

(No Model.)

P. HABEL.
WINDOW FRAME AND SASH.

No. 372,534.

Patented Nov. 1, 1887.

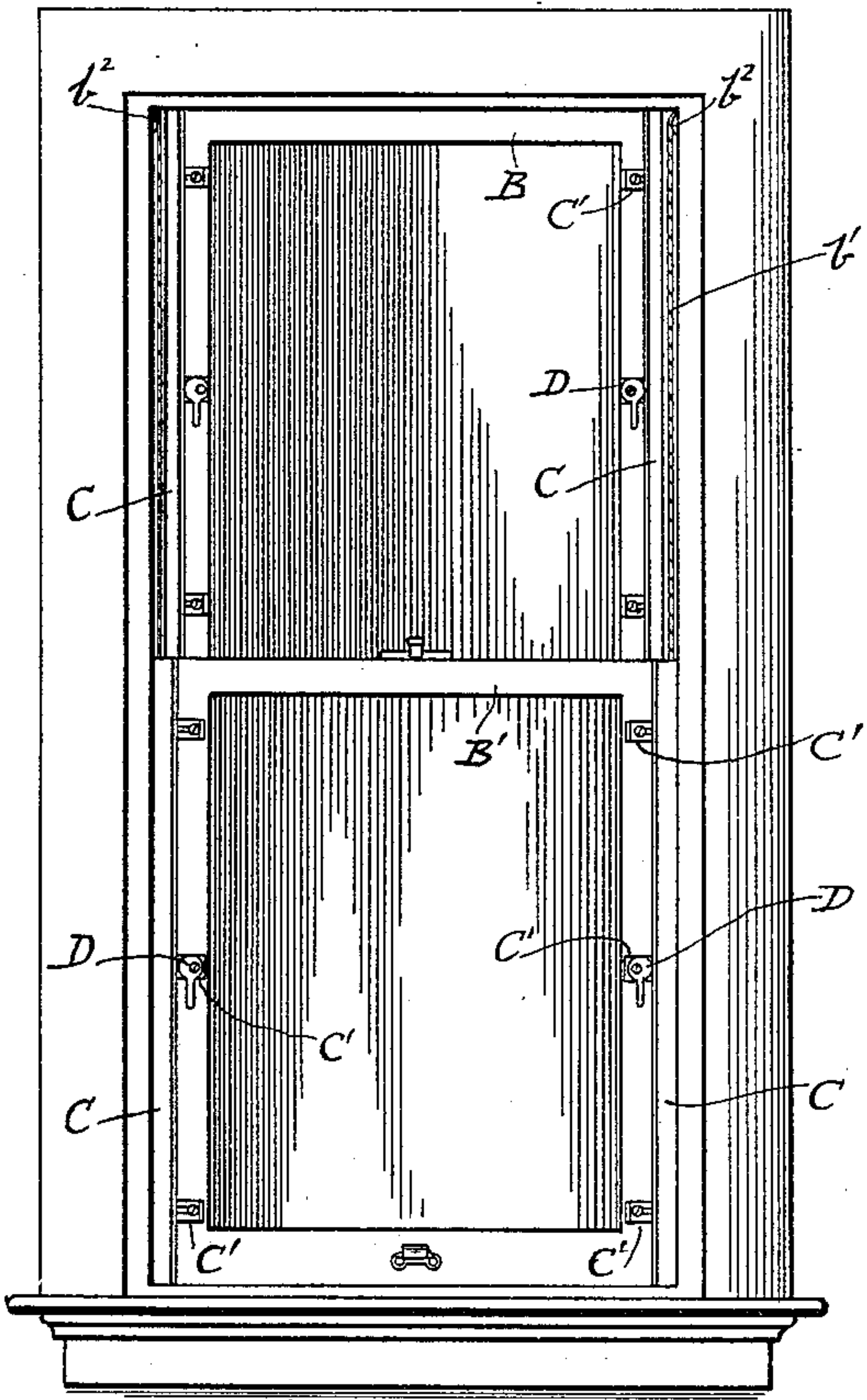


FIG. 1.

