H. N. RENTON.

LOCKING DEVICE AND PUSH-OUT STAY FOR STEEL SASHES.

APPLICATION FILED DEC. 15, 1915.

1,190,672.

Patented July 11, 1916.

3 SHEETS—SHEET 1.

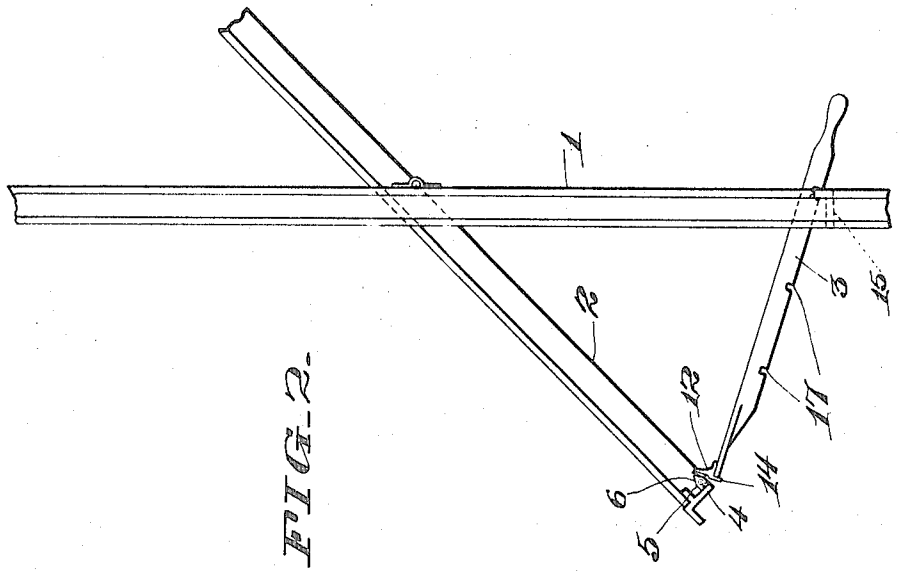


FIG. 2.

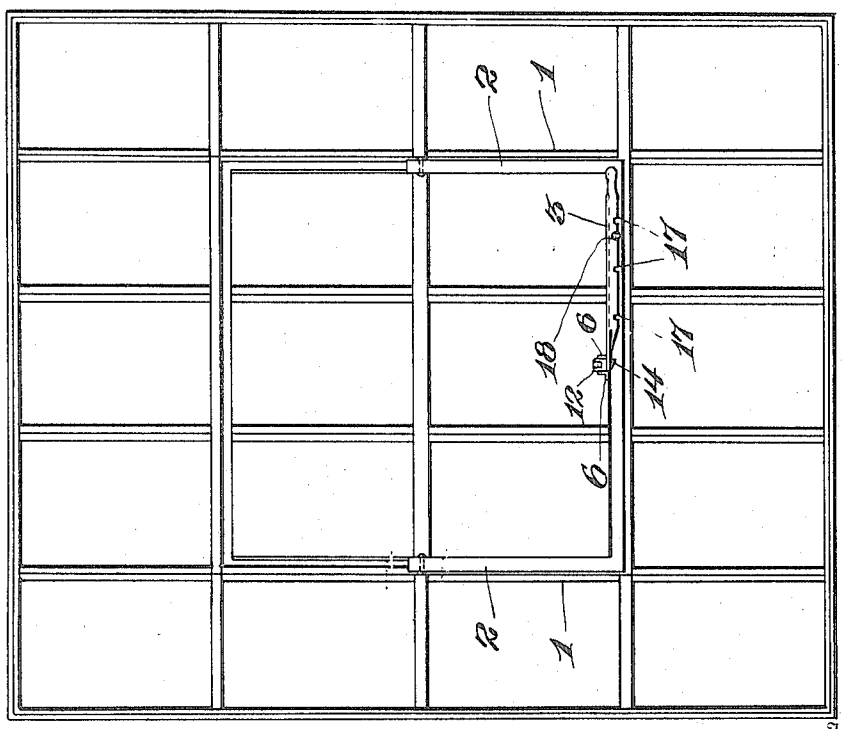


FIG. 1.

Witnesses
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Inventor
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3 SHEETS—SHEET 2.

