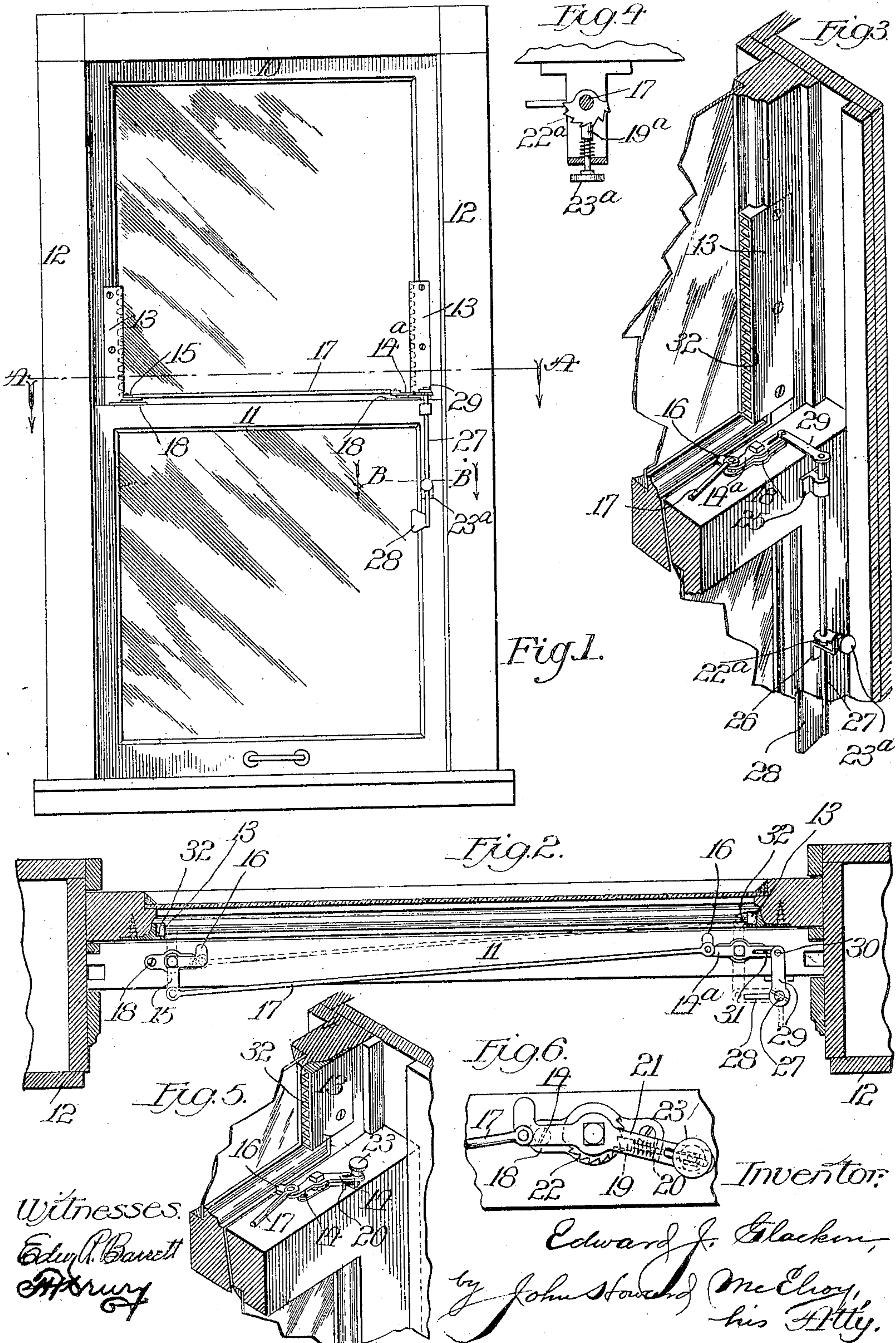


No. 821,097.

PATENTED MAY 22, 1906.

