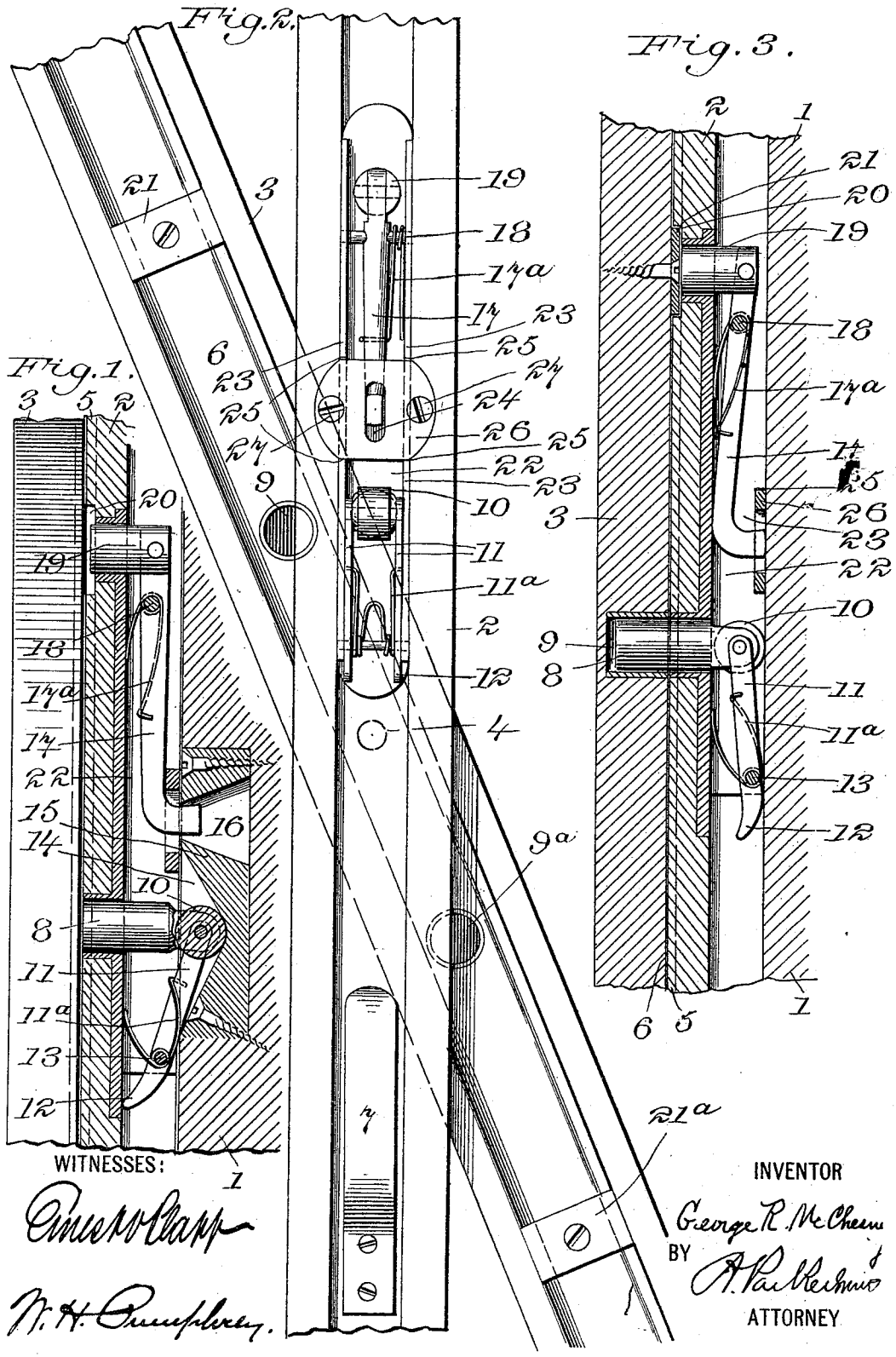
No. 642,749. Patented Feb. 6, 1900.

G. R. McCHESNEY.

REVOLVING WINDOW SASH.

(Application filed May 26, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

GEORGE R. McCHESNEY, OF NEW YORK, N. Y.

REVOLVING WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 642,749, dated February 6, 1900.

Application filed May 26, 1899. Serial No. 718,410. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. McCHESNEY, a citizen of the United States of America, and a resident of New York city, New York county, State of New York, have invented certain new and useful Improvements in Revolving Window-Sash, of which the following is a specification.

My invention relates to revolving window-sash and is more specifically designed to produce an improved locking device whereby the slide-bars supporting said revolving sash may be automatically locked in the position at which the sash is to be revolved and retained in said position as long as the sash is revolving, the lock being automatically tripped, however, as soon as the revolving sash returns to the perpendicular position.

