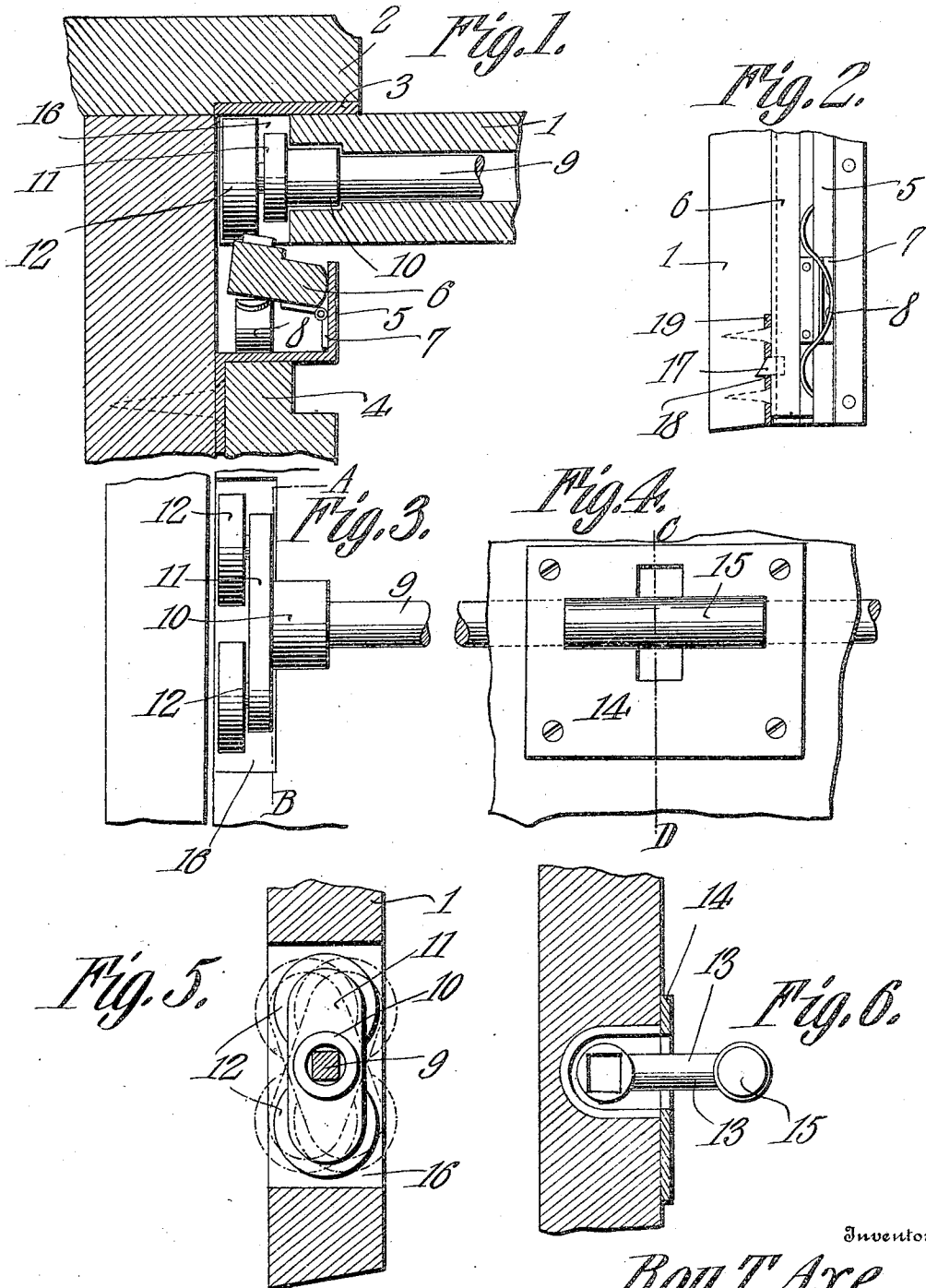


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WINDOW LOCK AND LIFT.
APPLICATION FILED NOV. 30, 1908.

942,851.

Patented Dec. 7, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

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WINDOW LOCK AND LIFT.

942,851.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Original application filed November 9, 1907, Serial No. 401,523. Divided and this application filed November 30, 1908. Serial No. 465,082.

To all whom it may concern:

Be it known that I, ROY T. AXE, a citizen of the United States, residing at Juniata, in the county of Blair and State of Pennsylvania, have invented a new and useful Window Lock and Lift, of which the following is a specification.

This invention has reference to improvements in window locks and lifts and is designed to provide a means whereby the act of lifting or lowering a window sash will cause the release of such sash from a lock normally holding the sash in the raised, or lowered, or any intermediate position.

The present application is a division of an application Serial No. 401,523, filed by me on November 9, 1907, for a sash balance.

In the application of which this present application is a division there is shown a sash balance which tends to hold the window sash in an elevated or a depressed position, or at intermediate positions and it is to a window sash equipped with such a sash balance that the present invention particularly relates. Furthermore, the present invention is designed particularly for use in car or other conveyance windows where it is desired that the sash when closed shall be dust tight and either when closed or opened shall be held against rattling due to the shocks and jars incident to the movement of the conveyance.

In accordance with the present invention there is provided a friction member normally held in engagement with the sash by springs of suitable strength while the lift which is usually applied to window sashes is so constructed that on the effort of a person to lift the window by means of the lift structure the friction strip is moved out of engagement with the window sash against the action of its actuating springs and the sash may be then readily raised as high as desired, when on releasing the lift the friction member is immediately moved into engagement with the sash by the action of the springs and holds the said sash against movement or rattling. When it is desired to lower the sash the lift is grasped and the sash is lowered by pulling down on the lift which causes the release of the sash from the friction members and the sash is then lowered to the desired extent or to its lowermost or closed position, when on the release of the lift the sash immediately locks in the

new position and if in the closed position becomes so held as to be practically dust tight thus adding materially to the comfort of passengers in the conveyance especially over dusty roads whether ordinary roads or railroads.

