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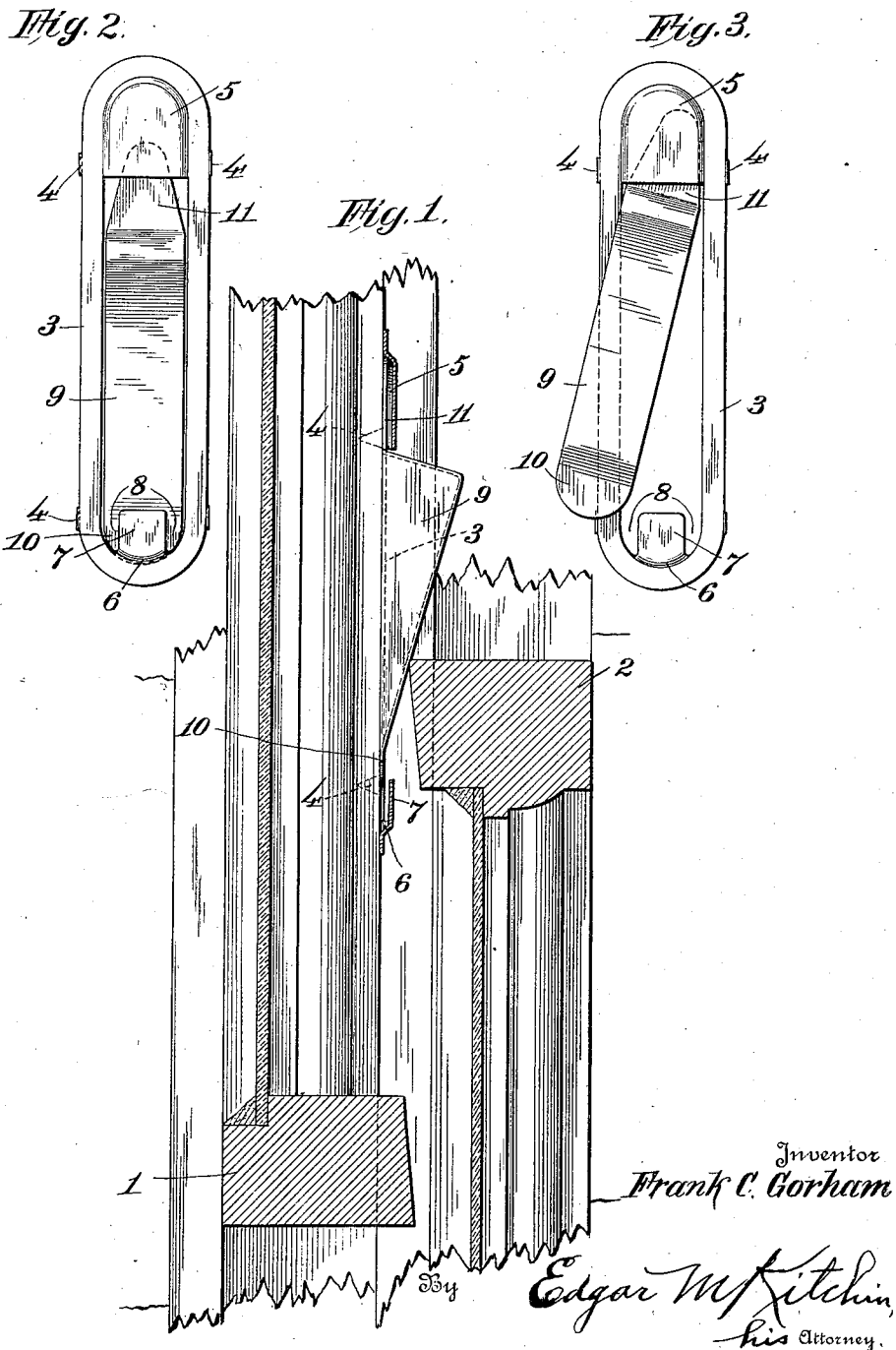
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SASH LOCK

Filed Jan. 8, 1923

2 Sheets-Sheet 1



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UNITED STATES PATENT OFFICE.

FRANK C. GORHAM, OF LOS ANGELES, CALIFORNIA.

SASH LOCK.

Application filed January 8, 1923. Serial No. 611,392.

To all whom it may concern:

Be it known that I, FRANK C. GORHAM, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Sash Locks; and I do hereby 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.

