(No Model.)

W. W. TORREY.

FASTENER FOR MEETING RAILS OF SASHES.

No. 545,215. Patented Aug. 27, 1895.

Fig. 1.

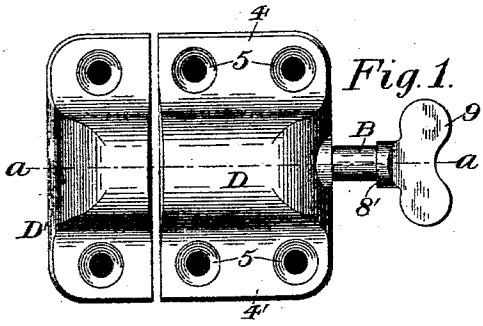


Fig. 2.

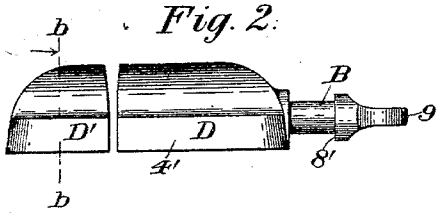


Fig. 3.

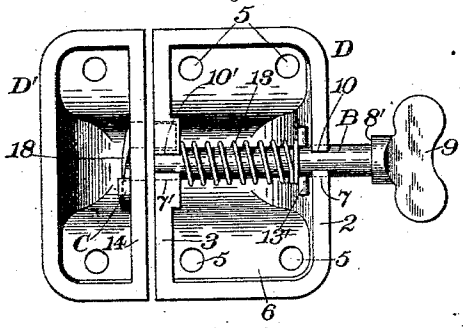


Fig. 4.

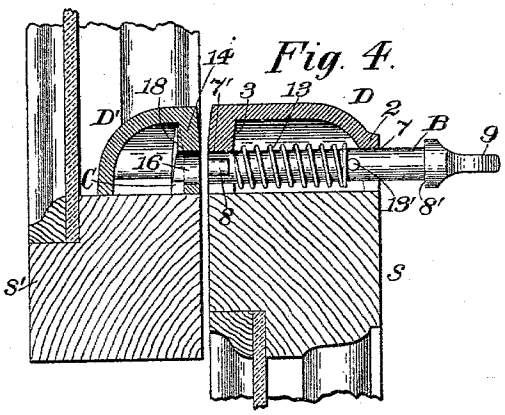


Fig. 5.

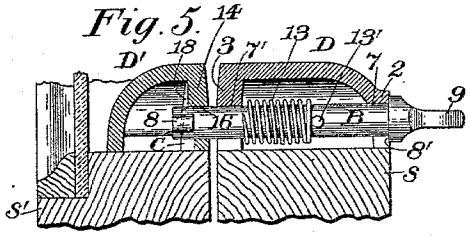


Fig. 6.

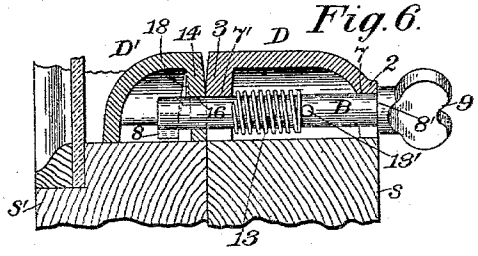


Fig. 7.

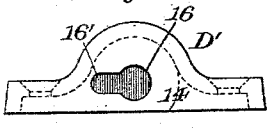


Fig. 9.

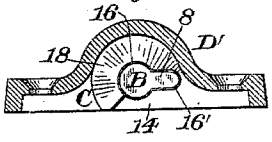


Fig. 8.

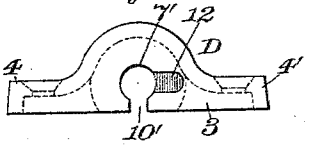


Fig. 11.

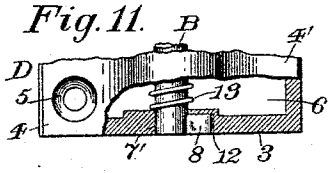


Fig. 10.

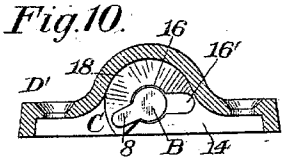


Fig. 12.

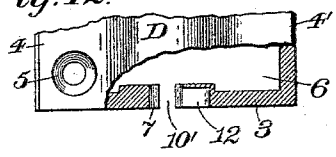
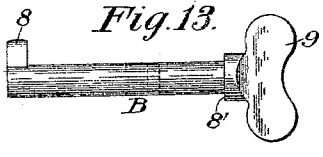


Fig. 13.



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Fred. J. Dole.

