

(No Model.)

T. F. LANG.
WINDOW SASH.

No. 281,379.

Patented July 17, 1883.

Fig. 3.

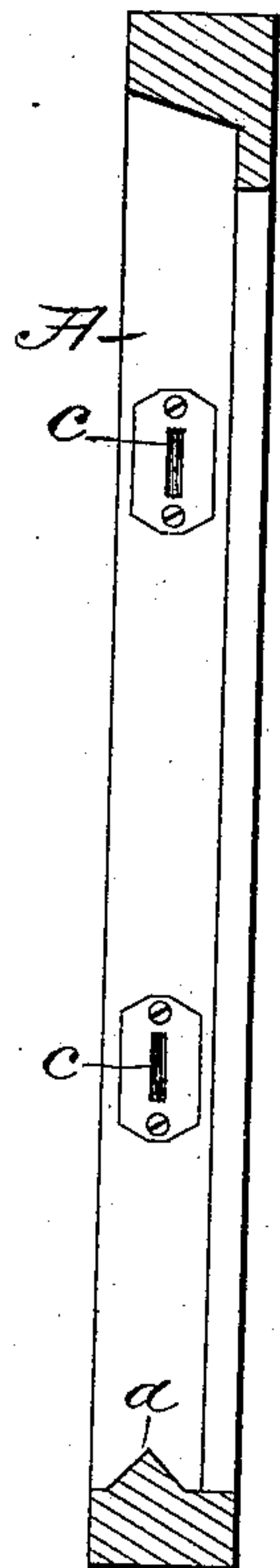


Fig. 1.

