

(No Model.)

C. KNAPP.

FASTENER FOR THE MEETING RAILS OF SASHES.

No. 504,165.

Patented Aug. 29, 1893.

Fig. 1.

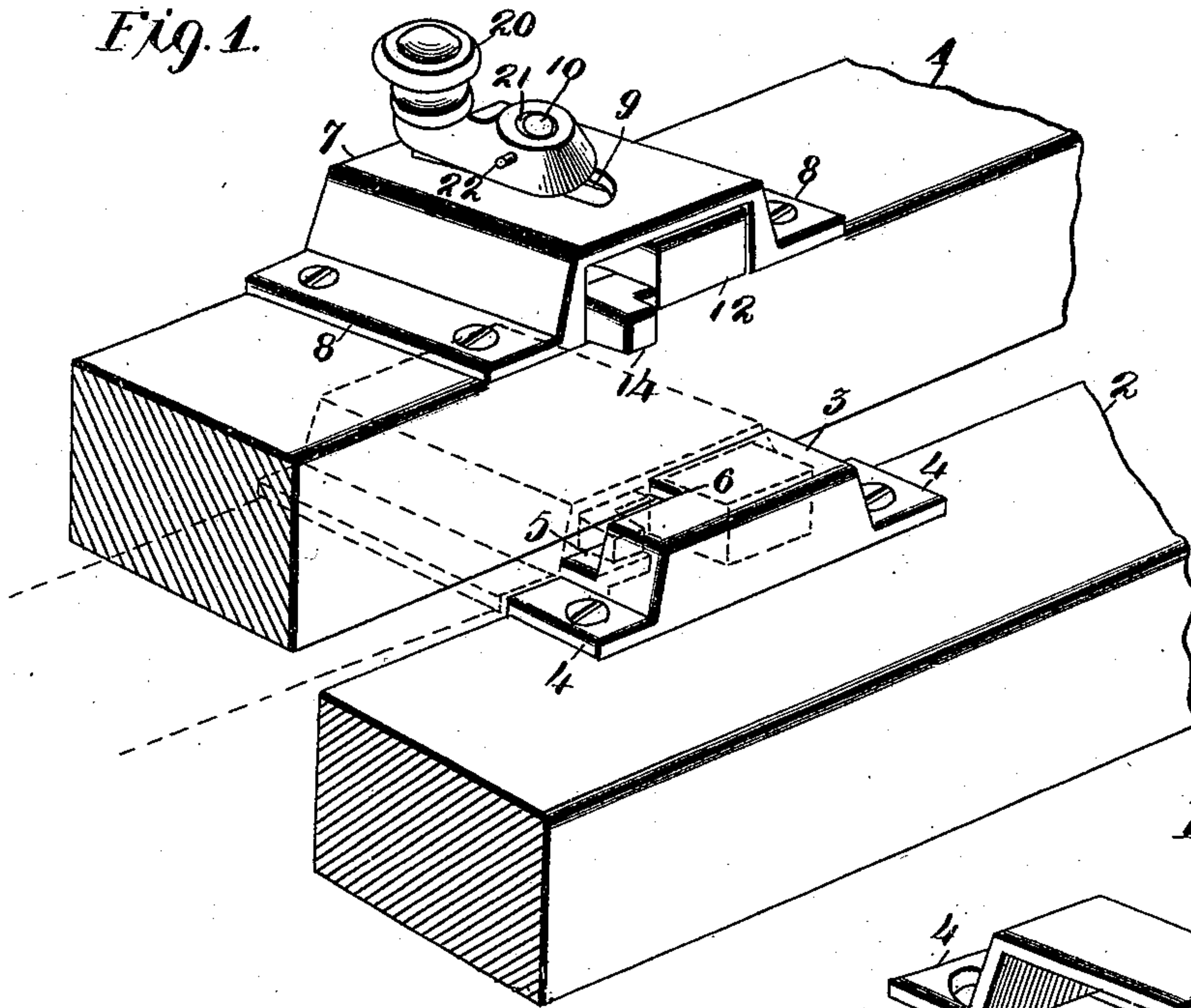


Fig. 2.

