

(Model.)

2 Sheets—Sheet 1.

J. Y. BASSELL.

SASH FASTENER.

No. 329,804.

Patented Nov. 3, 1885.

Fig. 1.

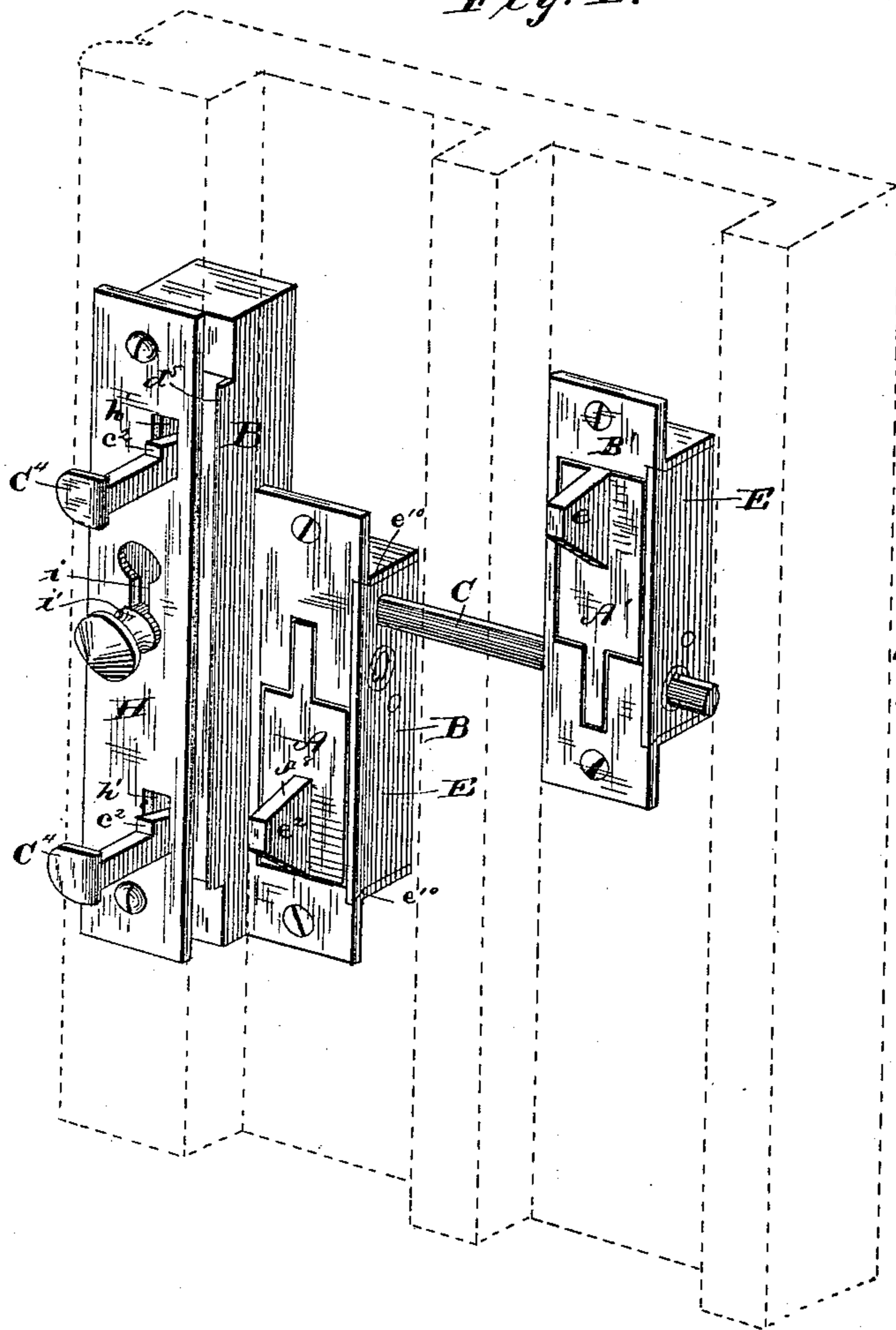
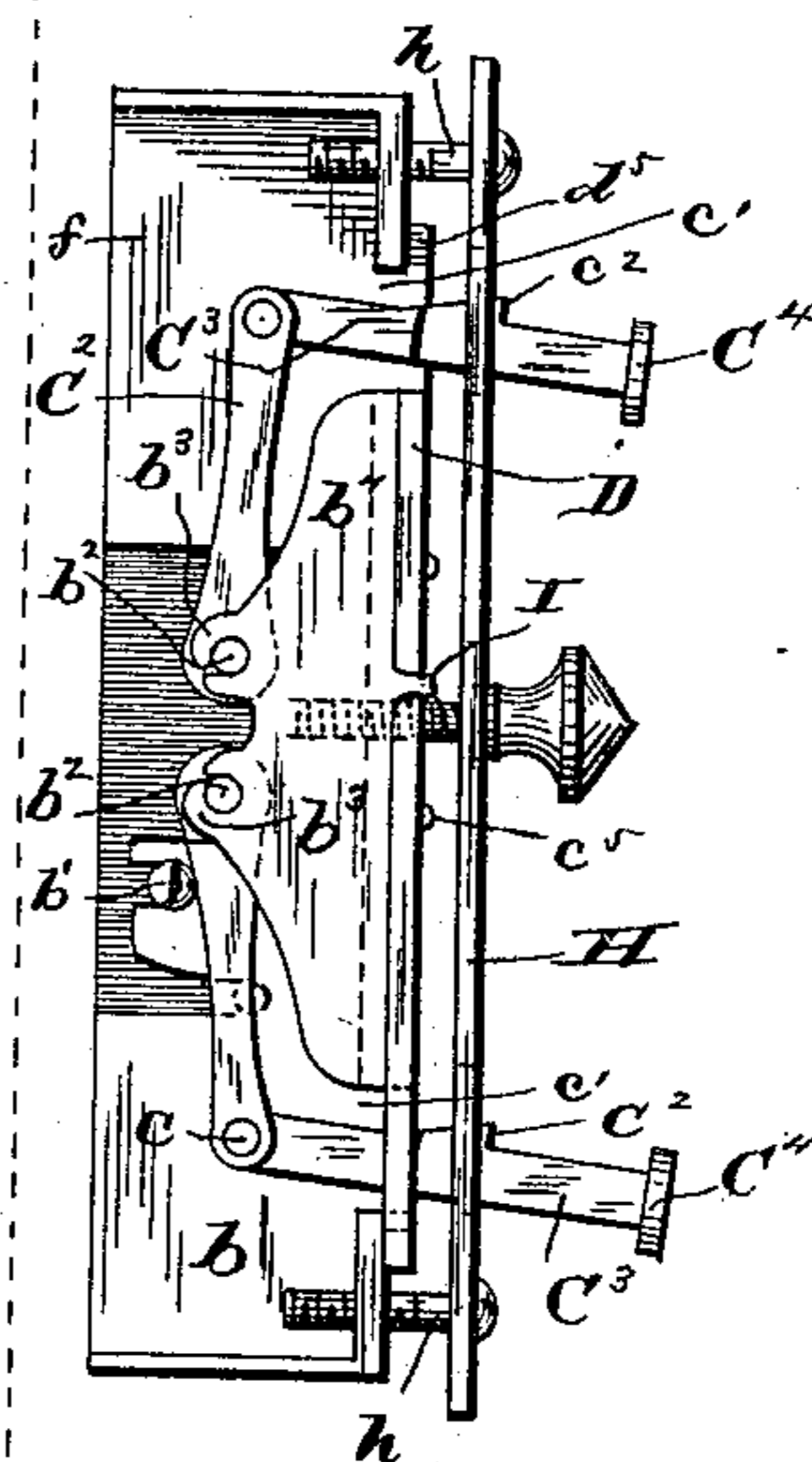


