

R. O. BEACH.

SASH LOCK.

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1,059,970.

Patented Apr. 29, 1913.

Fig. 1.

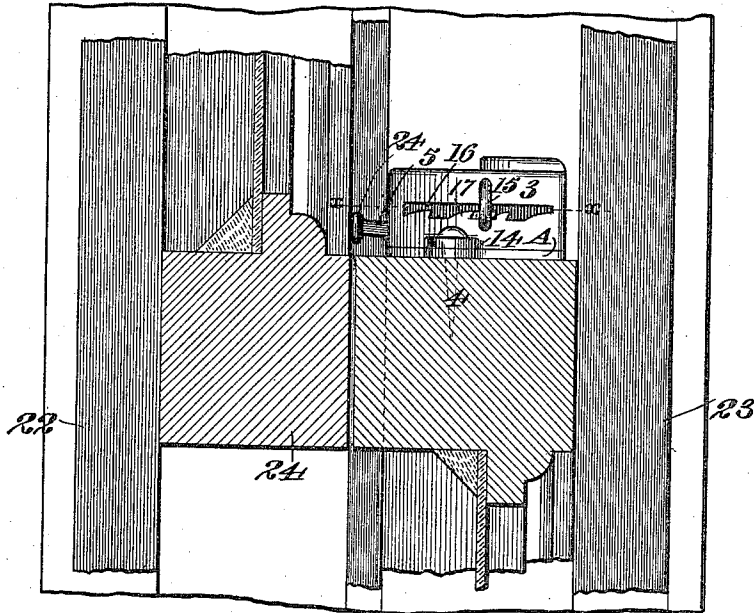


Fig. 2.

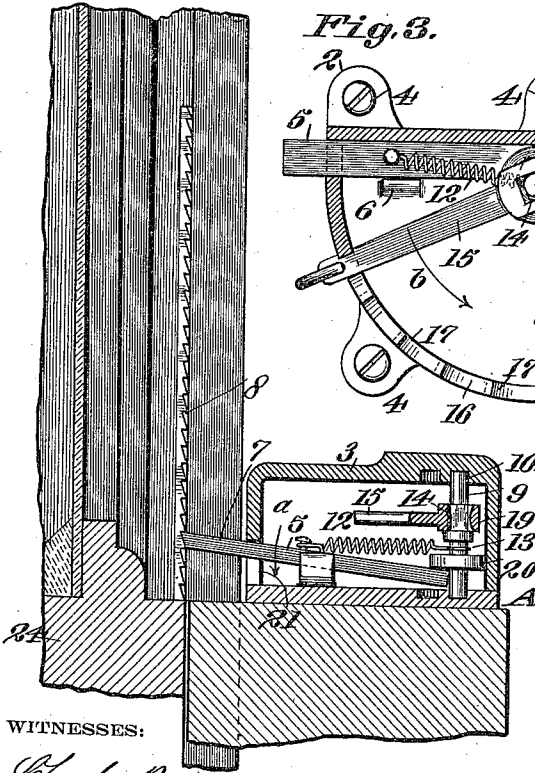


Fig. 3.

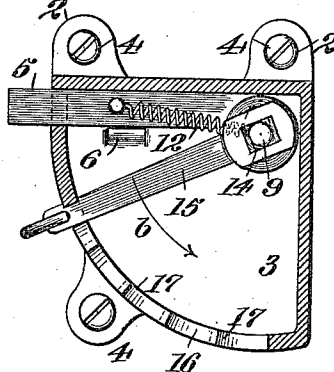


Fig. 4.

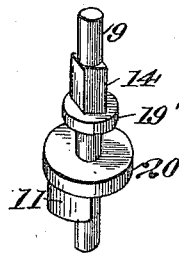
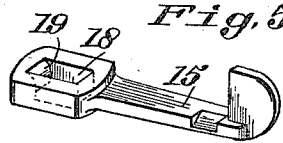


Fig. 5.



WITNESSES:

Charles Beckles
Thos. Eastberg

INVENTOR

Robert O. Beach

BY *J. H. Strong*

ATTORNEY

UNITED STATES PATENT OFFICE.

ROBERT O. BEACH, OF SAN FRANCISCO, CALIFORNIA.

SASH-LOCK.

1,059,970.

Specification of Letters Patent.

Patented Apr. 29, 1913.

Application filed December 14, 1912. Serial No. 736,761.

To all whom it may concern:

Be it known that I, ROBERT O. BEACH, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Sash-Locks, of which the following is a specification.

This invention relates to sash locks.

The object of this invention is to provide a simple, substantial and practical sash lock, which is so constructed that either or both sashes may be locked in any position, and which is further provided with a locking bar so positioned in the sash lock that any force applied to either window from the outside to open the window will only tend to increase the grip of the locking bar and further secure the window.

A further object of the invention is generally to improve this class of apparatus so as to increase their utility, durability and efficiency.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a partial cross section of the window sash showing the application of the invention. Fig. 2 is a similar view showing a vertical section of the device. Fig. 3 is a plan section on line X—X, Fig. 1. Fig. 4 is a perspective view of the lock-actuating means. Fig. 5 is a perspective view of the lock lever.

Referring to the drawings, A indicates the base portion of the sash lock which is provided with projecting lugs 2 by which the base may be secured to the lower sash.

3 indicates a casing or housing provided for the purpose of inclosing the locking mechanism; the housing being secured to the base, as shown at 4.

