C. J. KASPER.

SASH LOCK.

APPLICATION FILED MAY 15, 1917.

**1,326,937.** Patented Jan. 6, 1920.

Fig. 1.

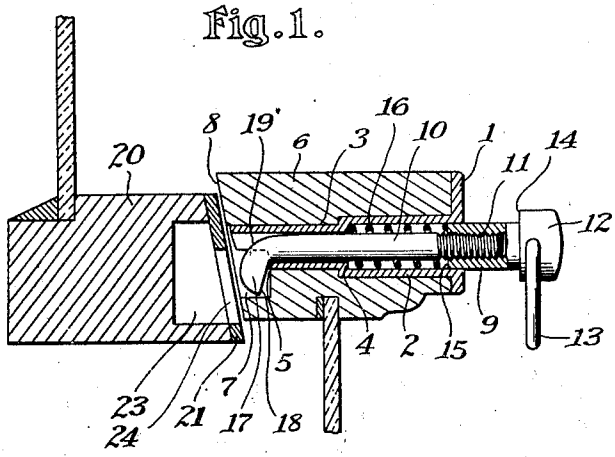



Fig. 5.

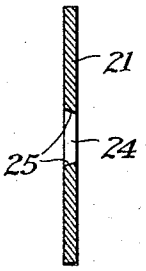



Fig. 2.

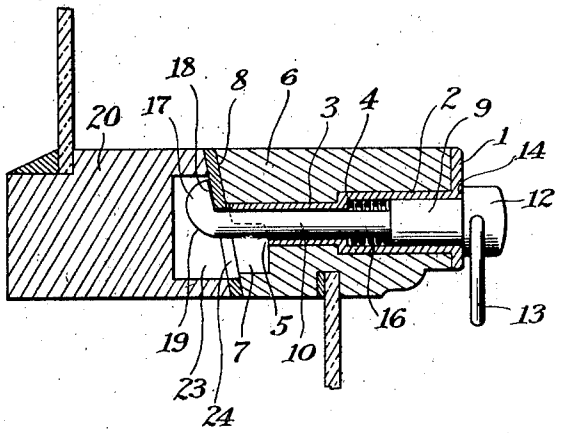



Fig. 4.

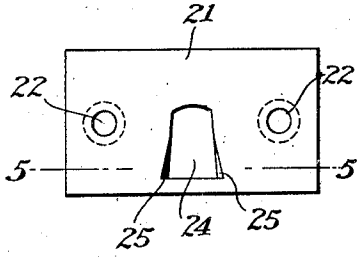
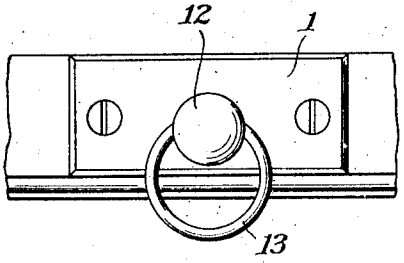



Fig. 3.




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# UNITED STATES PATENT OFFICE.

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## SASH-LOCK.

1,326,937. Specification of Letters Patent. Patented Jan. 6, 1920.

Application filed May 15, 1917. Serial No. 168,717.

*To all whom it may concern:*

Be it known that I, CHRISTIAN J. KASPER, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Sash-Locks, of which the following is a specification.

This invention relates to sash locks and more particularly to the type in which a sliding bolt is mounted on the meeting rail of the lower sash for engagement with an anchor member upon the meeting rail of the upper sash, an object of this invention being to provide a construction which will hold the meeting rails of the two sashes in firm engagement, while at the same time permitting an inexpensive installation of the lock. Another object of the invention is to provide a construction in which the sliding bolt may be turned in either direction to effect a drawing of the sashes together in firm engagement. Still another object of the invention is to provide a construction in which the locking bolt will produce a horizontal alinement of the meeting rails should the latter be slightly out of alinement.

To these and other ends, the invention consists of certain parts and combinations of parts all of which will be hereinafter described, the novel features being pointed out in the appended claims.

In the drawings:—

Figure 1 is a vertical section through the sash lock, showing the mounted position of the latter with the meeting rails slightly out of horizontal alinement and the lock in unlocked position;

Fig. 2 is a view similar to Fig. 1, showing the lock in locking position;

Fig. 3 is a view showing the front face of the lock;

Fig. 4 is a detail view of the anchor plate; and

Fig. 5 is a section on the line 5—5 of Fig. 4.

Referring more particularly to the drawings, 1 indicates a face plate of a casing which has two cylindrical portions 2 and 3 with bores of different diameters forming a shoulder 4 between them, the portion 2 with the larger bore connecting with the face plate and the portion 3 with the smaller bore having its outer end provided with a notch or recess 5, for a purpose which will be hereinafter set forth. The cylindrical portions 2 and 3 of the casing project horizontally through the meeting rail 6 of the lower sash, the face plate 1 abutting the front face of the meeting rail and the outer end of the portion 3 extending into a recess 7 formed in the rear or inclined face 8 of the meeting rail 6.

