

No. 885,239.

PATENTED APR. 21, 1908.

A. GORMAN.
SELF LOCKING SASH LOCK,
APPLICATION FILED OCT. 31, 1907.

Fig. 1.

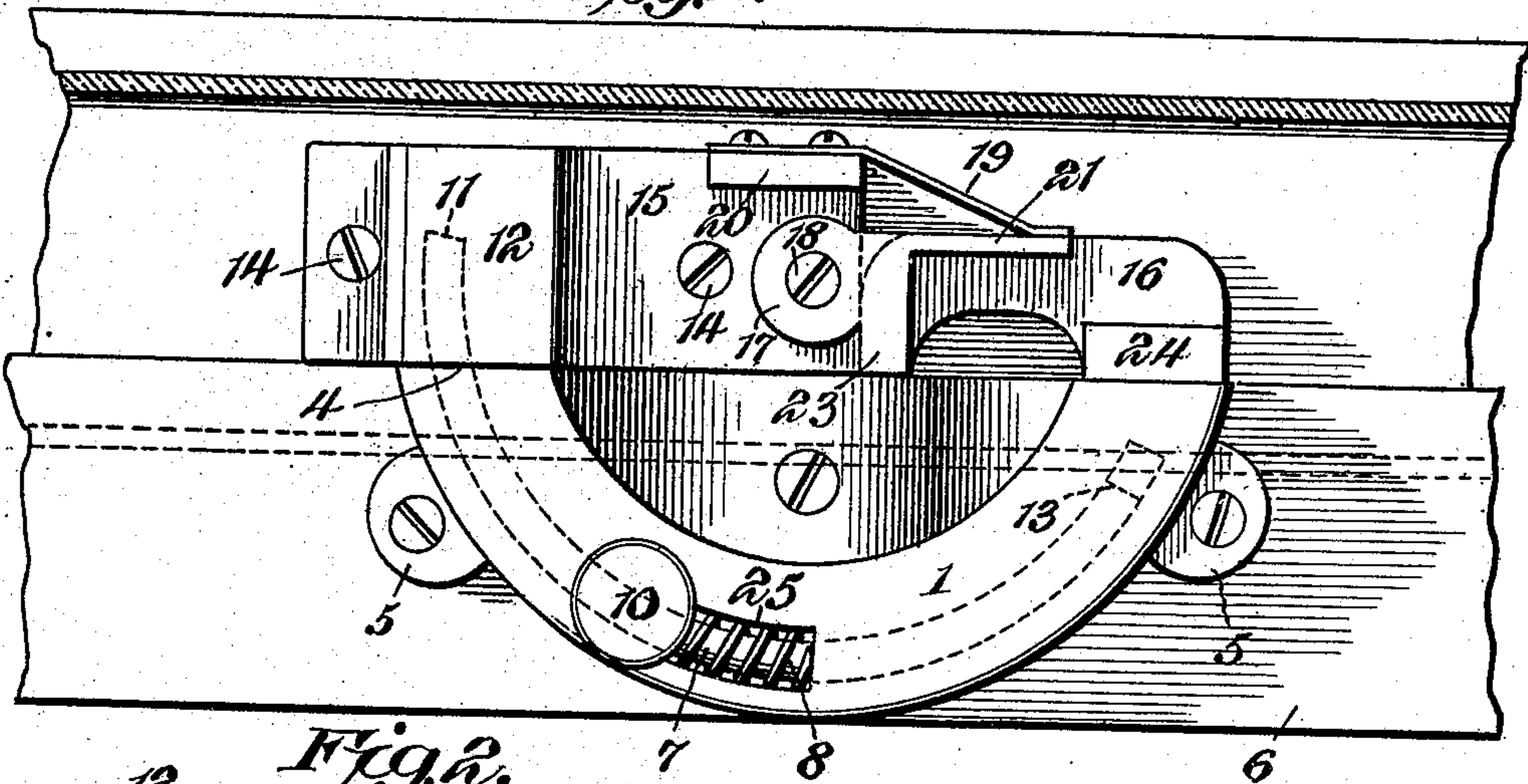


Fig. 2.