The preferred form of apparatus embodying my invention is illustrated in the accompanying sheet of drawings, in which—

Figure 1 is a detail sectional view of a portion of the window-casing and sliding bar, showing the lock in position, with a portion of the swinging sash in elevation. Fig. 2 is a side elevation of the slide-bar and revolving sash, with the parts in the same position as shown in Fig. 1. Fig. 3 is a detail sectional view showing the lock retracted.

Throughout the drawings like reference-figures refer to like parts.

The window-casing 1 is provided with the usual groove, (not shown in the drawings,) in which slides the slide-bar 2, to which the sash-frame 3 is pivoted at any suitable point 4, so as to swing on said slide-bar. The slide-bar is provided with a longitudinal tongue 5, which fits into the corresponding groove 6 in the swinging sash, the slide-bar being held up to said tongue-and-grooved connection by a series of springs of any suitable construction, such as that of the spring 7. Said springs yield, however, to permit the sash to be swung on the pivot 4, the tongue 5 being forced out of the groove 6 by the pressure produced at the beginning of said swinging action. The sash 3 has a recess 9, with which the latch 8, carried by the slide-bar, engages normally to hold said sash parallel with the slide-bar and prevent the swinging action.

The latch 8 has a roller 10 on its other end, which rolls along the surface of the window-casing 1, except when the slide-bar and window-sash are in a predetermined position, such that said roller will drop into the recess 14, formed in the window-frame. The roller drops into said recess by virtue of the action of the pivot spring-controlled frame 11, pivoted at 13 and normally forced outward by the spring 11^a.

The toes or projections 12 on the other end of the frame 11 strike the slide-bar or lock-case carried thereby and limit the outward movement of the latch, so that the same will not be entirely withdrawn in case the sash and slide-bar are removed from the window-casing.

The recess 14 may be formed in the wood of the window casing or frame; but preferably it is formed in a metal block 15, held in place by the wood-screws shown or other suitable means. Said block is also provided with a second recess 16, preferably made in the flaring shape shown in Fig. 1. This recess is narrower than the roller 10, so that the same will not drop into it in passing over it. With this recess 16 a locking-lever 17 engages by means of the lower bent end or other suitable conformation equivalent to a lock-bolt. This locking-lever is pivoted to the slide-bar 2 at 18 and has its lower end normally forced outwardly by a spring, such as the spring 17^a.

The upper end of the locking-lever carries any suitable projection 19, which extends through an opening in the slide-bar 2 and into a recess 20, formed by cutting away a portion of the tongue 5. Projections formed on the swinging sash 3, as by fastening on plates 21 21^a at equidistant points from the pivot 4, are adapted to fill this recess 20 when the sash is in a vertical position and force out the plunger 19, thereby withdrawing the lower end of the locking-lever 17 from the recess 16, as shown in Fig. 3.

The locking-lever and latch may of course be mounted directly in the slide-bar; but preferably they are mounted in the lock-case 22, which fits into a groove in the back of the slide-bar. This lock-case may be held in position in any suitable way, but preferably by means of the retaining-plate 26, which fits into cross-scarfs 25 in the edges 23 of the locking-case and has a central opening 24, through

which the locking-bolt or projection on the locking-lever 17 may pass. The retaining-plate is held in position by screws 27 27, passing through perforations in the ends of the plate, which overlap said walls of the groove in the slide-bar.

The mode of operation of my invention is as follows: Normally the parts are as shown in Fig. 3, and the window-sash can be raised and lowered, the same being rigidly locked to the slide-bar by the latch 8. When, however, said sash and slide-bar arrive at the predetermined point at which it is most convenient to swing the sash, the latch 8 drops back, as shown in Fig. 1, and when the sash is swung, as shown in Figs. 1 and 2, the spring 17^a forces the locking-lever 17 out, so that it engages the recess 16 in the window-frame, and the slide-bars are positively locked while the sash is swinging. When the sash is brought back to a perpendicular position, so that either the projection 21 or 21^a fills the recess 20 and forces out the plunger 19, said locking-bolt is withdrawn from engagement with the recess 16 and the sash can be pushed up or down. The moment it is moved in either direction the latch 8 is forced out again in the position shown in Fig. 3 and any swinging action of the sash is prevented. By removing the retaining-plate 26 the lock-case 22 and all the parts of the lock may be removed, and in such case the toes 12 on the swinging frame 11 prevent the withdrawal of the latch 8 beyond the position shown in Fig 1.

The advantages of my invention reside in the fact of the alternate action of the latch 8 and lock 17, preventing, on the one hand, any swinging of the sash when the slide-bar is not locked and, on the other hand, any movement of the slide-bar while the sash is being swung. If it were not for this interlocking action, the slide-bar might be slipped down while the sash was being swung, the latch 8 projected, and the apparatus injured by the returning sash striking the projecting latch. It is evident also that the sash may be completely reversed and then move up and down, the latch 8 engaging with the second recess 9^a. This renders the cleaning of either side of the window equally convenient. All the parts of the lock being supported in the lock-case 22, the same can be sold assembled and readily put in position on the slide-bar of any revolving window by cutting out the recess for the retaining-plate 26 and securing the same into position over the lock-case.