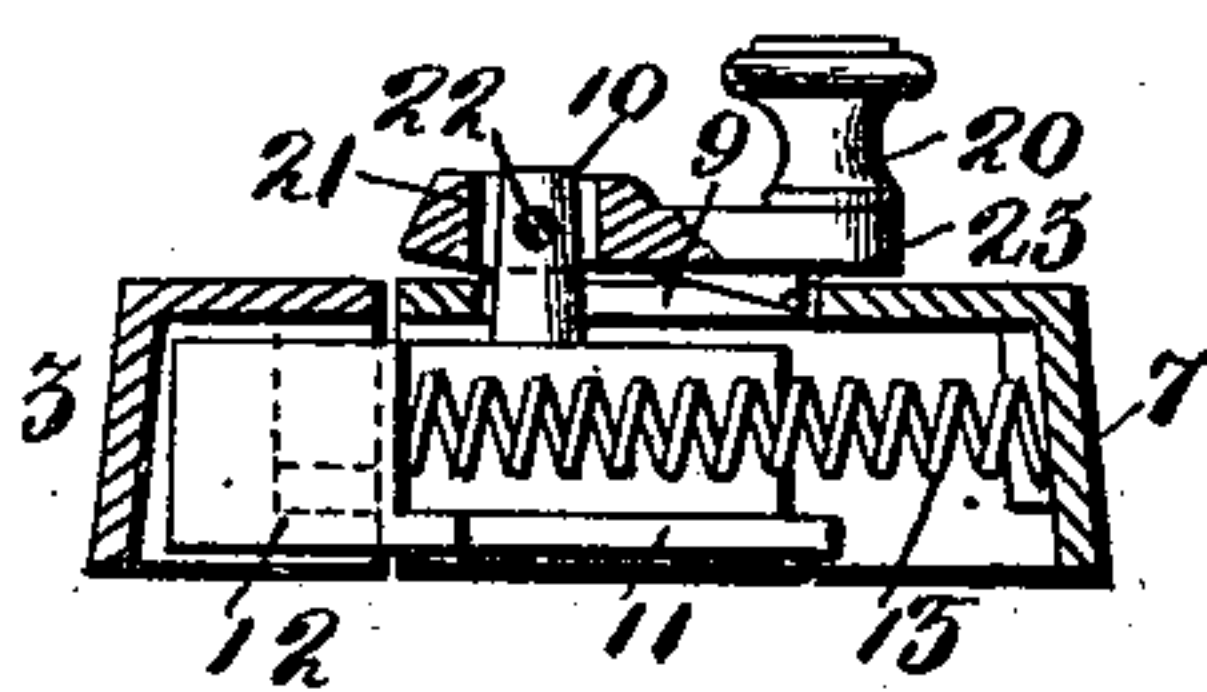


Fig. 3.