This invention relates to improvements in window sash fasteners, and has for its object the provision of simple and effective means for locking the two sashes of a window against relative movement.

A further object in view is the production of a simple and effective means for accomplishing this result by inexpensive apparatus which is capable of either permanent mounting or portable use.

With these and further objects in view as will in part hereinafter become apparent and in part be stated, the invention comprises certain novel constructions, combinations and arrangements of parts as subsequently specified and claimed.

In the accompanying drawings,—

Figure 1 is a vertical, central section through the sashes of a window, parts being broken away, and the present improved lock being seen partly in longitudinal, central section and partly in elevation.

Figure 2 is a side elevation of the lock or fastener detached.

Figure 3 is a similar view of the same with the locking wedge shown as swung laterally, as during the act of application or removal.

Figure 4 is a view in side elevation of a fragment of the sashes of a window with an embodiment of the improved lock or fastener attached.

Figure 5 is a vertical section therethrough taken on the plane indicated by line 5—5 of Figure 4.

Figure 6 is a perspective view of the wedge member detached.

Figure 7 is a side elevation of a slightly modified embodiment of the fastener.

Figure 8 is a vertical, longitudinal, central section therethrough.

Figure 9 is a perspective view of the wedge member of the lock as seen in Figures 7 and 8.

Referring to the drawings by numerals, 1

and 2 indicate respectively the upper and lower sashes of an ordinary window. An elongated frame 3, preferably of sheet metal, is provided with tabs 4, 4, which are pressed into the material of the sash 1 so as to retain the frame 3 at any required elevation in the length of the sash 1, according to the distance sash 2 is to be permitted to be opened for purposes of ventilation while limiting the opening for preventing unauthorized access. The frame 3 is provided at its upper end with a downwardly-opening pocket 5 and at its lower end with an upwardly-opening pocket 6. Cooperating with the frame 3 is a locking wedge 9 having at its upper end a longitudinally-extending tongue 11 and at its lower end a similarly extending tongue 10. The pocket 6 terminates in an upstanding lip or flange 7, preferably formed integral with the pocket 6, the said pocket, as best seen in Figure 1, being relatively shallow and the openings 8, 8, at the sides of the lip 7, permitting of the edgewise access of the tongue 10. The tongue 10 is rounded at its lower end and adapted to seat in the pocket 6, while the tongue 11 extends into the pocket 5. Pocket 5 is of a length to freely accommodate tongue 11. The distance from the upper edge of the lip 7 to the lower edge of the pocket 5 is greater than the length of wedge 9 but less than the distance from the upper end of wedge 9 (not including the tongue portion 11) to the lower extremity of the tongue 10, whereby the wedge 9 may be slid from its lowered position, as seen in Figure 2, vertically until the upper end of the wedge strikes the lower edge of pocket 5 without bringing the tongue 10 into position capable of movement outward away from the frame 3, because the lower portion of the tongue 10 will still underlap the upper portion of the lip 7. However, when the wedge 9 is so elevated, if otherwise free, it may be swung edgewise with a movement of the tongue 10 through one or the other of the openings 8, this edgewise movement, however, being accomplished only after a slight outward movement of the wedge to cause the wedge to free itself from the edges of the frame 3. As seen in Figure 1, it would not be possible for the wedge 9 to be moved laterally, because as appears from the dotted lines therein, the adjacent edges of the frame 3 are overlapped by the wedge and serve effectively to prevent any edgewise play of the wedge. However, when the sash 2 is

lowered, the wedge may be moved in an inward or lateral direction until free from the edges of the frame 3, since the pockets 5 and 6 are of sufficient width to allow this movement of the wedge.

The operation is fairly obvious and may be briefly stated as follows:

The frame 3 being affixed to the sash 1, the wedge 9 has its tongue 11 introduced into the pocket 5 after the manner seen in Figure 3, and then the wedge is swung edgewise until the tongue 10 underlaps the lip 7, whereupon the wedge is dropped and the tongue 10 seats itself in the pocket 6. After thus assembled, the lock is ready for operation, and when the operator lifts the sash 2 until it strikes the wedge 9, the wedge will be moved longitudinally and pressed laterally to the position indicated in Figure 1, whereupon the sashes will be effectively locked against further relative movement in the direction of opening. To render the sashes free for complete opening, it is only necessary to lower the sash 2 and remove the wedge 9 by first lifting it and then swinging it edgewise to the position seen in Figure 3, and then withdrawing the tongue 11 from the pocket 5.

