

M. A. Heath,

Sash Fastener

N<sup>o</sup> 11,375.

Patented July 25, 1854.

Fig: 4.

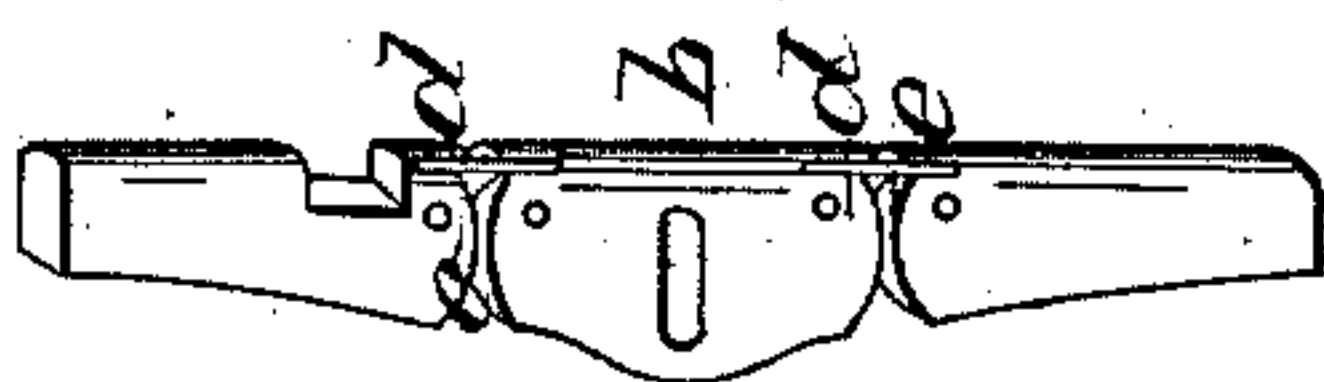


Fig: 3.