5 indicates the locking bar which is slidably mounted and guided within the casing, as shown at 6, and which projects a sufficient distance through the casing, as shown at 7, for the purpose of allowing it to be brought into locking engagement with a serrated or ratchet surface formed on a plate 8 secured to the upper sash.

9 indicates a vertical shaft suitably journaled within the casing, as shown at 10. Secured to the shaft 9 is a cam 11, which is so positioned with relation to the locking

bar 5 that any turning movement transmitted to the shaft 9 will bring the cam 11 into engagement with the locking bar 5 and project this into locking engagement with the member 8. The member 5 is retracted by a spring 12 secured at one end to the locking bar and at the other end to the shaft 9, as shown at 13. The inward movement of the locking bar 5 or retracted position of same is limited by the position of the shaft 9 and the projected position of the locking bar is controlled by the position of the cam 11. By this construction it is possible to regulate or control the outward movement of the locking bar. For the purpose of turning the shaft 9 so as to project the locking bar 5 by the action of the cam 11, I have provided the shaft with a square portion 14 which is provided for the purpose of receiving a lever 15 by which the cam and shaft may be turned into any desired position within the limits of a segmental slot 16 formed in the side of the casing 3. For the purpose of locking or securing the locking bar in its projected position, I have provided the segmental slot 16 with a series of ratchet teeth 17 with which the lever 15 may interlock, as shown in Fig. 1.

For the purpose of giving the lever 15 sufficient rocking movement to allow it to be brought into engagement with the ratchet teeth 17, in the segmental slot 16, it is provided with a rectangular perforation 18, of sufficient size, which will allow the lever to rock on the shaft 9; the rear portion of the perforation being provided with a rounded shoulder, as indicated at 19, so as to provide a rocking point for the lever, and the lever being held in position by the collar 19' on the shaft. The shaft is also provided with an annular collar 20 which holds the inner end of the locking bar 5 in position.

By referring to Fig. 2 of the drawings it will be seen that the slot 21 formed in the housing, through which the locking bar projects, is so formed that the locking bar is allowed to assume an angular position, with relation to the horizontal plane of the lock base, being held in this position by the tension of the spring 12. The object of this construction is to allow the outer end of the bar to move downward by the sliding of either sash, as any pressure thus applied to open the window would only tend to draw the locking bar downward in the direction

of arrow *a* to more securely engage the locking means as the locking bar 5 would swing in an arc and would tend to force the sashes apart and exert more pressure against the blind stop 22 and the inner stop 23.

In operation, the sash lock is secured to the lower sash, as shown in Figs. 1 and 2, and the sashes are locked with relation to each other by projecting the locking bar 5 into engagement with the ratchet surface formed on the plate 8, which is secured to the outer sash; this being accomplished by turning the lever 15 in the direction of arrow *b*. The turning of the lever will swing the shaft and cam into such a position as to project the locking bar 5 into engagement with the opposite locking surface, as previously described, and may be locked in this position by bringing the lever into engagement with the teeth 17 formed in the slot 16. The locking bar is projected with considerable pressure against the opposite locking plate; the pressure being sufficient to force the sashes against the outer and inner stops and the pressure of the sashes against the stops being in itself sufficient to lock the windows from movement with relation to each other. The play of the sashes, between the blind stop and the inner sash, acts as a spring or cushion so as to hold the lever in engagement with the teeth 17.

By referring to Fig. 2 it can be seen that either sash may be partly opened within the limit of the locking plate 8 and may be secured in this position.

By referring to Fig. 1 it can be seen that the outer end of the locking bar may be provided with a resilient cushion member, as the rubber tip 24, which is provided for the purpose of eliminating the locking plate 8 and also for the purpose of preventing the side of the window sash from becoming marred by contact of the locking bar with the sash. In this case the resilient member may be compressed to a more or less degree by the swinging movement of the lever 15, thus making it possible to apply more or less pressure when locking the windows.

The lock here shown is neat in appearance and prompt and reliable in its action and takes no more space than the ordinary sash lock. The materials and finish of the several parts of the lock are such as experi-

ence and judgment of the manufacturer may dictate.

I wish it understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims, and that I do not wish to limit myself to the specific design and construction here shown.

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

1. A sash lock comprising in combination, a base portion adapted to be secured to the lower sash, a cover or housing secured to said base, a reciprocal locking bar within said housing projecting through the housing, a ratchet plate secured to the upper sash with which the locking bar may engage, a vertically disposed shaft journaled within said housing, a cam secured to said shaft which is so positioned that the bar may be brought into engagement with the ratchet plate on the upper sash, a rocking lever mounted on the shaft for the purpose of turning said shaft, means for locking said lever when this is turned so as to project the locking bar, and means for automatically retracting the locking bar.

2. A sash lock comprising in combination, a base portion adapted to be secured to the lower sash, a cover or housing secured to said base, a reciprocal locking bar within said housing projecting through the housing, a ratchet plate secured to the upper sash with which the locking bar may engage, a vertically disposed shaft journaled within said housing, a cam secured to said shaft which is so positioned that it may be brought into engagement with the ratchet plate on the upper sash, a rocking lever mounted on the shaft for the purpose of turning said shaft, a segmental slot in the housing through which said lever projects, a series of teeth formed in the lower face of said slot with which the lever may be interlocked, and means for automatically retracting the locking bar.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ROBERT O. BEACH.

Witnesses:

JOHN H. HERRING,
W. W. HEALEY.