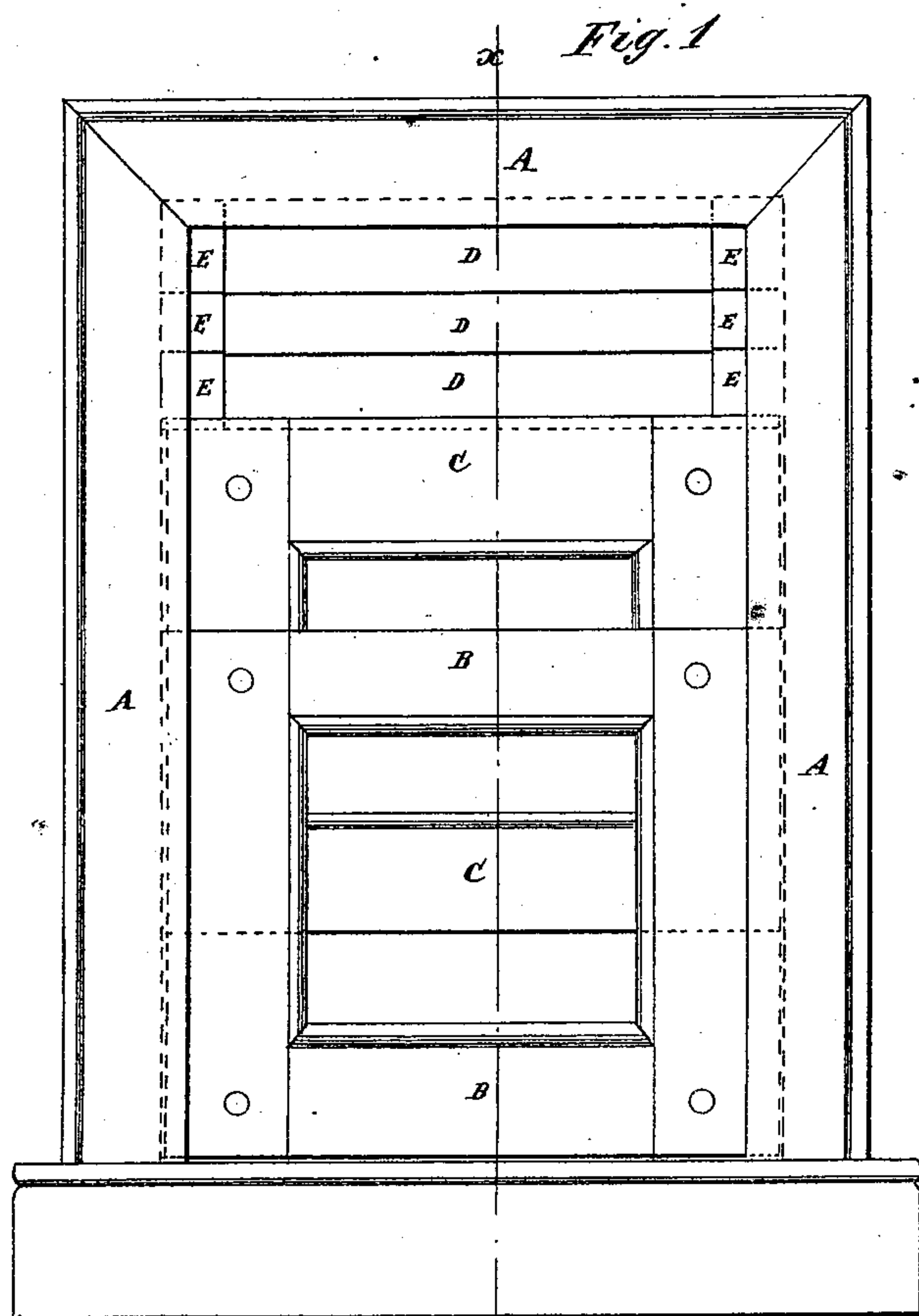


S. W. COUCH.  
Window Ventilator.

No. 159,800.

Patented Feb. 16, 1875.



WITNESSES:

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BY

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# UNITED STATES PATENT OFFICE.

SAMUEL W. COUCH, OF COLD SPRING, NEW YORK.

## IMPROVEMENT IN WINDOW-VENTILATORS.

Specification forming part of Letters Patent No. 159,800, dated February 16, 1875; application filed December 19, 1874.

*To all whom it may concern:*

Be it known that I, SAMUEL W. COUCH, of Cold Spring, Putnam county, New York, have invented a new and Improved Window-Ventilator, of which the following is a specification:

Figure 1 is a front view of a window to which my improvement has been applied. Fig. 2 is a vertical cross-section of the same, taken through the line  $x x$ , Fig. 1. Fig. 3 is a vertical longitudinal section of the same, taken through the line  $y y$ , Fig. 2. Fig. 4 is horizontal section of one part of the ventilator, taken through the line  $z z$ , Fig. 3; and Fig. 5 is a detail front view of one of the plates of the ventilator.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved ventilator for windows, which shall be so constructed that it may be opened and closed by opening and closing the window-sash, and which shall be simple in construction and readily applied to the window.

A represents the frame or casing. B represents the lower sash, and C represents the upper sash, of a window. D are small metal plates of such a length as to be readily placed in the window-frame.

To the inner side of each upper plate, D, are attached two or more transverse bars,  $d'$ , which may be made round or dovetailed in form, as may be desired. To the outer side of each lower plate, D, near its upper edge, are attached lugs  $d^2$ , having notches formed in their outer edges of such a shape as to receive and fit upon the bars  $d'$ . The bars  $d'$  are provided with stops at their lower ends, to prevent the lugs  $d^2$  from slipping off said lower ends. Two sets of plates, D, are used to form the ventilator, and there may be two, three, or more plates in each set. The upper plates D of each set rest upon small hooks or other supports, attached to the top bar of the window-frame A or to a small bar or plate attached to said frame A, or the said plates may be secured in any other convenient manner.

The two sets of plates D are arranged with their inner sides toward each other, as shown

in Fig. 2. The two sets of plates D may be placed directly above the top bar of the upper sash C, as shown in Figs. 1 and 2, in which case the top bar of said upper sash is grooved upon its upper side to such a depth as to receive the plates D when they are closed up.

With this construction, when the upper sash C is lowered, the plates D descend with it or open out, as shown in Fig. 2, and when the said sash is raised they are closed up and inclosed in the groove of the upper-sash bar, so as to be entirely out of sight.

The plates D may be placed at the outer side of the upper sash, or upon its inner side, or one set of the plates D may be placed at the outer side, and the other set at the inner side, of said sash. In this case the plates D are raised or closed by pins attached to the sides of the said bars. With this construction the air passes in and out through the spaces between the plates.

The plates D may be made plain or they may be made in the form of frames, or in ornamental open work. In the last two cases they should have wire-gauze or finely-perforated sheet-metal plates,  $d^3$ , applied to their inner sides. The plates D should have extension-plates E attached to their ends, so as to be slid into and out of the sash-grooves of the window frame A, when the said plates D have been adjusted in place to prevent the passage of air around ends of the plates D.

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

1. The improved ventilator, formed of the two sets of plates, D, provided with the cross-bars  $d'$  and the notched lugs  $d^2$ , to adapt them to be applied to a window, substantially as herein shown and described.

2. The combination of the extension-plates E with the end parts of the plates D, substantially as herein shown and described.

SAMUEL W. COUCH.

Witnesses:

JAMES T. GRAHAM,  
T. B. MOSHER.