Fig. 3.



Witnesses.

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(Model.)

2 Sheets—Sheet 2.

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Fig. 2.

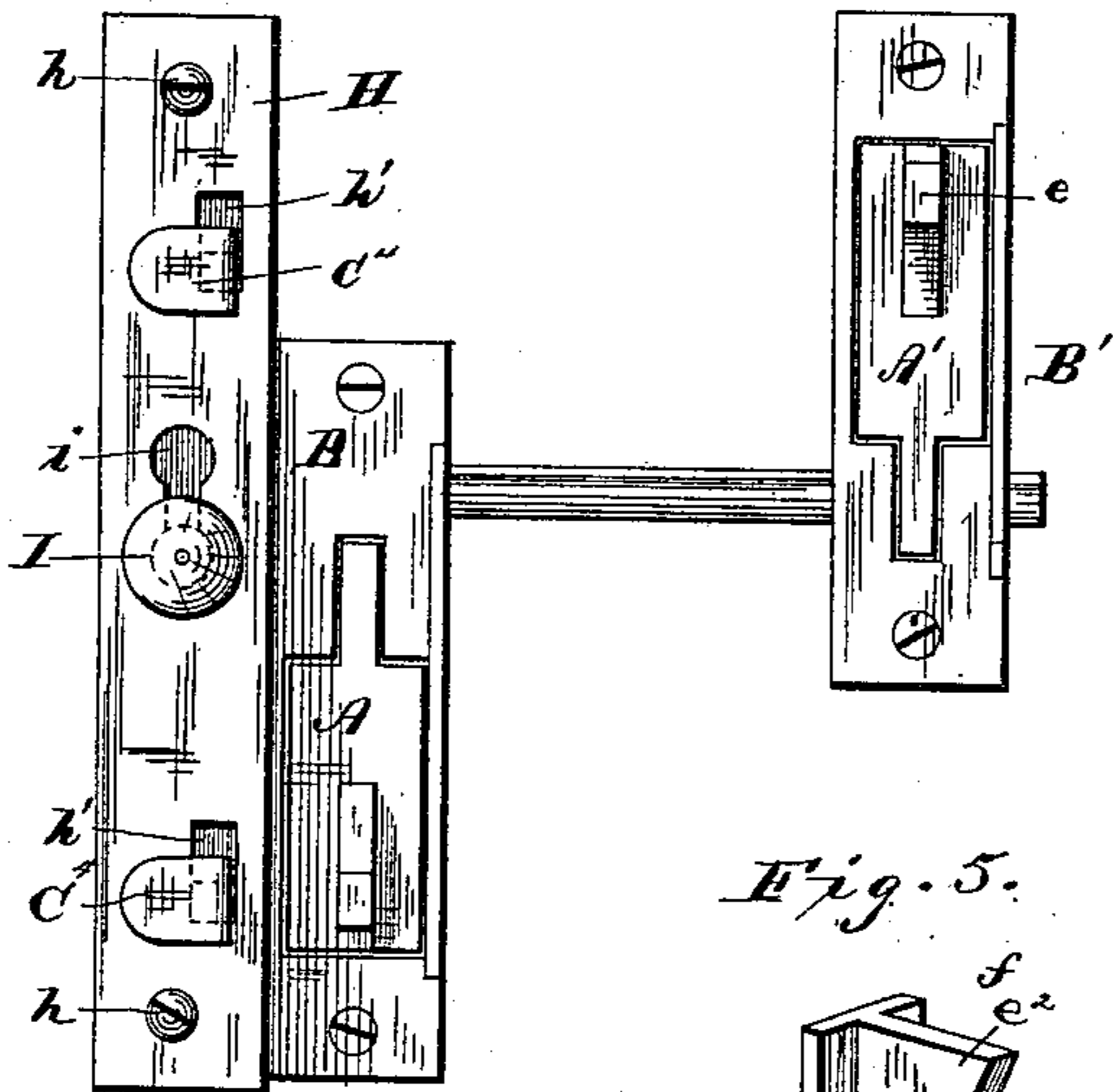


Fig. 9.

