

(No Model.)

F. SEVERIO.
WINDOW SASH LOCK.

No. 581,778.

Patented May 4, 1897.

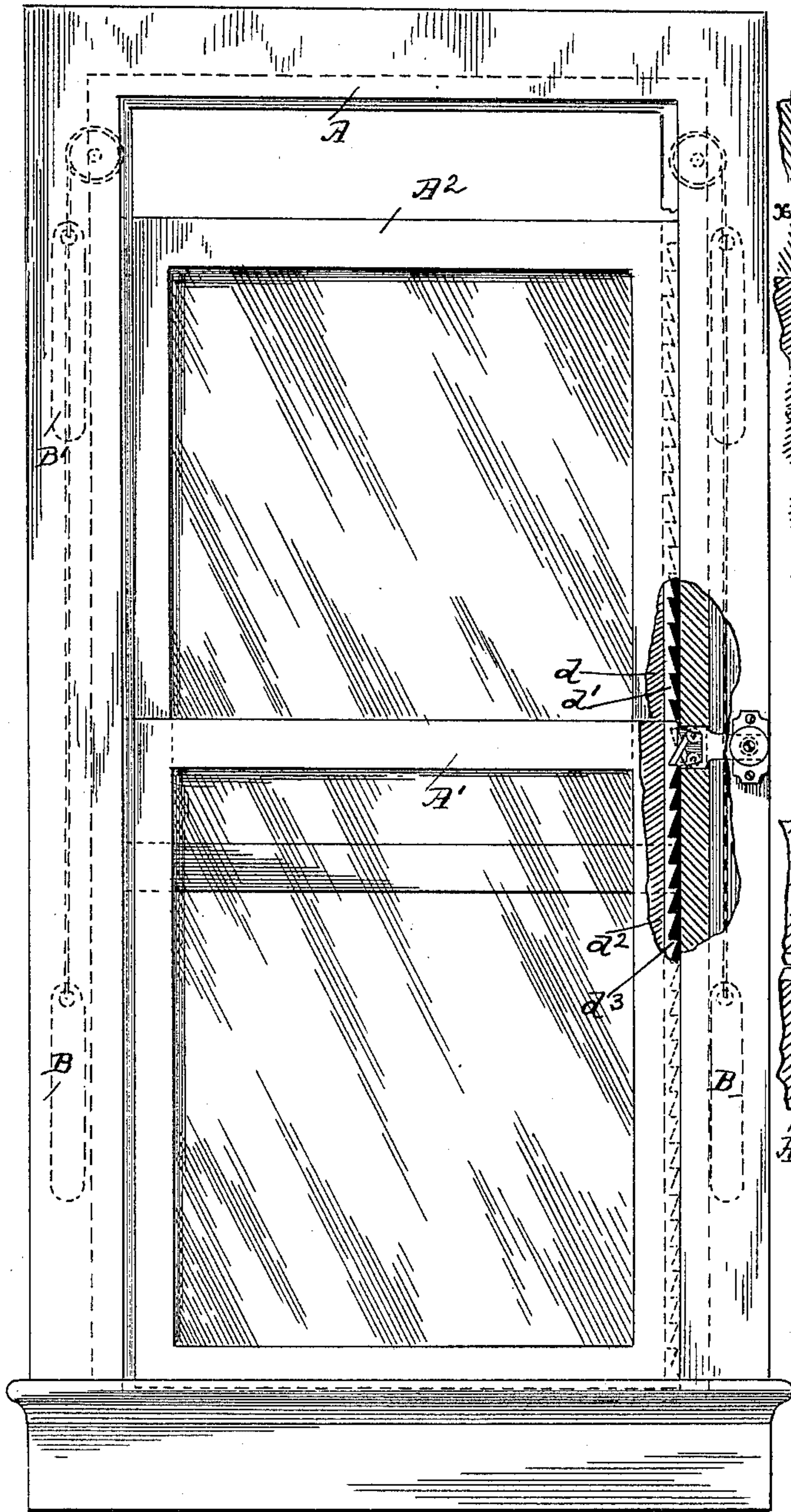


Fig. 1.

