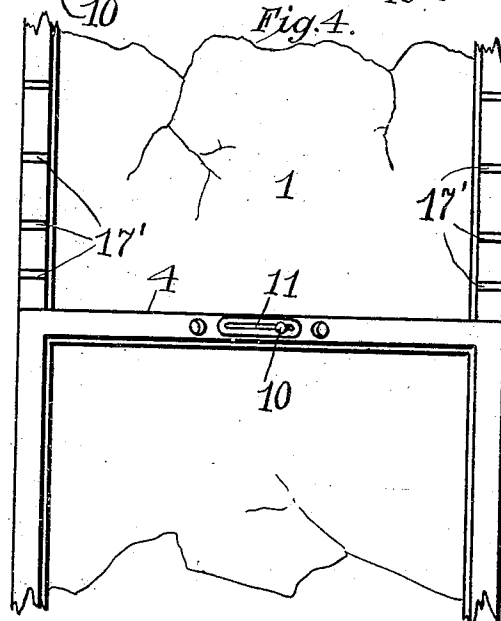
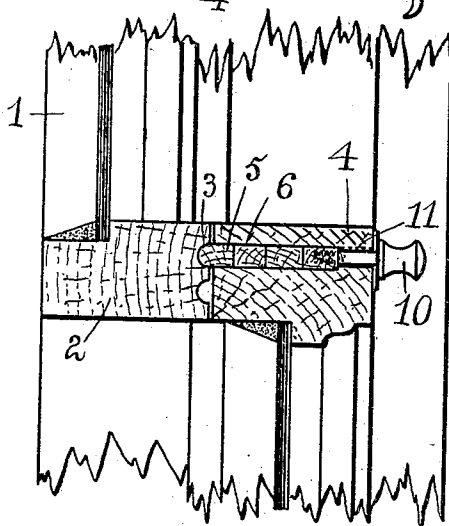
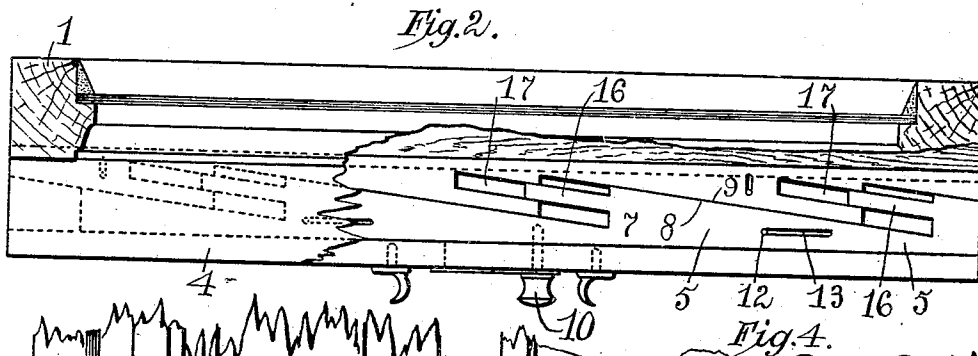
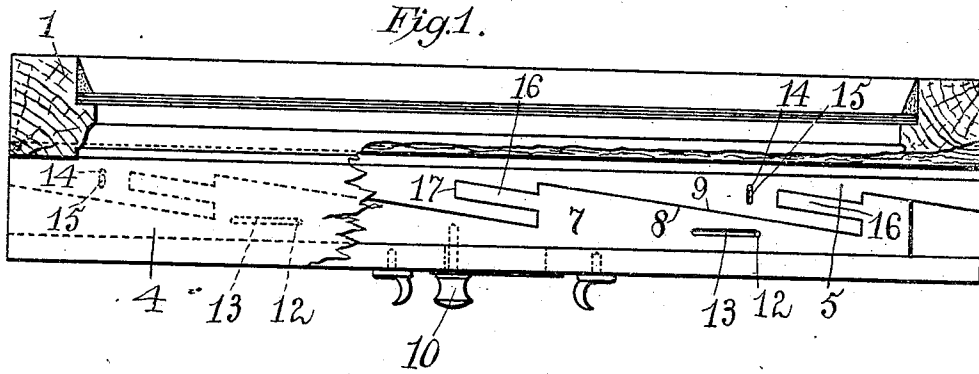


T. O. ABBOTT.
 COMBINED SASH LOCK AND WEATHER STRIP.
 APPLICATION FILED AUG. 20, 1908.

946,305.