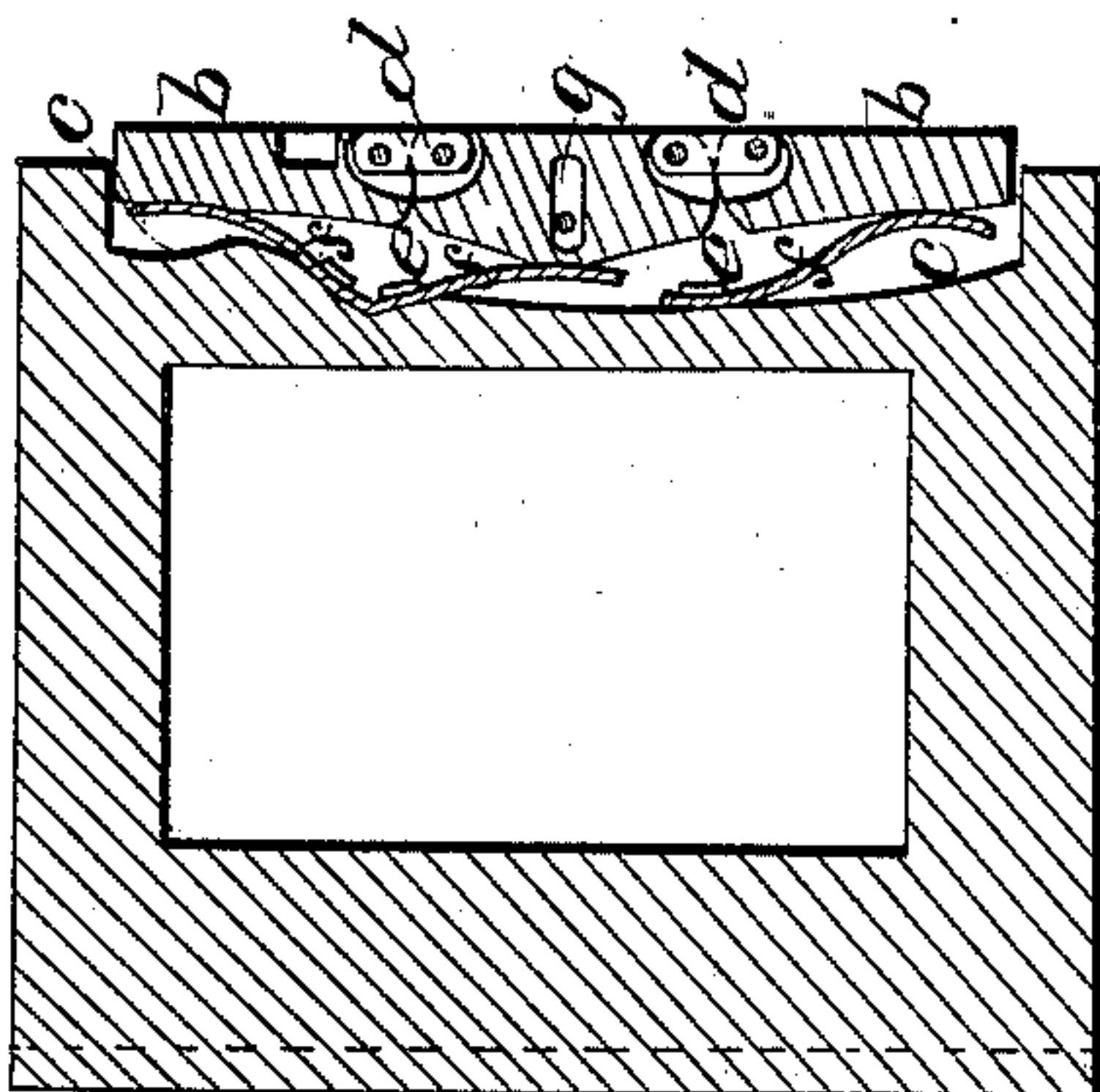


Fig: 2.

