(No Model.)

G. VOLL.

FASTENER FOR SASH MEETING RAILS.

No. 523,090. Patented July 17, 1894.

Fig. 1.

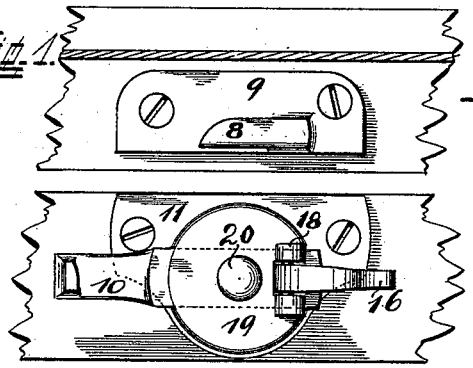


Fig. 4.

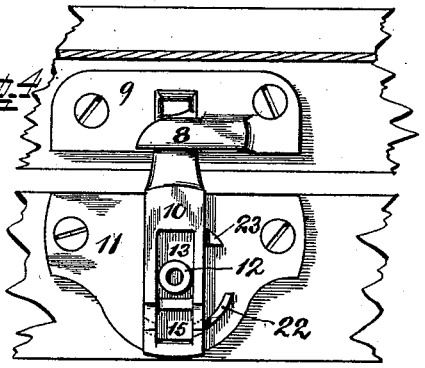


Fig. 2.

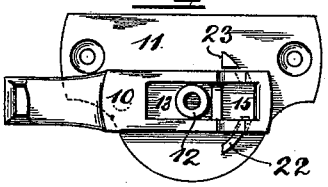


Fig. 5.

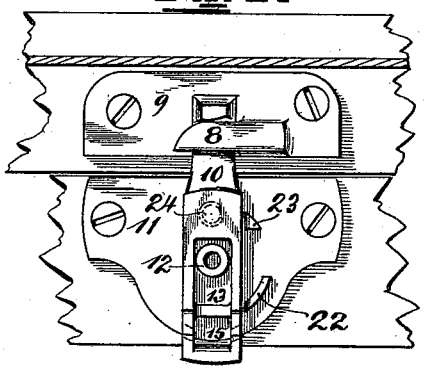


Fig. 3.

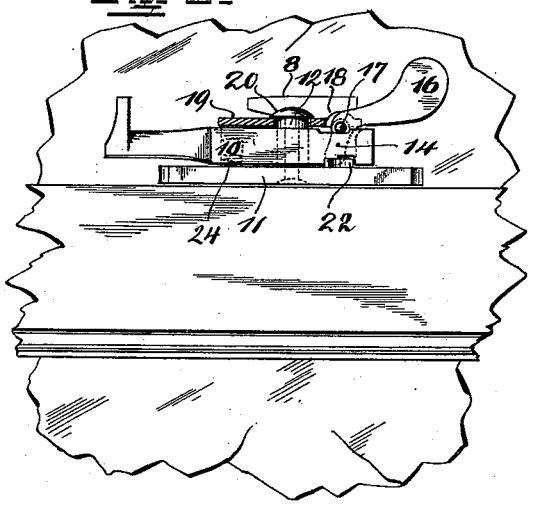
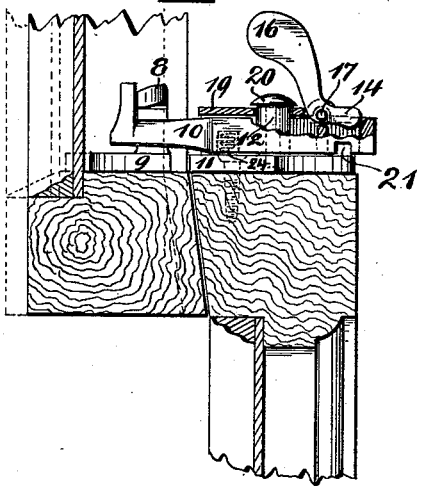


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE VOLL, OF CINCINNATI, OHIO.

FASTENER FOR SASH MEETING-RAILS.

SPECIFICATION forming part of Letters Patent No. 523,090, dated July 17, 1894.

Application filed February 2, 1894. Serial No. 498,844. (No model.)

To all whom it may concern:

Be it known that I, GEORGE VOLL, a citizen of the United States, and a resident of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Fasteners for Sash Meeting-Rails; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form a part of this specification.

This invention relates to improvements in sash-locks of the kind where for the purpose of locking a window, the meeting rails of the two sashes are locked to each other and whereby in addition to the locking of the sashes to each other, they are also drawn closely together to prevent them from rattling in windy weather, as well as to exclude cold air, draft, dust, &c., the drawing together of the sashes also causing the latch or bolt to become locked in its closed position and from which it cannot be released until the operation of drawing the sashes together, is first and in reversed order performed again from the inside, and which latter operation cannot be performed while the latch is open, whereby it is prevented from missing its connection with the other, or stationary part (catch, hook) of the lock and nut until fully in engagement therewith.

The novelty resides in the details of an improved construction whereby the lock may be manufactured in the cheapest possible way, which is by casting all its parts complete and practically all machinist's work is avoided.

