

No. 789,568.

PATENTED MAY 9, 1905.

L. W. ROE & L. J. BONAR.

WINDOW LOCK.

APPLICATION FILED JAN. 9, 1904.

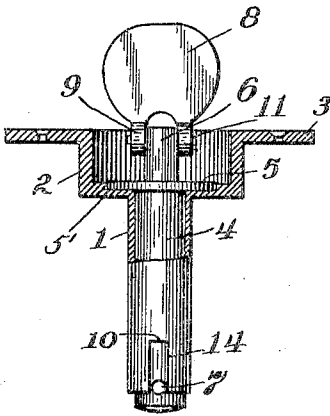


Fig. 1.

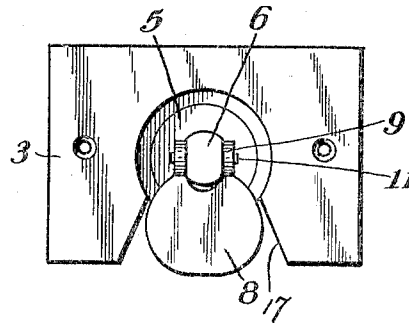


Fig. 2.

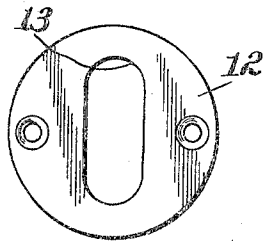


Fig. 3.

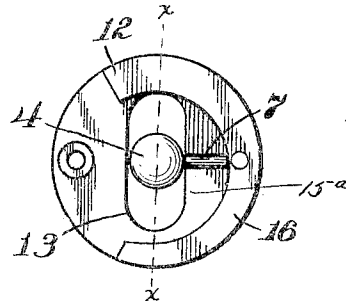


Fig. 4.

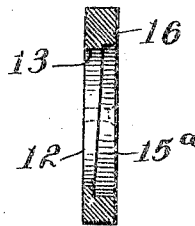


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

LEWIS W. ROE AND LEWIS J. BONAR, OF MANSFIELD, OHIO.

WINDOW-LOCK.

SPECIFICATION forming part of Letters Patent No. 789,568, dated May 9, 1905.

Application filed January 9, 1904. Serial No. 188,335.

To all whom it may concern:

Be it known that we, LEWIS W. ROE and LEWIS J. BONAR, citizens of the United States of America, and residents of Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Window-Locks, of which the following is a specification.

Our invention relates to window-locks which are adapted to be secured to the sash in such a manner as to conceal the locking mechanism from the exterior of the sash.

The objects of our improvements are, first, to provide a simple and effective means of locking the sash; second, to afford facilities for forcing the sash in contact with the sides and upper and lower portion of the window-frame and at the same time bringing the faces of the midrails of the upper and lower sashes in close contact, whereby all movement or vibration of the sashes is obviated when locked. We attain these and other objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal side view showing a combination sleeve and plate with key-bolt fitted to the inner periphery of the sleeve and having a bifurcated thumb-lever attached to one end. Fig. 2 is a top view of the plate, which is made integral with the sleeve, showing a recess formed therein, and top view of thumb-lever as it appears when the window-sashes are locked together. Fig. 3 is a top view of the cam-plate, showing an elongated slot provided therein. Fig. 4 is a bottom view of the cam-plate, showing the cam extending from the face thereof and the locking-pin stop. Fig. 5 is a cross-sectional view taken on the line *xx* of Fig. 4, showing an inclined plane formed on the cam-plate, the key-bolt and locking-pin being omitted.

In constructing our lock we provide a sleeve 1, having an enlarged circular portion 2 and at one end a projecting plate 3, made integral therewith. A key-bolt 4, having a collar 5 and flattened portions 6 formed on one end, is fitted to the inner periphery of the sleeve and is adapted to slide or reciprocate therein. The outer periphery of the sleeve is fitted to a suitable aperture provided in the midrail of the

lower sash. The sash is counterbored and mortised to receive the enlarged portion or chamber 2 and plate of the sleeve, so as to leave the plate 3 flush with the surface of the sash.