Within the casing of the sash lock a locking bolt is adapted to move in the direction of its longitudinal axis. This bolt, in this instance, comprises two cylindrical portions 9 and 10 of different diameters, the portion 9 being adjustably mounted on the portion 10 by means of screw-threads 11, said portion 9 carrying a head 12 to which a finger ring 13 is pivoted, the rear face of this head providing a shoulder or stop 14 for abutment with the face plate 1 of the casing to limit the inward movement of the locking bolt. The inner end 15 of the portion 9 produces a shoulder which serves as an abutment for a helical spring 16 surrounding the portion 10 and having its other end abutting the shoulder 4 on the casing. This spring tends to project the locking bolt from the front face of the lower sash. At the free end of the portion 10 of the locking bolt a lateral projection or lug 17 is provided, this lug having its inner face 18 arranged at an obtuse angle to the longitudinal axis of the locking bolt. A cam portion 19 is also provided on the extreme end of the locking bolt and the purpose of this cam portion, together with that of the angular face 18, will be set forth more fully hereinafter. When the spring 16 projects the locking bolt from the front face of the meeting rail 6, it also moves the lug or projection 17 into the pocket or recess 7, so that the projection 17 is housed and does not project beyond the face 8 of the meeting rail 6.

For the anchoring of the locking bolt in the meeting rail 20 of the upper sash, an anchoring member is mounted on the meeting rail 20 and is preferably in the form of a plate 21 formed from sheet metal and provided with two screw openings 22 for securing it in a countersunk position on the front or inclined face of the meeting rail 20, the meeting rail being provided in rear of said plate with a pocket 23. The plate 21 has a vertically elongated slot or opening 24, the opposite side walls of said slot being beveled at 25, as shown in Figs. 4 and 5.

Assuming that the parts are in the positions shown in Fig. 1, and it is desired to

lock the two sashes: The locking bolt is forced inwardly to compress the spring 16. On this inward movement, the cam portion 19 will engage the upper wall of the elongated opening 24 of the anchor plate, and shift the meeting rails into horizontal alinement. The locking bolt, upon being rotated in either direction, will have its face 18 engaged with one of the inclined walls 25 of the opening 24, and will then engage with the inner face of the plate until it is brought to rest in engagement with the rear face of the plate above the opening 24. Owing to the inclined position of the anchor plate the two sash rails 6 and 20 are drawn firmly into abutment and are thus held until the locking bolt is again turned so that its laterally-extending lug 17 will aline with the opening 24 in the anchor plate. When so alined the spring 16 will act on the locking bolt and draw the lug 17 into the pocket 7 so that the window will be unlocked. When the lug 17 is in the position shown in Fig. 2, the shoulder 14 will lie against the face plate 1, and it is through this shoulder and the lug 17 that the drawing of the two sash rails together is obtained. It is apparent that sash rails will be of different widths, and this invention meets this problem by making the shoulder 14 adjustable with reference to the face 18 of the lug 17. The inclined arrangement of the anchor plate on the meeting rail together with the beveling of the opposite walls of the elongated slot in an anchor plate makes it possible to form the anchor plate from flat stock. The formation of the casing for the locking bolt is such that the opening therefor may be readily formed by an auger, thus reducing the time required for installing the sash lock.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A sash lock comprising a casing having a bolt receiving opening and a recess extending downwardly from the inner end of said opening, a locking bolt mounted to rotate in either direction and to move longitudinally in the bolt receiving opening of the casing, said bolt having at its inner end a beveled portion on one side and a lateral lug on its other side adapted to depend in the recess of the casing when the locking bolt is withdrawn, said locking bolt also having a shoulder adapted to engage with the casing, and an anchor plate of uniform thickness supported at an angle other than a right angle to the axis of the bolt, said plate having an elongated opening, the top wall of which is so arranged that the beveled end of the bolt will engage therewith to cause the sashes to register.

2. A sash lock comprising a longitudinally movable locking bolt rotatable in either direction and having a lug at one end formed with an inner face at an obtuse angle to the longitudinal axis of the bolt, the lug end of the bolt having a cam surface on the side opposite the lug, said bolt also having two cylindrical portions of different diameters adjustably connected together and forming a shoulder between them, the one of smaller diameter having the lug extending therefrom and the one of larger diameter having a shoulder to limit the movement of the bolt in one direction; a casing in which said locking bolt moves having two communicating bores, each receiving a cylindrical portion of the bolt, the inner end of the casing having a recess; a spring arranged in the larger bore about the smaller cylindrical portion and abutting the shoulder between the two cylindrical portions and the shoulder formed between the two bores, said spring being adapted to draw the lug into the recess when the bolt is turned to a certain position; and an anchor plate supported in a plane at an angle other than a right angle to the longitudinal axis of the bolt, said plate having an elongated opening, the opposite walls of which are beveled at the bottom of the opening and the top wall of the opening being arranged to engage the cam surface of the bolt to cause the opening to be brought into perfect register with the locking bolt, the inner face of the lug cooperating with the inner face of the plate on either side of the opening to move to a point to engage the inner face of the plate above the top wall of the opening and to draw the shoulder on to the cylindrical portion having a larger diameter against the casing for the purpose of holding the sashes firmly together.

CHRISTIAN J. KASPER.