The invention will be best understood from a consideration of the following detail description taken in connection with the accompanying drawings forming a part of this specification, in which drawings,

Figure 1 is a cross section through one end of a sash and window casing with parts broken away and embodying the invention. Fig. 2 is a detail view showing one of the springs for the friction member. Fig. 3 is a side view of the friction member operating means. Fig. 4 is a face view of the lifting member for the sash. Fig. 5 is a section on the line A—B of Fig. 3 with parts in elevation. Fig. 6 is a section on the line C—D of Fig. 4 with parts in elevation.

As shown in Fig. 1, the sash 1 has a bearing against the window nosing 2 with an interposed wearing plate 3. Instead of the usual window strip 4 bearing directly against the sash, it is placed some distance therefrom and carries a housing metal strip 5 in which is located a friction strip 6 hinged to the housing 5 at appropriate points. One of the hinges 7 is shown in Figs. 1 and 2, but, in practice, several hinges will be used for each strip. A strong spring 8 preferably of the leaf type, is secured to the housing and, bearing against the strip 6, urges it toward the window sash with sufficient force to maintain the sash in such contact with the nosing as to prevent it from rattling and also rendering it practically dust proof. Since the strips, one on each side of the sash, are hinged at several points in their lengths, but one spring 8 is necessary to cause the strips to engage the sash throughout their lengths. Of course, if under some circumstances it is desirable to use more than one spring for each strip 6, it may be done.

Extending longitudinally through the lower rail of the sash is a rock shaft 9 terminating at one end in a hub 10 carrying a plate 11 midway between its two ends, so that the plate projects radially from the hub to an equal extent in opposite directions. At the ends of the plate 11 are journaled rollers 12. At the middle of the rock

shaft 9 there projects an arm 13 through a slot in a base plate 14 on one surface of the lower rail of the sash, and this arm terminates in a cross head 15 constituting a handle. The rollers 12 and supporting arm 11 are located in a recess 16 formed in the corresponding end of the sash and are so situated that when the shaft 9 is rocked on its longitudinal axis, one roller will engage the wearing plate 3 and the other roller will engage the friction strip 6. The result is that the sash is moved away from the wearing strip 3 and the strip 6 is moved out of contact with the sash. The sash being now unrestrained by the friction strip 6 and having anti-friction bearings between the strip 6 and the wearing strip 3 is free to move under the action of a suitable force tending to lift or lower the sash depending upon the position of the said sash when the force is applied.

Assuming that the sash is initially in the lowermost position, it will rise under the application of a suitable force as long as the handle 15 is held in position to relieve the sash from the friction strip 6. Now, because of the roller bearing, the sash will move without perceptible noise in either direction and if the sash be of the balance type, then the movement is accomplished with minimum of effort on the part of the operator. As soon as the handle 15 is released the strips 6 acting on the two side rails of the window sash will hold it in any adjusted position. When it is desired to lower the sash from an elevated position, it is only necessary to pull down upon the handle 15 when the rollers 12 are rocked in the opposite direction and act as before to relieve the window sash from engagement with the friction strips 6 and the sash may be drawn to its lowermost position, or any intermediate position, to be again locked in the adjusted position on the release of the handle 15. The lower end of each strip 6 is provided with a projecting latch member 17 adapted to enter through a slot 18 in a plate 19 fast on the window sash. This will act as a lock preventing the raising of the sash except by the manipulation of the handle 15 but when the friction strips 6 are moved away from the sash, the latch bolts 17 move out of engagement with the plates 19 and the sash is then free to be moved upward.

This invention provides a simple means for arresting the movement of the window sash at any point of its travel and at the same time rendering the window anti-rattling whether open or closed, and practically dust-proof when closed, and being

dust proof the structure is likewise weather proof.

What is claimed is:—

1. In a window, means for holding the window sash in adjusted positions, comprising a friction strip for each side of the window sash and a spring for each strip urging the same in contact with the window sash, and means for overcoming the action of the springs to release the window sash, comprising rollers mounted upon a rock arm on each side of the axis thereof at each end of the window sash and in operative relation to the respective strips, and means for moving the rock arm about its axis to cause the rollers to engage the strips and move them away from the window sash.

2. In a window, means for holding the window sash in adjusted positions comprising a friction strip hinged along one edge to a fixed portion of the window frame, a spring normally urging said strip against the sash, and means for overcoming the action of the spring to release the sash comprising a rock shaft carried by the sash, a handle also on the sash and connected to said shaft, and rollers carried by said shaft on each side of the axis thereof and movable into engagement with the spring constrained strip and the window casing respectively.

3. In a window, means for holding the window sash in adjusted positions, comprising a friction strip hinged along one edge to a fixed portion of the window frame, a spring normally urging the strip against the window sash, means carried by the sash for overcoming the action of the spring to release the sash, a latch member carried by the strip, and co-acting means on the sash receiving the latch member when the sash is in the lowermost position.

4. In a window, means for holding the window sash in adjusted positions, comprising a friction strip hinged along one edge to a fixed portion of the window frame, a spring urging said strip toward said window sash, a shaft rotatably mounted in the sash, and radially projecting means assembled with the terminal of the shaft, arranged to engage the said strip to overcome the action of the spring.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ROY TAYLOR AXE.

Witnesses:

MADALINE RYDER,
PATRICK J. RYDER.