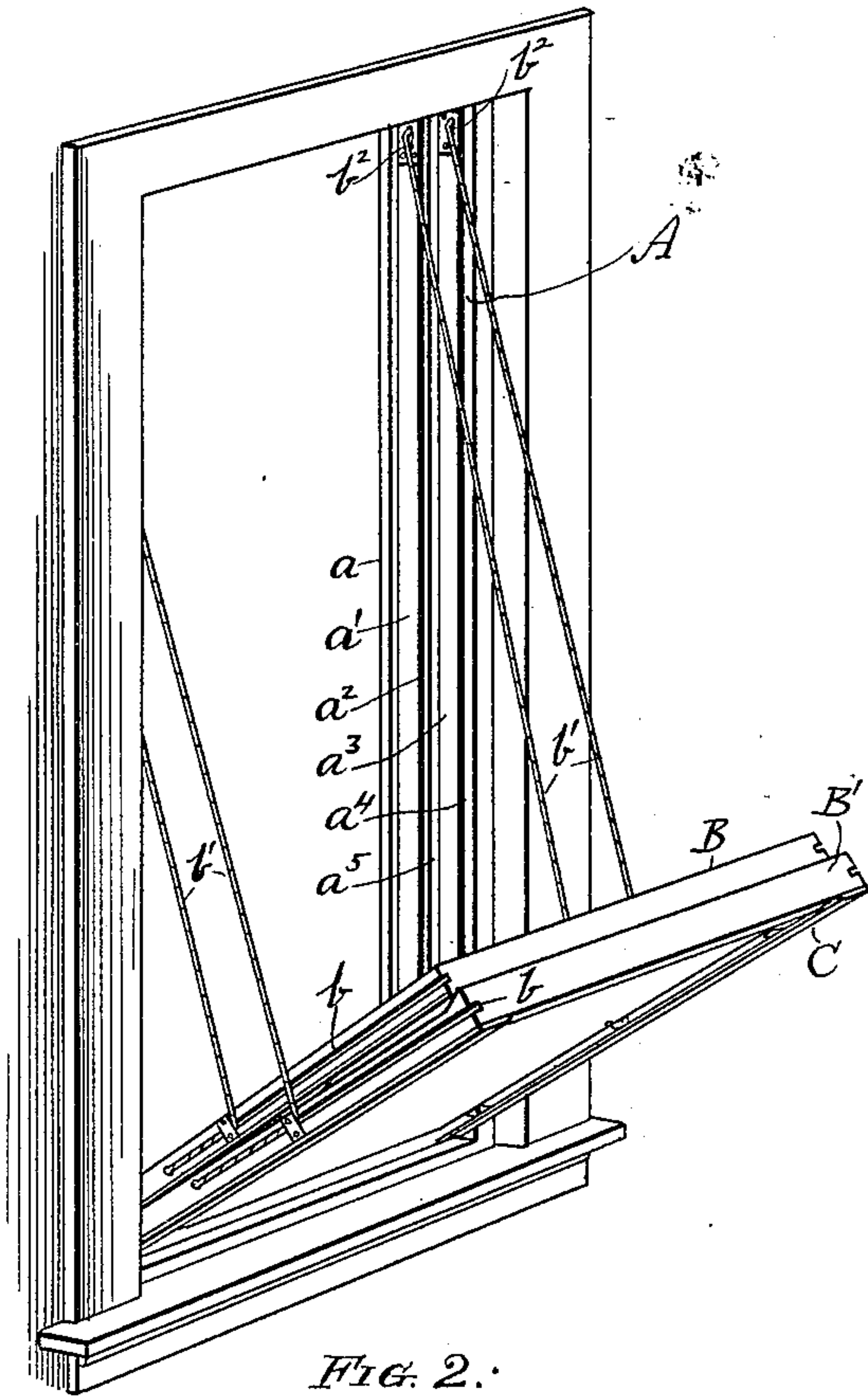


FIG. 2.