E. J. GLACKIN.  
SASH LOCK FOR WINDOWS.  
APPLICATION FILED DEC. 15, 1904.

2 SHEETS—SHEET 1.



Witnesses:  
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Attest

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his Atty.



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2 SHEETS—SHEET 2.

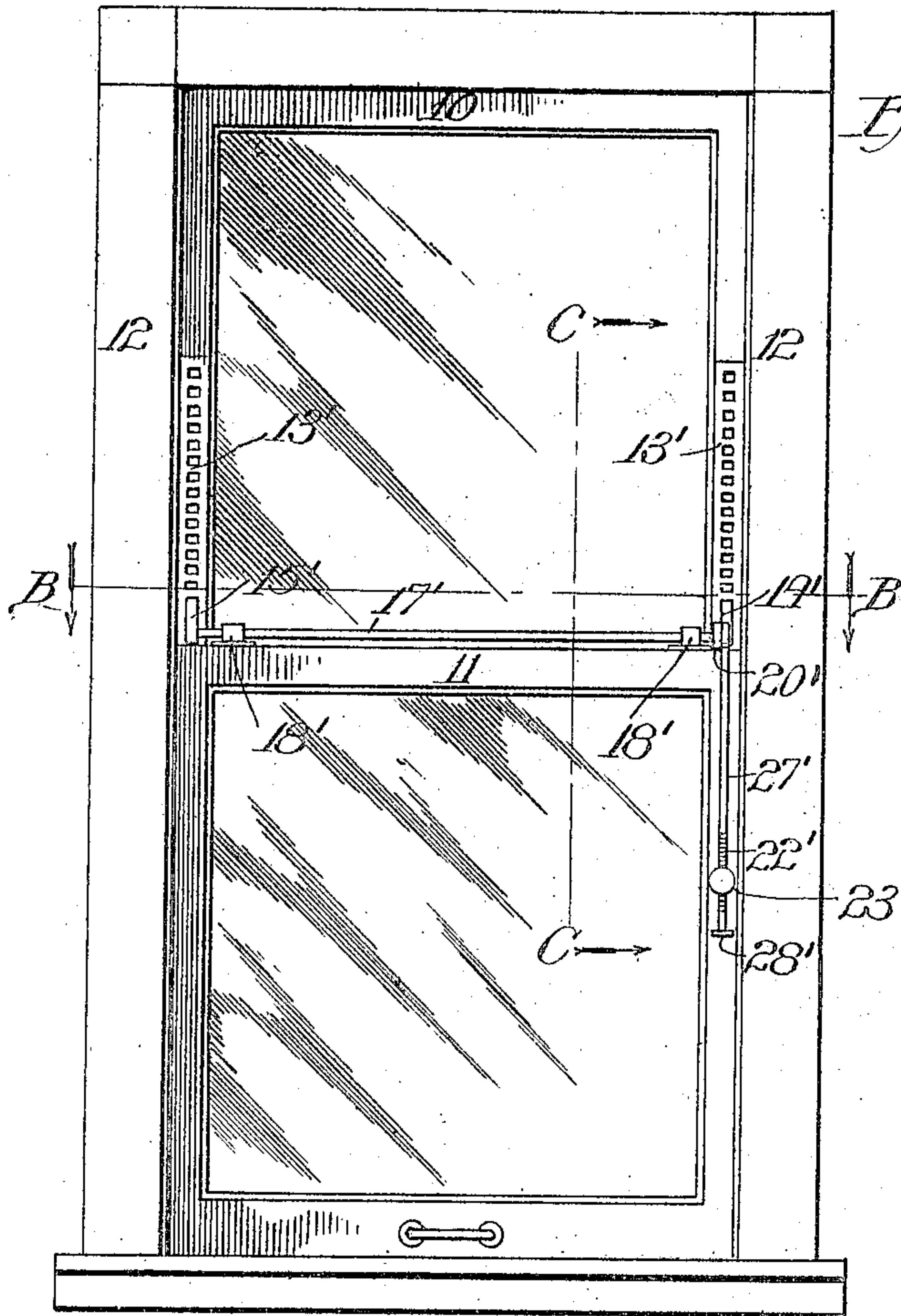


Fig. 7.