Fig. 10.

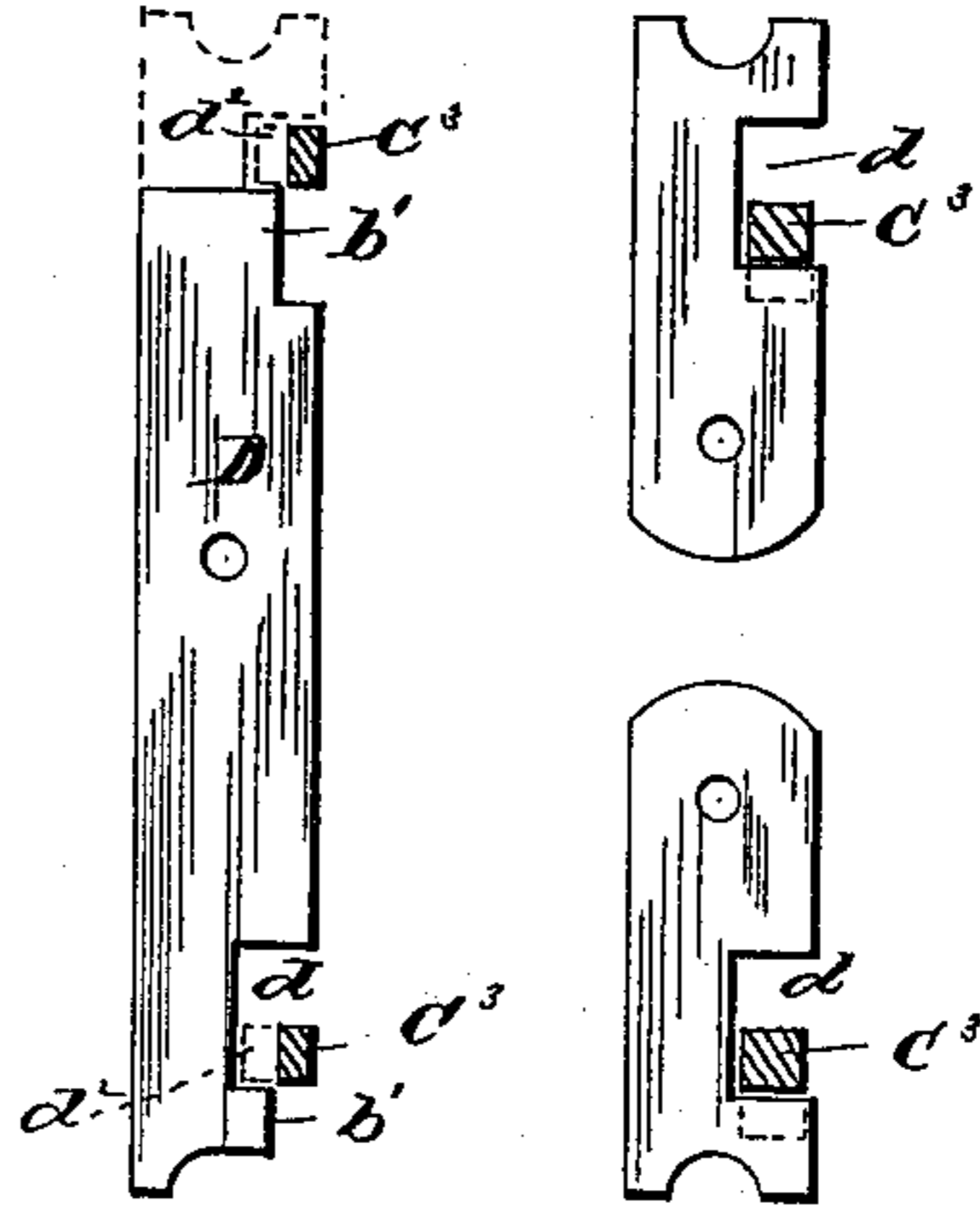


Fig. 5.

