

No. 666,913.

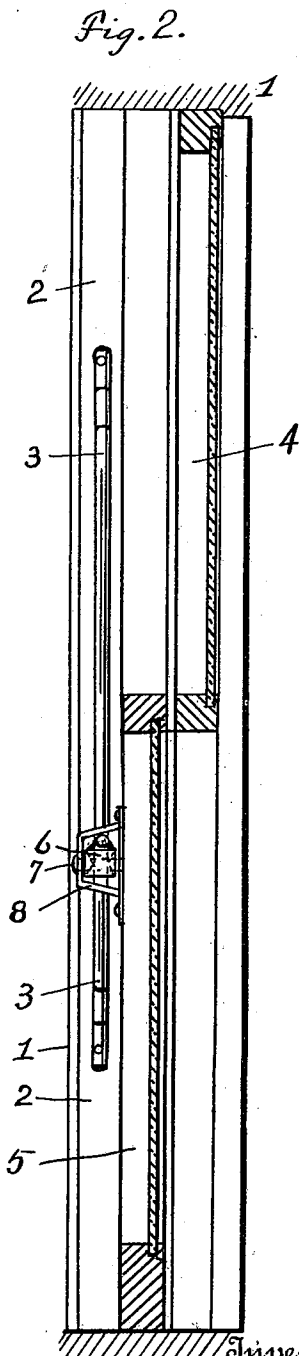
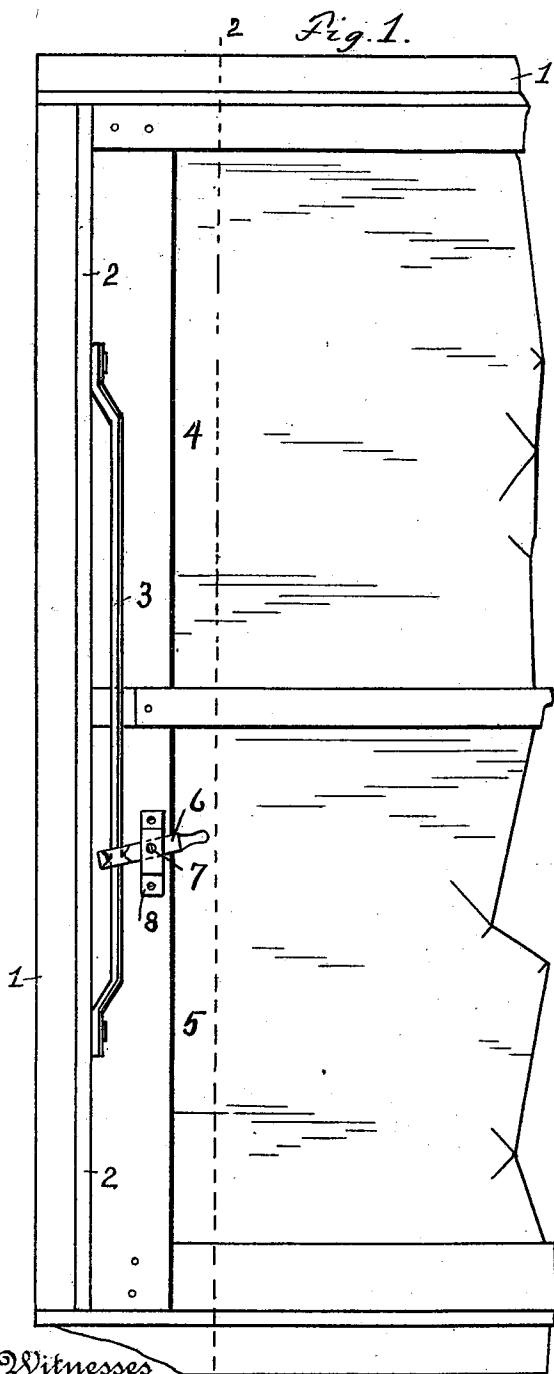
Patented Jan. 29, 1901.

W. E. TYLER.
WINDOW LOCKING DEVICE.

(Application filed Sept. 15, 1899.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses
C. M. Catlin,
A. H. Walter,



Inventor
Wm. E. Tyler,
by Benj. R. Catlin
Attorney

No. 666,913.

Patented Jan. 29, 1901.

W. E. TYLER.
WINDOW LOCKING DEVICE.

(Application filed Sept. 15, 1899.)

3 Sheets—Sheet 2.

(No Model.)