FIG. 3.

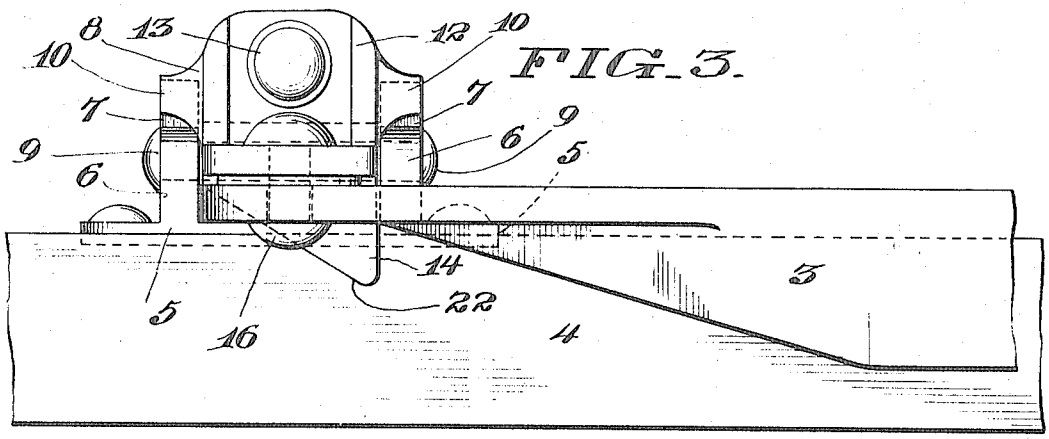


FIG. 4.

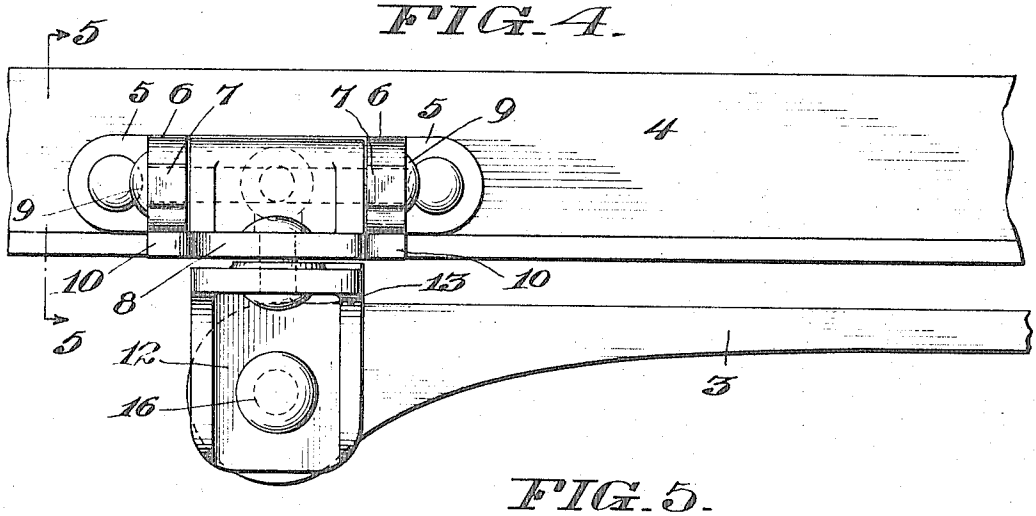
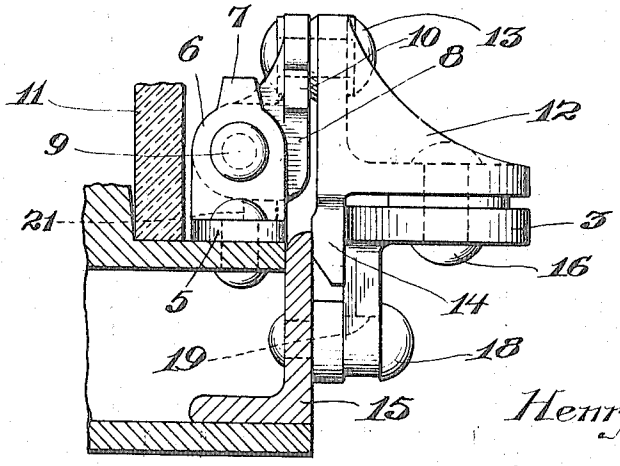


FIG. 5.



