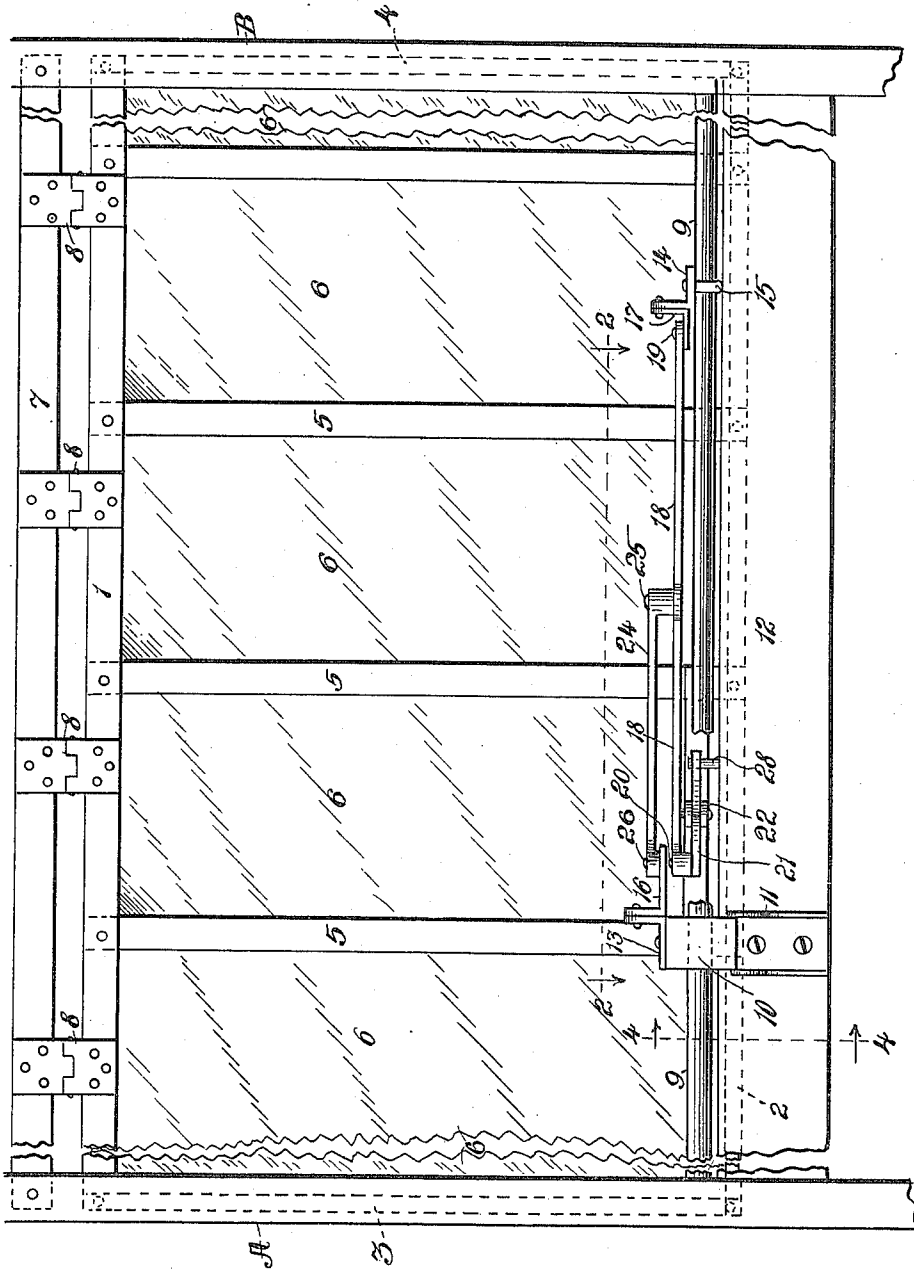


S. E. CIBULAS,  
 SELF LOCKING WINDOW OPERATING DEVICE.  
 APPLICATION FILED MAR. 8, 1915.

1,157,760.

Patented Oct. 26, 1915.