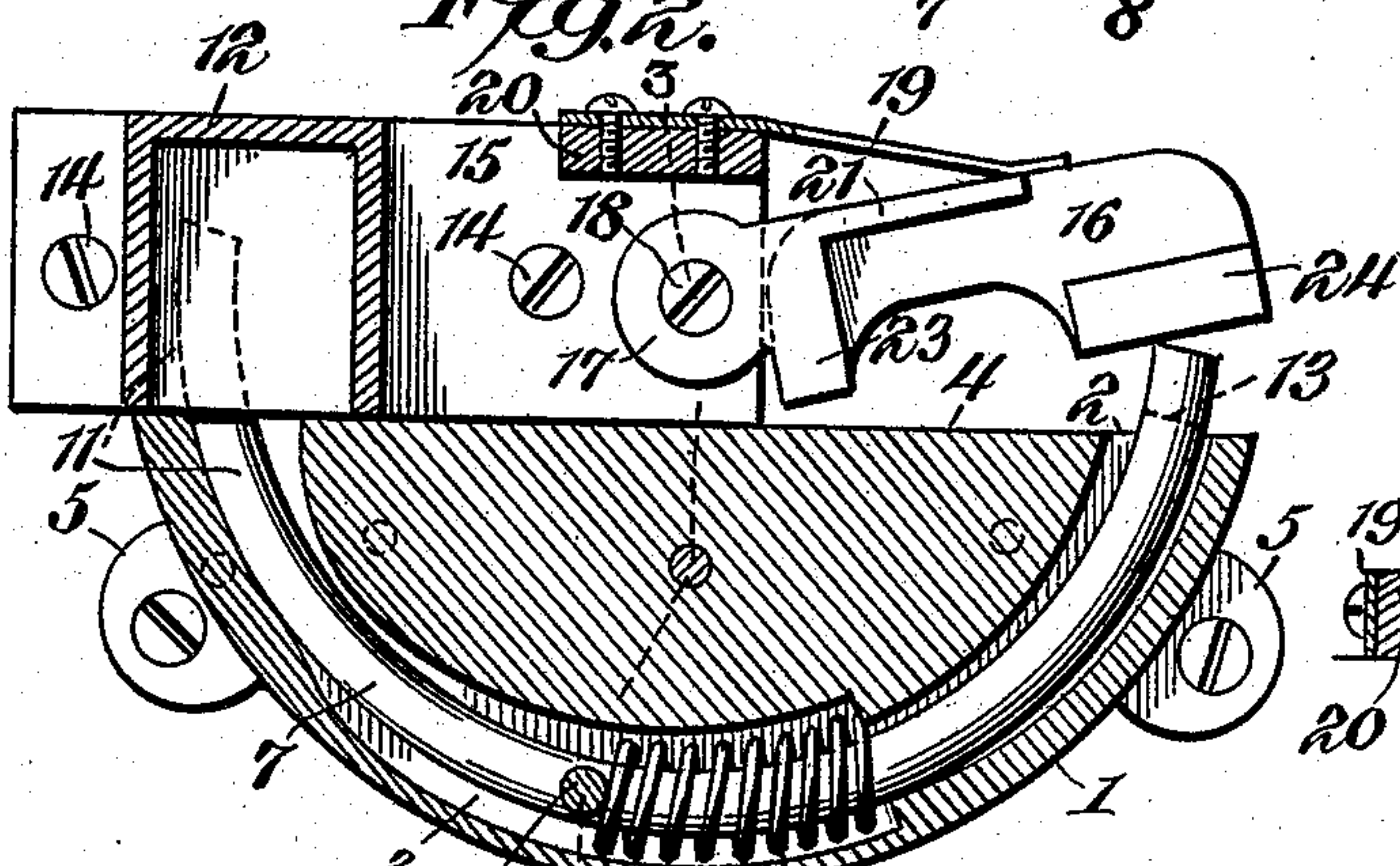


Fig. 3.