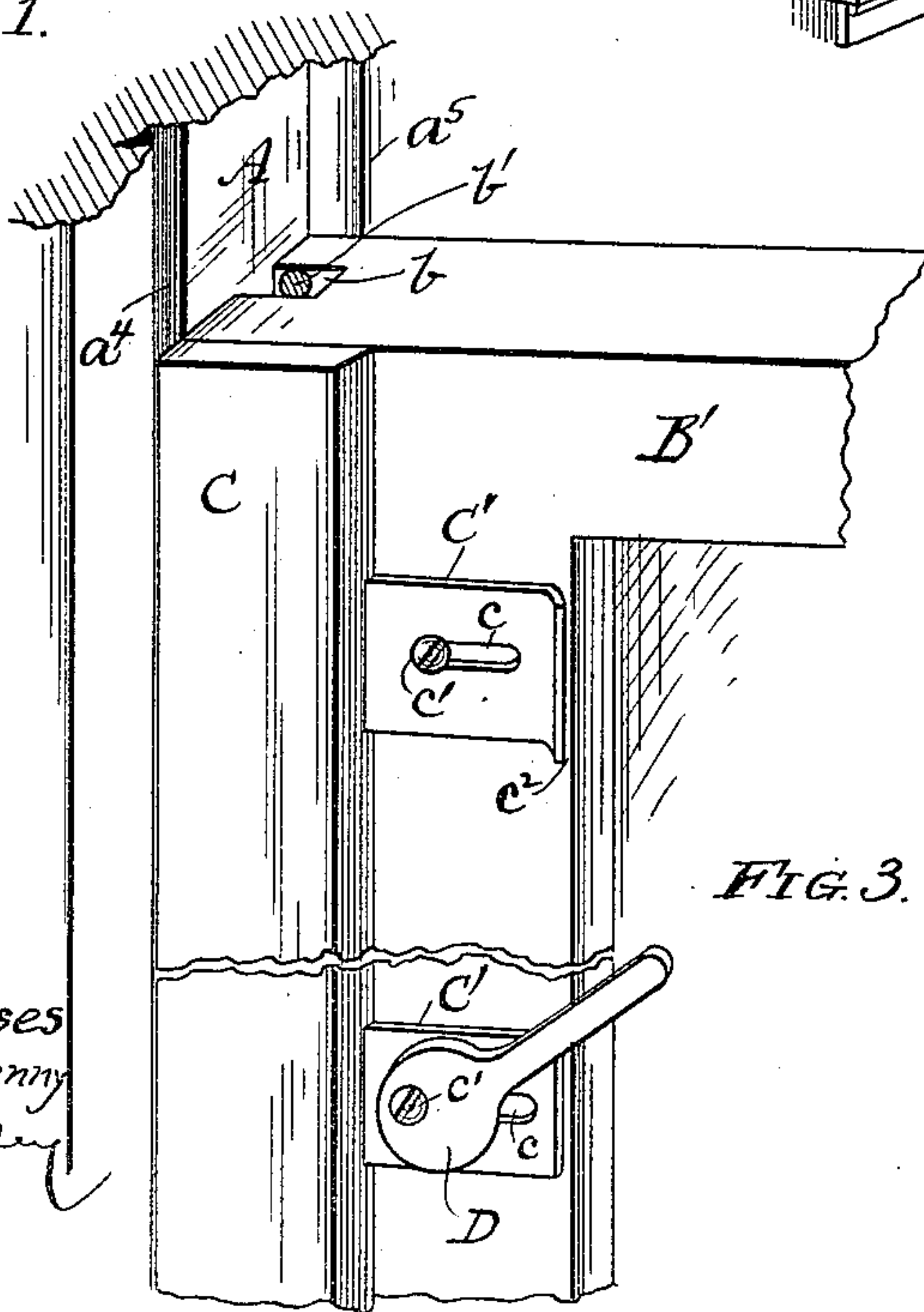


FIG. 3.