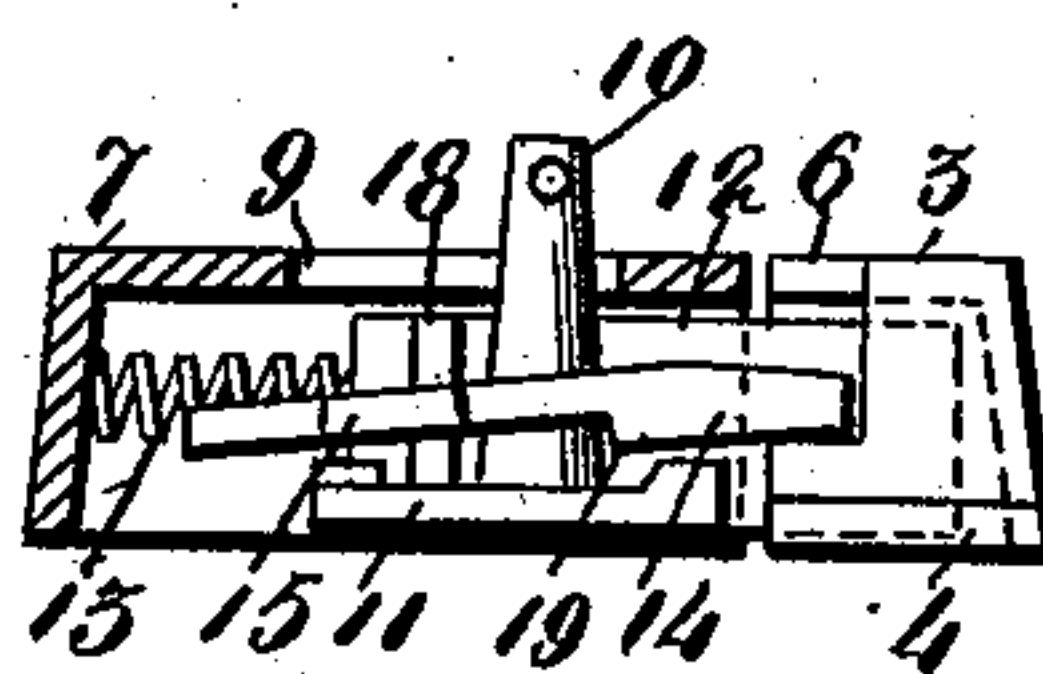


Fig. 4.