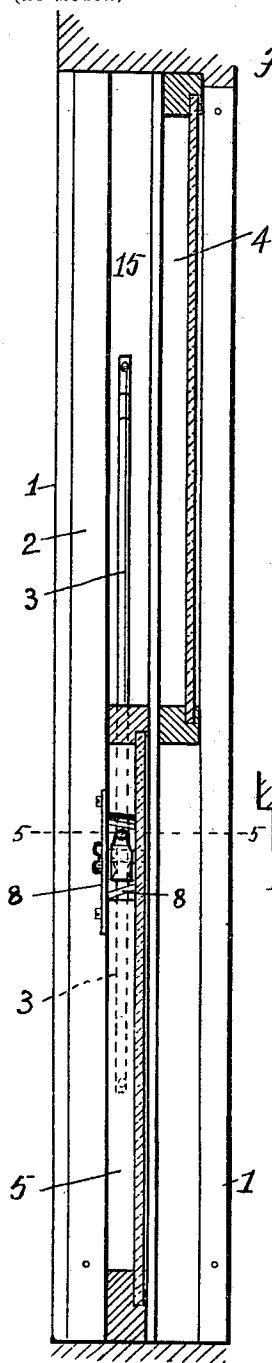


Fig. 4.

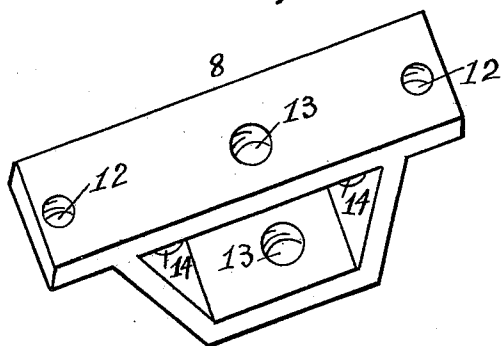


Fig. 7.

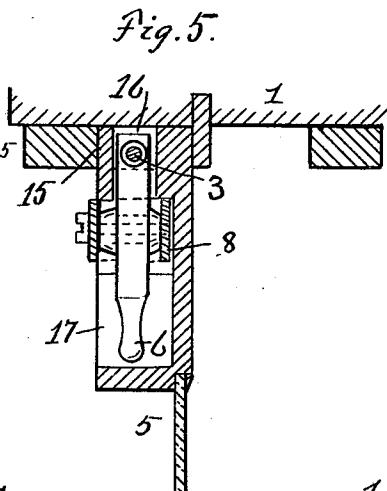


Fig. 5.

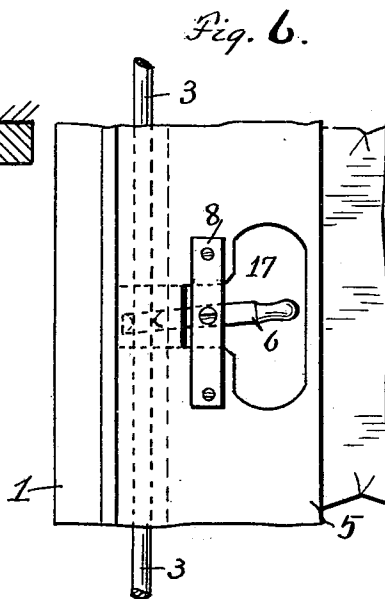


Fig. 6.

Witnesses
cm Catlin.
A. H. Matur.