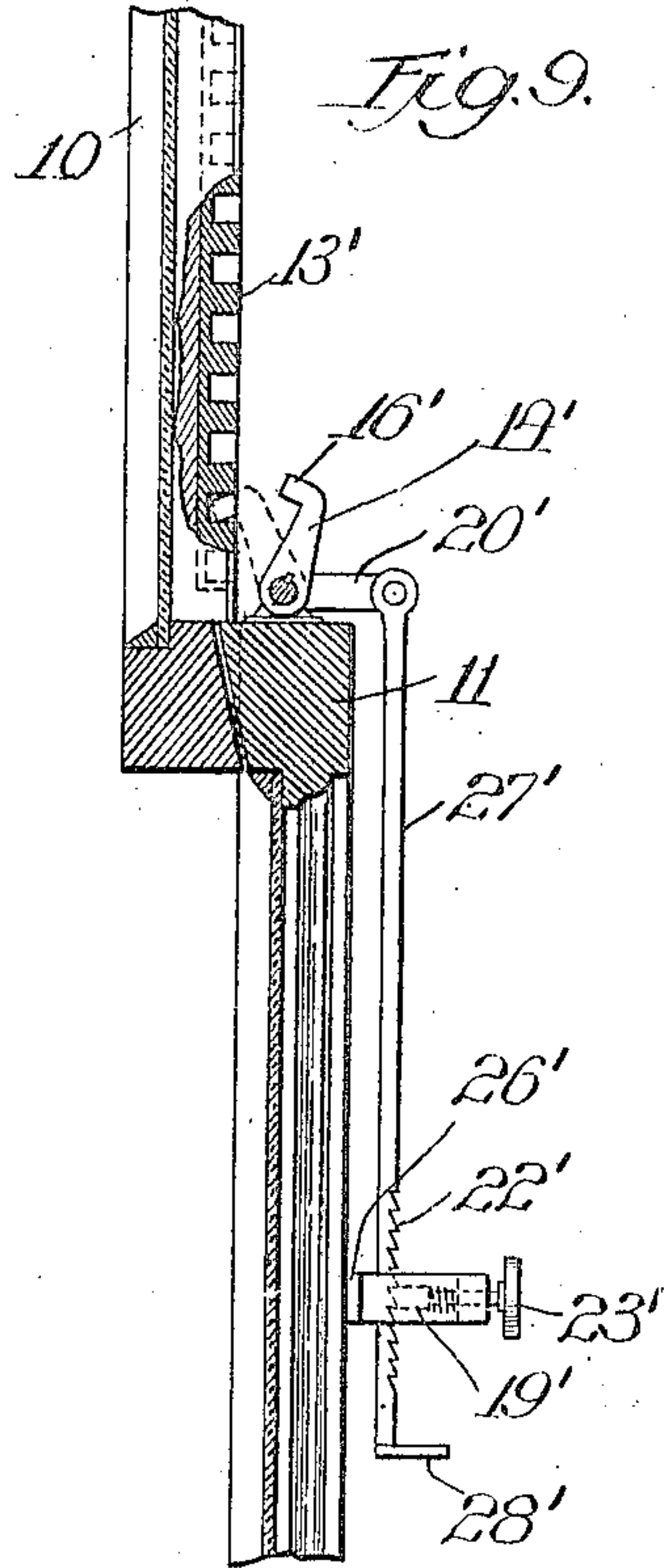


Fig. 9.