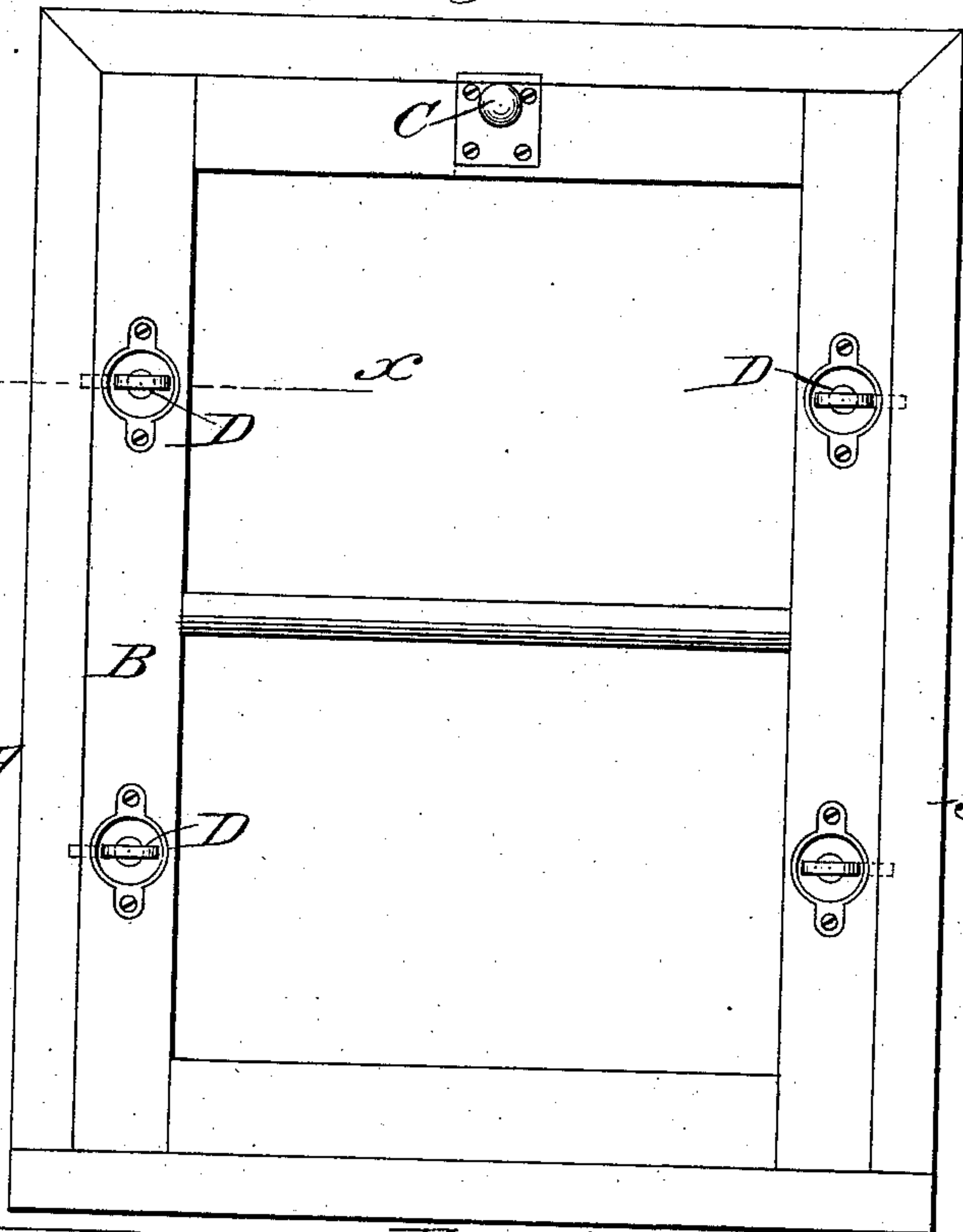


Fig. 2.

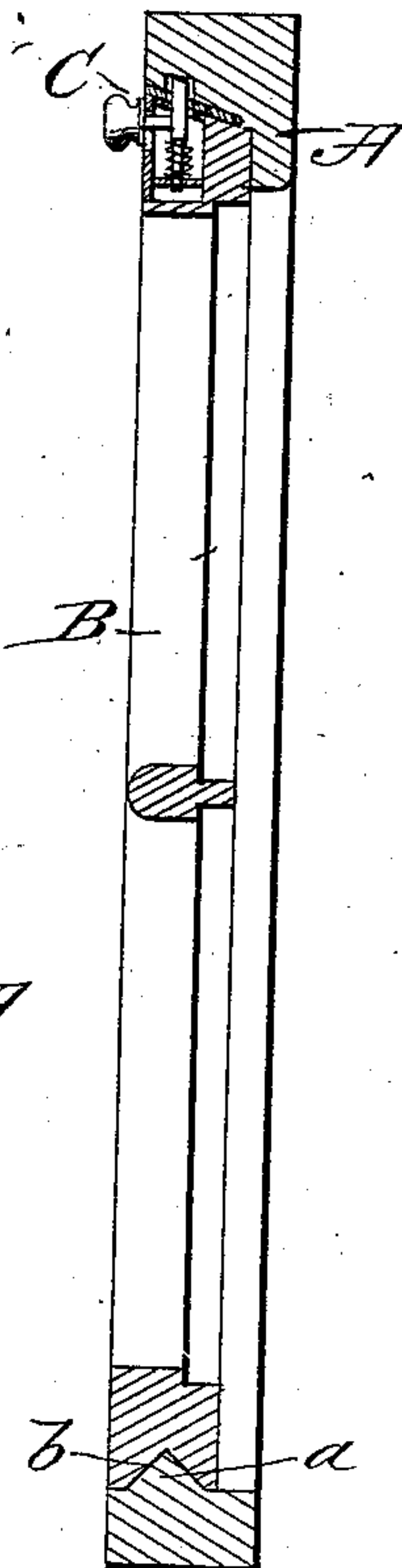


Fig. 4.