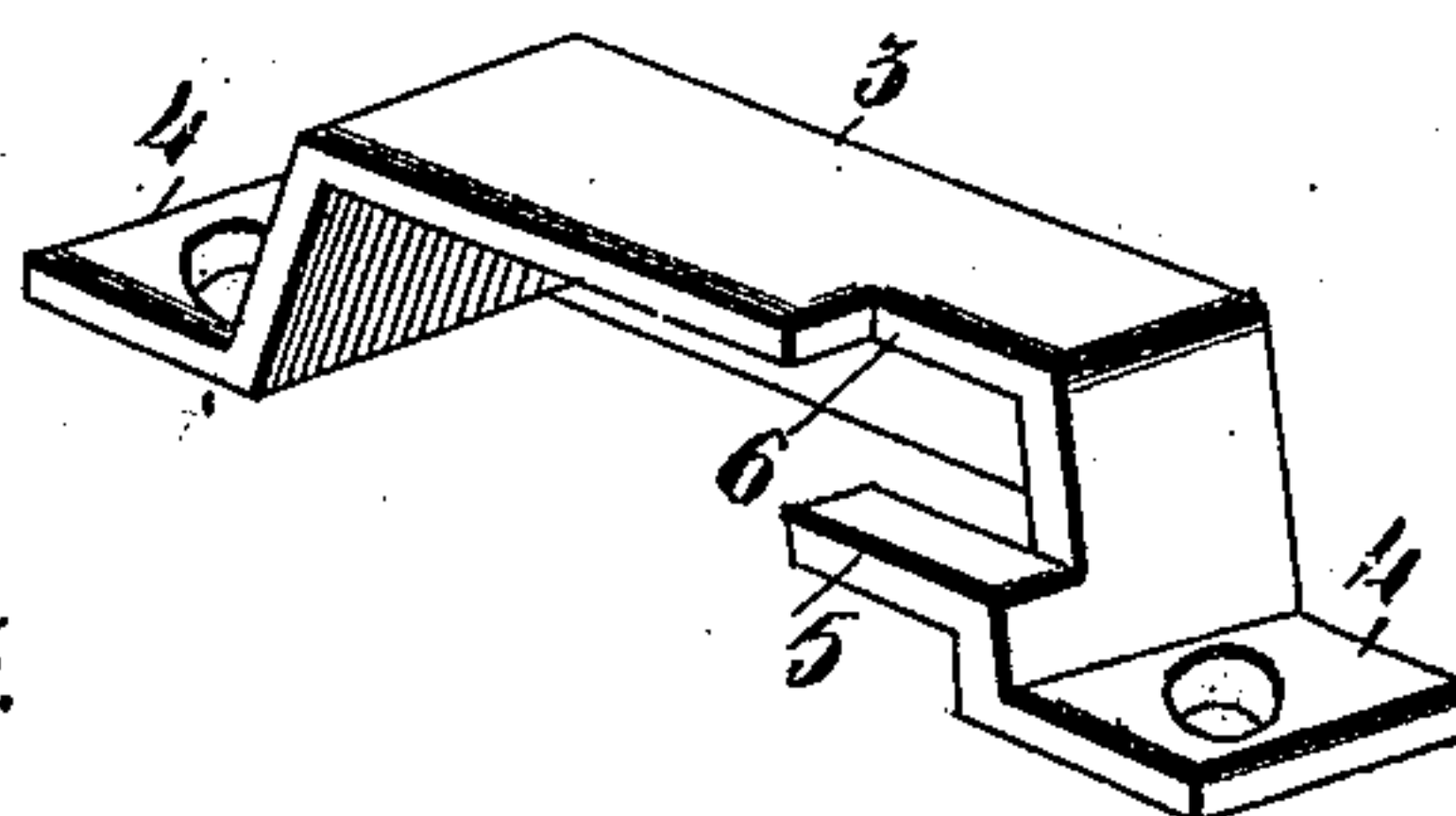


Fig. 5.

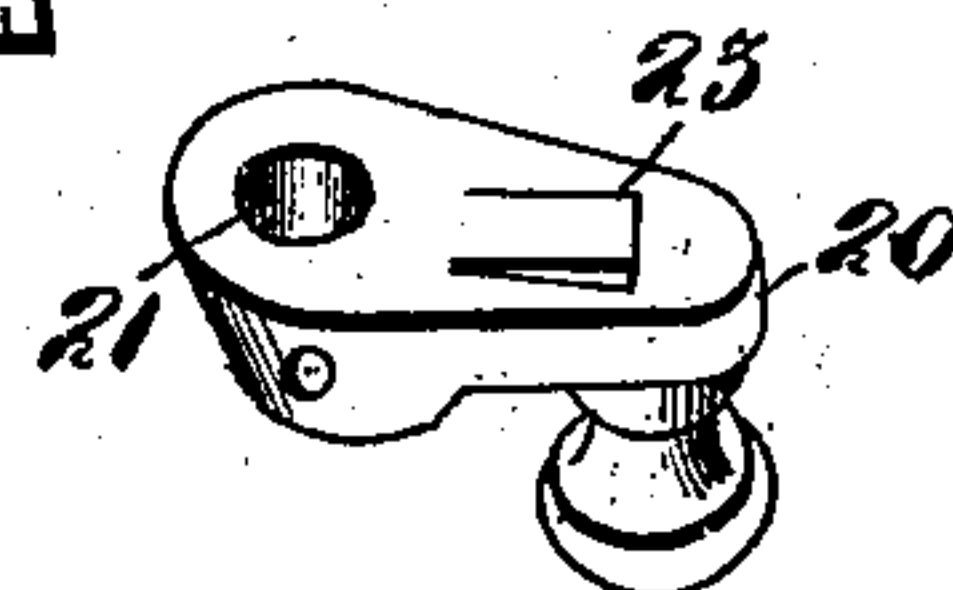


Fig. 6.