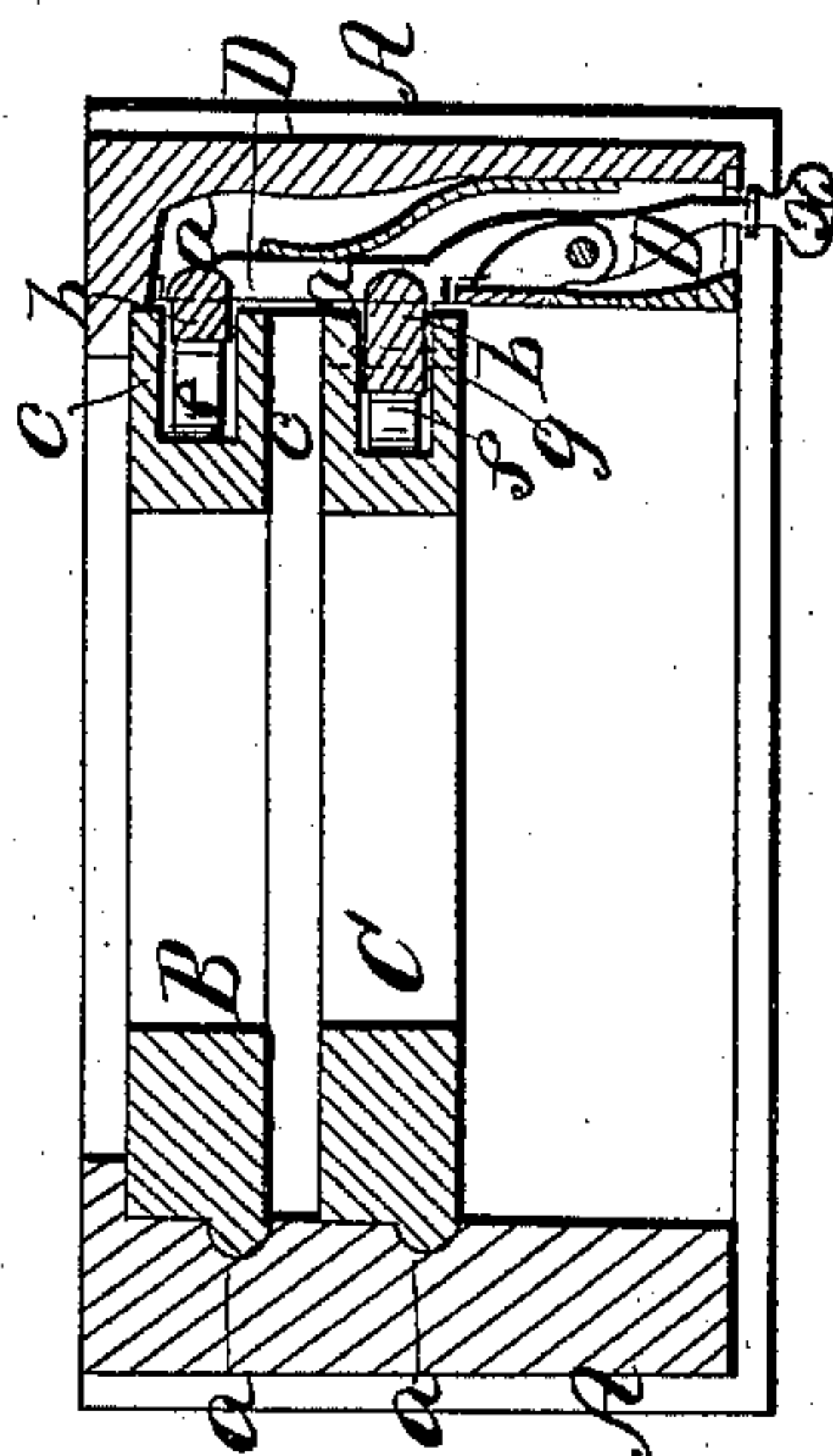
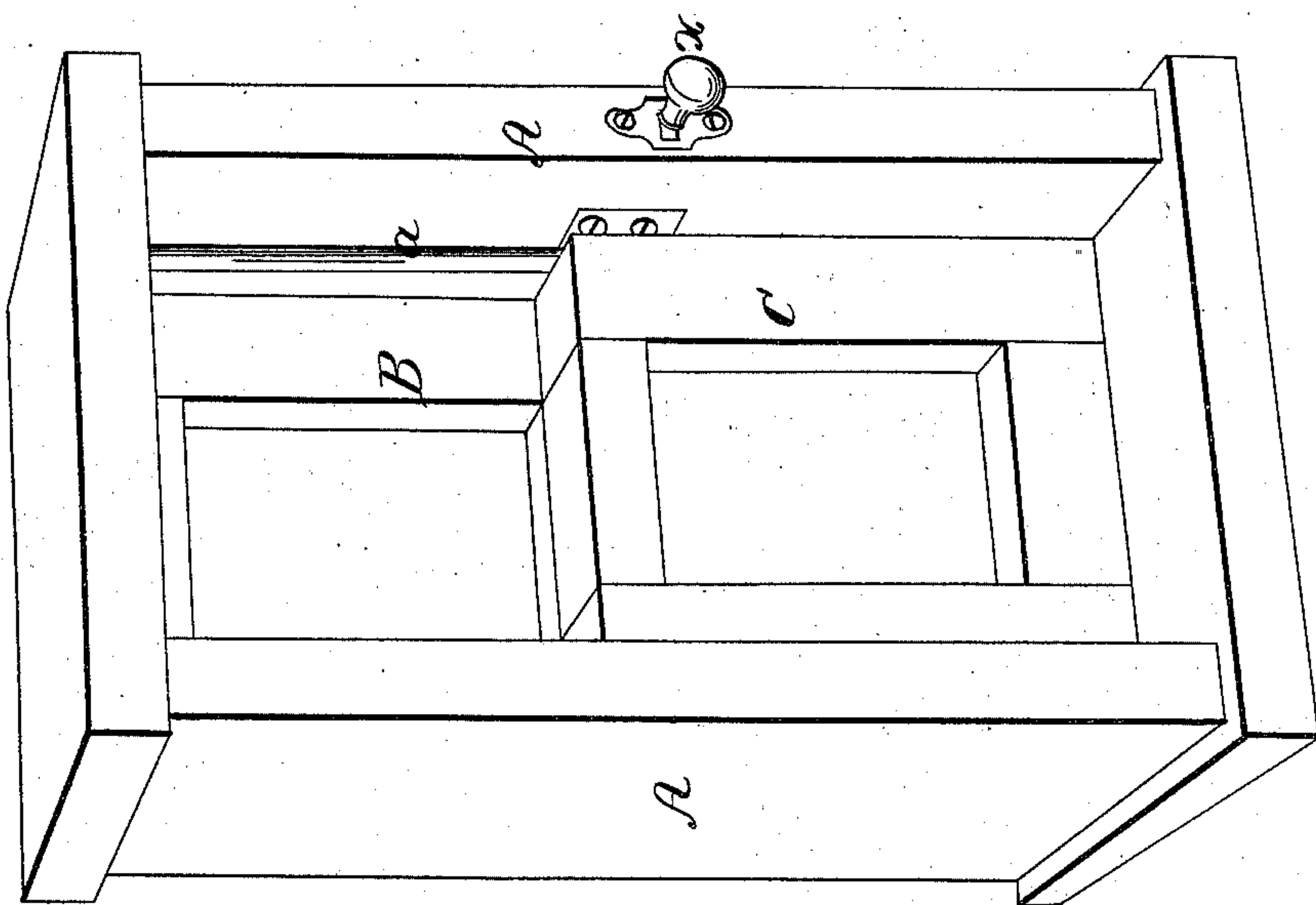


Fig: 1.





# UNITED STATES PATENT OFFICE.

MARK A. HEATH, OF PROVIDENCE, RHODE ISLAND.

## WINDOW.

Specification of Letters Patent No. 11,375, dated July 25, 1854.