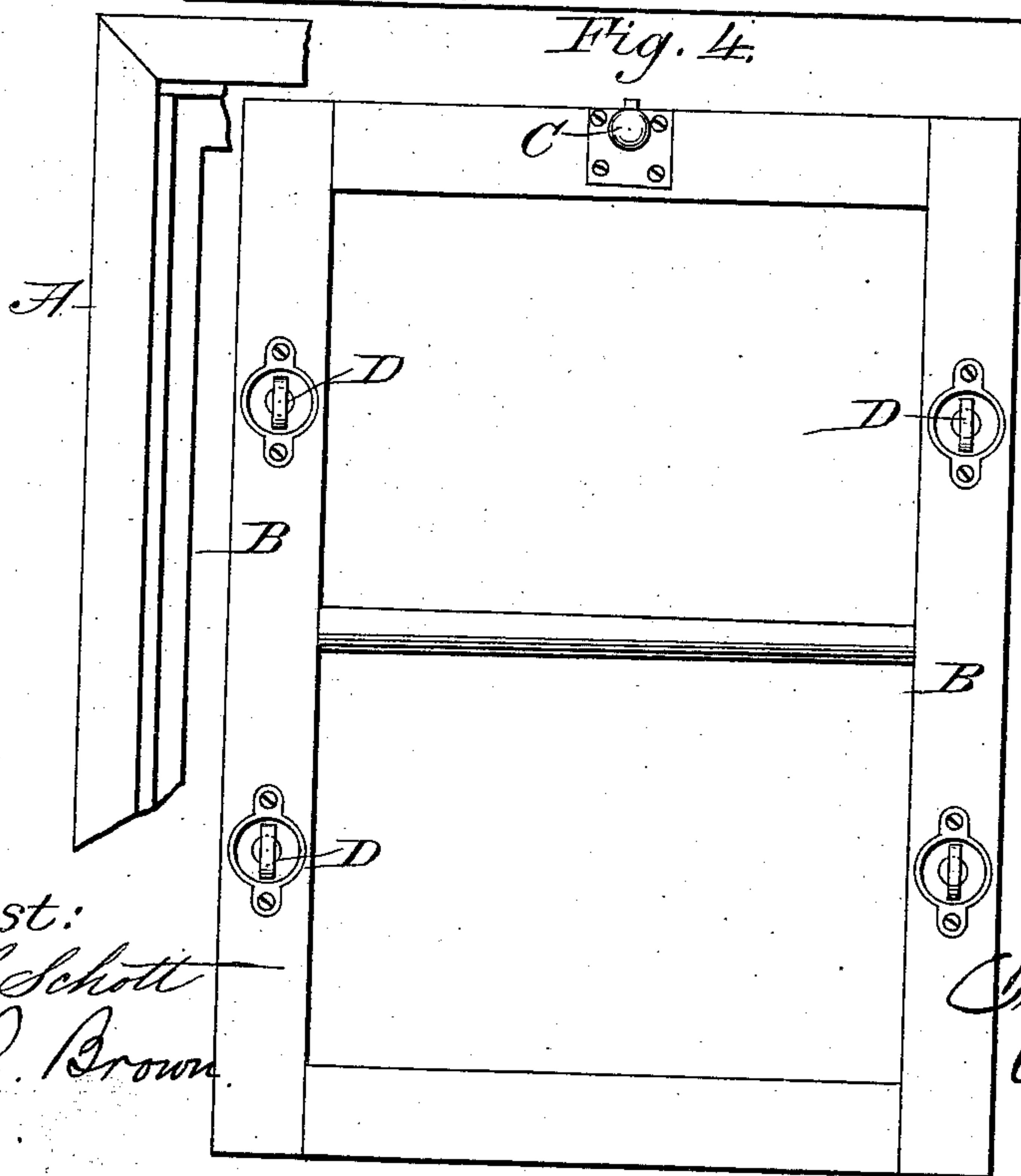
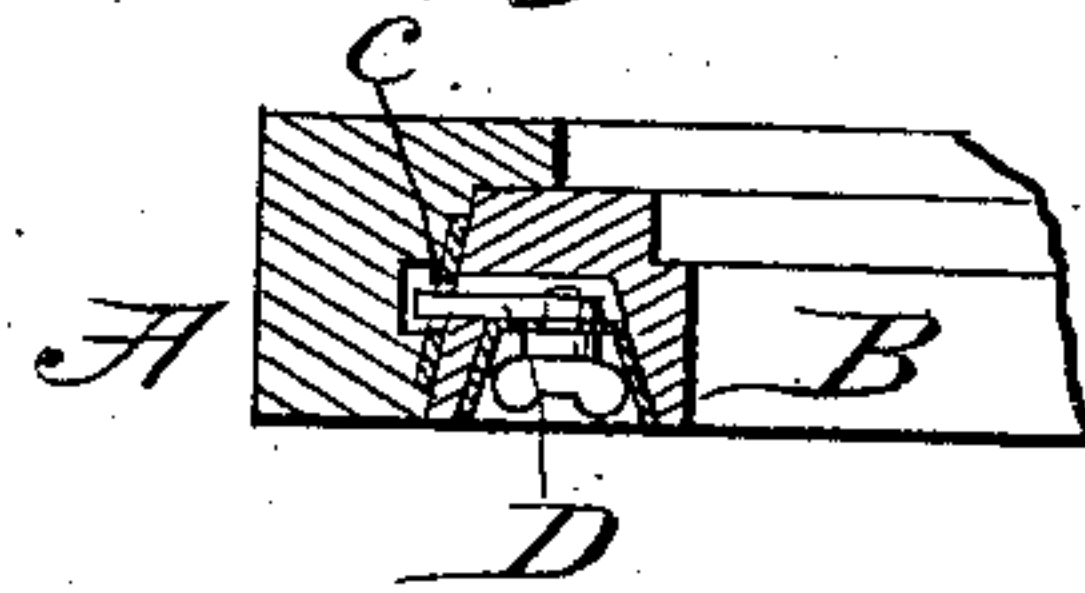