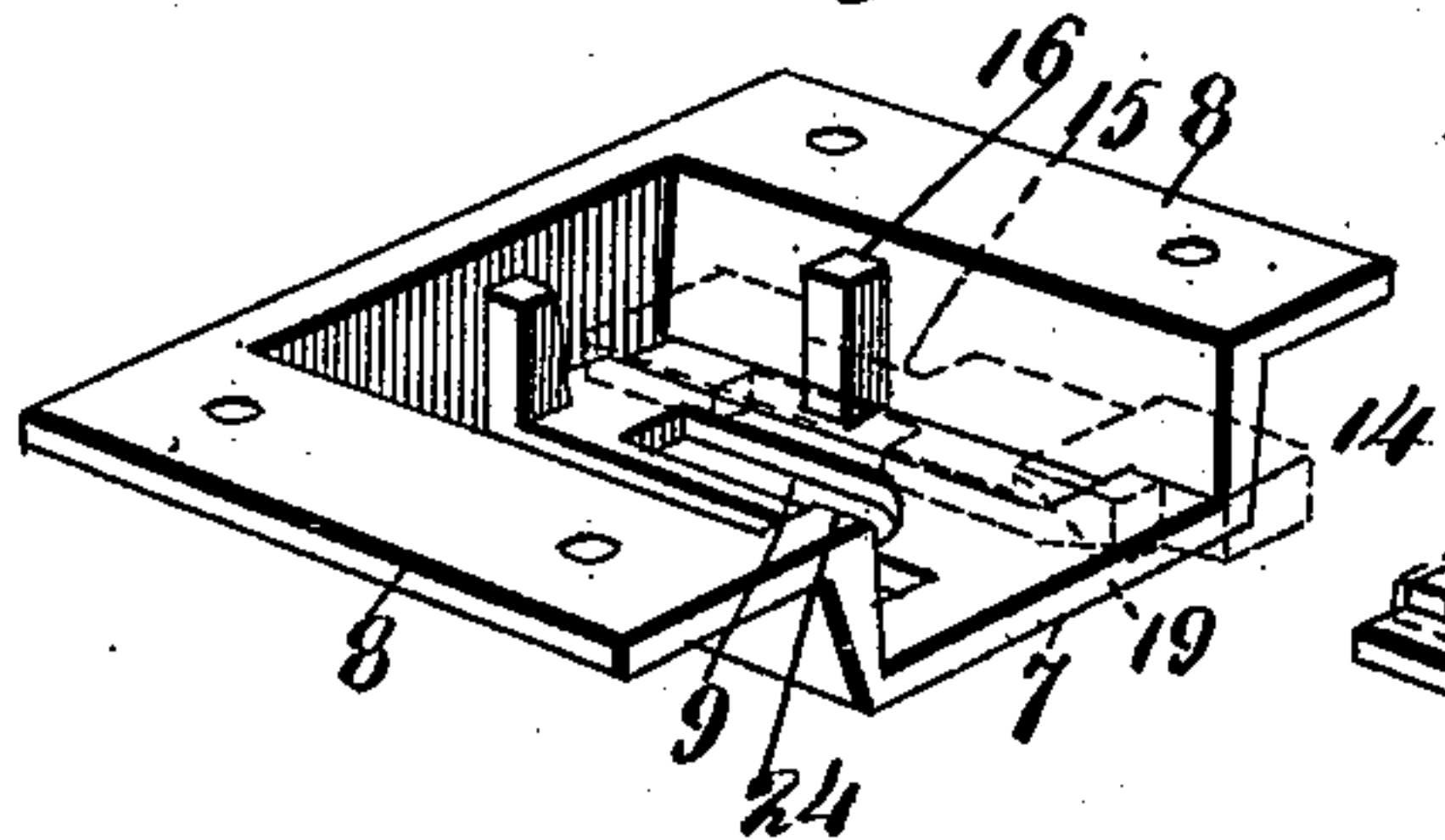


Fig. 7.