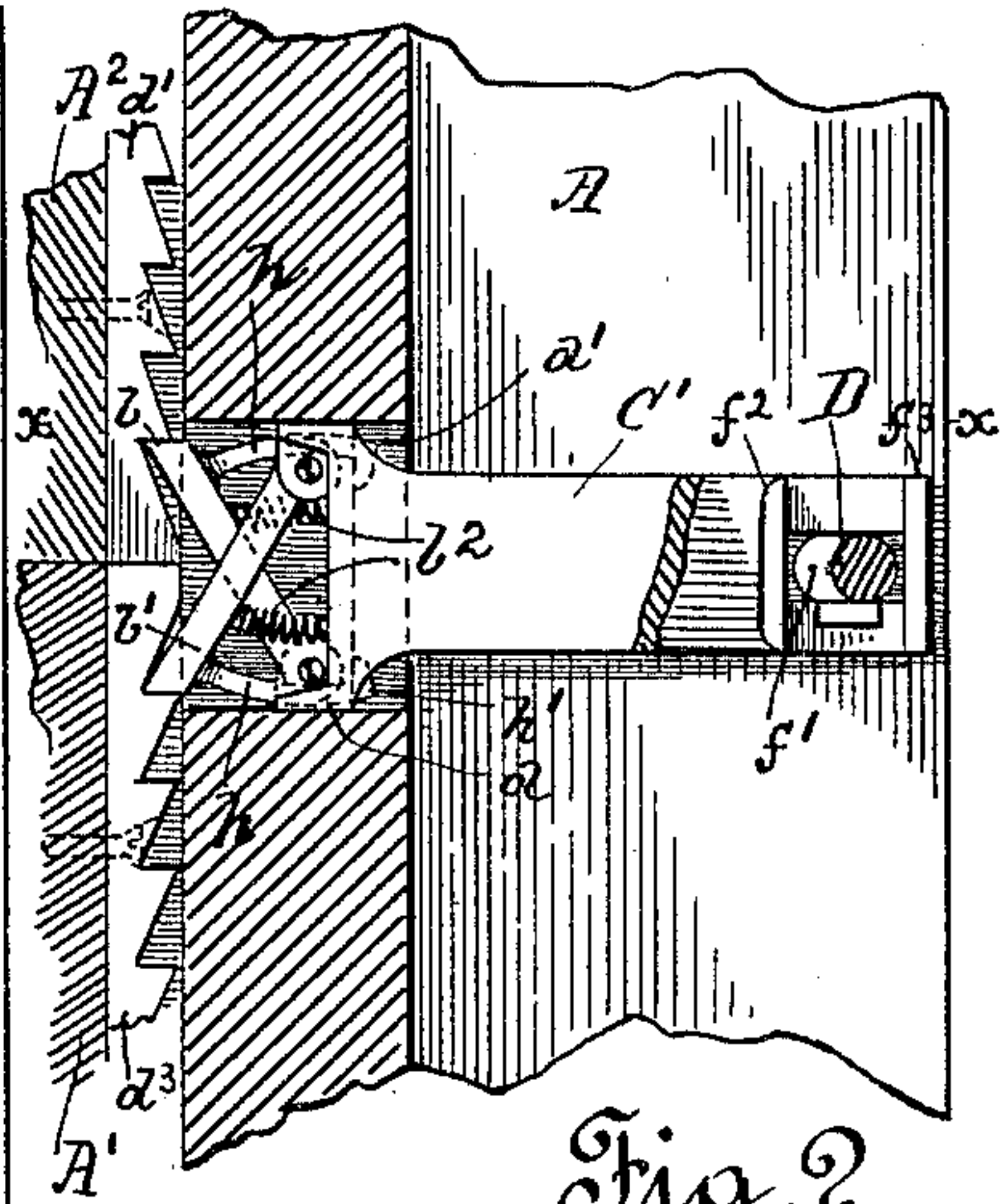


Fig. 2.