*To all whom it may concern:*

Be it known that I, MARK A. HEATH, of the city and county of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Weather-Strips and Sash-Fasteners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a view in perspective of a window frame with an upper and lower sash therein; Fig. 2 is a horizontal section of the same; Fig. 3 is a vertical longitudinal section of the sash, detached, and Fig. 4 is a view in perspective of one of the flexible weather strips of the sash, detached.

It frequently happens with the common and other varieties of window sashes, that the inflexible sliding strips, often used, fail to prevent air, damp and dust from entering the room; this is commonly caused by the sash, or window frame, or both, being crooked where they meet; this defect is not necessarily the result of inaccurate workmanship but may be occasioned, in windows originally well made, by the action of the weather and the shrinking or warping of the wood. It also often happens, from the same or other causes, that the sashes, which should slide tightly but smoothly in their frames, whenever it is attempted to raise or lower them, jam or stick; and it seldom happens that a window sash is found to remain tight enough to exclude air, damp and dust, and at the same time, run free and easy in its frame with just sufficient friction to balance the sash at any height to which it may be raised. The inflexibility of the sliding strips commonly attached to sashes, which prevents them from accommodating themselves to the inequalities of the frame to form a tight joint, is the main defect in common windows, which it is the object of my invention to remedy.

The accompanying drawing represents a window frame (A) constructed much in the usual manner excepting that the grooves (a), in which the sashes slide, are of semi-circular form. The upper sash (B) and lower sash (C) are fitted so as to slide vertically in the grooves, the one behind the other; each sash being provided, at one or both of its sides, with expanding fillets or strips (b) that form the sliding ribs or surfaces in the grooves (a) of the frame; these

sliding strips (b) are fitted loosely into recesses (c) cut in the sides of the sashes; they are of the length, or nearly so, of the sash and are made in pieces united by joints (d) formed so as to leave a space (e) between each piece; thus constructed, they are placed in the recesses (c) which are fitted with springs (f) that press against the several lengths of the sliding strips (b) to force them outward, the center piece of each strip (b) being guided by and swiveling on a pin (g) that passes through an oblong slot in the center piece of the strip (b); the pin (g) also serves to prevent the strip (b) from falling out of the sash when the latter is removed from the window frame; the strip (b) is of rounded form on its outer edge corresponding with the shape of the groove in the window frame.

The expanding strips (b) constructed and forced out by springs in the recesses (c) as described, not only admit of the sashes accommodating themselves to any variation in width, by expansion or contraction, of the sash or window frame, and serve to hold the sash at any height to which it may be raised, by the friction or pressure of the expanding strips against the back of the grooves (a),—but also allow for any inequalities or unevenness of surface in the grooves (a); which advantages result from the flexible construction of the strips as produced by their formation in pieces or lengths acted upon by separate springs (f); for should a swell or hollow be formed in the groove (a), the several lengths of the flexible strip (b) will ride over or bend into the same, as the case may be, in the most accommodating manner, either end of each length being dipped into or forced out of the recess (c) according to the inequalities to be overcome as the sash is raised or lowered, so that the greater part of the expanding strip may form a close joint with the window frame while the remaining portion rides easily over or adjusts itself to any inequality instead of (as would be the case were the expanding strip inflexible) forming an open joint nearly the entire length of the strip through which, air, damp and dust would pass into the room, but this, the flexibility of the expanding strips almost entirely prevents,—while the movement of the sash is rendered comparatively smooth and easy whatever the inequalities, and a sufficient bearing surface of the expanding strips in



the grooves (*a*) is constantly insured, to hold up and nicely balance the sash, by the pressure of the springs (*f*), at any height to which it may be raised. A spring catch  
5 (D) is fitted in the one side of the window frame for locking both sashes when the window is closed, or other fixed point, at which it is required to lock the sashes; this is effected by the bolt of the catch shooting  
10 itself into notches in the expanding strips when the said notches arrive opposite the bolt of the catch; and when it is required to move the sashes, the bolt of the catch is  
15 unlocked from the notches by pressing to one side the knob (*x*) of the catch.

This improvement can readily be applied to any window of the usual construction, which adds greatly to its value and utility.

Having thus described my window sash

and frame, what I claim as new therein and 20 desire to secure by Letters Patent, is—

Inserting in either side of the sash a flexible expanding strip (*b*), formed in lengths jointed or otherwise pliantly secured together, so that the sash is made to slide 25 smoothly in the frame, the several lengths of the strip expanding and contracting to accommodate themselves to inequalities in the groove in which they slide for the purpose of forming a close joint between the sash 30 and the frame, substantially as shown and described.

In testimony whereof I have hereunto subscribed my name.

MARK A. HEATH.

Witnesses:

WM. G. MEREWETHER,  
GAMALIEL LYMAN DWIGHT.