Witnesses
J.B. Halpenny
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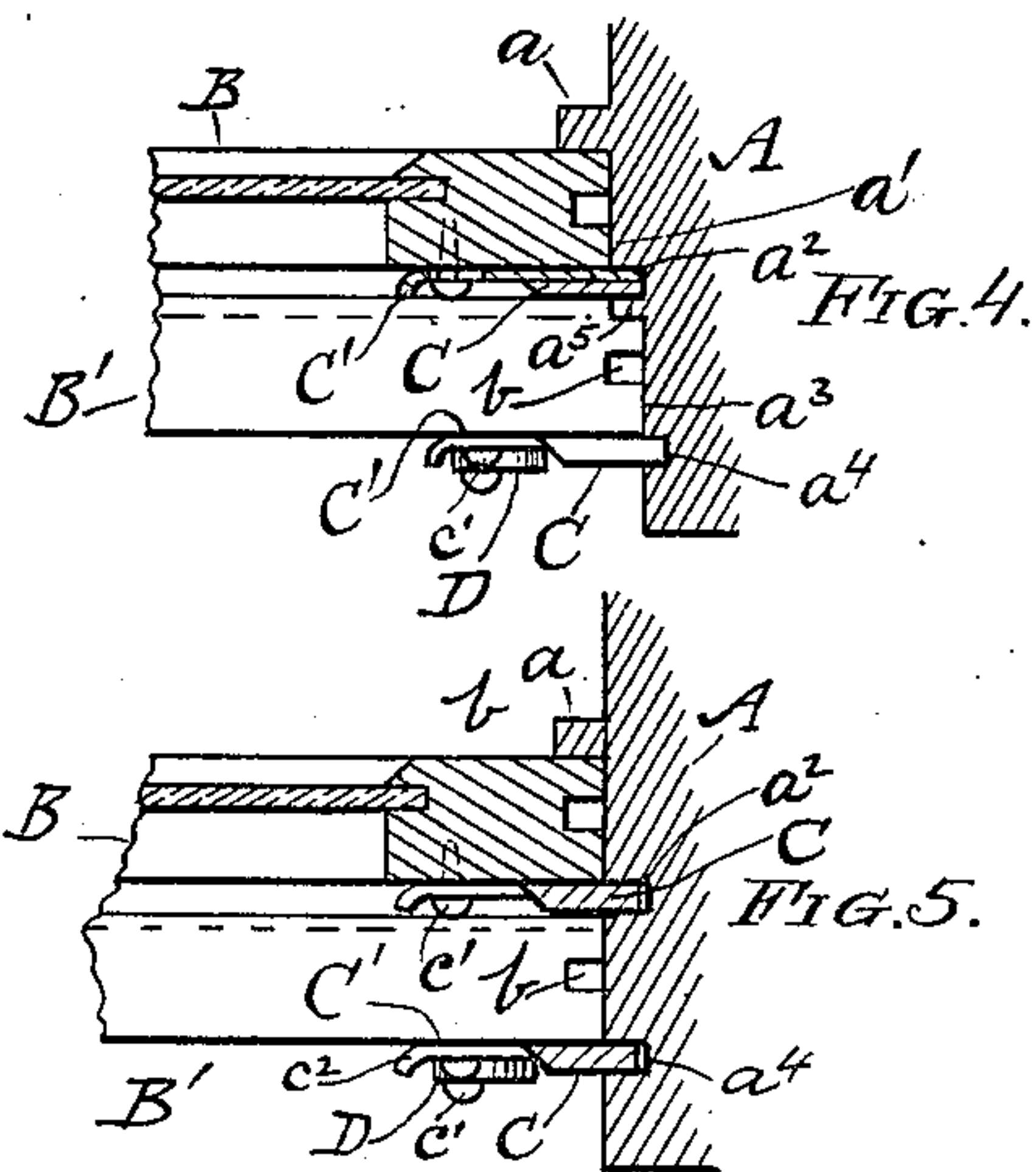


FIG. 4.