A locking-pin 7 is fitted to the key-bolt at right angles with its axis. A thumb-lever 8, having a bifurcated projecting portion 9 adapted to fit the flat portion 6 of the key-bolt, is pivotally secured thereto by means of the pin 11. The cam-plate 12 is countersunk in and secured to the midrail of the upper sash so as to bring the elongated aperture 13 in direct alinement with the key-bolt when it is desired to lock the window. A slot 14 is formed in the sleeve at right angles therewith and extending longitudinally thereof, the slot 14 coinciding with a slot formed in the sash and being adapted to receive the locking-pin 7 when it is withdrawn from the cam-plate. The periphery of the pin contacts with the end of the slot 10, which forms a stop regulating the outward sliding movement of the key-bolt and keeping the projecting portion of the key-bolt within the plane of the sash when it is desired to raise or lower the sash, the collar 5 limiting the inward movement of the bolt. When it is desired to lock the sash, the key-bolt is forced into the elongated slot provided in the cam-plate, leaving the locking-pin protruding through and beyond the walls of the elongated slot. The key-bolt is then rotated by means of the thumb-lever, and the periphery of the locking-pin, which extends through the slot of the cam-plate, is brought in contact with the inner surface of an inclined plane 15^a, forming a portion of the base of the plate 12, and at the same time the end of the locking-pin is brought in contact with the cam 16, extending from the surface of the plate 12. As the key-bolt is rotated, bringing the locking-pin in contact with the inclined plane, the faces of the midrails are brought together, and the end of the pin contacting with the cam transmits a sidewise and longitudinal movement to the sashes, forcing the stiles of the sashes against the sides and upper and lower ends of the window-frame.

When the locking-pin is forced forward, its movement is regulated by the collar 11. The

enlarged portion or chamber 2 of the sleeve is counterbored, as at 5', so as to form a bearing for the collar, providing a means of leaving the end of the key-bolt flush with the face of the sash when locked. A portion of the plate 3, as at 17, is cut away to receive the thumb-lever for the purpose of keeping it within the plane of the sash when the window is locked. By this construction it will be observed that the moment the thumb piece or lever 8 is released after the device is locked such thumb-piece will swing downwardly and be received in the recess formed between the edges 17 17 of the cut-away portion of the plate, which edges serve as stops to prevent the rotation of the key-bolt by engaging the thumb-piece 8, whereby the accidental unlocking of the sashes is prevented, nor can it be rotated from the outside.

It will be noted that when the key-bolt is pressed forward and rotated, it performs three separate and distinct functions, to wit: The contact of the periphery of the locking-pin with the inclined plane brings the adjacent faces of the midrails together, and the engagement of the end of the pin 7 with the cam-rib 16 forces the stiles of the sashes in contact with the sides and upper and lower ends of the window-frame and at the same time securely locks the window, by means of which all shaking, rattling, vibration, and noise which are incident to an ordinary window is obviated.

Having fully described our invention, what we desire to secure by Letters Patent is—

1. A window-fastener comprising a sleeve, a bolt inserted therein and a cam-plate, the adjacent end of the bolt received within the cam-plate, a pin carried by the bolt and receivable within the cam-plate, an inclined surface with which the side of the pin engages and a cam-surface with which the end of the pin engages.

2. In a window-fastener, the combination with a key-bolt, and a locking-pin carried thereby, of a disk plate provided with an in-

clined surface engaged by the side of the pin and a section of a spiral rib located perpendicularly to the inclined surface and engaged by the end of the pin.

3. In a window-fastener, the combination with a suitably-supported bolt, of a disk plate having an elongated closed aperture extending diametrically across the plate, the end of the bolt extending through the plate centrally of the aperture, the inner face of the plate provided with a gradual incline, an arc-shaped cam-rib carried by the plate and a pin mounted on the bolt, the pin adapted to engage the incline and cam-rib simultaneously.

4. The combination with a window-casing and a plurality of sashes, of a window-fastener comprising a bolt carried by one of the sashes, a lateral projection carried by the bolt, a keeper mounted upon the remaining sash, the keeper adapted to receive the projection, means carried by the keeper and engaged by the projection for forcing the sashes in opposite lateral directions and subsequently in opposite longitudinal directions, and means likewise engaged by the projection for simultaneously drawing the sashes toward one another during their lateral and longitudinal movement.

5. The combination with a window-casing and a plurality of sashes, of a window-fastener comprising a bolt carried by one of the sashes, a lateral projection carried by the bolt, a keeper mounted upon the remaining sash, the keeper adapted to receive the projection, and means carried by the keeper and engaged by the projection for forcing the sashes in opposite lateral directions and subsequently in opposite longitudinal directions.

Signed at Mansfield, Ohio, this 30th day of November, 1903.

LEWIS W. ROE.
LEWIS J. BONAR.

Witnesses:

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