Inventor:
William W. Torrey.
By his Attorney,
F. H. Richards

UNITED STATES PATENT OFFICE.

WILLIAM W. TORREY, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO THOMAS H. BRADY, OF SAME PLACE.

FASTENER FOR MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 545,215, dated August 27, 1895.

Application filed February 15, 1895. Serial No. 538,575. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. TORREY, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Sash-Fasteners, of which the following is a specification.

This invention relates to sash-fasteners and especially to the class of fasteners used in connection with the meeting-rails of sashes.

The objects of my present invention are, primarily, to furnish an improved fastener of the class specified, which shall be simple and durable in construction and effective in its operation, and to so construct and organize the several parts of said fastener that the same may be quickly assembled and disassembled, may be applied readily in operative position to the sashes of any ordinary window without cutting away or otherwise changing the sashes, and which will, when so applied, be adapted for holding the sashes against movement longitudinally of one another, and will effect a close impingement of the adjacent faces of the meeting-rails of said sashes, thereby sealing the joint against the admission of air. This will so obviate the obnoxious rattling of the sashes together or within their frames, which may be caused by wind, and will also act as a safeguard to prevent the possibility of unlocking said fastener from the outside by inserting a wire or other implement between the meeting-rails of the sashes, as is possible with windows provided with sash-fasteners of common construction.

In the drawings accompanying and forming part of this specification, Figure 1 is a plan view of a sash-fastener embodying my present invention, said figure showing the sash-fastener detached and the locking-bolt or cam-bolt in an inoperative or non-locking position. Fig. 2 is a side elevation of said sash-fastener as seen from the under side in Fig. 1. Fig. 3 is an inverted plan view of the sash-fastener shown in Figs. 1 and 2. Fig. 4 is a vertical longitudinal section of the sash-fastener, taken in line *a a*, Fig. 1, and showing said fastener as applied to the meeting-rails of the sashes of an ordinary window, a portion of the two window-sashes being shown in cross-section. In this figure the locking-bolt or cam-bolt of the sash-fastener is shown in its normal or non-locking position. Fig. 5 is a similar cross-sectional view of the parts shown in Fig. 4, showing the locking-bolt or cam-bolt carried by one member of said fastener in engagement with the cam of the adjacent cam-carrying member of said fastening device and in position to be turned to draw the meeting-rails of the sashes together. Fig. 6 is a similar cross-sectional view of the sash-fastener, showing the parts thereof in locked relation. Fig. 7 is a front end view of the cam-case or cam-carrying member as seen from the right hand in Fig. 1. Fig. 8 is a rear view of the bolt-carrying member as seen from the left hand in Fig. 1. Fig. 9 is a cross-sectional view of the sash-fastener, taken in line *b b*, Fig. 2, and looking in the direction of the arrow in said figure, and showing the cam-bolt in the position illustrated in said Figs. 2 and 5. Fig. 10 is a similar cross-sectional view of the sash-fastener, taken in dotted line *b b* in Fig. 2, and showing the locking-bolt or cam-bolt in the position illustrated in Fig. 6. Fig. 11 is a sectional plan view of a portion of the rear end of the bolt-carrying member, showing a portion of the locking-bolt or cam-bolt therein. Fig. 12 is a similar view of said bolt-carrying member with the cam-bolt removed, and Fig. 13 is a side view of the cam-bolt detached.

Similar characters represent like parts in all the figures of the drawings.

In the preferred embodiment of my invention herein shown and described the sash-fastener comprises a revoluble and horizontally-shiftable cam-bolt B, having a laterally-disposed cam-engaging arm at the inner end thereof and having a fixed abutment at the outer end thereof; a spiral or parti-spiral cam C, having the axis thereof preferably coincident with the axis of said bolt, or substantially so; a carrying member D for said cam, and a carrying member D′ for said bolt, as will be hereinafter fully described, and all arranged and combined so that the device practically consists of three principal parts, the cam-casing, the bolt-casing, and the cam-bolt.

The two carrying members, designated in a general way by D and D′, respectively, may be of any suitable construction or conforma-