In the following specification and particularly pointed out in the claims, is found a full description of my invention, its operation, parts and construction, the latter being also illustrated in the accompanying drawings, in which—

Figure 1, is a complete top-view of the lock as it appears in its normal position and before locking. Fig. 2, is a similar view showing position of locking-latch or bolt as it would appear in Fig. 1, when housing and operating lever are removed. Fig. 3, is a longitudinal section of Fig. 1, showing the parts as they appear when viewed from the inside of the window. Fig. 4, is a view similar to Fig. 2, showing the latch turned and swung under the hook on the other sash, in which position neither one of the latter may be moved. Fig. 5, is a view similar to Fig. 4, showing however the latch moved back to draw the meeting rails of the sashes together. Fig. 6, is a longitudinal section of the lock complete and when the latch is in a position as shown in the preceding figure.

In the drawings, 8 indicates the hook or catch of the stationary part of the lock, being provided with a suitable base 9, whereby it is secured to the inside of the lower or meeting-rail of the upper sash.

10 is the latch or bolt of the lock proper and capable of a reciprocating motion in a rotary, as well as a rectilinear direction upon a base 11, which is secured to the upper and inside of the top- or meeting-rail of the lower sash. The location of this base on its rail is such as to enable the latch, when the two meeting-rails are opposite each other, to swing under catch 8 with a quarter turn. In the two movements of which the catch is capable as above designated, it is guided by a center-post 12, rising from base 11 and passing through a slot 13 in such latch.

For the purpose of operating the latch a lever is provided, one part 14 of which passes into and plays in a socket 15 of the latch, while its other end 16 extends outwardly and forms a suitable hand-piece or operating handle. This lever is provided with trunnions 17 resting on top of the latch and it is held in position thereon by bearings 18 forming part of a housing 19 and passing over said trunnions. This housing is cut out on opposite sides to clear the latch which it otherwise covers, reaching down to base 11, and it is cut out on top between caps 18 to admit the operating lever to pass in, and also in the center, to admit the center-post 12. It is held in this position by a pin or screw, but preferably by a rivet 20, passing through the center-post and catching with its upper head over said housing. This connection is such as to permit the latter to go through a rotary motion with the latch when the operating lever on the latter is operated, so that in all po-

sitions of the said latch it is capable of performing its function, to wit: holding the operating lever in position on the former. For the purpose of securing the sashes in a manner to prevent them from being raised or lowered, the latch is turned by means of the handle in a manner to bring its free end under the hook 8 as is well understood and as shown in Fig. 4.

For the purpose of drawing the two sashes closely together in a manner to hold them immovable to each other and close up any space between them, the handpiece 16 of the operating lever is lifted up as shown in Fig. 6, whereby its other end 14, playing in socket 15 of the latch impinges against the latter in a manner to cause it to move inwardly, whereby the hooked end of the latch comes in direct engagement with hooks 8, which engagement enables the first hook to draw the second hook in and causes the sashes to approach each other until they are in direct contact with each other. (See Figs. 5 and 6.) Housing 19 by reason of its central engagement with post 12, is not capable of participating in this rectilinear movement of the latch and is thus enabled to hold the trunnions of the operating lever in a fixed position to permit the latter to move the latch.

When the lock, respectively its latch is in a position as shown in Figs. 1 and 2, the latter by means of a notch or gate 21 in its under side engages with a curved ward 22 projecting upwardly from the base. This engagement prevents any longitudinal movement of latch while in such position and which would be objectionable because if occurring, it would shorten the reach of the latch and cause its hooked end, when to be turned under hook 8, to miss the latter and pass it, or possibly strike it instead of passing clear and to the outside of the same. When the lock and its latch are however in a position as shown in Fig. 4, the latter having passed under hook 8, it becomes clear of ward 22 and may now be readily moved back to a position as shown in Figs. 5 and 6 for the purpose of drawing the two sashes together. If now in this position an attempt were made to turn the latch back again in order to disconnect the sashes, it would be found that such is impossible by reason of ward 22 forming an obstacle to the required rotary motion of the latch which by its rearward movement has carried notch 21 therein beyond ward 22. Thus it will be seen that the operation of the lever for the purpose of drawing the sashes together also locks the latch in the position it then occupies and prevents it from being turned back and away from under hook 8, before handpiece 16 is operated again in a reverse direction and in a manner to bring notch 21 opposite ward 22, as shown in Fig. 4 and which is the only position in which the latch may be rotated. Inasmuch, however as access to the operating lever is only had from the inside, it is obvious that a tampering with the bolt from the outside remains practically without effect.

23 is a stop also secured to base 11 and prevents the latch from swinging beyond the necessary distance, which is a turn through a quarter circle. It also acts as a guide for the latch during its rearward movement when it is operated to draw the sashes together.

24, is a friction-spring, occupying a socket in the under side of the latch and its object is to prevent looseness between the parts in case they become worn.

It will be noticed that with the exception of the connecting pin or rivet and the spring, all parts may be cast completely finished and require only to be connected without any further machinist's work, whereby a great reduction in manufacturing expenses is attained.

Having described my invention, I claim as new—

In a sash-lock, the combination of a latch adapted to engage with a suitable catch, or hook, and provided with a slot 13, socket 15, and notches 21, a base 11, with a center-post 12, upon which the latch is confined, an operating-lever extending with one of its ends 14 into socket 15, of the latch and provided with trunnions 17, a housing 19, also confined on center-post 12 and cut out to clear latch 10, bearings 18, thereon to receive trunnions 17, of the operating lever, a ward 22, adapted to engage with the notch in latch 10, a stop 23 to limit the rotary movement of the latter and serve as a guide for it during its rectilinear movement and means to hold the rotary housing 19 in place on base 11, whereby this latter is enabled to confine all parts of the lock in their positions.

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

GEORGE VOLL.

Witnesses:
WM. KRAMER,
C. SPENGEL,