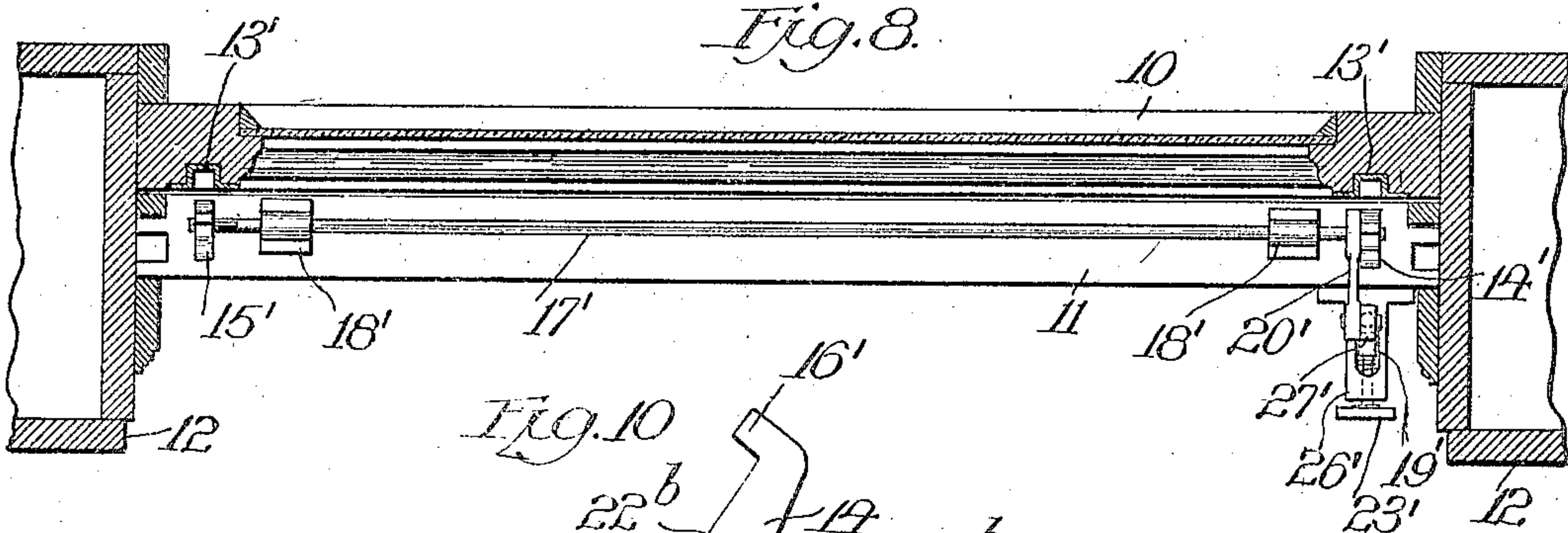


Fig. 8.