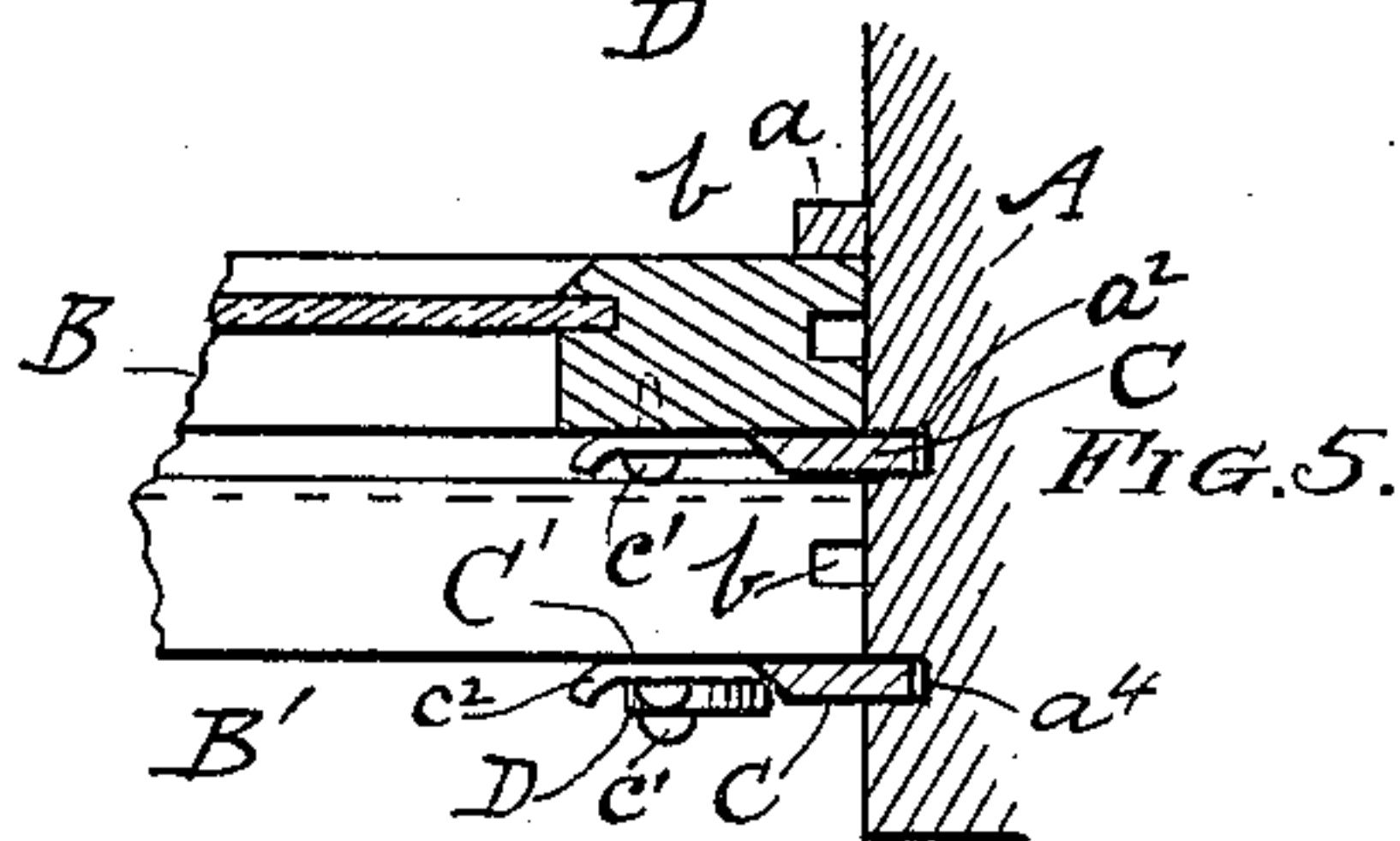


FIG. 5.

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UNITED STATES PATENT OFFICE.

PETER HABEL, OF CHICAGO, ILLINOIS.

WINDOW FRAME AND SASH.

SPECIFICATION forming part of Letters Patent No. 372,534, dated November 1, 1887.

Application filed April 25, 1887. Serial No. 235,957. (No model.)

To all whom it may concern:

Be it known that I, PETER HABEL, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window Frames and Sash, of which the following is a description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a front view of a window frame and sash, showing the latter in its normal position. Fig. 2 is a perspective view of the same, in which the sash has been lowered and partially removed to show its position when it is desired to clean it. Fig. 3 is an enlarged detail view of a portion of one side of the sash and frame, showing the manner of constructing and operating the adjustable stops. Fig. 4 is a sectional plan view in detail of a part of the sash and frame, and Fig. 5 is a modification of said construction.