2 SHEETS—SHEET 1.



WITNESSES:  
*Fred H. Beckwith*  
*Faichild Irvine*

**FIG 1**

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*Stephen E. Cibulas*  
 BY *Geo. D. Phillips*  
 HIS ATTORNEY

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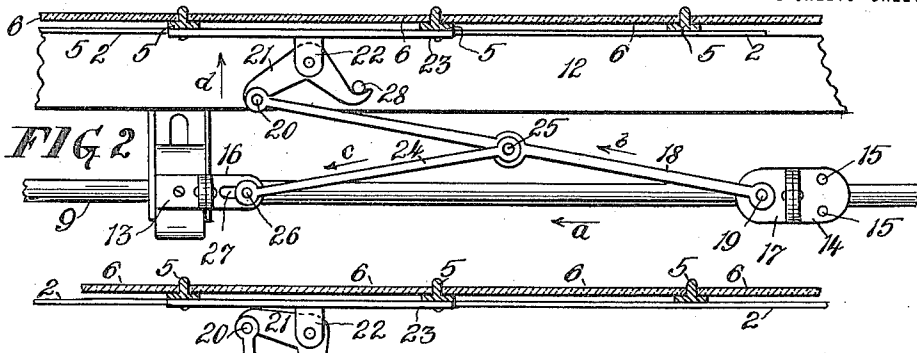


FIG. 3

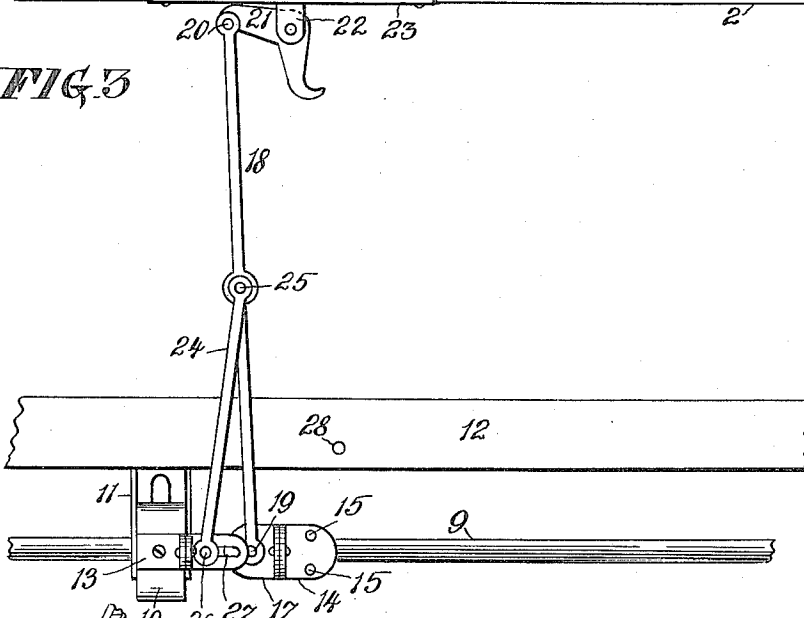
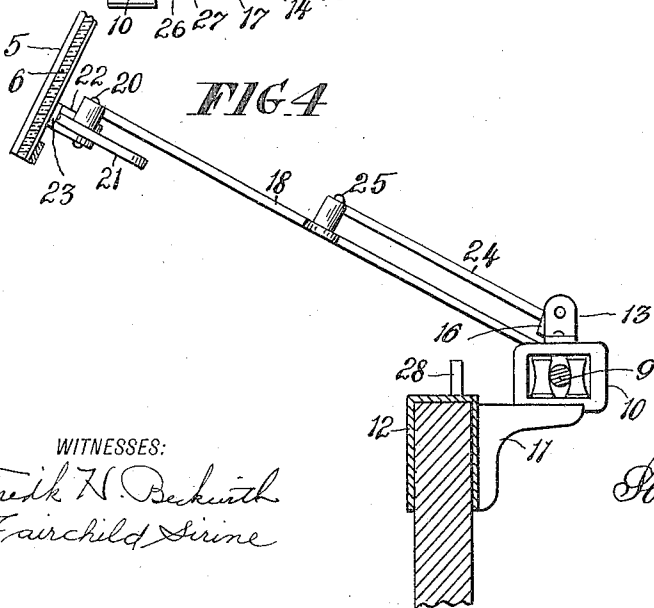


FIG. 4



WITNESSES:

*Frank N. Beckwith*  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

STEPHEN E. CIBULAS, OF BRIDGEPORT, CONNECTICUT.

## SELF-LOCKING WINDOW-OPERATING DEVICE.

1,157,760.