Patented Jan. 11, 1910.

2 SHEETS—SHEET 1.



Witnesses:
 Bent M. Stahl.
 Edward N. Sartor

T. O. Abbott
 by Spear, Middleton, Dimeson & Spear
 Inventor
 Attorneys

T. O. ABBOTT.
 COMBINED SASH LOCK AND WEATHER STRIP.
 APPLICATION FILED AUG. 20, 1908.

946,305.

Patented Jan. 11, 1910.

2 SHEETS—SHEET 2.

Fig. 5.

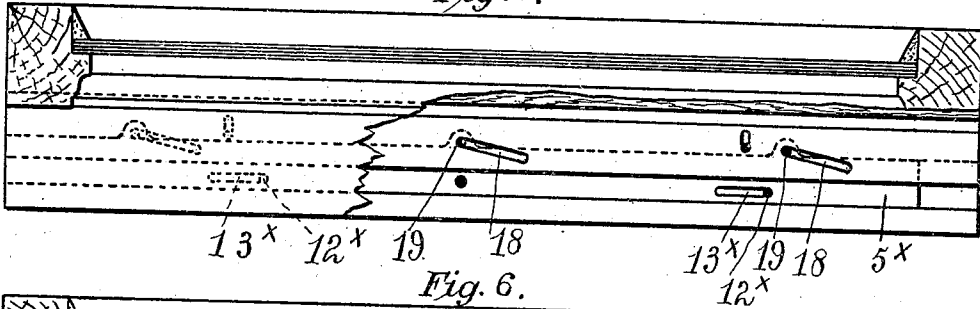


Fig. 6.

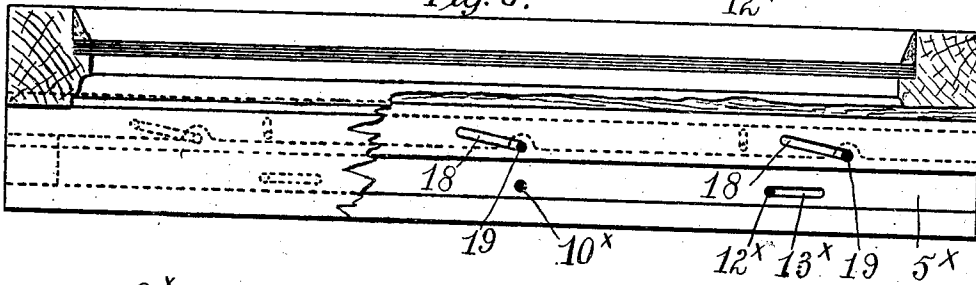


Fig. 8.

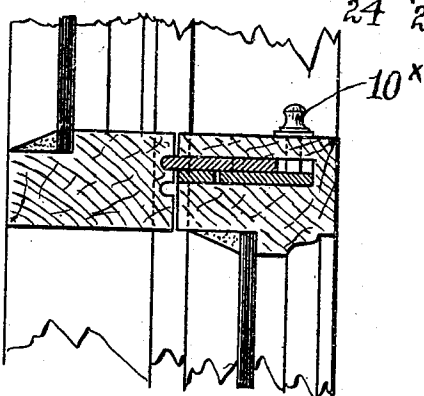
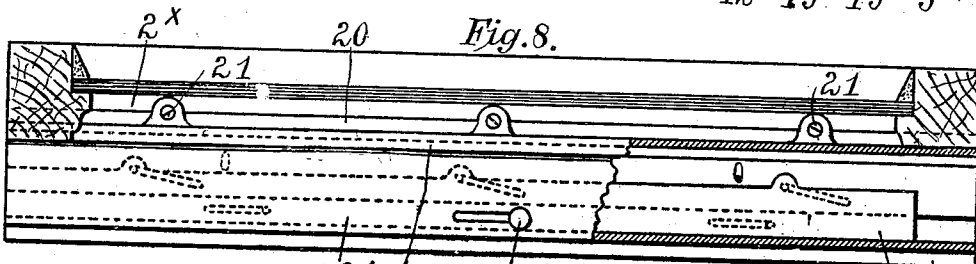


Fig. 7.