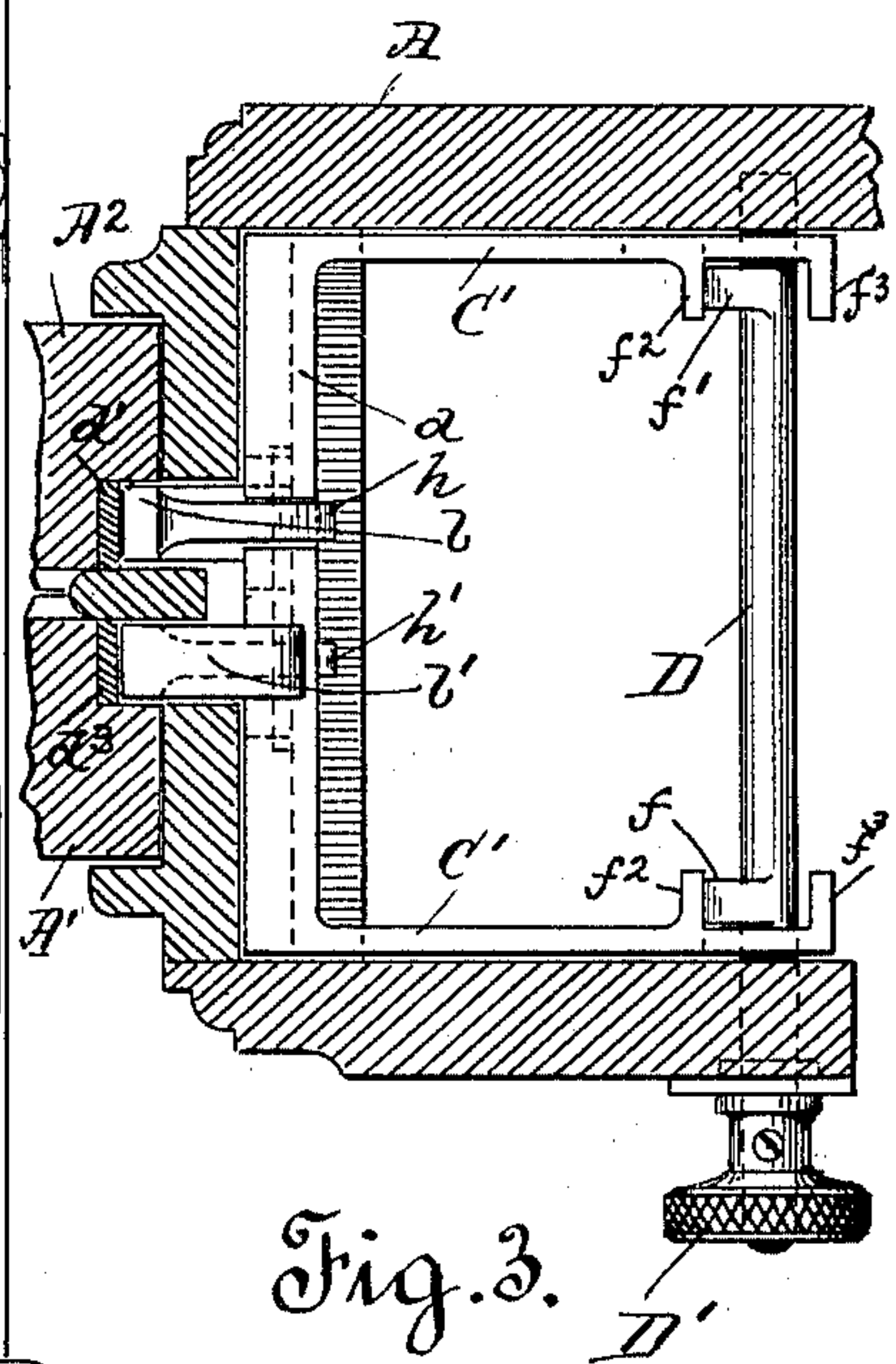


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

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WINDOW-SASH LOCK.

SPECIFICATION forming part of Letters Patent No. 581,778, dated May 4, 1897.

Application filed March 30, 1896. Serial No. 585,416. (No model.)

To all whom it may concern:

Be it known that I, FRANK SEVERIO, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Window-Sash Locks; and I do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to a certain new and useful window-sash lock, which consists in the arrangement of parts and details of construction, as will be hereinafter fully set forth in the drawings and described and pointed out in the specification.

The object of my invention is to provide a simple and inexpensive device for locking both sashes of the window at the same time, so as to prevent the lower sash from being raised and the upper sash lowered, although the lower sash is free to move downward and the upper sash free to move upward without disturbing the position of the locking device, the said locking device consisting, essentially, of a sliding frame or plate carrying pawls locking in both directions, which when the slide frame or plate is moved outward or toward the window-sashes engage with rack-plates secured to each sash of the window-sash, the teeth of which rack-plates are oppositely inclined.

In order to fully understand my invention, reference must be had to the accompanying sheet of drawings, forming a part of this application, wherein—

Figure 1 is a front view of a window with its upper sash partly lowered, the window-sash frame being partly broken away. Fig. 2 is a broken sectional view of the sash-frame, showing the lock mechanism in position and in locked engagement with the upper and the lower window-sash; and Fig. 3 is a top plan view on line *x x*, Fig. 2.

The letter A is used to indicate an ordinary window-cased sash-frame, and A' A² the lower and the upper window-sash, respectively. The sashes are balanced by the suspended counterpoise-weights B B'. These weights work within the side boxes of the sash-frame.

Within one of the side boxes of the window-frame, in case it is a cased sash-frame, is located the sliding frame C'. The forward end *a* of this frame projects or works through

an opening *a'* cut in the face of the window frame or box A, and the said sliding frame C' is arranged so as to have movement transverse of the box or toward and from the window-sash. To the forward end *a* of the sliding frame, I fulcrum the pawls *b* and *b'*, the former being fulcrumed to the lower edge and the latter to the upper edge of the end *a* of the sliding frame. The free end of each pawl is held outward by the pressure of the springs *b²*, located between the said pawls and the outer face of the end *a* of the slide-frame C'. The lower pawl *b* projects upwardly and the upper pawl *b'* downwardly, Fig. 2.