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3 SHEETS—SHEET 3.

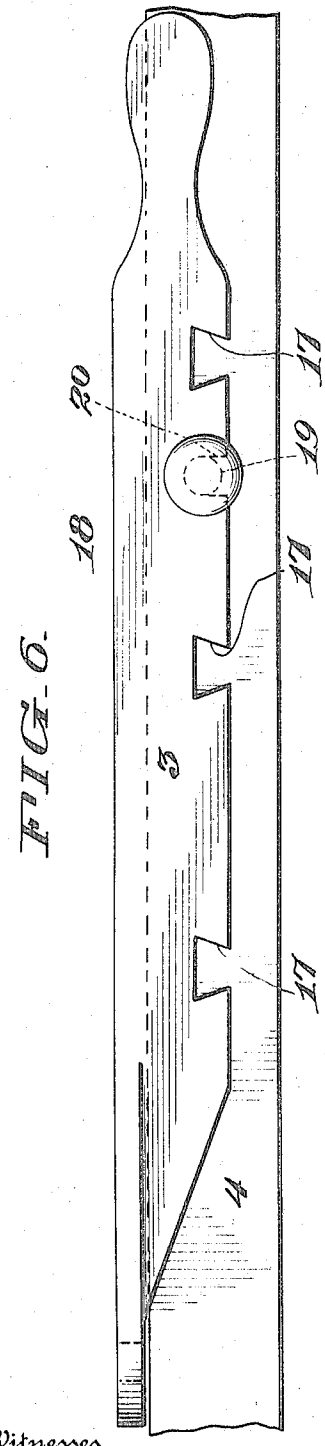


FIG. 6.

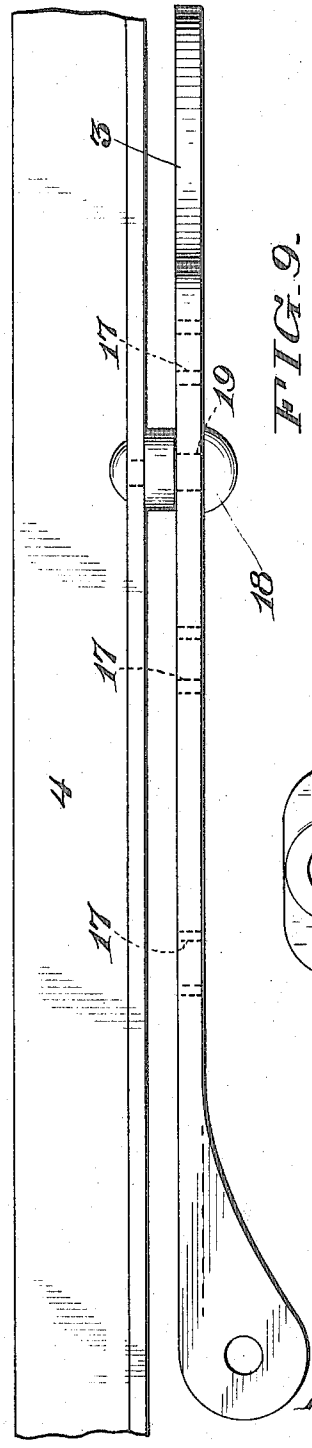


FIG. 7.

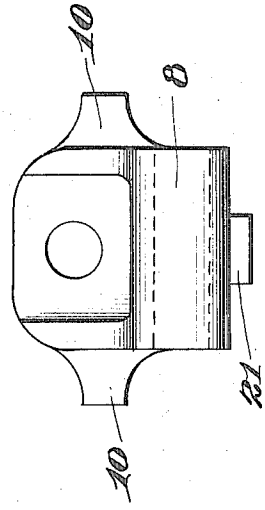


FIG. 9.

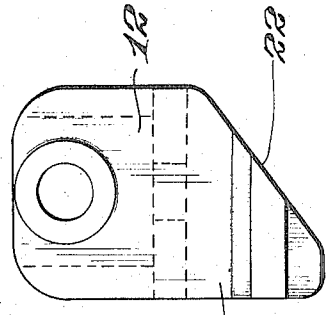


FIG. 8.

Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY N. RENTON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO WILLIAM ROPER, OF PHILADELPHIA, PENNSYLVANIA.

LOCKING DEVICE AND PUSH-OUT STAY FOR STEEL SASHES.

1,190,672. Specification of Letters Patent. Patented July 11, 1916.

Application filed December 15, 1915. Serial No. 66,985.

To all whom it may concern:

Be it known that I, HENRY N. RENTON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Locking Devices and Push-Out Stays for Steel Sashes, of which the following is a specification.

My invention relates to improvements in locking device and push-out stay for steel sashes, the object of the invention being to provide a push-out stay connected in an improved manner to the sash, so that the stay can be conveniently operated to move the sash to open position, hold the sash in open position, and also securely lock the sash in closed position.

A further object is to provide improvements of the character stated which can be manufactured and sold at a reasonably low price, and which will most efficiently perform the functions for which they are intended.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view in elevation illustrating my improvements in connection with an ordinary pivoted sash showing the latter in closed position. Fig. 2 is a broken view in side elevation showing the sash in open position. Fig. 3 is an enlarged fragmentary elevation showing the connection of the stay with the sash. Fig. 4 is a top plan view of Fig. 3. Fig. 5 is a view in section on the line 5—5 of Fig. 4. Fig. 6 is an enlarged view in elevation illustrating the position of the stay when locked with the sash in closed position. Fig. 7 is a top plan view of Fig. 6. Fig. 8 is an inner face view of the pivoted locking member 12, and Fig. 9 is a view in elevation of the coupling member 8.

1 represents a frame, and 2 a pivoted sash.

3 is my improved stay which is connected to the lower cross bar 4 of the sash 2 as will be hereinafter explained. A bracket 5 is secured to the bar 4, and is provided with integral upwardly projecting perforated ears 6 having lugs 7 at their upper ends. A coupling member 8 is pivotally connected to the perforated ears 6 by means of a rivet 9, and is provided at opposite sides with laterally projecting lugs 10 which are adapted to engage the lugs 7 and limit the pivotal movement of the coupling member 8 in a direction toward the pane of glass 11 in the sash so as to prevent any possibility of breaking the sash by the manipulation of the stay. The pivotal movement of the coupling member 8 in the opposite direction is limited by a lug 21 on the lower portion of the coupling which engages bracket 5.

12 represents my improved locking member which is pivotally connected to the coupling member 6 by a rivet 13, and this locking member 12 is provided with a downwardly projecting integral tongue 14 adapted to engage over an angle bar 15 constituting a part of the frame 1, and when in this position, securely lock the sash in its closed position.

My improved stay 3 is pivotally connected to the coupling member 12 by means of a rivet 16, and is provided in its lower face with a plurality of notches 17 adapted to engage the bar 15, and hold the pivoted sash in any desired open position.

It will be noted that rivet 13 is located at right angles to rivet 9, and that rivet 16 is located at right angles to rivet 13. These rivets operate as journals or pivots, so that in effect a universal joint is had between the stay and the sash. Hence, the stay is capable of movement at any angle, so that it need not be positioned at right angles to the sash, but may assume any angular disposition so as to increase the possible adjustment and prevent the necessity of projecting the inner end of the stay an undesired distance into the room.

A stud 18 is securely riveted to the inner face of bar 15, and is made with a restricted neck portion 19 adapted to receive a recess 20 in the stay 3 when the sash is closed, and the stay is moved to a position flat against bar 15 as shown clearly in Figs. 6 and 7. When the stay is in this position, the locking tongue 14 will be held securely against the inner face of bar 15, and a sash held in closed position. To open the sash, it is necessary to release the stay 3 from button 18 by slightly elevating the stay, then swinging the stay around to a position at right angles to the sash, then elevating the stay slightly to move locking member 12 and

coupling member 8, rivet 9 acting as a pivot in this last-named movement. This last-named pivotal movement is limited by the lugs 10 engaging lugs 7. This movement of the coupling 12 on pivot 9 when aided by a turning movement on pivot 13 is sufficient to free tongue 14 from locking engagement with the bar 15, due to the bevel of the tongue 14 and allow the stay to be forced outwardly to open the sash and when the sash is in open position any of the notches 17 can be located over the bar 15 to hold the sash in open position as shown clearly in Fig. 2.