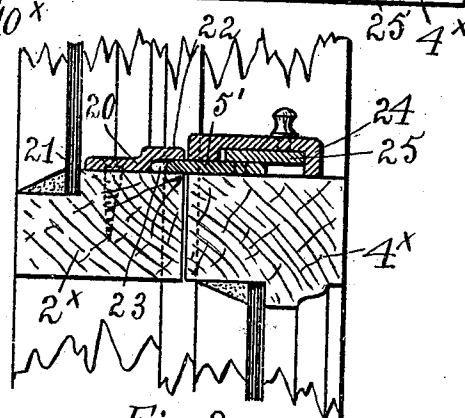


Fig. 9.

Witnesses:
 Benj. H. Stahl.
 Edward N. Sartor.

T. O. Abbott
 Inventor
 Spear, Middleton, & Spear
 Attorneys

UNITED STATES PATENT OFFICE.

TWYMAN O. ABBOTT, OF SEATTLE, WASHINGTON.

COMBINED SASH-LOCK AND WEATHER-STRIP.

946,305.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed August 20, 1908. Serial No. 449,539.

To all whom it may concern:

Be it known that I, TWYMAN O. ABBOTT, citizen of the United States, residing at Seattle, Washington, have invented certain new and useful Improvements in Combined Sash-Locks and Weather-Strips, of which the following is a specification.

My invention relates to sash locks and weather strips combined, my object being to provide a simple and inexpensive construction to serve as an effective lock and, at the same time, close the crevices about the window sash to prevent the ingress of the weather or dust.

The invention consists in the features and combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

In the accompanying drawings,—Figure 1 is a plan view showing the upper and lower sashes, the upper one being in section and parts being broken away for clearness of illustration, the parts in this figure being in the position of non-use. Fig. 2 is a view similar to Fig. 1, with the parts in the position of use. Fig. 3 is a vertical transverse sectional view through the meeting rails and adjacent parts of the upper and lower sashes with my invention in place. Fig. 4 is a front view of a portion of an upper and a lower sash with my invention combined therewith. Fig. 5 is a view similar to Fig. 1 of a modified arrangement of the parts. Fig. 6 is a view similar to Fig. 5 with the parts in a different position. Fig. 7 is a vertical transverse sectional view through the parts shown in Fig. 5. Fig. 8 is a view similar to Fig. 5 of a further modification of the invention, and Fig. 9 is a vertical transverse sectional view of the parts shown in Fig. 8.

In these drawings, 1 indicates an upper sash, the meeting rail 2 of which is provided, on its inner face, with a groove 3 extending longitudinally thereof; 4 indicates the meeting rail of the lower sash, and 5 is the combined locking device and weather strip. This strip is arranged in a recess 6 of the meeting rail 4, and it has a rounded edge adapted to enter the groove 3 of the meeting rail 2 of the upper sash. For operating the locking strip 5 to and from connection with the meeting rail 2, I provide a wedge strip 7 also arranged within the recess 6 of the meeting rail 4, said wedge strip having inclined surfaces at 8 bearing upon inclined surfaces 9 of the locking strip 5. The locking strip

extends the full length of the meeting rails, while the operating strip 5 is somewhat shorter, as shown in Fig. 1. This figure illustrates the parts in the position of non-use, the locking and weather strip 5 being in its retracted position and being located entirely within the recess of the meeting rail 4.