To the face of the stile *d* of the upper window-sash is secured the rack-plate *d'*, and to the face of stile *d²* of the lower window-sash is secured the rack-plate *d³*. The teeth of these rack-plates are given an opposite pitch, and the upper end of the fulcrumed pawl *b*, when the slide-frame is moved outward, engages with the teeth of the upper rack-plate *d'*, while the lower end of the fulcrumed pawl *b'* engages the teeth of the lower rack-plate *d³*. When the slide-frame C' is moved outward, so as to place the pawls *b* and *b'* into engagement with the rack-plates *d'* *d³*, it will be impossible to raise the lower window-sash or to lower the upper window-sash, for the reason that the teeth of the lower rack-plate are forced against the lower end of the pawl *b'* and the teeth of the upper rack-plate against the upper end of the pawl *b*. Inasmuch as the pawls *b b'* are fulcrumed, it is obvious that while the upper and the lower window-sashes may be locked at any given point or position, so as to prevent the lower sash from being raised and the upper sash from being lowered beyond its adjusted height, the pawls will give inward or ride upon the face of the teeth of the rack-plate, so as to permit the lower window-sash to be lowered and the upper window-sash to be raised. It will thus be seen that while the lower or the upper window-sash may be held locked against being raised or lowered, respectively, they may, nevertheless, be lowered and raised without releasing the lock.

Through one side of the window-sash frame is fitted the rod D, to the outer end of which is secured the thumb-nut D'. The rod D is cast with or has secured thereon the project-

ing shoulders $f f'$, which shoulders, when the rod D is in position, work between the side flanges $f^2 f^3$ of the slide plate or frame. As the shoulders $f f'$ are thrown forward by the oscillation of the rod D they engage the flanges f^2 and force the slide-frame forward, so as to cause the fulcrumed pawls to move into locked engagement with the teeth of the rack-plates of the upper and the lower sash. By turning or oscillating the rod D so as to throw the shoulders $f f'$ rearward they engage the flange f^3 and draw the sliding frame inward, so as to remove the pawls from locked engagement with the window-sashes. The thumb-nut D' projects within the room, and the rod D is oscillated by simply turning the thumb-nut. This thumb-nut is suitably ornamented, so as not to disfigure the appearance of the window-sash frame.

From the free end of each of the fulcrumed pawls rearwardly extends the arm h , the inner end of which is bent at right angles, so as to provide the flange h' , which fits over the upper and the lower edge of the slide-frame, Fig. 2. This flanged portion of the arms h engages the inner face of the end a of the slide-frame when said frame is moved away from the window-sash and prevents the pawls $b b'$ being forced outward beyond a certain distance by the pressure of the springs.

While I have shown and described a thumb-nut for oscillating the rod D, so as to throw the slide-frame forward and backward in order to lock and unlock the window-sashes, it is obvious that the said rod may be oscillated in any suitable manner. Consequently I do not wish to be understood as confining myself to this particular manner of operating the oscillating rod D.

The slide-frame is in the present instance made stirrup-shaped in order that the movement of the counterpoise-weights may not be interfered with. In place of the sliding frame a slide-bolt may be employed, and for the purpose of the claims I shall employ the term "slide-bolt" as indicating either a frame or a bolt.

The essential feature of my invention is providing a window-lock which will lock the window sash or sashes against movement in one direction, while allowing free movement

in the opposite direction without requiring the position of the lock mechanism to be disturbed—that is to say, the lower window-sash may be locked against upward movement, although allowed free downward movement, and the upper window-sash locked against downward movement, while allowed free upward movement.

While I have shown and described my invention as being used in connection with a double window or one employing two window-sashes, it is obvious that it is equally as well adapted for use in connection with single windows or such as make use of only one sliding sash.

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

1. In a window, the combination with the upper and the lower sliding window-sash, of a rack-plate secured to one of the side stiles of each sash, the teeth of the rack-plates having an opposite pitch, the sliding spring-actuated pawls locking in both directions for engaging the teeth of the rack-plates, and of devices for simultaneously moving the pawls into engagement with the teeth of the rack-plates so as to lock the window-sashes against movement in one direction while allowing free movement in the opposite direction.

2. In a window-sash lock, the combination with the upper and lower sliding window-sash, of a slide-bolt working through the frame of the window, an oscillating rod for moving the slide-bolt toward and from the window-sashes, and of the spring-actuated pawls locking in both directions carried by the slide-bolt, said pawls moving into locked engagement with the slide-sashes (when the slide-bolt is moved toward the sashes) and holds the sashes against movement in one direction while leaving said sashes free to move in an opposite direction.

In testimony whereof I affix my signature, in presence of two witnesses, this 7th day of March, 1896.

FRANK SEVERIO.

Witnesses:

N. A. ACKER,
LEE D. CRAIG.