In Figures 4 to 9 inclusive are shown slightly varied embodiments, the principal variation consisting of the provision of a deeper pocket at the lower end of the wedge-receiving frame, while omitting the lateral openings or passages, whereby the space between the lower and upper pockets must be sufficiently increased to allow escape with an inward movement of the wedge and its lower tongue from the lower pocket. More in detail, the structures shown in Figures 4 to 6 inclusive are illustrated as applied to the upper sash of sashes 1 and 2 and include the frame 13, which, in this particular instance, is shown as an elongated plate. The frame 13 is in the form of a substantially flat open frame, as shown, and may be secured by laterally extended pointed tabs 14, 14, formed integral with the frame and designed to be forced into the material of the sash 1 for securing the frame in place. The frame 13 is formed at its upper and lower ends with outwardly formed, preferably stamped, pockets 15 and 16, the upper pocket opening downwardly and the lower pocket opening upwardly. Cooperating with the frame 13 is the locking wedge 17. The wedge 17 may be formed of any appropriate material, and is shown as preferable when formed of sheet metal stamped or otherwise brought to the configuration of the wedge so as to be relatively light and yet possess sufficient stability to effectively serve in resisting relative movement of the sashes. Projecting upwardly from the upper end of the wedge at that face contacting with the face of the sash 1 or the frame

13, when the frame is not in the form of a simple frame, is an upstanding tab or tongue 18 proportioned to slide easily within the pocket 15, the pocket being of as great or greater length as the tongue, whereby when the wedge 17 is introduced by the insertion of the free end of the tongue 18, the wedge may be moved along the length of the frame 13 until its upper end contacts with the lower edge of pocket 15, as indicated in dotted lines in Figure 5. The lower end of the wedge 17 terminates in a downwardly extending tab or tongue 19 adapted to slide within the pocket 16. The wedge 17 is introduced into engagement with the frame 13 by the insertion of the tongue 18 into pocket 15, the movement of the wedge to the dotted line position seen in Figure 5, whereby the tongue 19 is brought into line with the pocket 16 above the same, and the wedge is then lowered for causing the tongue 19 to move into the pocket 16. The tongue 19 is of a length such as to allow the end of the wedge 17 to contact with the upper edge of the pocket 16 before the tongue 18 has been sufficiently lowered to escape from the pocket 15, whereby the wedge 17 will be held in its given relation to the frame 13 until manually removed. Thus when the wedge is in place, the two sashes will be effectively retained against any substantial relative movement and the window may not be opened for unauthorized ingress.

When the operator desires to open the window to a greater extent than permitted by the wedge 17, it is only necessary for him to grasp the wedge 17, lift it to the dotted line position seen in Figure 5, the lower sash being in its lowered position, and, swinging the lower end portion of the wedge 17 inward away from sash 1, withdraw the wedge from its frame. To conveniently locate the wedge 17, the tongue 18 is formed with an aperture 20 enabling the wedge to be suspended on an appropriate nail or hook.

In Figures 7, 8 and 9 a further modified embodiment of the sash lock is illustrated wherein the sash-engaging frame is in the form of a plate as seen at 3', having tabs 4', 4', stamped from the frame for being driven into the sash for securing the frame in place. The frame 3' is provided at its upper end with a pocket 5' and at its lower end with a pocket 6' adapted to receive the respective upper and lower tongues 8' and 9' of the wedge 7'. It is to be noted that in all forms of the wedge shown, the upper and lower tongues are in alinement with each other and in line with the outer face of the wedge, that is the face which contacts either with the sash or with the receiving frame or plate, and such face in the form of the wedge shown consists merely of the edges of the metal sheets from which the wedge

is constructed. As a matter of stability in construction as well as inexpensive simplicity, the wedge seen in Figures 7 and 9 has its upper end plate formed with downwardly-extending tabs 11' overlapping and fixed to the side plates of the wedge. The said end plate is also stamped to provide a downwardly-extending tongue 12' alined with and extending below the tongue 8'.

It will be observed that while the parts 5, 15 and 16, and 5' and 6' have been shown and described as pockets, they, in fact, function as retaining guides and may take any other obvious form susceptible of so functioning.