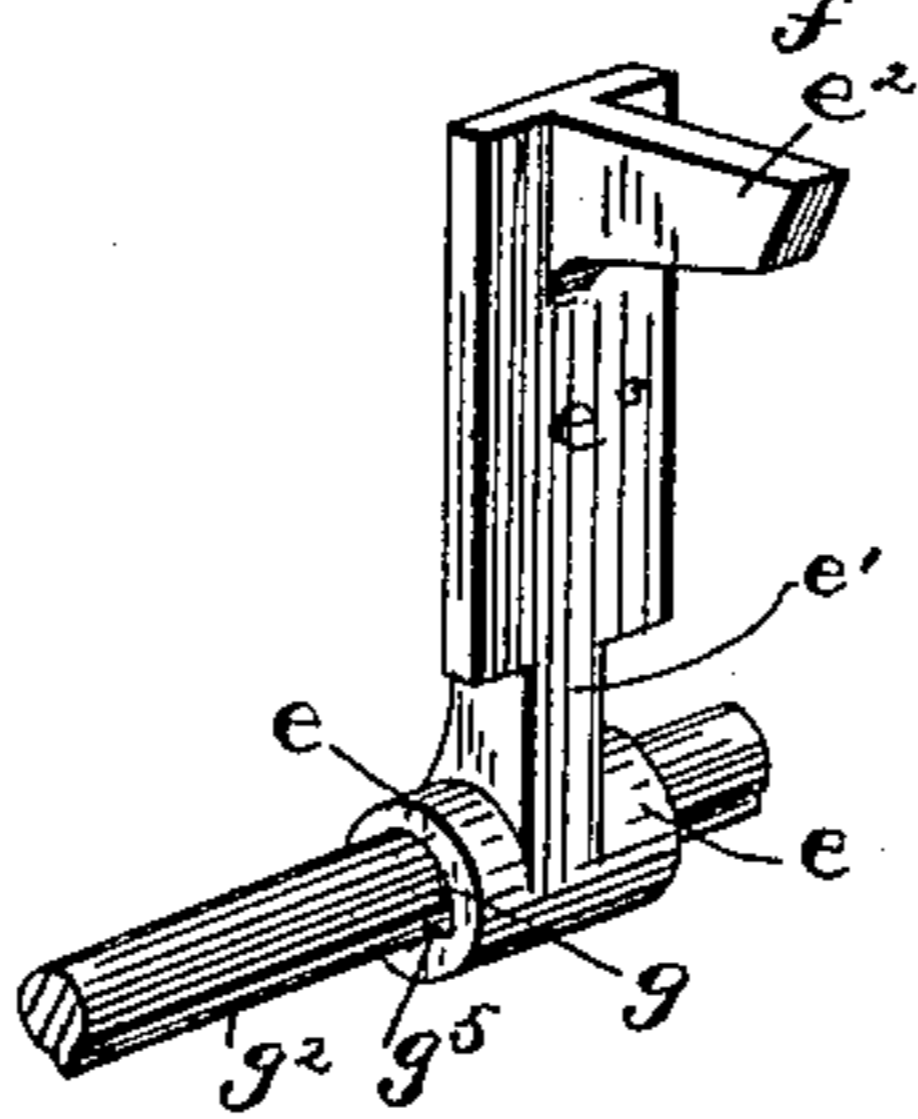


Fig. 6.

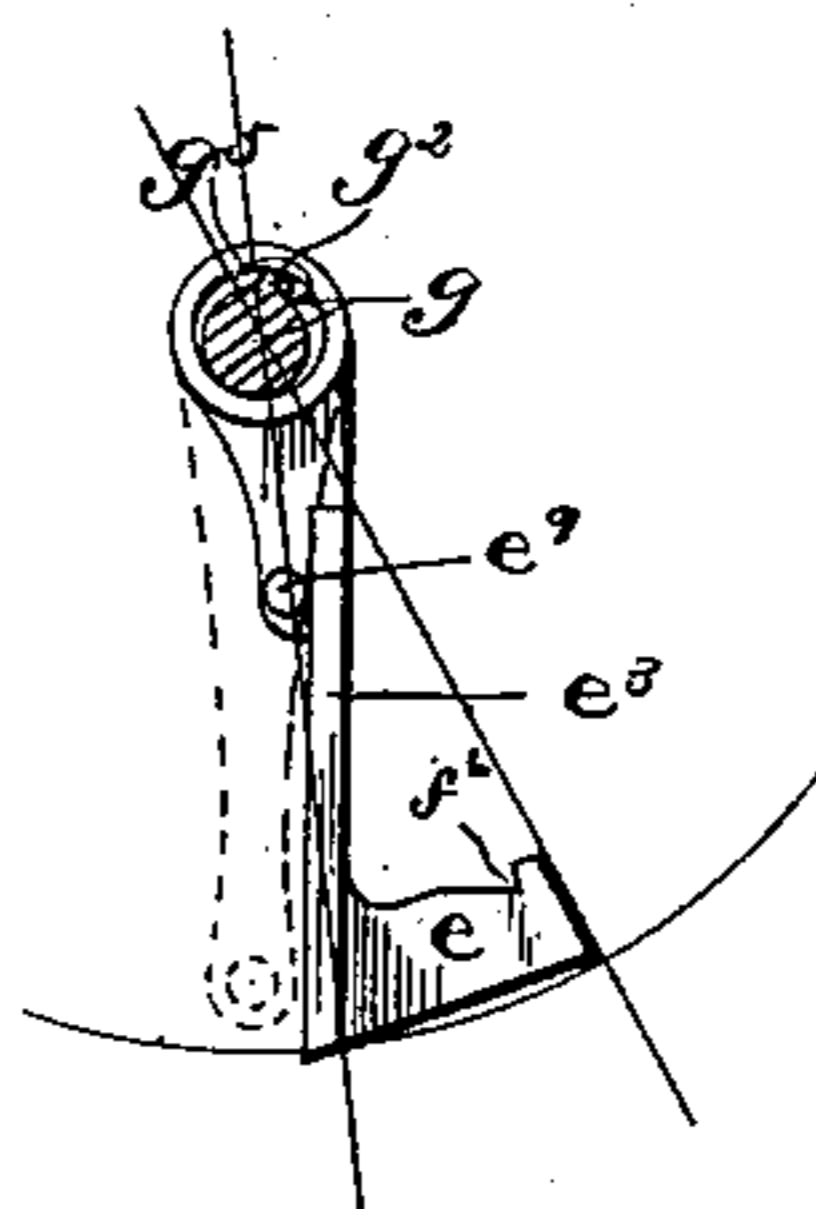


Fig. 4.