Like letters of reference indicate like parts in the different figures.

The purpose of my invention is to so construct a window frame and sash that the latter may be readily and easily removed from the frame and so adjusted as to be washed from the inside of the window; and said invention consists in the arrangement and combination of elements, hereinafter more particularly described and claimed.

In the drawings, A represents the window jamb or frame, while B is the upper and B' the lower sash. Upon the frame A is formed the usual outer stop, a . Next to the stop a , I construct a rabbet, a' , which is preferably made wider than the thickness of the sash B, as shown in Fig. 4. Within the wide rabbet a' , I construct a groove, a^2 , the edge of which is flush with the inner edge or side of the sash. A secondary rabbet, a^3 , is also formed in said frame, into which is plowed a similar groove, a^4 , which is made flush with the inner edge of the sash B'. The sash B' is made wider than its companion, so as to fit within the rabbet a^3 and to rest against the shoulder a^5 , forming a part of the rabbet a' . Upon each side of the sash B B', respectively, are placed adjustable stops C C, to which are rigidly attached metal plates C', having slots c therein. Said plates are in turn loosely secured to the sash by means of screws c' , so as to permit a lateral movement

of the stops C, the screws being so adjusted that the stops may be pushed within the grooves a^2 a^4 , respectively, or withdrawn therefrom, so as to be even with the edge of the window-sash. 55

I prefer to employ three plates C' for each one of the stops C—one at or near the top, one at or near the bottom, and the other at the middle. Upon the screw c' , which holds the latter, I place an eccentric, D, adjusted to press against the stop C and push it into the groove in the frame formed for its reception. When the eccentric is in the position shown in Fig. 3, the stop may be readily withdrawn by means of curved flanges c^2 upon the upper and lower plates, and when reversed it holds the stop normally in its groove. 65

Within the edges of said sash, respectively, are plowed grooves b , for the reception of the usual sash-cords, b' , which are trained over pulleys b^2 in the customary manner. Said cords are preferably attached to the sash at or near the middle or lower part thereof, as clearly shown in Fig. 2. It will thus be seen that when the stops are in the respective grooves the sash may be raised or lowered at will, while upon the withdrawal of the stops from said grooves the sash may be lowered and drawn out into the room in an inclined position, as shown in Fig. 2, so that the outside of the glass may be cleaned with ease and safety. A further advantage of said construction is that the stop C as fully covers the crack between the sash and frame as does the usual stationary stop, while the sash may be removed from the inside, as described, without injury to any part of the frame. 75 80 85

If desired, the frame may be made without the rabbet a^3 , as shown in Fig. 5; but in that event it is necessary to depend almost entirely upon the adjustable stops to retain the lower sash in place. 90

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is— 95

1. In a window-frame, the jamb A, provided with the usual outside stop and rabbets, a' a^3 , said rabbets having therein grooves a^2 a^4 , respectively, substantially as and for the purposes set forth. 100

2. The combination, with a window-sash, of the laterally-sliding stops C, adjusted upon the

inside of the sash, slotted plates C', and bolts or screws c', substantially as and for the purposes specified.

3. The combination, with a window-frame
5 having the grooved rabbets $a' a^3$, of sash adjusted to fit said rabbets, respectively, and adjustable stops arranged upon the inside of said sash, substantially as and for the purposes set forth.

10 4. The combination, with a window-frame having the rabbets $a' a^3$, grooves $a^2 a^4$ therein, and made flush with the inner face of the sash, respectively, of sliding stops C, secured to the inner face of the sash by means of slotted plates

C', and means, as the eccentrics D, for normally retaining said stops within said grooves, substantially as and for the purposes set forth. 15

5. The combination, with a window-frame having the grooved rabbets $a' a^3$, of sash adjusted to fit said rabbets, respectively, stops C, 20 slotted plates C', and suitable cords, weights, and pulleys, whereby said sash may be withdrawn from the frame and tilted forward, substantially as and for the purposes specified.

PETER HABEL.

Witnesses:

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