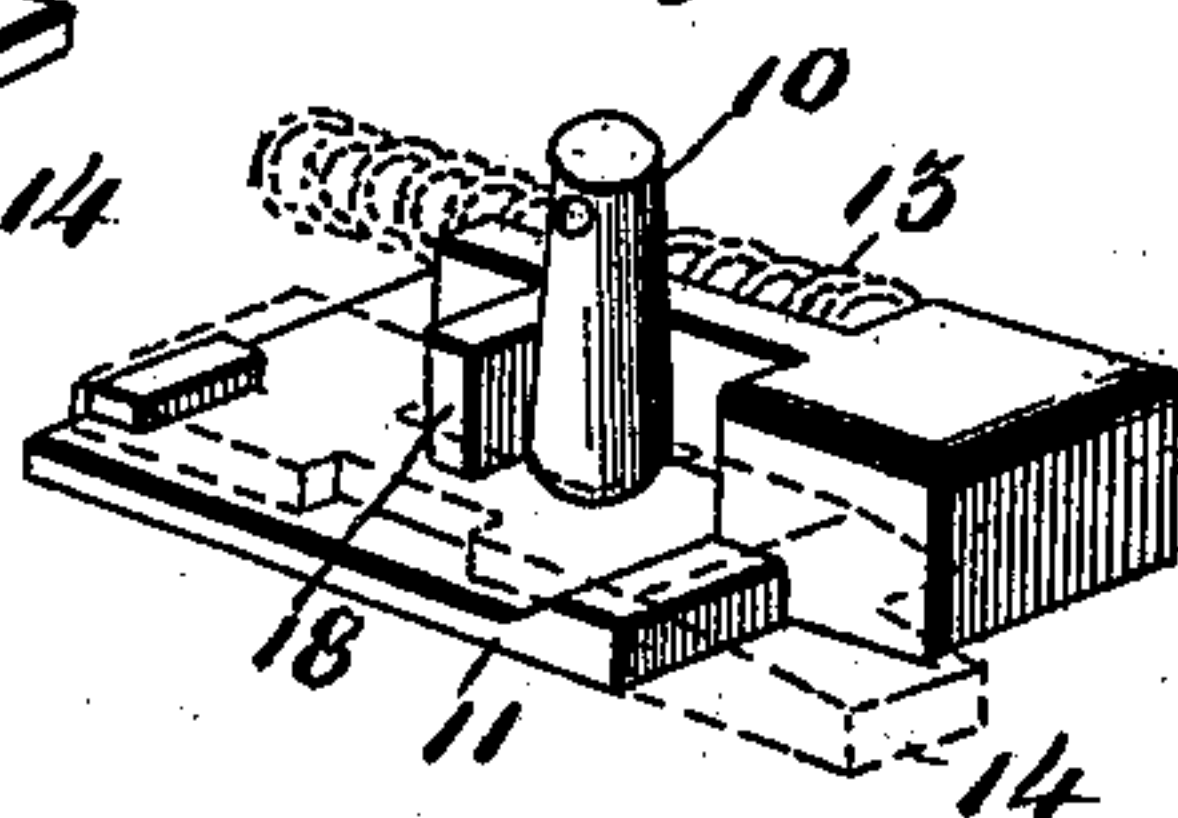
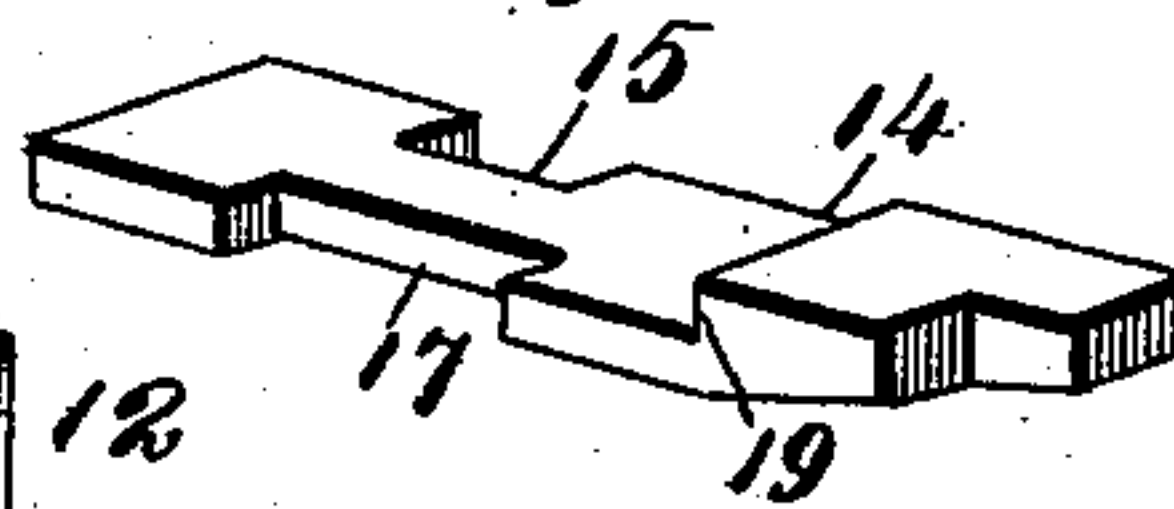


Fig. 8.