Specification of Letters Patent.

Patented Oct. 26, 1915.

Application filed March 8, 1915. Serial No. 12,729.

*To all whom it may concern:*

Be it known that I, STEPHEN E. CIBULAS, citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Self-Locking Window-Operating 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 appertains to make and use the same.

My invention relates to window operating devices, and particularly to a self-locking feature for same.

Referring to the drawings wherein—

Figure 1 represents a broken vertical inside elevation of a window frame closed, and its supports, and broken view of the operating rod; Fig. 2 is a broken sectional view on line 2—2 of Fig. 1; Fig. 3 shows the window open, and an upper plan view of the window sill, broken view of the operating rod, broken sectional view of the glass and their supporting uprights; and Fig. 4 shows the position of the device and window when open, broken sectional view of the window and window sill, and sectional view of the operating rod on line 4—4 of Fig. 1.

The window frame comprises the top rail 1, bottom rail 2, side rails 3 and 4, and the glass supporting T-shaped rails 5, supporting the several sections of glass 6, and is suspended from the bar 7 by the hinges 8. This bar is secured to the angle iron and uprights A and B.

9 is the operating rod having a reciprocating longitudinal movement in front of the window by any well known hand operating means (not shown). This rod is supported at proper intervals by anti-frictional boxes similar to box 10 herein shown supported on the bracket 11 and is adapted to have an adjustment thereon to and from the iron window sill 12.

13 is a bracket secured to the box, and 14 is a similar bracket secured to the operating rod by means of the U-shaped clip 15.

16 is a bracket pivotally supported to the bracket 13, and 17 is a bracket pivotally supported to the bracket 14. The operating lever 18 is pivotally supported at one end on the pin 19 projecting from the bracket 17, and at the opposite end on pin 20 located on one end of the locking lever 21 pivotally

supported in the ears 22 projecting from the bar 23 secured to two of the T-rails 5. The fulcrum lever 24 is pivotally supported at one end to the pin 25 projecting from the operating lever 18, and at its opposite end on the pin 26, which pin is adapted to have a longitudinal movement in the slot 27 for the purpose presently to be described.

28 is a stationary locking pin projecting from the window sill adapted to be engaged by the locking lever when the window is closed.

To open the window, the rod 9 is longitudinally actuated in the direction of arrow *a*, Fig. 2. The bracket 14, as before mentioned, being secured to the rod, will move therewith and force the operating lever 18 in the direction of arrow *b*, and also cause a temporary idle movement of the fulcrum lever 24 in the direction of arrow *c*. This idle movement of lever 24, while its pin 26 is traveling in the slot 27, is absolutely necessary to allow the locking lever 21 to disengage itself from the pin 28, and when this is accomplished, the pin 26 will have brought up against the end of said slot to form a fulcrum point for the lever 18, which will exert an outward push against the window just as soon as that part of the arm of the locking lever, to which the lever 18 is pivoted, is forced against the bar 23 of the movable window frame as shown in Figs. 3 and 4. As the levers 18 and 24 swing outward, the brackets 16 and 17 will turn on their pivotal supports to compensate for the different angles these levers will assume during the outward movement of the window. The closing of the window by a reverse movement of the operating rod 9 will cause a reengagement of the locking lever with the pin 28 and hold the window frame firmly against the window sill. As the distance between the pivotal points of the levers 18 and 24 is the same, the outward thrust of the lever 18 will be practically at right angles to the window sill.

In a long single window frame as shown, the operating device will be multiplied and placed at such suitable intervals as will give the best result; or a long line of window units with the operating device connected to each unit could be arranged if desired. While I show the locking device associated with a window swinging from the top, it is applicable to windows opening in any direction.

Having thus described my invention, what I claim is:—

A window operating device comprising a pivoted locking lever carried by the window, means adapted to be engaged by the lever to lock the window, a longitudinally actuated operating rod, an operating lever pivoted at one end to the locking lever and at the other end to a pivotally supported member carried by the operating rod, a fulcrum lever pivoted at one end to the operating

lever and at its other end to a movable pivot adapted to have a limited travel in a support pivoted to a stationary part of the device while the operating lever is unlocking the locking lever. 15

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

STEPHEN E. CIBULAS.

Witnesses:

FRANK E. CLARK,  
GEORGE N. SEARS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."