For setting the locking strip into its position of use, the operating wedge 5 is moved longitudinally from the position shown in Fig. 1 to that shown in Fig. 2, so that its inclined surfaces bearing upon those of the strip 2 will force said strip across the joint or crevice between the two meeting rails, so that its edge will lodge within the groove 3 of the meeting rail of the upper sash. Any suitable means may be provided for moving the wedge strip longitudinally, such, for instance, as the finger button 10 having its shank secured to the wedge strip, said shank extending through a slot 11 in the meeting rail 4. The wedge strip is guided in its movement by pins 12 passing through slots 13 into the meeting rail, while the locking strip 2 is guided by pins 14 passing through slots 15 into the meeting rail. The slots 15 extend transversely in respect to the meeting rail so that the locking strip has movement only in a direction transversely of the sashes and across the crevice between them.

In order to effect the retraction of the locking strip from the groove in the meeting rail 2, the wedge strip is provided with tongues 16 entering recesses 17 in the locking strip, these parts being inclined so that, upon moving the wedge strip toward the left in Fig. 2, the inclined members will draw the locking strip inwardly and away from its position of use.

It will be observed that the locking effect is secured by forcing the sashes away from each other and setting them firmly against the confining beads of the ways in which they run; in other words, at the same time that the joint between the meeting rails is securely closed by the locking strip, the sashes are forced into close contact with the adjacent parts of the window frame. This not only will prevent the sashes from rattling, but it will close the crevices or joints around the sashes and prevent the access of wind or rain to the interior of the building. The locking strip thus not only serves as a locking device, but also as a weather strip.

As shown in Fig. 3, a plurality of grooves may be formed in the meeting rail 2 to re-

ceive the locking strip, and, in this way, the sashes may be locked together while one sash is raised slightly in relation to the other.

As shown in Fig. 4, I may form a series of grooves 17 on the side rail or rails of the upper sash to receive the locking strip when the lower sash is raised to the proper point or points, and, in this way, the two sashes may be locked together with one raised or lowered in respect to the other.

Figs. 5 and 6 illustrate a modification in which, instead of having the locking strip and the wedge strip located in the same horizontal plane within the recess of the meeting rail 4, these strips may be arranged in different planes, and, instead of securing the wedge effect by the inclined surface of one strip working against the corresponding surface on the other, I may provide, in the locking strip, inclined slots 18 which receive pins 19 extending up from the operating strip 5* so that, by moving the operating strip in one direction, the combined locking and weather strip will be projected into the groove in the opposing meeting rail and, if moved in the other direction, the locking strip will be retracted, these effects being due to the pin 19 working against the inclined walls of the slot 18. In this form also the operating strip is guided by slots 13* extending longitudinally thereof and having pins 12* extending therethrough, while the locking strip is guided by pins and transversely extending slots. In order to operate the strip 5* in this modified form, a finger button may be employed at 10* extending upwardly from the meeting rail, the shank of said button passing through a slot in the meeting rail and connecting with the operating strip.

Instead of locating the parts of my invention within the meeting rail, and instead of forming the locking groove or slot in the upper meeting rail, I may locate these parts on the upper surfaces of the meeting rails, as shown in Figs. 8 and 9. For this purpose I secure to the upper meeting rail 2* a plate 20 by means of screws 21. This plate has a raised lip 22 at its inner edge beneath which is the groove 23 for receiving the locking strip 5* of the upper meeting rail. This locking strip is held on the upper surface of the meeting rail 4* by a box or casing 24 which has within it the operating strip 25, this strip overlying the locking strip and being of substantially the same form as that illustrated in Figs. 5, 6 and 7. By this form of the invention the device may be applied to windows now in use.

My invention may be used either as a sash lock or as a weather strip, or it may perform both of these functions.

While I have described the invention with particular reference to its application to the meeting rails of the usual form of window sash, it will be understood that I do not limit

myself in this respect, as it may be applied to the sides or, in fact, to any part of the window frame or sash, and it also may be applied to doors.