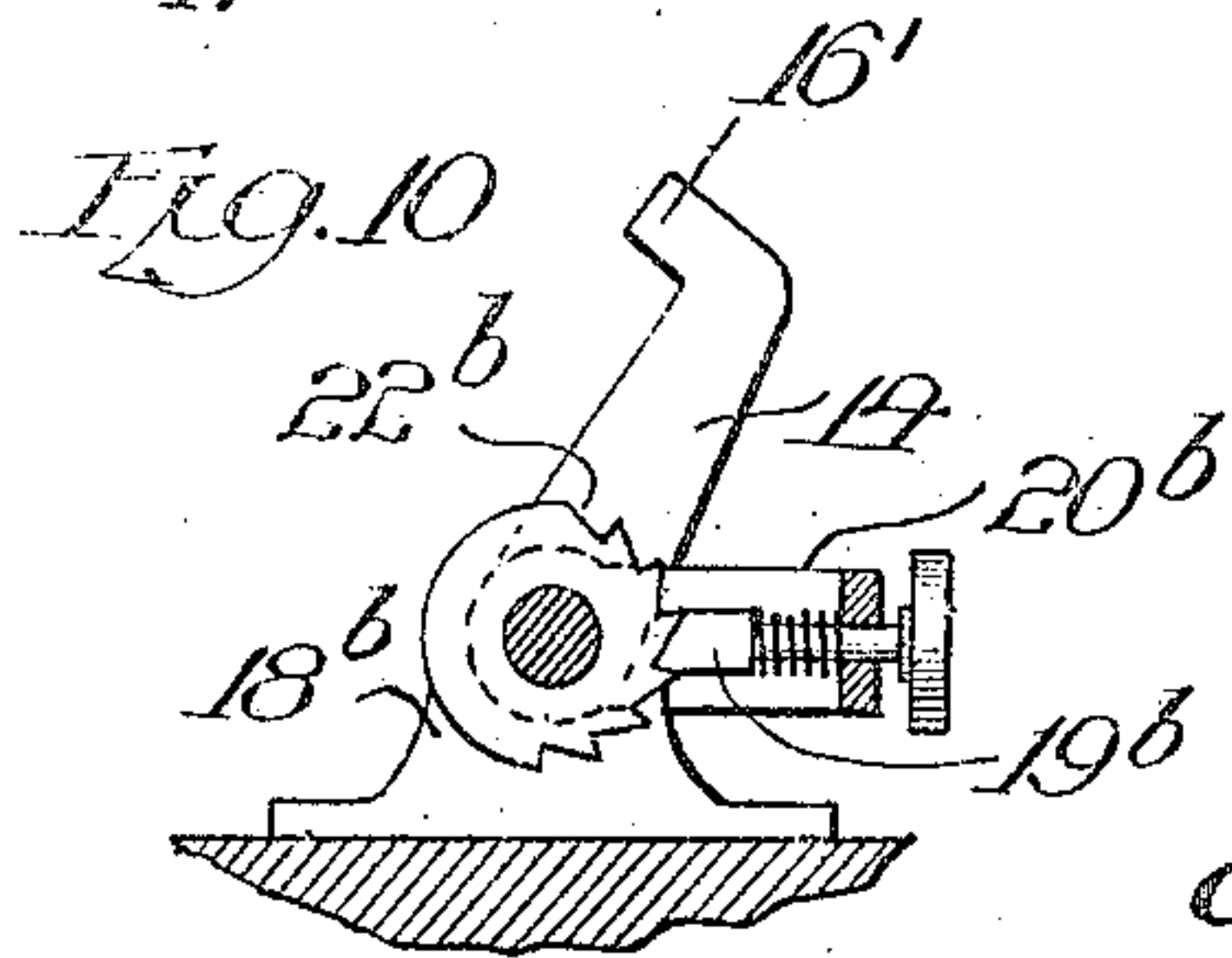


Fig. 10.

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# UNITED STATES PATENT OFFICE.

EDWARD J. GLACKIN, OF CHICAGO, ILLINOIS.

## SASH-LOCK FOR WINDOWS.

No. 821,097.

Specification of Letters Patent.

Patented May 22, 1906.

Application filed December 15, 1904. Serial No. 236,932.

*To all whom it may concern:*

Be it known that I, EDWARD J. GLACKIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sash-Locks for Windows, of which the following is a specification.

My invention is concerned with a novel sash-lock, which I have devised, primarily, for the purpose of enabling me to lock the two sashes of a window together in any relative position, so that I can use the lower sash to raise or lower the upper sash, thereby dispensing with the use of poles or any other awkward expedient.

My improved sash-lock also serves as a burglar-proof lock, to prevent a sash which has been opened a small amount for ventilation from being opened from without far enough to admit an intruder.

It further serves as a means of drawing the sashes together tightly enough in any relative position to prevent their rattling.

To illustrate my invention, I annex hereto two sheets of drawings, in which the same reference characters are used to designate identical parts in all the figures, of which—

Figure 1 is a front elevation of a window having my invention in one form applied thereto. Fig. 2 is a horizontal section, on an enlarged scale, on the line A A of Fig. 1. Fig. 3 is a perspective view of a portion of one side of the window, showing more clearly some of the details of the invention. Fig. 4 is a detail in section, on an enlarged scale, on the line B B of Fig. 1. Fig. 5 is a perspective view similar to Fig. 3, but showing a modified form. Fig. 6 is a top plan view of a portion of the mechanism shown in Fig. 5. Fig. 7 is a view similar to Fig. 1, but showing still another modification in which the locking-dogs swing in a vertical instead of a horizontal plane. Fig. 8 is a horizontal view in section on the line B B of Fig. 7. Fig. 9 is a side elevation in section on the line C C of Fig. 7, but on an enlarged scale; and Fig. 10 is a detail view illustrating still another modification.