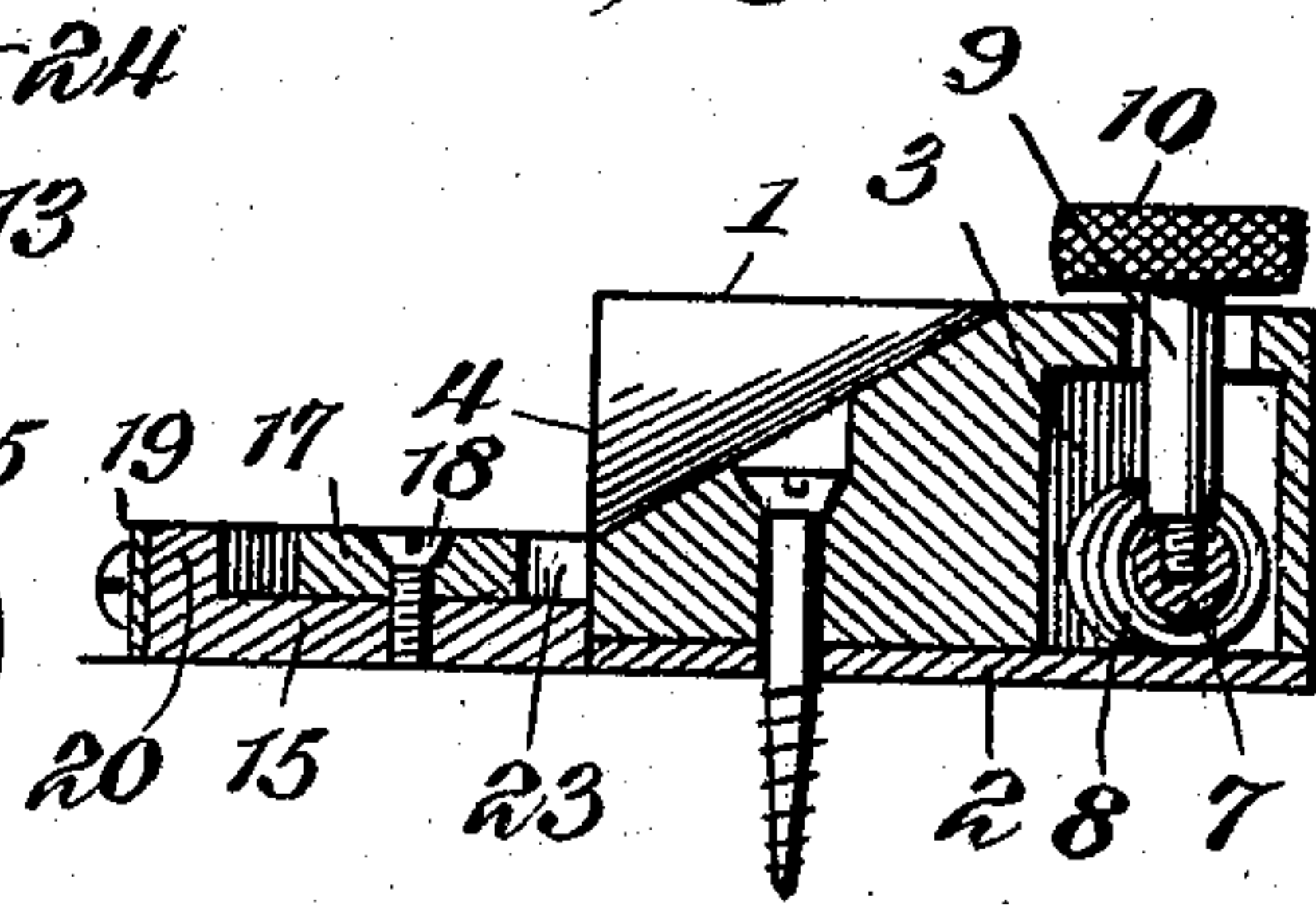


Fig. 4.