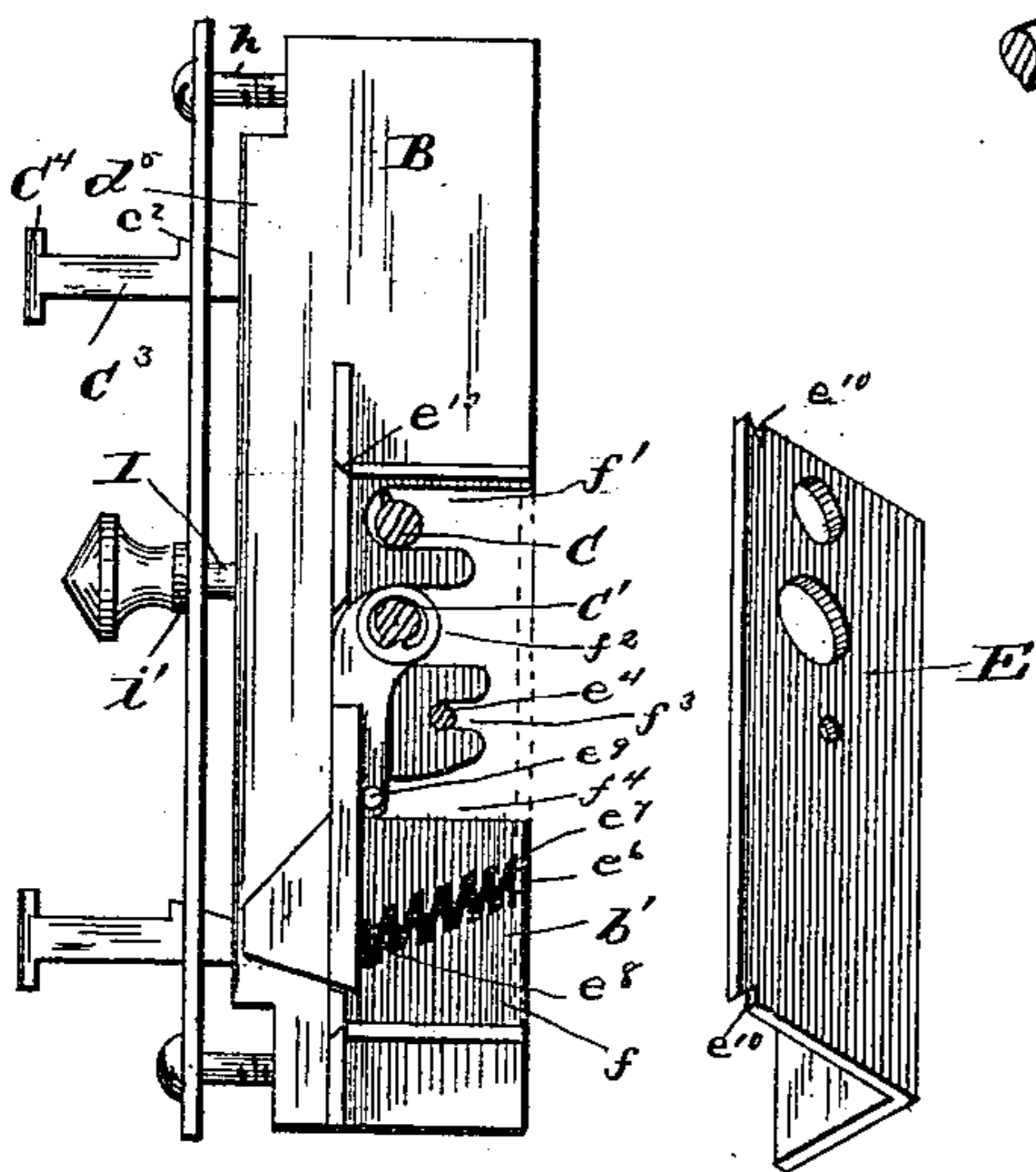


Fig. 7.

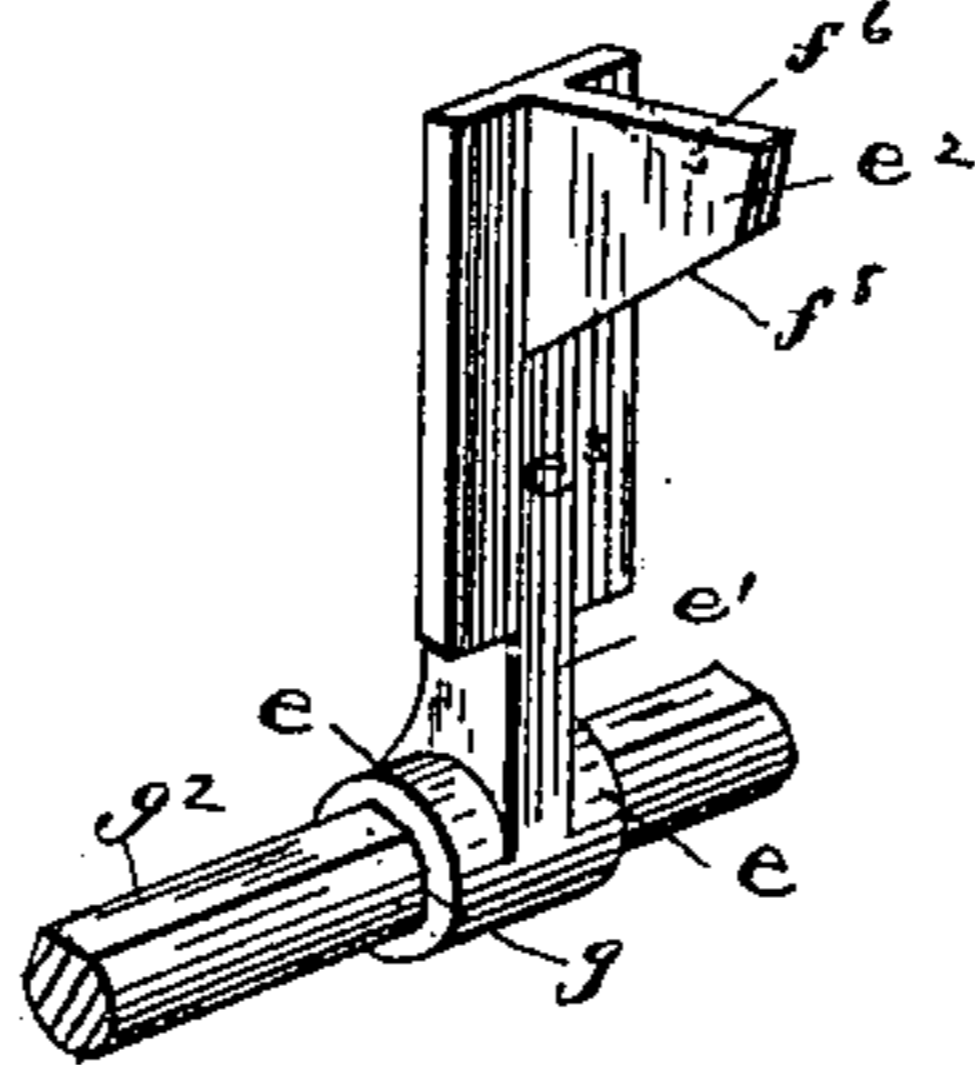
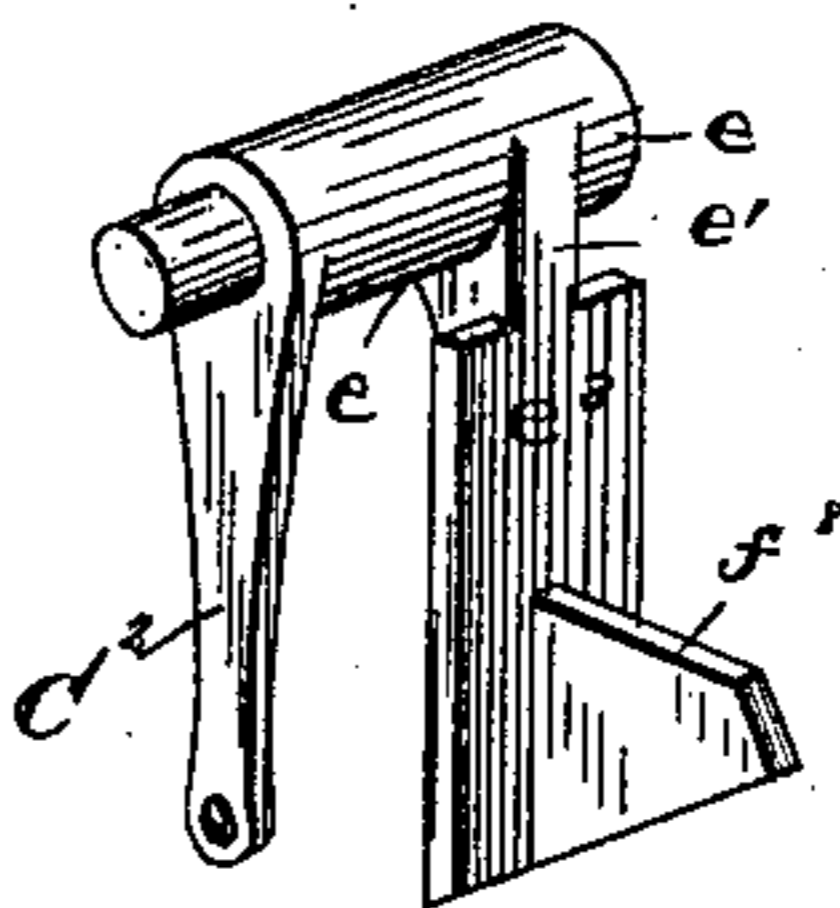