The upper sash 10 and the lower sash 11 are of the customary construction and are mounted in the casing 12 in the customary manner. Where the upper sash is the outer one, as is the customary construction, the rack member 13 (which may be of any desired length) of the locking mechanism is secured on the upper sash, preferably by being

screwed to the front edge of the side thereof, with its teeth pointing toward the center. In order to move the upper sash from the lower without causing any tendency of either sash to bind in the casing, I preferably provide the locking mechanism at both sides of the window, so that the sashes will be fastened to each other at both sides, and as a result if the lower sash is lifted from the center or from two points equally distant from the center as is customary, both sashes will be moved upward vertically and without any resistance other than that offered by their combined weight. Of course it will be understood that they can only be moved together when one of them is open.

The movable members of the locking mechanisms consist of the pivoted dogs 14 and 15, which have their operating ends hook-shaped and provided with the noses 16, that enter the teeth of the racks, and as the two racks face each other and it is desirable to connect the two dogs, so as to be moved simultaneously by the single link 17, this link is pivoted to the dogs on opposite sides of their fulcrums, as is clearly shown in Fig. 2, so that when either of the dogs is swung from its full-line position of Fig. 2 to its dotted-line position the other dog is compelled to move therewith and simultaneously assume the same position, and vice versa. These dogs are pivoted to the top of the lower sash, the pivot-pins preferably being secured in the plates 18, secured to the top of the sash, as clearly shown.

Where my invention is applied to a window of ordinary height, in which a person of average height can ordinarily reach the top of the lower sash, I provide the spring-pressed plunger 19, mounted to slide in a suitable bearing 20, secured on the under side of the arm 21 of the dog 14 and coöperating with the segmental ratchet 22, formed integral with or secured upon the top of the plate 18, upon which the dog is pivoted. The teeth of the ratchet preferably point in the direction shown, so that when the dog is swung into locking position it is held there automatically until it is released by withdrawing the plunger 19, which for this purpose has its outer end provided with the head 23. It will be seen that by use of this construction and location of the plunger the locking mechanism can be manipulated by one hand.

When my invention is applied to a large window of such a height that it is inconvenient



ient or impossible to reach to the top of the lower sash, instead of employing the handle 23 to operate the dog 14 I journal in the bearings 25 and 26, secured to the lower sash, the vertical rock-shaft 27, the lower end of which is provided with a projecting plate or arm 28, of suitable shape to be seized in order to rock the shaft, and upon its upper end I provide the arm 29, which has a pin 30 projecting downwardly into the slot 31, formed in the dog 14<sup>a</sup>. Instead of having the segmental ratchet 22 secured to the dog 14 I in that case employ the similar ratchet 22<sup>a</sup>, secured to the rock-shaft 27 in a suitable position so that the spring-pressed plunger 19<sup>a</sup> is conveniently located, so that it can be withdrawn by means of its head 23<sup>a</sup>. By the mechanism shown it will be apparent that the lower sash can be raised to any desired distance and the locking mechanism then operated to lock the two sashes together, after which by lowering the lower sash the upper sash will be drawn from the top to the desired position. When it is to be closed, the lower sash is then lifted until the upper sash is closed, when by unlocking the mechanism the lower sash can be closed and the two sashes locked together with the window entirely closed.

To draw the sashes together and prevent any tendency to rattle, the rack 13 is preferably provided with the flange 32, so that the hooked end 16 of the dogs engaging the same when they are in locking position will draw the two sashes together.