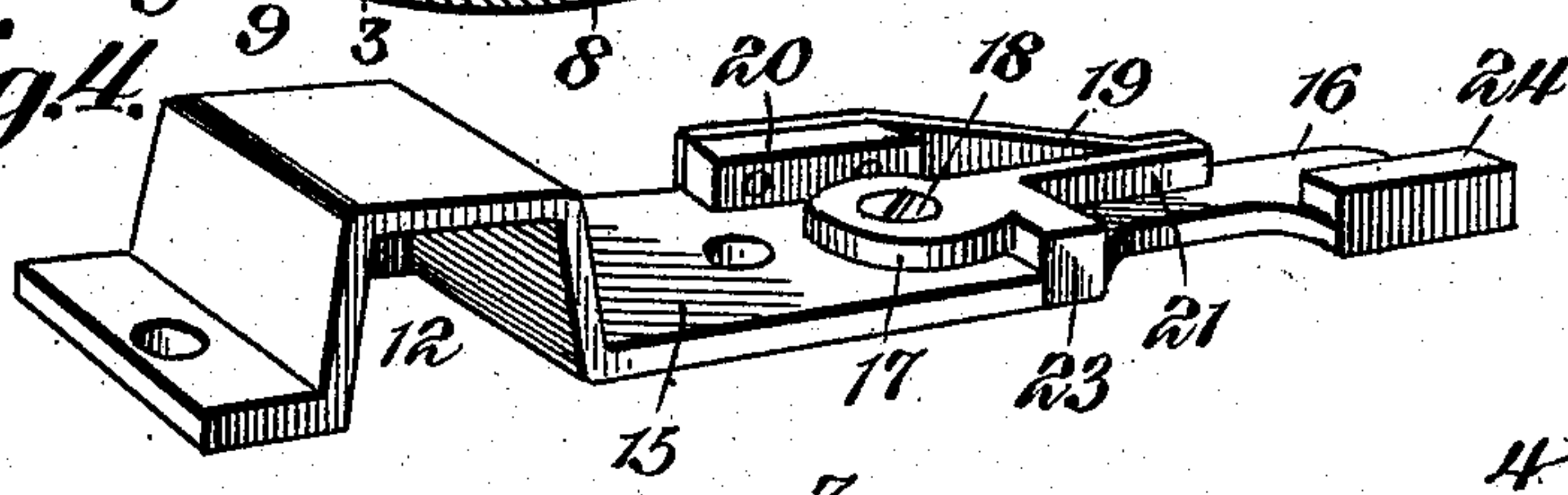


Fig. 5.