Fig. 8.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN Y. BASSELL, OF LEESBURG, VIRGINIA, ASSIGNOR TO REBECCA G. BASSELL, OF SAME PLACE.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 329,804, dated November 3, 1885.

Application filed July 23, 1885. Serial No. 172,907. (Model.)

To all whom it may concern:

Be it known that I, JOHN Y. BASSELL, of Leesburg, in the county of Loudoun and State of Virginia, have invented certain new and useful Improvements in Sash-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

My present invention relates to that class of sash-fasteners wherein are employed a pair of locking dogs or bolts, actuating devices therefor, and a locking mechanism applied to the said actuating devices, the whole being mounted upon the window-frame in such manner that each dog or bolt, when projected, will engage the sash; and my said invention consists in certain improvements in the construction, arrangement, and combination of the several members composing such a fastener, whereby the same is rendered applicable to varying sizes and dimensions of window-frame, and either or both dogs can be retracted or locked in position at will, all as hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings, illustrating the preferred mode of applying my said invention in practice, Figure 1 is a side view, in perspective, of my improved sash-fastener as applied to a window-frame. Fig. 2 is a front elevation. Fig. 3 is a side elevation of the main frame and the actuating and locking mechanisms. Fig. 4 is a side view of the main frame, looking in the opposite direction from Fig. 3. Figs. 5 and 6 are views in perspective of the dogs, spindles, and operating-levers. Figs. 7 and 8 are similar views illustrating modifications of Figs. 5 and 6. Fig. 9 is a plan view of the locking-plate. Fig. 10 illustrates a modification of the locking devices.

According to my present invention I mount the inner dog, A, and the actuating and locking mechanisms all upon a single frame or casting, B, and the outer dog, A', in a separate housing, B', and connected to its operating mechanism through a spindle, C, which passes through and engages the dog A'. By this arrangement of the principal elements not only am I enabled to place the dogs at

any required distance apart to accommodate different widths of sash and parting-strips, but by securing the inner dog and the actuating mechanism in one frame they are at all times held in proper relation to each other, and the carpenter cannot by mistake or accident misplace the parts or set them at any other than the proper working position, being guided in locating the lock by the inner stop. The frame B is, according to this part of my invention, divided into two sections or compartments, the one, *b*, for the actuating and locking mechanisms and the other, *b'*, for the inner dog, A. Each dog A A' is connected to or operated upon by a separate spindle, C C', extending through the frame B and having an end bearing therein, as at *b*², said bearing being preferably formed by bending over lugs or flanges *b*³ cast integral with the frame and depending from the outer edge of the plate *b*⁴. Extending laterally from the end of each spindle C C' is an arm or lever, C², to which the actuating devices are applied, the latter consisting, essentially, of an arm or link, C³, pivoted to the end of said lever C², as at *c*, and extending outward through openings *c'* in the plate *b*⁴. Each link C³ is formed or provided with a head, C⁴, and with a projecting shoulder, *c*², (a notch will answer,) on its upper edge, and in position to engage one side or edge of the opening in the plate *b*⁴. Although this engaging-shoulder may, if desired, be formed upon the under side or edge of the link C³, I prefer that it should be located upon the upper edge, as shown, in order that the dog, when retracted by pressure applied to the head C⁴, may not be locked and held back in that position, unless the link C³ is intentionally raised or pushed upward, so as to bring the shoulder C² under the edge of the plate *b*⁴.