Witnesses

William Stutz

Ralph Knapp

Inventor

Charles Knapp.

By his Attorneys

Keller & Staree



# UNITED STATES PATENT OFFICE.

CHARLES KNAPP, OF ST. LOUIS, MISSOURI.

## FASTENER FOR THE MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 504,165, dated August 29, 1893.

Application filed March 30, 1893. Serial No. 468,362. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES KNAPP, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Sash-Locks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to automatic sash locks and consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claim.

In the drawings, Figure 1 is a perspective view of my complete invention as applied to the meeting rails of the sashes. Fig. 2 is a longitudinal section of the same showing more clearly the spring for actuating the bolt. Fig. 3 is a similar section taken through the casing showing the latch out of engagement with the bolt. Fig. 4 is a perspective view of the catch plate carried by one of the rails of the sash. Fig. 5 is a perspective view of the operating knob or handle. Fig. 6 is a perspective view of the casing of the lock. Fig. 7 is a perspective view of the bolt detached from the lock and the parts carried thereby, and Fig. 8 is a perspective view of the latch.

The lock hereinafter to be described is designed to be held in a released position after the same has been withdrawn by the operating knob and to remain in said position until the sash carrying the lock is pulled down to its lowest position, when the latch carried by the lock will be operated allowing the bolt to be released and passed under the catch plate carried by the opposite sash, thereby securely locking the sashes.

A further object of the invention is to lock the bolt after the same passes under the catch plate thereby preventing the same from being forced back from the outside of the window.

Referring to the drawings, 1 represents the meeting rail of the lower sash, and 2 the meeting rail of the upper sash to which rails the members of the lock are attached.

3 represents the catch plate having extensions 4, 4, through which may be passed screws for securing the same to the rail 2 of the upper sash. The said plate is provided with a lip 5 having a flat upper surface and immediately above said lip the said plate is

cut away as shown at 6 for the passage of the latch carried by the lock.

The lock proper comprises a casing 7 having perforated extensions 8, 8, through which extensions screws are passed for securing the casing to the rail 1 of the lower sash.

Formed in the top of the casing 7 is an elongated opening 9 through which the post 10 carried by the bolt passes and is free to be moved therein.

11 represents a plate which carries the post 10 and also the bolt 12, the said plate being of such a size as to work freely within the casing 7 and forms a bottom for the same.

Interposed between the bolt 12 and the rear end of the casing 7 and located on one side of the post 10 is a coiled spring 13 which operates to force the bolt outwardly after the same has been released.

14 represents a latch which is movably secured within the casing and is located therein on the opposite side of the bolt 12 and is designed to work entirely by gravity and hold the said bolt 12 in an unlocked position or within the casing. The latch 14 is provided with a depression 15 formed in one of its sides and is adapted to receive the lug 16 forming a part of the casing and thus prevent the latch 14 from being withdrawn. Formed in the opposite side of the latch 14 is a similar depression 17 which receives the extension 18 carried by the plate 11 the co-operation of which parts operates to keep the latch 14 in its proper position with relation to the bolt 12.

19 represents a shoulder formed on the latch which receives the edge of the plate 11 when the bolt 12 is pulled within the casing as shown in dotted lines Fig. 7, thus holding the bolt in said position until the forward end of the latch is elevated after which the spring 13 will force the bolt 12 under the catch plate 3 as shown in Fig. 2.