My invention differs broadly from the forms of sash locks now in use in that, with my invention, the locking effect is secured by forcing the sashes away from each other, whereas in the usual form of sash lock the sashes are drawn toward each other. This feature of my invention is of importance, as it more effectually excludes the weather by closing all the openings, and it prevents rattling. Further, it renders it more difficult for an evilly disposed person to gain an entrance through the window. Again, with my invention the locking effect is secured from end to end of the meeting rail, instead of at restricted points, as in the sash locks now in use. Instead of forming a recess in the meeting rail, this rail may be formed in sections and a space provided between these sections for the reception of the working parts.

I claim as my invention:—

1. In combination with the upper and lower sashes of a window, a strip carried in a recess of the upper meeting rail, the other meeting rail having a recess to receive the edge of the said strip, and a longitudinally movable strip carried by the upper meeting rail and having a bearing at its front edge against the wall of the recess in which it lies, inclines on the said longitudinally movable strip engaging parts carried by the strips first mentioned, and means extending from the movable strip through a slot in the recess wall whereby, when the strip is moved longitudinally, the first strip will be forced into the recess of the lower meeting rail, and the two sashes will be forced in opposite directions into close contact with the window frame, substantially as described.

2. In combination two meeting members, a pair of locking strips in one member arranged in the same horizontal plane, edge to edge, one of which has inclined recesses therein and the other having inclined tongues in the same plane with the main body of the strips to enter said recesses for wedging the strip against or retracting it from the other member by a movement of the other strip longitudinally of the meeting member, substantially as described.

3. In combination two meeting members, a pair of locking strips in one member arranged edge to edge in the same horizontal plane, one of which has inclined recesses therein and the other having inclined tongues in the same plane with the main part of the strips to enter said recesses for wedging the strip against or retracting it from the other member by a movement of the other strip longitudinally of the meeting

member, said tongue being slightly longer than the distance of extreme movement of the longitudinal strip whereby the laterally movable strip will be held from detaching from the longitudinal movable strip in all adjustments of the parts, substantially as described.

4. In combination with two meeting members, one having a plurality of parallel recesses and the other having flat locking strips arranged edge to edge in the same plane, one movable transversely thereof to engage one of the several recesses, and the other movable longitudinally and having inclined or wedge surfaces in the same plane with the main body of the strips engaging similar inclines on the other strip, substantially as described.

5. In combination with window sashes, one having a series of grooves on its side rail, a pair of flat strips in the meeting rail of the other sash arranged edge to edge and in the same plane, one having transverse movement and the other longitudinal movement with wedge surfaces between the strips in the same plane with the body of the strips, substantially as described.

6. In combination with window sashes one having a recess extending along its meeting rail and having a recess or recesses in its side rail, a pair of flat strips in the meeting rail of the other sash arranged in the same plane edge to edge, one having transverse movement and the other longitudinal movement, with wedge surfaces between the strips in the same plane with the body of the strips, substantially as described.

7. In combination a pair of meeting

members, one having a pair of strips one of which is movable transversely of its carrying member to engage the other member, and the other strip being movable longitudinally of its carrying member, said strips being arranged in the same horizontal plane, edge to edge, each of said strips having longitudinally extending inclines or wedges in contact with each other and in the same plane with the main body of the strips, substantially as described.

8. In combination the meeting members, one of which has a pair of strips arranged edge to edge in the same plane, one of which is movable transversely and the other longitudinally, and a plurality of groups of inclines or wedges between the strips in the same plane with the main body of the strips, the longitudinally movable strip being shorter than the transversely movable strip, substantially as described.

9. In combination a pair of meeting members, a plate attached to one member and providing a receiving recess, a plate attached to the other member and having a recess, and a pair of wedged strips in the recessed plate arranged edge to edge in the same plane with means for operating one of them longitudinally to effect a transverse movement of the other in the recess formed by the plate of the other member, substantially as described.

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

TWYMAN O. ABBOTT.

Witnesses:

GEO. P. FERGUSON,
H. W. HARTMANN.