What is claimed is:—

1. The combination of a frame adapted to be anchored to a window sash and having spaced retaining guides and a wedge having outstanding tongues adapted to co-operate with said guides for retaining the wedge in operative relation to the frame during use, the parts being proportioned to enable withdrawal of one of the tongues from its guide for enabling withdrawal of the wedge from the frame.

2. The combination of a frame adapted to be anchored to a window sash and having a retaining guide at its upper portion and a pocket at its lower portion spaced from the guide, and a wedge of less length than the distance between the guide and pocket having tongues extending into engagement therewith, the difference between the length of the wedge and the length of the space between the guide and pocket being equal at least to the length of one of the tongues.

3. The combination of a frame adapted to be anchored to a window sash and having a retaining guide at its upper portion and a pocket at its lower portion spaced from the guide, and a wedge of less length than the distance between the guide and the pocket having tongues extending into engagement therewith, the difference between the length of the wedge and the length of the space between the guide and pocket being greater than the depth of the pocket.

4. The combination of a frame adapted to be anchored to a window sash and having a retaining guide at its upper portion and a pocket at its lower portion spaced from the guide, and a wedge of less length than the distance between the guide and the pocket having tongues extending into engagement with the guide and pocket, the difference between the length of the wedge and the length of the space between the guide and pocket being greater than the depth of the pocket, and the pocket having an extended portion lapping its respective tongue of the wedge and having an opening for permitting edgewise access and

egress of the tongue to and from the lapping position.

5. The combination of a frame adapted to be anchored to a window sash and having a retaining guide at its upper portion and a retaining guide at its lower portion spaced from the upper guide, and a wedge having tongues extending into engagement with the guides, the parts being proportioned for retaining the wedge in engagement with the frame during operation but permitting escape of the wedge when moved to an inoperative position relative to the frame.

6. The combination of a frame adapted to be anchored to a window sash and having upper and lower retaining guides, and a wedge interposed between said guides and having means of engagement therewith, said engaging means being constructed to normally retain the wedge in operative relation to the frame, but being proportioned to permit edgewise dislocation of the wedge from the frame.

7. The combination of a frame adapted to engage a window sash, the said frame being formed with a pocket at its upper portion and a pocket at its lower portion spaced from the upper pocket, and a wedge of a less length than the distance between the pockets, said wedge having projections extending into the pockets and retaining and guiding the wedge in its engagement with the frame, the difference between the length of the wedge and the distance between the pockets being at least as great as the length of one of the projections.

8. The combination of a frame adapted to engage a window sash, the said frame being formed with a pocket at its upper portion and a pocket at its lower portion spaced from the upper pocket, and a wedge of a less length than the distance between the pockets, said wedge having projections extending into the pockets and retaining and guiding the wedge in its engagement with the frame, the difference between the length of the wedge and the distance between the pockets being at least as great as the length of one of the projections, and one of the pockets having an extended lip lapping one of the projections for preventing lateral displacement thereof after the same has moved out of the pocket and is free to escape edgewise from the frame.

9. The combination of a frame adapted to be anchored to a window sash, a wedge co-operating therewith and adapted to engage the frame in position for interrupting relative movement of said sash with respect to a co-operating sash, the wedge and frame being connected by interengaging guides and projections so proportioned as to detachably retain the wedge while in use in engagement with the frame, one of the

guides having an extended portion adapted to lap one of the projections when the latter is moved to a position out of retaining engagement with the guide.

- 5 10. In window sash locks, the combination of a locking wedge having extending tongues, and means adapted to be anchored to a window sash for engaging the tongues and retaining the wedge in normally operative position, the said wedge being movable
10 to and from a position in engagement with the retaining means.

11. In window sash locks, the combination of a locking wedge having terminal,
15 longitudinally-extending tongues and retaining guides adapted to be connected to a window sash and to engage said tongues, one of the guides being apertured for edge-

wise access and egress of its respective tongue.

12. In window sash locks, the combination of an anchoring plate adapted to be fixed to a window sash and having a pocket, and a wedge having an upward projection at its upper end slidably engaging the anchoring plate and extending into the pocket,
25 the anchoring plate being adapted to guide and limit the upward movement of the wedge.

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

FRANK C. GORHAM.

Witnesses:

J. B. STURTEVANT,
G. E. REDIN.