It is evident, of course, that various changes could be made in the details of construction of the apparatus disclosed without departing from the spirit and scope of my invention, so long as the relative arrangement of parts or the principle of operation is preserved. Other forms of springs and locking-lever might be employed, and different constructions of latch and coöperating parts might be substituted for those shown; but all such modifications I consider changes in form and not in substance, and still within the scope of my invention.

Having therefore described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. The combination with a slide-bar and a sash-frame pivotally mounted on said slide-bar, of a latch carried by the slide-bar and adapted to engage the sash-frame and hold it locked to the slide-bar, means for causing the latch to automatically move out of engagement with the sash-frame when the latter and the slide-bar reach a certain point with reference to the window-casing, a lock on the slide-bar separate and distinct from said first-mentioned latch and means whereby it is automatically operated to engage the window-frame when the slide-bar and sash are at that point whenever the sash is swung from the perpendicular.

2. The combination with a slide-bar and a sash-frame pivotally mounted on said slide-bar, of a latch carried by the slide-bar and adapted to engage the sash-frame and hold it locked to the slide-bar, means for causing the latch to automatically move out of engagement with the sash-frame when the latter and the slide-bar reach a certain point with reference to the window-casing, a lock on the slide-bar and means whereby it is automatically operated to engage the window-frame when the slide-bar and sash are at that point, whenever the sash is swung from the perpendicular, said last-mentioned means consisting of two projections on the sash equidistant from the pivot thereof.

3. The combination with a slide-bar and a sash-frame pivotally mounted on said slide-bar, of a lock for said slide-bar, adapted to engage the window-casing, and means whereby the swinging of the sash automatically operates said lock, said means consisting of a projection on the sash adapted to engage the tail of the locking-lever.

4. The combination of a tongued slide-bar, a sash-frame pivotally mounted on said slide-bar and grooved to fit over the tongue, the pivotal joint between the two having sufficient endwise play, however, to permit of the disengagement of the tongue and groove, a pivoted locking-lever mounted in the sliding bar, having a projection from one end adapted to engage a recess in the window-frame, and a projection from its other end extending through the slide-bar into a recess formed by cutting out a section of the tongue thereon, together with a projection on the swinging sash adapted to enter the last-mentioned recess and engage the projection from the locking-lever, when the tongue-and-grooved connection is established.

5. The combination of a tongued slide-bar, a sash-frame pivotally mounted on said slide-bar, and grooved to fit over the tongue, the pivotal joint between the two having sufficient endwise play however, to permit of the disengagement of the tongue and groove, a

pivoted locking-lever mounted in the sliding bar, having a projection from one end adapted to engage a recess in the window-frame, and a projection from its other end extending through the slide-bar into a recess formed by cutting out a section of the tongue thereon, together with a projection on the swinging sash adapted to enter the last-mentioned recess and engage the projection from the locking-lever when the tongue-and-grooved connection is established, and a spring normally tending to turn said locking-lever into its position of engagement with the recess in the window casing or frame.

6. The combination with a slide-bar and a sash-frame pivotally mounted thereon, of a latch carried by the slide-bar, adapted to engage the swinging sash, means for holding said latch normally retracted, a roller on the other end of the latch adapted to roll upon the window-frame, and a recess in said frame adapted to receive said roller and permit the withdrawal of the latch from the swinging sash.

7. The combination with a slide-bar and a sash-frame pivotally mounted thereon, of a latch carried by the slide-bar, adapted to engage the swinging sash, means for holding said latch normally retracted, a roller on the other end of the latch adapted to roll upon the window-frame, and a recess in said frame adapted to receive said roller, and permit the withdrawal of the latch from the swinging sash, together with a pivoted spring-controlled frame for withdrawing said latch.

8. The combination with a slide-bar and a sash-frame pivotally mounted thereon, of a latch carried by the slide-bar, adapted to engage the swinging sash, means for holding said latch normally retracted, a roller on the other end of the latch adapted to roll upon the window-frame, and a recess in said frame adapted to receive said roller, and permit the withdrawal of the latch from the swinging sash, together with a pivoted spring-controlled frame for withdrawing said latch, and projections on said frame for limiting the motion thereof.

9. The combination of a grooved slide-bar for a window-sash, a lock-case set in said groove and flush therewith, cross-scarfs cut in the edges of the case, and a retaining-plate fitting into said scarfs, having a central perforation for the lock-bolt, and perforated ends through which retaining-screws may be driven into the face of the slide-bar on either side of the groove therein.

Signed by me at New York city, New York, this 24th day of May, 1899.

GEORGE R. McCHESNEY.

Witnesses:
LILIAN FOSTER,
W. H. PUMPHREY.