It will be noted that the tongue 14 is beveled or cut at an angle at one side as shown at 22 which enables me to unlock the sash by swinging the locking member 12 on the pivot 13 in addition to using the pivot 9.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. A device of the character described, comprising a bracket adapted to be secured to a sash, a coupling member pivotally connected to the upper portion of the bracket, a locking member pivotally connected to the lower portion of the coupling member, and a stay pivotally connected to the locking member, substantially as described.

2. A device of the character described, comprising a bracket adapted to be secured to a sash, and having lugs thereon, a coupling member pivotally connected to the bracket and having lugs thereon engaging the first-mentioned lugs and limiting the pivotal movement of the coupling in one direction, a locking member pivotally connected to the coupling at right angles to the pivotal connection of the coupling with the bracket, said locking member having a tongue thereon adapted to engage a fixed part and hold the sash in closed position, and a stay pivotally connected to the locking member, substantially as described.

3. A device of the character described, comprising a bracket adapted to be secured to a sash, and having lugs thereon, a coupling member pivotally connected to the bracket and having lugs thereon engaging the first-mentioned lugs and limiting the pivotal movement of the coupling in one direction, a locking member pivotally connected to the coupling at right angles to the pivotal connection of the coupling with the bracket, said locking member having a tongue thereon adapted to engage a fixed part and hold the sash in closed position, a stay pivotally connected to the locking member and having notches in its edge adapted to engage a fixed part and hold the sash in open position, and a fixed locking member adapted to enter one of the notches in the stay and hold the stay with the sash in closed position, substantially as described.

4. The combination with a frame and a pivoted sash, of a bracket secured to the lower bar of the pivoted sash, a coupling pivotally connected to the upper portion of the bracket, a locking member pivotally connected to the lower portion of the coupling and having a tongue thereon engaging over a bar of the frame, and a stay pivotally connected to the locking member, substantially as described.

5. The combination with a frame and a pivoted sash, of a bracket secured to the lower bar of the pivoted sash, a coupling pivotally connected to the bracket, a locking member pivotally connected to the coupling and having a tongue thereon engaging over a bar of the frame, a stay pivotally connected to the longer member, all of said pivotal connections positioned at right angles to each other, and means for locking the stay against movement, substantially as described.

6. The combination with a frame and a pivoted sash, of a bracket secured to the lower bar of the pivoted sash, a coupling pivotally connected to the upper portion of the bracket, a locking member pivotally connected to the lower portion of the coupling and having a tongue thereon engaging over a bar of the frame, a stay pivotally connected to the locking member, and means on the bracket and coupling member limiting the movement of the coupling member in both directions, substantially as described.

7. The combination with a frame and a pivoted sash, of a bracket secured to the lower bar of the pivoted sash, a coupling pivotally connected to the bracket, a locking member pivotally connected to the coupling and having a tongue thereon engaging over a bar of the frame, a stay pivotally connected to the longer member, all of said pivotal connections positioned at right angles to each other, means for locking the stay against movement, and means on the bracket and coupling member limiting the movement of the coupling member in both directions, substantially as described.

8. The combination with a frame and a pivoted sash, of a bracket secured to the lower bar of the pivoted sash, a coupling pivotally connected to the bracket, a locking member pivotally connected to the coupling and having a tongue thereon engaging over a bar of the frame, a stay pivotally connected to the longer member, all of said pivotal connections positioned at right

angles to each other, said stay having notches in its lower edge adapted to engage over the bar of the frame and hold the sash in open position, a stud on the frame bar adapted to enter one of the notches in the stay and hold the latter against movement, and means on the bracket and coupling member limiting the movement of the coupling member in both directions, substantially as described.

9. The combination with a frame and a pivoted sash, of a bracket secured to the lower bar of the pivoted sash, a coupling pivotally connected to the bracket, a locking member pivotally connected to the coupling and having a tongue thereon engaging over a bar of the frame, a stay pivotally connected to the locking member, said locking tongue beveled at one side, whereby it may be moved out of locking position by the pivotal movement of the locking member on its connection with the coupling, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY N. RENTON.

Witnesses:

CHAS. E. POTTS,

MARIE JACKSON.