20 represents an operating knob having an elliptical shaped opening 21 formed therein for receiving the projecting end of the post 10 the parts being united by pin 22, the shape of the opening allowing the operating knob to be slightly moved from the upper surface of the casing 7 for releasing the lug 23 carried thereby from its engaging position with the casing when it is desired to move the bolt



12 from under the catch plate 3. When the bolt however is in a locked position as shown in Fig. 2 the weight of the knob will cause the lug 23 to fall within the slot 9 of the casing, and in an engaging position with the termination of said slot, whereby it is impossible to force the bolt from under the catch plate without elevating the knob 20. When the bolt is in a locked position, or located under the catch plate 3, the parts will assume the position as shown in Fig. 3, the end of the latch 14 resting upon the upper surface of the lip 5 of the catch plate it being caused to assume said position by the subsequent movement of the lower sash. In said position, the plate 11 has been released from its engaging position with the latch 14 and the spring 13 has forced the bolt 12 under the catch plate 3. By elevating one end of the operating knob 20 the bolt 12 may be withdrawn from under the catch plate 3 the said bolt in this position being released; and after the bolt has been completely withdrawn, the edge of the plate 11 will be brought in contact with the shoulder 19 formed on the latch 14 as shown in dotted lines in Fig. 7, and hold the said bolt in the position as shown in Fig. 1 the lower surface of the outer end of the latch being on a level with the plate 11 in which position the lower sash may be raised. When the lower sash is lowered in the position as shown in dotted lines Fig. 1, the projecting end of the latch 14 will be brought in contact with the lip 5 of the catch plate 3, thereby elevating the latch and releasing the same from its engaging position with the plate 11, and thus allow the spring 13 to force the bolt 12 under the catch plate.

From the above description it will be seen that it is impossible to leave the window unlocked should the same be closed, and further, the bolt 12 cannot be forced back from the outside as the lug 23 carried by the operating knob 20 is in contact with the termination of the slot 9 of the casing 7. Of course in operating the lock from the inside, the knob 20, or one end thereof is slightly elevated before the same is pulled thus releasing the same from its engaging position. It is further to be noted that the depression 15 formed in the latch 14 is of such a length as to allow the extension 18 forming a part of the plate 11 to move in one direction independent of said latch; furthermore the depression 17 formed on the opposite edge of the latch is of sufficient length to allow an independent movement of the same whereby the parts operate freely and without friction.

To convey more clearly the functions of the

depressions 15 and 17 in co-operation with the remaining parts, it may be stated that when the bolt 12 is in the position as shown in Fig. 1 and the shoulder 19 in contact with the edge of the plate 11 for holding the bolt in said position, the extension 18 will be located in the depression 17 of the latch 14 in the position as shown in dotted lines Fig. 7, and the lug 16 forming a part of the casing 7 will be located in the depression 15 as shown in dotted lines Fig. 6. Now, when the forward end of the latch 14 is elevated, or the shoulder 19 moved out of contact with the edge of the plate 11, the bolt 12 is pushed forward by the spring 13, the said latch being held in a stationary position by the lug 16, the extension 18 moving in the depression 17 of the latch. When it is desired to again move back the bolt 12 into the casing the extension 18 will be moved within the depression 17 of the latch until the shoulder 19 forming a part of the same is in a position to drop over the edge of the plate 11, whereby the bolt 12 is held until the latch 14 is elevated in a manner previously described. It is also to be noted that the plate 11 is of sufficient length to move a certain distance within the casing 7, and is limited in its outward movement by the lug 24 forming a part of the casing, the plate being supported by the end of the lug 16 upon which the plate moves.

Having described my invention, what I claim is—

An automatic sash lock comprising a bolt, a plate forming a part of the same, a casing, a slot formed therein, a spring interposed between said bolt and the casing, a latch located to one side of the bolt and provided with a shoulder and adapted to receive the edge of the plate, depressions formed on either side of the said latch, an extension forming a part of the plate and adapted to be received by one of the depressions, a lug carried by the casing and received by the other depression of the latch, a post secured to the plate and passing through the slot of the casing, an operating knob secured to the upper end of the post, a catch plate provided with a lip against which one end of the latch is brought in contact, and a cut-away portion formed on the said catch plate immediately above the said lip for the passage of one end of the latch, substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES KNAPP.

Witnesses:

WILLIAM STUTZ,  
C. F. KELLER.