The locking mechanism consists, essentially, of a plate, D, held in position upon the plate *b*⁴ by lugs *c*⁵ or equivalent means, permitting of a free longitudinal movement of said plate upon the plate *b*⁴ of the main frame. Each link C³ is formed or provided with a shoulder, *d*², on one side, or, as shown in dotted lines, Fig. 9, on its lower edge, and the plate D notched, as at *d*, to accommodate the body of the link, is provided with bearing-surfaces *b'*, which, when the said plate D is raised, will

pass under the projections or shoulders d^2 , and thereby effectually prevent the withdrawal or retraction of the dogs by pressure applied to the link C^3 . The plate or web b^4 is located slightly below the edge of the central flange, d^5 , of the frame in order to accommodate the plate D, and, if desired, said plate may serve as the stop to engage the lugs or projections on both the upper and lower edges of the links C^3 , in lieu of employing the plate d^4 for that purpose. This result is accomplished by forming a notch or slot in both ends of the said plate D, as shown in dotted lines, Fig. 9, the upper edges of said slots or notches serving, when the plate is down, to engage the shoulders or projections e^2 , and thereby hold the dogs retracted. The inner dog, A, is, as before stated, mounted in bearings attached to the frame B, and is constructed and applied as follows: A pivoted dog or bolt is preferably employed of a form such as illustrated in Fig. 5, wherein e represent the trunnions or supporting-pivots applied to the sides of the dog and upon the reduced portion or web e' thereof, while e^2 represents the engaging portion or projection applied to the wider part, e^3 . The body of the dog is made relatively thin and wide, and the portion to which the trunnions are applied is made narrower, and extended back at right angles to the body, for the purpose of securing the requisite strength and insuring a firm bearing, at the same time reducing the body of the dog to such an extent that its engaging portion can be wholly withdrawn within the housings, and allow a sufficient magazine for the necessary play of the parts without unduly increasing the depth of the housing. The plate E, which forms the outer face of the housing for the inner dog, is detachably applied to the frame B, and is held in place by the dovetails e^3 and screw e^4 . This plate is provided with a flange, e^5 , forming the bottom of the housing, and carries a stud, e^6 , to receive one end of the spring e^7 , whose opposite end is received upon a stud, e^8 , attached to the dog A, and serves to hold the latter projected. A pin or stud, e^9 , cast or formed on the side of the dog, serves, by coming into contact with a portion of the frame, as a stop to limit the outward movement of the dog. The trunnions e of the dog A are received in bearings formed in the plate E and the flange or web f of the frame B. This flange or web f is, for convenience, cast integral with the frame, and is provided with a series of open slots—one, f^1 , for the spindle of the outer dog, another, f^2 , to receive the inner trunnion, e , another, f^3 , for the screw e^4 , and another, f^4 , to accommodate the stud e^9 . By making these several bearings f^1 , f^2 , f^3 , and f^4 in the shape of an open slot, as shown, I obviate the necessity of drilling, and am enabled to form them in the process of casting the frame B. At the same time ample support is given to the dog in the direction most needed—i. e., in a vertical line—and the spindles C being supported in bearings b^2 at their inner ends and by the dogs

or housings of the dogs at their other ends, they cannot be easily displaced, but are held correctly in operative position.

The engaging portion e^2 of the dogs may be made in any approved form; but I prefer, when the windows are not supplied with counter-weights, that they shall have their bearing-surface set on the chord of an arc of which the trunnions or pivotal point of attachment is the center, and the entering end and point of support the ends of the radii, whereby, when the sash is moved until the dog is brought opposite the hole in the strike-plate, it will enter the latter to the full extent of its throw, and hold the sash in adjusted position without permitting it to fall, and thus leave a space between the sash and frame at the top of the window; and a similar advantage is obtained when used with a counter-balanced sash, in that the engaging end of the dog will, if it enters the strike-plate at all, enter to the full extent, and any effort which may be made to force the sash to permit an entrance will operate to more firmly seat and hold the dog in engagement with the strike-plate. When the said construction of dog is employed to lock unbalanced windows, a notch, f^6 , may be formed near the outer end or the bearing surface of the dog to engage the strike-plate and prevent the withdrawal of the dog unless the sash is held or supported in position, when the dog can readily be withdrawn.

It is deemed desirable under certain circumstances that the dogs should operate to lock the sash in but one direction—that is, closed—and that the sash should be capable of being moved freely and without manipulating the operating mechanism when closing either sash. To accomplish this result, I form the under surface of the outer dog and the upper surface of the inner dog with inclined shoulders f^8 , whereby when either sash is moved in a direction to close the window the edge of the sash or strike-plate will, by pressing upon said inclined shoulders, force the dogs back and into their housings, where they will be held until an opening in the sash or strike-plate presents itself either by the upward or downward movement of the sash, when they will again be projected by their springs. It is essential to this operation that the dogs be so connected to their spindles or actuating mechanism as that the former may have a certain amount of free play or backward movement on the spindles, in order that the dogs may be capable of being retracted, and so held while the actuating mechanism is locked in position, whereby the sash may be closed to the point of safety after the locking devices have been set for the night.

Although, as is obvious, the dogs and their actuating-spindles may be rigidly connected, and the inner dog, its spindle, and arm may, if desired, be cast integral, as shown in Fig. 8, I prefer, for the reason stated above, to form an enlarged opening, g , through the bosses of

the dogs, and locate therein an engaging shoulder or projection, g^5 , against which a feather or projection, g^2 , on the spindle makes contact when the latter is rotated in a direction to retract the dog, leaving the dog free to move back independent of the spindle.