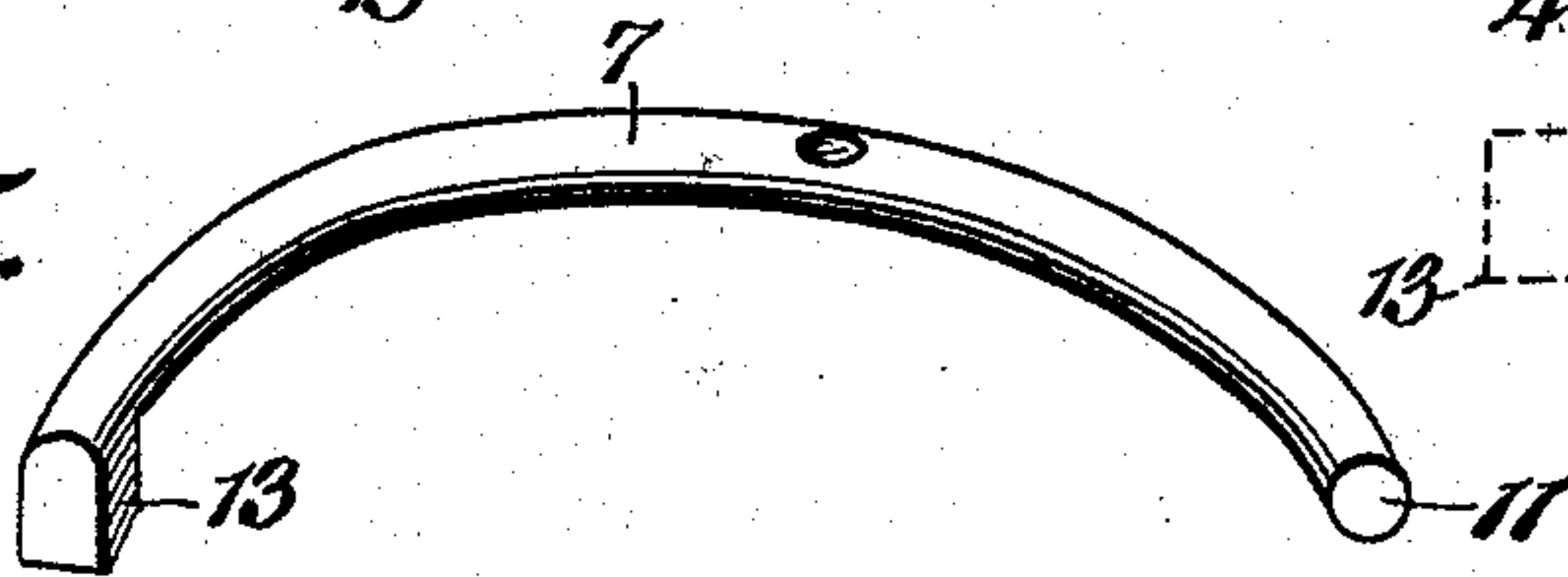
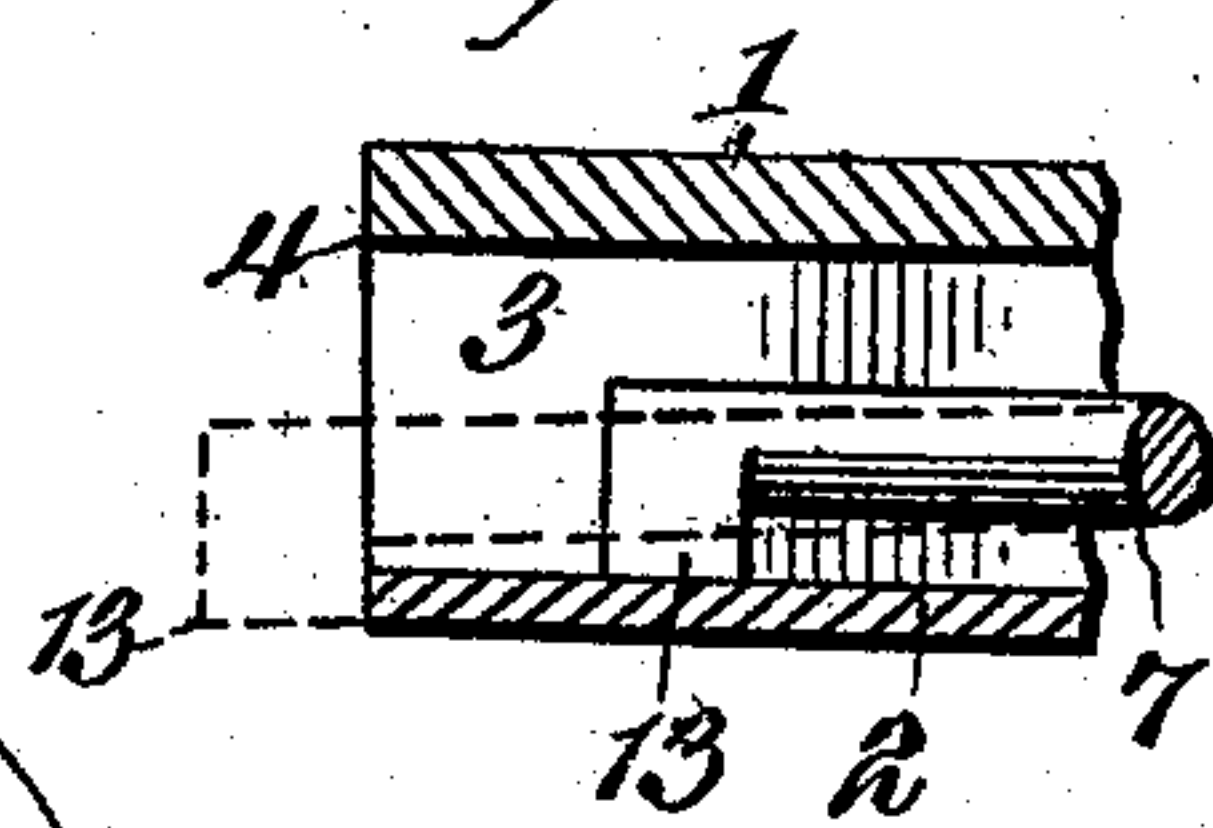


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

ARTHUR GORMAN, OF ST. LOUIS, MISSOURI.