In Figs. 7 to 9 I have shown a modification, in which the dogs 14' and 15' are pivoted on horizontal axes, being rigidly secured to the rock-shaft 17', which is journaled in the bearings 18', secured on the top of the lower sash 11. The dogs have the hook-shaped ends 16', as before, which cooperate with the teeth of the rack-bars 13', which are secured to the sides of the upper sash and project outwardly from the window instead of toward each other. Where they are used in connection with a high window, as in the form first illustrated, the dog 14' is provided with an arm 20', to which is pivoted a vertically-sliding rod 27', which slides through a combined catch and bearing piece 26', secured on the side of the lower sash. The rod is provided with the rack-teeth 22', with which the spring-pressed plunger 19' cooperates, it being provided with the head 23', by which it is manipulated. The lower end of the rod 27' is preferably provided with a finger-piece 28', by which the rod is manipulated. The rack-teeth 22' are preferably directed, as shown, so that the rod can be shoved up freely to throw the noses 16' of the dogs into engagement with the teeth of the rack-bars to lock the sashes together in any desired position of adjustment, and the ratchet will hold them in their adjusted position. It will also be ap-

parent that the pressure of the dog will tend to separate the sashes instead of to draw them together, as in the preferred form; but this separating them and pressing the sashes away from each other and against the casing-strips also serves to prevent the rattling of the sashes.

In Fig. 10 I have illustrated the last-mentioned form as adapted for use in a window of the ordinary height, where the arm 20<sup>b</sup> is provided with the spring-pressed plunger 19<sup>b</sup>, cooperating with the ratchet 22<sup>b</sup>, secured to or preferably formed integrally with the bearing 18<sup>b</sup>. With this construction it will be apparent that the locking mechanism can be thrown into or out of operation by the use of one hand.

While I have shown and described my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, a plurality of locking-dogs on one sash, a corresponding plurality of members on the other sash adapted to be engaged by the dogs in any desired relative position of the sashes, said dogs being adapted to engage said members without interfering with the movement of the sashes relative to the casing and connections for simultaneously causing the dogs to engage the members whereby the lower sash may be used for raising and lowering the upper sash any desired amount.

2. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, a plurality of locking-dogs on one sash, a corresponding plurality of rack-bars on the other sash adapted to be engaged by the dogs, said dogs being adapted to engage said rack-bars without interfering with the movement of the sashes relative to the casing and connections for simultaneously causing the dogs to engage the teeth of the rack-bars whereby the lower sash may be used for raising and lowering the upper sash any desired amount.

3. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, a plurality of pivoted locking-dogs on one sash, a corresponding plurality of members on the other sash adapted to be engaged by the dogs in any desired relative position of the sashes, said dogs being adapted to engage said members without interfering with the movement of the sashes relative to the casing and a link connecting the dogs to compel their simultaneous move-



ment to engage the members whereby the lower sash may be used for raising and lowering the upper sash any desired amount.

4. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, a plurality of locking-dogs on one sash, a corresponding plurality of members on the other sash adapted to be engaged by the dogs in any desired relative position of the sashes, said dogs being adapted to engage said members without interfering with the movement of the sashes relative to the casing and automatically-operating mechanism to hold the dogs and members in engagement whereby the lower sash may be used for raising and lowering the upper sash any desired amount.

5. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, a plurality of pivoted locking-dogs on one sash, a corresponding plurality of members on the other sash adapted to be engaged by the dogs in any desired relative position of the sashes, said dogs being adapted to engage said members without interfering with the movement of the sashes relative to the casing, a link connecting the dogs to compel their simultaneous movement to engage the members, and automatically-operating mechanism to hold the dogs and members in engagement whereby the lower sash may be used for raising and lowering the upper sash any desired amount.

6. In a window, the combination with a casing, of the two sashes movable therein relative to each other, rack-bars on the sides of the outer sash with their teeth facing each other, the pivoted locking-dogs adapted to engage the teeth of the racks, and a link pivoted to the dogs on opposite sides of their pivots, for the purpose described.

7. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, the rack-bars on the sides of the outer sash with their teeth facing each other, the pivoted dogs having the hook-shaped ends mounted on the inner sash, and the flanges secured on the racks between their teeth and the pivots of the dogs.

8. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, a plurality of locking-dogs on the top of the lower sash, a corresponding plurality of members on the sides of the upper sash adapted to be engaged by the dogs in any desired relative position of the sashes, said dogs being adapted to engage said members without interfering with the movement of the sashes relative to the casing and mechanism extending below the top of the lower sash for operating the dogs to cause them to engage with the members, whereby the lower sash may be used for raising and lowering the upper sash any desired amount.

9. In a window, the combination with the

casing, of two sashes movable therein and relative to each other, a plurality of locking-dogs on the top of the lower sash, a corresponding plurality of members on the sides of the upper sash adapted to be engaged by the dogs in any desired relative position of the sashes, said dogs being adapted to engage said members without interfering with the movement of the sashes relative to the casing and a single mechanism extending below the top of the lower sash for simultaneously operating all of the dogs to cause them to engage with the members.

10. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, a locking-dog pivoted to swing in a horizontal plane on the top of the lower sash, a member on the side of the other sash adapted to be engaged by the dog in any desired relative position of the sashes, a vertical rock-shaft journaled on the lower sash having an operating-arm on its lower end, connections between the pivoted dog and the top of the rock-shaft, and means for securing the shaft in the locked position of the parts.

11. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, a locking-dog pivoted to swing in a horizontal plane on the top of the lower sash, a member on the side of the other sash adapted to be engaged by the dog in any desired relative position of the sashes, a vertical rock-shaft journaled on the lower sash having an operating-arm on its lower end, connections between the pivoted dog and the top of the rock-shaft, and means for securing the shaft in the locked position of the parts, said means consisting of a segmental ratchet secured to the rock-shaft and having beveled teeth, and a spring-pressed plunger cooperating therewith.

12. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, the racks secured to the sides of the upper sash and having their teeth facing each other, the cooperating dogs pivotally mounted on the top of the lower sash, the link connecting said dogs and secured thereto on opposite sides of their pivots, the vertical rock-shaft journaled on the lower sash, the arm for operating said rock-shaft on the lower end, the arm on the upper end of the rock-shaft having the pin, and the arm on the adjacent dog having the slot with which the pin cooperates.

13. In a window, the combination with a casing, of the two sashes movable therein and relative to each other, locking-dogs carried on the top of the lower sash immediately adjacent the sides of the upper sash and extending when in their locking position into the plane of the upper sash, but not otherwise, so that the sashes can pass each other when unlocked, members on the sides of the



upper sash with which the dogs are adapted to engage in any position of adjustment without interfering with the movement of the sashes relative to the casing, and connections  
5 for simultaneously causing the dogs to engage the members, whereby the lower sash may be used for raising and lowering the upper sash any desired amount.

14. In a window, the combination with the  
10 casing, of the two sashes movable therein and relative to each other, locking-dogs pivoted on the top of the lower sash immediately adjacent the sides of the upper sash and having their noses extending when in their locking  
15 position into the plane of the upper sash, but not otherwise, so that the sashes can pass each other when unlocked, rack-bars on the sides of the upper sash with which the dogs are adapted to engage in any position of ad-  
20 justment without interfering with the movement of the sashes relative to the casing, and connections for simultaneously causing the dogs to engage the rack-bars, whereby the lower sash may be used for raising and lower-  
25 ing the upper sash any desired amount.

15. In a window, the combination with the

casing, of the two sashes movable therein and relative to each other, locking-dogs pivoted on the top of the lower sash immediately adjacent the sides of the upper sash and having  
30 their noses extending when in their locking position into the plane of the upper sash, but not otherwise, so that the sashes can pass each other when unlocked, rack-bars on the  
35 sides of the upper sash with which the dogs are adapted to engage in any position of adjustment without interfering with the movement of the sashes relative to the casing, connections for simultaneously causing the  
40 dogs to engage the rack-bars, whereby the lower sash may be used for raising and lowering the upper sash any desired amount, and a spring-pressed ratchet for holding the dogs in engagement with the members, substantially  
45 as and for the purpose described.

In witness whereof I have hereunto set my hand this December, 1904.

EDWARD J. GLACKIN.

Witnesses:

JOHN H. McELROY,  
F. H. DRURY.