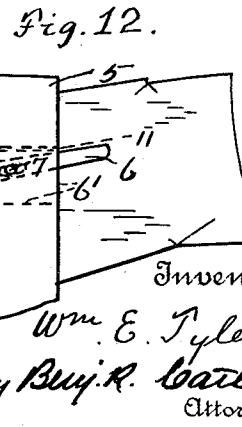
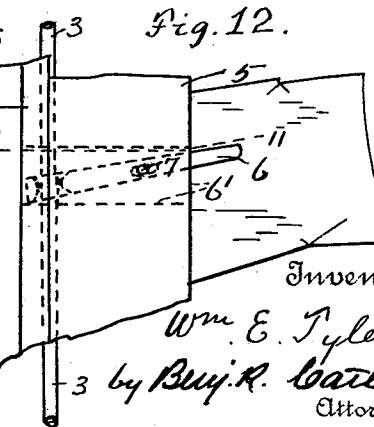
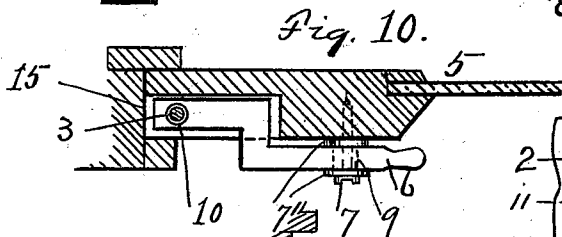
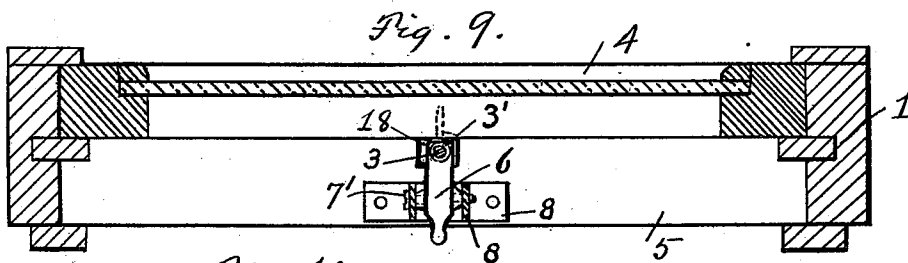
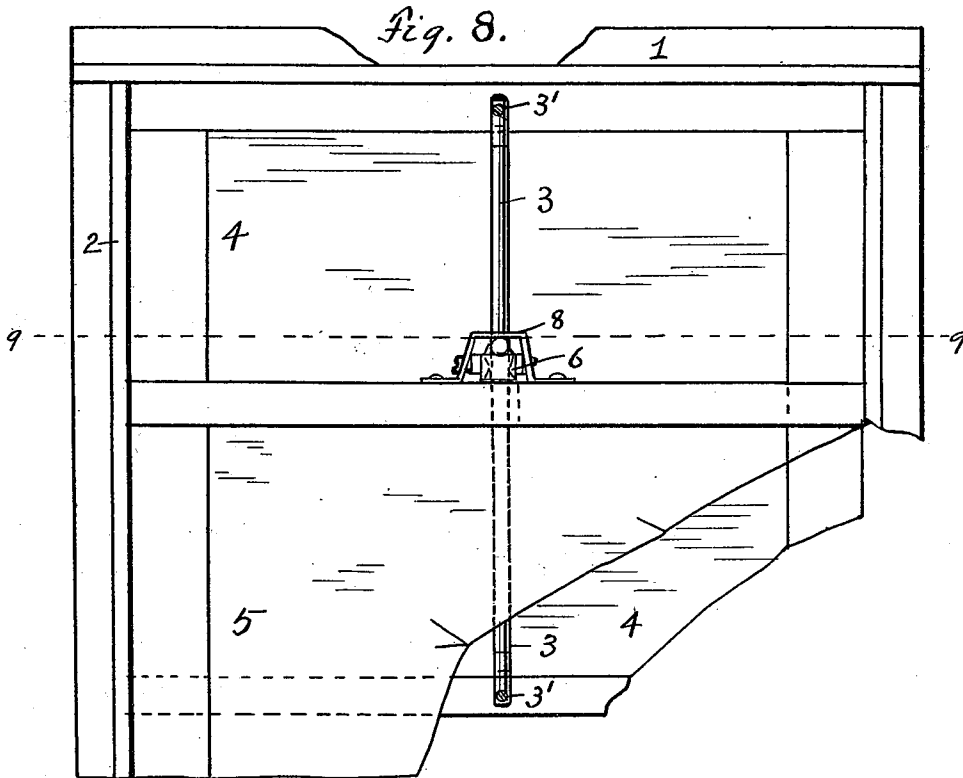
Inventor
Wm. E. Tyler
By Chas. R. Catlin
Attorney

W. E. TYLER.
WINDOW LOCKING DEVICE.

(Application filed Sept. 15, 1899.)

(No Model.)

3 Sheets—Sheet 3.



Witnesses
J. M. Catlin,
A. H. Maher

Inventor
Wm. E. Tyler,
by Benj. R. Catlin
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM E. TYLER, OF ALDIE, VIRGINIA.

WINDOW-LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 666,913, dated January 29, 1901.

Application filed September 15, 1899. Serial No. 730,630. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. TYLER, a resident of Aldie, in the county of Loudoun and State of Virginia, have invented certain new and useful Improvements in Window-Locking Devices; 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 pertains to make and use the same.

This invention relates to window-locking and window-supporting devices having a fixed rod and an improved coöperating pivoted clamping-lever.

In the accompanying drawings, Figure 1 is a front view of a window-frame and window with locking device attached. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a partial central vertical section of the locking-lever. Fig. 4 is a section showing a modified arrangement, the section being taken on a line corresponding to 2 2 of Fig. 1. Fig. 5 is a section on line 5 5 of Fig. 4. Fig. 6 is a front view of a part of the modified arrangement. Fig. 7 is a perspective view of a bracket. Fig. 8 is a front view of another modification. Fig. 9 is a section on line 9. Fig. 10 is a section of a modification on a line corresponding to 5 5 of Fig. 4. Fig. 11 is a section on line 11 11. Fig. 12 is a partial side view of a modification.