Fig. 5.



Attest:

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THEODORE F. LANG, OF BALTIMORE, MARYLAND.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 281,379, dated July 17, 1883.

Application filed April 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, THEODORE F. LANG, a citizen of the United States, residing at Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Window-Sashes; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of this invention is to enable a window-sash to be removed from its frame without disturbing the cords, weights, and pulleys, or the outside frame of the sash; and the invention consists in the construction, arrangement, and combination of parts, as hereinafter more fully described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is an elevation of my improved window-sash. Fig. 2 is a central vertical section. Fig. 3 is a vertical section of an auxiliary frame in which the sash proper is held. Fig. 4 is a front view of the sash and a partial view of the auxiliary frame, the parts being detached. Fig. 5 is a section on the line *xx* of Fig. 1.

Like letters designate like parts in the several views.

A represents a frame that is supported in the window-casing in any suitable or usual manner, and may be provided with weighted cords that pass over pulleys, so that the frame can be raised or lowered at pleasure, or may slide horizontally in a recess in the wall on either side thereof. Each window-casing may be provided with one or more of these frames, as desired, the window-casing being provided, as usual, with a separate groove or recess for each frame employed, so that the frames can be made to pass each other when being raised or lowered.

In each frame A is placed a removable sash, B, having any desired number of lights or window-panes. The sash B is attached to the frame A by means of suitable fastenings in such a manner as to be readily removed for purposes

of cleaning or repairs without removing the frame A from its casing, and consequently without disarranging the pulleys and weighted cords by which said frame is suspended. The proximal surfaces of the sash B and its auxiliary frame A may be plain, if desired; or they may be beveled or rabbeted to form a closer joint for excluding air and moisture.

In the bottom of the frame A is a double-inclined or oval or square projection, bead, or strip, *a*, that corresponds with and fits into a V-shaped or oval or square groove, *b*, in the bottom of the sash B, as shown in Fig. 2.

At the top of the sash B is a spring bolt or latch, C, that engages a recess in the top of the frame A, as shown in Figs. 1 and 2. The sash is thus detachably secured in its frame at top and bottom, so that by simply disengaging the bolt or latch C it can be readily removed when required. The sash may also be further secured by means of pivoted thumb-catches D, that are countersunk in the sides of the sash and arranged to engage in recesses *c c*, formed in the inner sides of the frame A, as shown in Fig. 5. These thumb-catches, being countersunk beneath the surface of the sash B, will not interfere with the free movement of one sash over or by the other. The spring-latch C and the tongue and groove *b* may be used alone, if desired; but I prefer to employ the side fastenings, D, in connection with the top and bottom fastenings, especially when the sash to be detachably secured is a large or heavy one, as additional security is thereby attained.

The advantage of detachably securing the sash B in an auxiliary frame, A, that is suspended or placed in the window-casing, will be apparent, the sash being thus arranged so as to be readily removed for washing or for repairs or resetting of glass without disturbing the cords or other suspending devices or removing the frame A. When the sash B is removed or detached from the frame A, the latter may be fastened, if necessary, by any suitable means, to prevent it from being carried to the top of the casing by the weights acting through the sash-cord upon said frame, which has been lightened by removal of its sash.

I am aware that window-sash composed of

detachable glazed portions supported in sliding frames have been heretofore used, and therefore I do not claim such, broadly.

What I claim as my invention is—

- 5 In a window-sash, the combination, with the frame A, having bead *a*, of the detachable sash B, having groove *b*, and provided with suitable fastenings, substantially as shown and described.

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

THEODORE F. LANG.

Witnesses:

H. L. EMMONS, Jr.,
FELIX R. SULLIVAN.