SELF-LOCKING SASH-LOCK.

No. 885,239.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed October 31, 1907. Serial No. 400,060.

To all whom it may concern:

Be it known that I, ARTHUR GORMAN, a citizen of the United States, residing at St. Louis and State of Missouri, have invented a new and useful Self-Locking Sash-Lock, of which the following is a specification.

The invention relates to improvements in sash locks.

The object of the present invention is to improve the construction of sash locks, and to provide a simple and comparatively inexpensive one of great strength and durability, adapted to be readily applied to the upper and lower sashes of a window, and capable of automatically locking the same when the sashes are closed.

A further object of the invention is to provide a sash lock, which, when applied to a window, will render it impossible to close the sashes without locking the same, and which will effectually prevent a window from being unlocked from the exterior by introducing the blade of a knife, or other tool between the meeting rails of the sashes.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims here-to appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a plan view of a self locking sash lock, constructed in accordance with this invention, and shown applied to a window. Fig. 2 is a horizontal sectional view. Fig. 3 is a vertical sectional view, taken substantially on the line 3—3 of Fig. 2. Fig. 4 is a detail perspective view of the keeper and the tripping plate or member. Fig. 5 is a detail perspective view of the bolt. Fig. 6 is a detail sectional view of a portion of the casing, showing the rear end of the bolt.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a substantially segmental casing, constructed of suitable metal and provided with a detachable bottom plate 2, and

having a curved bolt opening 3, terminating at the straight edge 4 of the casing adjacent to the ends thereof, as clearly illustrated in Fig. 2 of the drawing. The bottom plate is provided with projecting ears 5, and the bolt casing 1 is secured to the upper edge or top of the lower sash by means of screws, or other suitable fastening devices, the straight edge of the casing being arranged flush with the edge of the top rail 6, as clearly shown in Fig. 1. The opening 3 receives a curved or arcuate bolt 7, and is enlarged at an intermediate point for the reception of a coiled spring 8, which bears against the casing and against the shank 9 of an operating head or knob 10 for actuating the bolt to slide the front end 11 of the same into a keeper 12. The rear end of the bolt is provided with a depending setting lug 13, which is adapted, when the rear end of the bolt is extended from the casing, to engage the latter at the bottom of the bolt opening 3, as clearly illustrated in Fig. 6 of the drawing. This sets the bolt and holds the front end retracted and out of engagement with the keeper.

The keeper, which is constructed of suitable material, is secured by screws 14, or other suitable fastening devices to the upper face of the bottom rail of the upper sash, and it is provided with an extended end portion 15 to which a tripping plate or member 16 is pivoted. The tripping plate or member 16 is provided at its inner end with an eye 17, and it is secured to the end portion 15 by a vertical screw 18, which forms the pivot of the tripping plate or member. The tripping plate or member is adapted to oscillate horizontally, and it is held normally extended and in flush relation with the edge of the bottom rail of the upper sash by means of a spring 19, secured at one end to a flange 20 of the end portion of the keeper, and having its free end bearing against a flange 21 of the tripping plate or member 16. The flanges 20 and 21 extend longitudinally of the bottom rail of the upper sash, and the inner end of the tripping plate or member is also provided with a transversely disposed shoulder 23, which abuts against the adjacent end of the keeper to form a stop for limiting the forward movement of the tripping plate or member, as clearly shown in Fig. 1 of the drawing. The outer end of the

tripping plate or member has an enlargement or boss 24, arranged in the path of the rear end of the bolt, when the latter is set, and the meeting rails of the sashes are separated and adapted, when the sashes are closed, to engage the setting lug 13 and lift the same out of engagement with the edge of the casing to permit the coiled spring 8 to throw the bolt into engagement with the keeper.