In applying sash-fasteners of this kind to window-frames great difficulty is experienced in obtaining a satisfactory finish without the employment of highly skilled labor, for as the inner stops of window-frames vary in thickness, the escutcheon, if one is employed, must be neatly fitted and adjusted, or, if made as a part of the sash-lock, the inner stop must be proportioned to suit the locks, or the locks must be provided in a multitude of sizes. To overcome this difficulty, I employ a separate escutcheon, H, adapted to fit over and cover the opening or openings made in the inner stop for the reception of the frame B, and connect it to the latter by adjustable fastenings—such as screws h threaded into holes in the ends of the plate b^4 . This escutcheon H is provided with openings h' for the passage of the links C^3 , said slots being so proportioned and the heads on the links C^3 being so disposed and arranged that the escutcheon H can be slipped over the heads and into position on the links C^3 or removed therefrom while the lock is in place in the frame, whereby the inner stop can be conveniently removed or replaced without first taking out the sash-lock. The locking-plate D is reciprocated or held in adjusted position at will by means of a screw-threaded spindle, I, passing through a slot, i , in the escutcheon, said slot being enlarged at one or both ends to receive the collar or enlarged portion i' , formed upon or attached to the head of the spindle I. The spindle I, being threaded into the plate D, is thereby rendered extensible with respect to the escutcheon, and can be readily adapted to conform to the thickness of the inner stop, and by screwing said spindle down until the collar i enters one of the enlarged portions of the slot i the plate D can be securely fastened and held in engagement with the links C^3 , so that the latter cannot be manipulated to withdraw the dogs, and when the window is left open for ventilation at the point of safety the spindle I cannot readily be operated to release the actuating mechanism by a stick or other device passed under or over the window-sash and operated by a person on the outside.

Although I have shown and described a special construction of devices adapted to carry into practice my invention, I do not wish to be understood as limiting myself to such features, except in the particulars pointed out in the claims, as it is obvious that numerous modifications in the structure and substitutions of equivalent devices may be made to produce like results with those sought, without involving any material departure from the spirit of my invention as herein set forth and described.

As is obvious, instead of employing a single locking-plate for simultaneously engaging

both links, separate locking-plates may be used, each provided with a threaded spindle, I, as shown in Fig. 10. Moreover, where but one sash is to be provided with a locking or holding mechanism, the outer dog and its actuating mechanism can be omitted, and the frame with the housing for the inner dog and the actuating mechanism therefor will constitute an efficient device for application to a single movable sash, as where the upper sash is fixed and held in closed position either permanently or by other locking devices.

I claim as my invention—

1. The combination, in a sash-fastener such as described, of a main frame, in which is mounted the actuating mechanism and inner dog, and a detachable housing for the outer dog, the latter movably applied to its actuating-spindle, substantially as described.

2. The combination, in a sash-fastener such as described, and with the main frame, the spindles mounted therein, and the independent actuating mechanism applied to each spindle, of the dogs loosely connected to the spindles, and the springs applied to said dogs to hold them projected, whereby the dogs can be independently retracted, as by closing the window-frame, while the actuating mechanism remains stationary, or vice versa, substantially as described.

3. The combination, in a sash-fastener, of the main frame supporting the actuating mechanism for the dogs or bolts, with an escutcheon adjustably secured to said frame, as and for the purpose set forth.

4. In a sash-fastener, and in combination with the spindles, the actuating mechanism therefor, and the locking-dogs operated by but capable of an independent movement with relation to said spindles, of the locking-plate, engaging the actuating mechanism to hold the latter from movement while the dogs are free to be retracted by pressure applied to their engaging ends, substantially as described.

5. The combination, in a sash-fastener such as indicated, of the main frame and attached housing for the inner dog, the detachable and adjustable housing carrying the outer dog, the two spindles connected to said dogs, the actuating mechanism mounted in the main frame, and an adjustable escutcheon secured to said frame, substantially as described, whereby the locking mechanism as a whole is adapted for application to window-frames of various dimensions.

6. The combination, in a sash-fastener, and with the notched or shouldered links applied to the levers for operating the dogs, of the sliding plate engaging said links, and the screw-spindle provided with a shoulder for entering the enlarged portion of the slot in the escutcheon, substantially as described.

7. The combination, with the main frame, the spindles for operating the dogs, and the links for actuating the spindles, said links provided with shoulders engaging shoulders on the main frame and co-operating with the sliding plate,

of the escutcheon adjustably applied to said frame and provided with slots for the passage of the links, and the adjustable spindle applied to the sliding plate, substantially as described.

8. In combination with the main frame carrying the actuating mechanism for the independently-supported dogs, and adapted to be secured to the window-frame beneath the inner stop, the escutcheon adjustably secured to the main frame for bearing upon the face of the inner stop, substantially as described.

9. In combination with the dog-actuating mechanism and the links thereof provided with heads, as described, the escutcheon for application to the inner stop provided with openings or slots to receive the links, said escutcheon being removably applied to the main frame, substantially as described.

10. In combination with the spring-projected dogs, independently supported in separate housings and provided with the tangential bearing-surface and inclined shoulders, the spindles loosely applied to said dogs, as described, and the separate actuating devices connected to said spindles, substantially as and for the purpose set forth.

11. In a sash-fastener, and in combination with the shouldered links applied to the actuating mechanism for the dogs, the notched locking-plate held in position upon the plate b^4 of the main frame and above the bearings for the spindles, substantially as described.

12. The combination, in a sash-fastening such as described, of the main frame, the housing for the dog applied thereto, the independently-supported and pivoted dog, its spindle and arm, the notched link engaging the main frame, and the movable locking plate co-operating with the said link, substantially as described.

13. The combination, in a sash-lock such as described, and with the spring-pressed dog, its spindle, lever, and link, the sliding plate engaging notches or projections on the link, and serving both to hold the dog retracted or lock it in position to engage the window-sash, substantially as described.

JOHN Y. BASSELL.

Witnesses:

MELVILLE CHURCH,
J. B. CHURCH.