1 indicates a window-frame, 2 a stop-bead, and 3 a metal rod secured to said bead, so as to extend along about half the length of the upper window 4 and of the lower window 5. On the side of the lower window is pivoted a locking and holding clamping-lever 6, pivoted at 7 in a universal bracket 8, screwed to the window. Lever 6 is provided with an elongated hole 9 for the pivot and an opening 10, through which rod 3 passes. Opening 10 inclines inwardly from both ends to the middle, when the inclined parts meet in a slightly-rounded, but nearly angular, ridge 11, just large enough to loosely encircle rod 3, where the lever stands at right angles to the rod. When the lever is free to move, it assumes by gravity a slightly-inclined position, Figs. 1 and 6, and positively clamps or bites rod 3, so that it will be impossible to raise the window from the outside; but the window can be raised from the inside by simply moving lever 6 on its

pivot to a right-angle position with relation to the rod. When the window has been raised and the lever released, the latter instantly holds and locks the window in the position which it then occupies. I have found that the particular shape described of the opening 10 is important, as it provides a powerful and positive grip on the rod immediately at the central portion of the opening. The rod 3 only touches the wall of opening 10 at the ridge 11, and owing to the short bite and advantageous leverage rod 3 is strongly and unyieldingly gripped. The elongated slot 9 provides for a slight longitudinal movement of the lever as it turns on its pivot.

The bracket 8 may be of cast metal, having holes 12 for securing-screws, holes 13 for a pivot-screw for the lever 6, and similar holes 14 at right angles to holes 13 for use instead of holes 13 when the bracket is in a certain position. In Figs. 1 and 2 the long side of the bracket is secured on the side of the lower window, with the bracket projecting out from the window, the pivot of lever 16 occupying holes 13.

In Figs. 4, 5, and 6 rod 3 is not supported on strip 2, but is located in one of the grooves 15, in which the lower window 5 slides, the window-sash having a groove 16 to accommodate the rod. Said groove communicates with a notch or depression 17 in the sash, in which lever 6 can be manipulated. In this arrangement the bracket is inverted, the projecting part extending into the notch, as shown in Figs. 4 and 5.

The adaptability of the single bracket for use in different positions in different places is important.

Fig. 8 shows rod 3 secured at the middle of the upper window at 3', the bracket 8 and lever 6 being secured on the top rail of the lower window. The opening 10 is of the form already described and operates to clamp rod 3, as set forth. In this construction the pivot 7' is mounted in holes 14 14 of the bracket—that is, it is parallel with the base. 18 is a notch in the top rail of the lower window to accommodate the rod 3. The lower window is shown partly raised and locked in that position.

When rod 3 is mounted in groove 15, lever 6 may be made Z shape, as in Fig. 10, the

sash being suitably notched to receive the end of the lever having hole 10. If desired, bracket 8 may with some arrangements of the locking-lever be omitted and pivot 7 may be passed through the lever into the window-sash, as in Fig. 10. 7" indicates washers. Other arrangements of the rod and locking-lever may be adopted, so long as the principle of operation is substantially as above described. In Figs. 11 and 12 lever 6 extends through a hole 6' straight through the side bar of the lower window 5.

I am aware that a pivoted locking-lever having a tubular opening has been combined with a fixed rod in a window-holding device, the construction being such that the sharp edges of the lever around the opposite ends of the opening grip the rod oppositely to clamp it, and such construction is not claimed by me. In such construction the said edges while they remain operative bite into the rod sufficiently to indent or mar it, and must do so in consequence of the small leverage incident to the distance between the bearing edges. This is especially objectionable in case of nicely-finished rods. Further, after use said edges become more or less worn and uncertain in operation. By my improvement the opposite bearings of the lever on the rod are situated very nearly in exact opposition to produce an increased leverage, and said bearings are on the inclined opposite surfaces of the rounded approximately angular ridge 11. By this construction the wear of the parts is reduced to a minimum, and the leverage is so increased that the friction of the inclined surfaces is sufficient without any cutting or biting action, such as occurs in prior devices.

Obviously the hour-glass-shaped opening 10 and the rod should have substantially the relative proportions indicated and so that the bearing-points are on opposite sides of the ridge and near its vertex to secure the result desired.

I claim—

1. In a window holding and locking device, the combination of a fixed rod, a cooperating pivoted locking-lever having an hour-glass-shaped opening with a rounded ridge 11, and a pivot for said lever secured to the movable window, said rod and ridge and opening having the relation specified, whereby in operation the rod bears on the lever on the opposite inclined faces of the ridge closely adjacent its vertex.

2. A clamping-lever 6 having an opening 10 tapering from both sides toward the center, having a central clamping-ridge 11, and a pivot-slot 9 in combination with a bracket having sets of pivot-holes at right angles to each other, whereby the lever may be pivoted in different positions relative to the bracket.

3. A Z-shaped clamping-lever 6 having an opening 10 at one end tapering from both sides toward the center, having a central clamping-ridge 11, with slightly-rounded bearing-surface, said lever having a handle at the opposite end and a pivot-slot 9 in the member of the Z-lever having the handle.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM E. TYLER.

Witnesses:

B. W. FRANKLIN,
COR. SHAWEN.