By this construction, the sash lock is adapted to lock the sashes of a window automatically when the same are closed. The bolt opening 3 at the rear end of the bolt is sufficiently large to permit the rear portion of the bolt to move vertically a distance to disengage the lug from the casing when the bolt is tripped. The shank 9 of the operating head or knob 10 extends through a slot 25 of the top of the casing, and the head or knob is located above the same in convenient position for the operator to slide the bolt backward for unlocking the window. When the bolt is moved backward to the position shown in Fig. 2 of the drawing, its rear end engages its setting and tripping device and swings the latter rearwardly to the position shown in Fig. 2. As soon as the lower sash is raised, or the upper sash is lowered sufficiently to carry the rear end of the bolt out of engagement with the side edge of the tripping plate or member, the latter will be returned to its normal position by the spring, and will extend into the path of the rear end of the bolt, so that it will be impossible to close the sashes without tripping the bolt and locking the window. As the bolt, when in engagement with the keeper, extends across the adjacent edges of the meeting rails of the upper and lower sashes and is slidable backwardly and forwardly, it will be apparent that it will be impossible to operate the sash lock from the exterior by the blade of a knife or similar tool inserted between the sashes.

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

1. In a lock, the combination with a keeper, of a casing, a bolt movably mounted within the casing to project either end from the same, a spring for carrying one end of the bolt into engagement with the keeper, means for setting the bolt with its other end extended from the casing, and a tripping device arranged in the path of the extended end of the bolt when the latter is set and adapted to release the same for automatically engaging the keeper.

2. In a sash lock, the combination with a keeper designed to be mounted on the upper sash of a window, of a casing for attachment to the lower sash, an arcuate bolt slidable in the casing to project either end of it from the same, a spring for carrying one end of the bolt into engagement with the keeper, means

for setting the bolt in an extended position, and means for automatically tripping the bolt when the sashes are closed.

3. In a sash lock, the combination with a keeper designed to be mounted on the upper sash of a window, of a casing for attachment to the lower sash, a bolt slidable in the casing to project either end of it from the same, a spring for carrying one end of the bolt into engagement with the keeper, the other end of the bolt being provided with means for engaging the casing to set the bolt, and a tripping device arranged in the path of the bolt when the latter is set.

4. In a sash lock, the combination with a keeper designed to be mounted on the upper sash of a window, of a casing for attachment to the lower sash, a bolt slidable in the casing to project either end of it from the same, a spring for carrying one end of the bolt into engagement with the keeper, the other end of the bolt being provided with a depending lug for engaging the casing to set the bolt, and a tripping device arranged in the path of the lug when the bolt is set and movable to and from such position to permit the bolt to be unfastened and set while the sashes are closed.

5. In a sash lock, the combination with a keeper, of a casing, a slidable bolt arranged to project either of its ends from the casing, one end of the bolt being provided with means for setting it, a spring for moving the other end of the bolt into engagement with the keeper, a movably mounted tripping device for releasing the bolt, and a spring for holding the tripping device normally in the path of the extended end of the bolt when the latter is set.

6. In a sash lock, the combination of a keeper, a casing, a spring actuated bolt slidable in the casing and arranged to project either of its ends therefrom, one end being arranged to extend into the casing, a lug carried by the other end of the bolt and arranged to engage the casing for setting the bolt, a tripping device pivoted to the keeper and provided with means to limit the swing of the tripping device, and a spring for actuating the tripping device.

7. In a sash lock, the combination of a keeper, a casing, a spring actuated bolt movable to project either end from the casing, one end being arranged to engage the keeper, and the other end being provided with means for setting the bolt, a tripping device pivoted at one end to the keeper and provided adjacent to the same with a shoulder for engaging the keeper, said tripping device being also provided with means for engaging the bolt to release the same, and a spring actuating the tripping device.

8. In a sash lock, the combination of a keeper, a casing, a spring actuated arcuate bolt slidable in the casing to project either

end therefrom, one end of the bolt being adapted to engage the keeper, and the other end being provided with a depending lug for engaging the casing to set the bolt, and a
5 tripping device pivoted at one end to the keeper and provided at the other end with a lug or enlargement arranged to engage the bolt when the latter is set.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature 10 in the presence of two witnesses.

ARTHUR GORMAN.

Witnesses:

AUGUST A. WOLF,
OSCAR F. UHL.