tion adapted for carrying the locking members of the fastening device, and are herein shown of box-like construction and constituting casings or housing for said locking members. The cam-bolt carrying member D is herein shown somewhat in the nature of a semicircular barrel having front end walls 2 and 3, respectively, and having laterally-projecting flanges or extensions 4 and 4′ with suitable screw-holes 5 therein adapted for receiving the screws (not shown) by means of which said member is secured to the upper face of one of the meeting-rails, as *s*, of the window-sashes. (See Figs. 1 to 6 inclusive.) This member D will preferably be open at the under side thereof, as shown at 6, and will have horizontally-aligned bearings 7 and 7′, formed in the opposite end walls 2 and 3, respectively, of said member, adapted for receiving the shank of the cam-bolt B, which constitutes one of the locking members for the two carrying members D and D′, said bolt being supported for reciprocatory and rotary movement in said bearing, as clearly shown in Figs. 3, 4, 5, and 6 of the drawings. This cam-bolt, in the form thereof herein shown, is somewhat similar in conformation to an ordinary key having a round shank, said cam-bolt having at the inner end thereof a laterally-projecting cam-engaging arm 8, and having at the opposite outer end thereof a fixed abutment or shoulder 8′, adapted for engaging the outer end wall of the member D when the bolt is shifted into its cam-engaging position, as shown in Figs. 5 and 6, and is also provided with a thumb-piece 9, preferably integrally connected therewith, as shown in the drawings, at the outer end thereof, by means of which said bolt may be turned to lock the two members D and D′ together.

As a convenient means for assembling the parts, the end walls 2 and 3 of the bolt-carrying case or member D are slotted, as shown at 10 and 10′, which openings communicate with the bearings 7 and 7′, and are of sufficient area to permit the passage through said walls of the cam-engaging arm 8 of the cam-bolt B. Formed in the rear end wall 3, preferably at right angles to the slot 10, is a socket 12, which extends but partially through said end wall and constitutes a seat for the cam-engaging arm 8 of the bolt B, when said bolt is in a retracted or non-locking position, as shown in Figs. 3 and 11. As a convenient means for retracting said bolt to normally maintain the same in a non-locking position, I have provided a retracting-spring 13, herein shown as a spiral spring carried upon the bolt, and bearing at one end against the rear end wall of the carrying member D and bearing at its opposite end against a pin or projection 13′ upon the bolt B near the forward end thereof.

The cam-carrying member D′ is somewhat similar in cross-sectional conformation with the carrying member D, and has a front end wall 14, adapted to be brought into engagement with the end wall of the member D. Formed through the front wall is a circular bolt-receiving opening 16, having a lateral extension 16′, as shown most clearly in Fig. 7, through which the end of bolt B may be extended when it is desired to operate the parts D and D′ together, and partially surrounding the opening 16 at the inner face of the front end wall of said member D′ is a cam C, having its working face or cam-face 18 at right angles or substantially so with relation to the axis of the bolt B, said cam-face being preferably of spiral form at one end thereof, preferably flush or tangential with the inner face of the end wall 14, as shown most clearly in Fig. 3.

In practice, the extension 16′ of the circular opening 16 in the end wall 14 of the member D′ will register, when the members D and D′ are assembled in working order, with the seat or socket 12 in the rear end wall of the member D, so that the bolt B is turned to release the cam-engaging arm 8 thereof from the cam C and is brought into registration with the extension 16′ of the opening 16 and the front wall 14 of the member D′, and it will be at once retracted by the spring 13 until the arm 8 is seated in the socket 12. The said socket being of a depth equal or substantially equal to the width of the arm 8, will cause the rear face of the arm to come flush with the rear face of the end wall 3 of the member D, when the cam-bolt is in the non-locking position, as shown in Figs. 3 and 4.

The operation of my improved sash-fastener is as follows: Assuming the two carrying members D and D′ to be fixed in operative position upon the two meeting-rails *s* and *s*′, as shown in Fig. 4, and the cam-bolt being in its retractive or non-locking position, it is simply necessary to advance the locking-bolt until the cam-engaging arm at the inner end thereof is in position for engagement with the cam upon the interior of the member D′ or in the position shown in Fig. 5, the fixed abutment of the cam-bolt being, when said bolt is in its advanced position, as shown in said Fig. 5, in engagement with the front end wall 2 of the member D, after which the said cam-bolt may be turned by means of the thumb-piece 9, which will cause the cam-engaging arm 8 thereof to ride up the inclined face of the cam C, and draw the two members D and D′ and the meeting-rails *s* and *s*′ closely together, as will be readily understood by a comparison of the several figures of the drawings.

Having thus described my invention, I claim—

A three-part sash-fastener consisting of a slotted apertured casing having a cam therein; an open under-sided casing having two slotted bearings, one in each of its end walls communicating with its open under side, whereby the assembling of the parts is facilitated, and also having a locking recess in the exterior face of its rear wall, substantially at

right angles to the slotted bearing in said wall, and in alignment with the slotted aperture of the cam-casing; and a spring-actuated cam-arm bolt having a device for preventing the withdrawal of the same from the casing, and adapted to have its cam-arm engage said recess and be locked therein, and to permit the outer edge of the cam-arm to be flush with the outer face of the rear wall of said casing when the bolt is in its non-locking position, substantially as shown, and for the purpose set forth.

WILLIAM W. TORREY.

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