

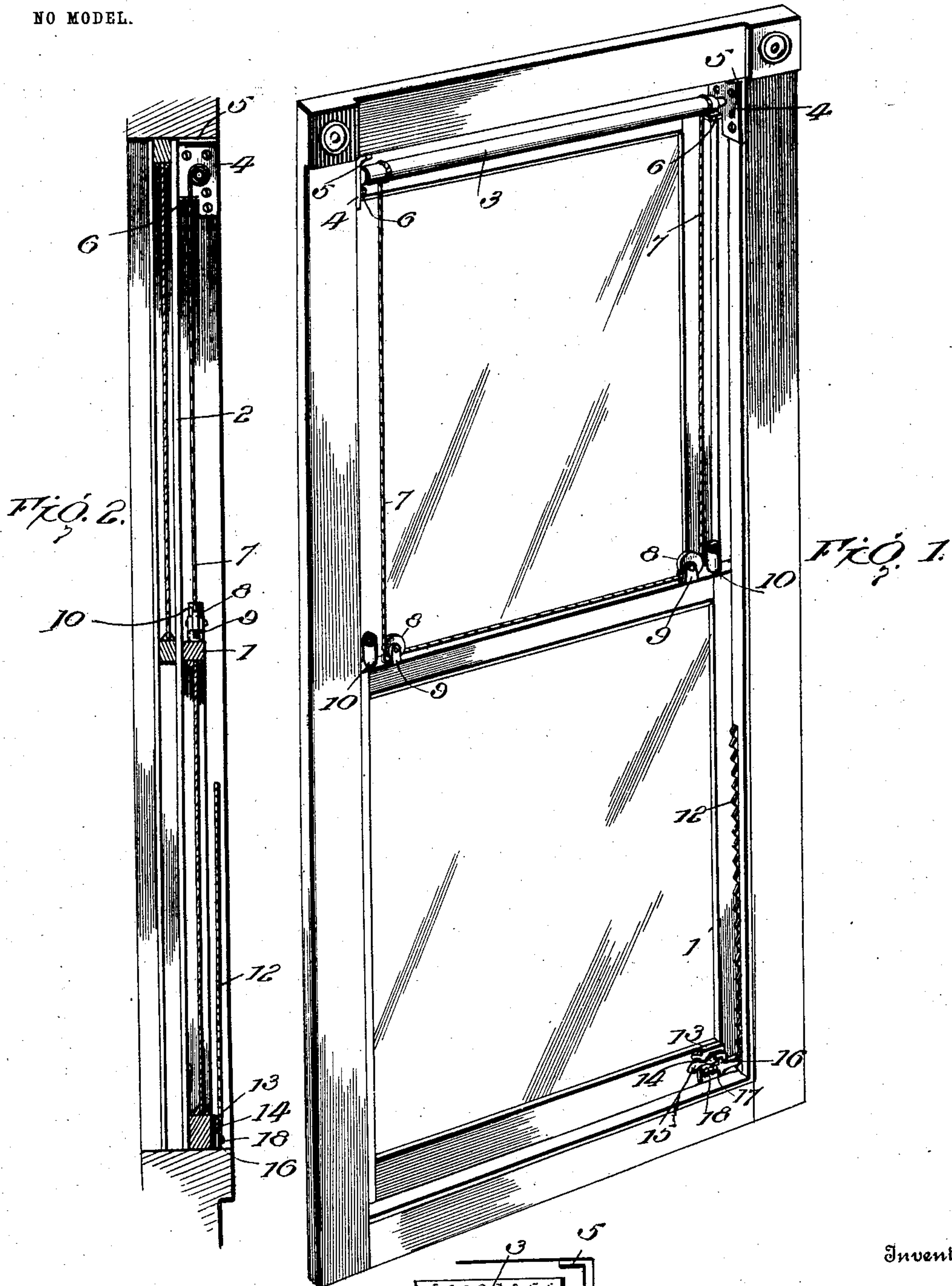
No. 754,575.

PATENTED MAR. 15, 1904.

G. H. LAWRENCE.  
WINDOW SASH.

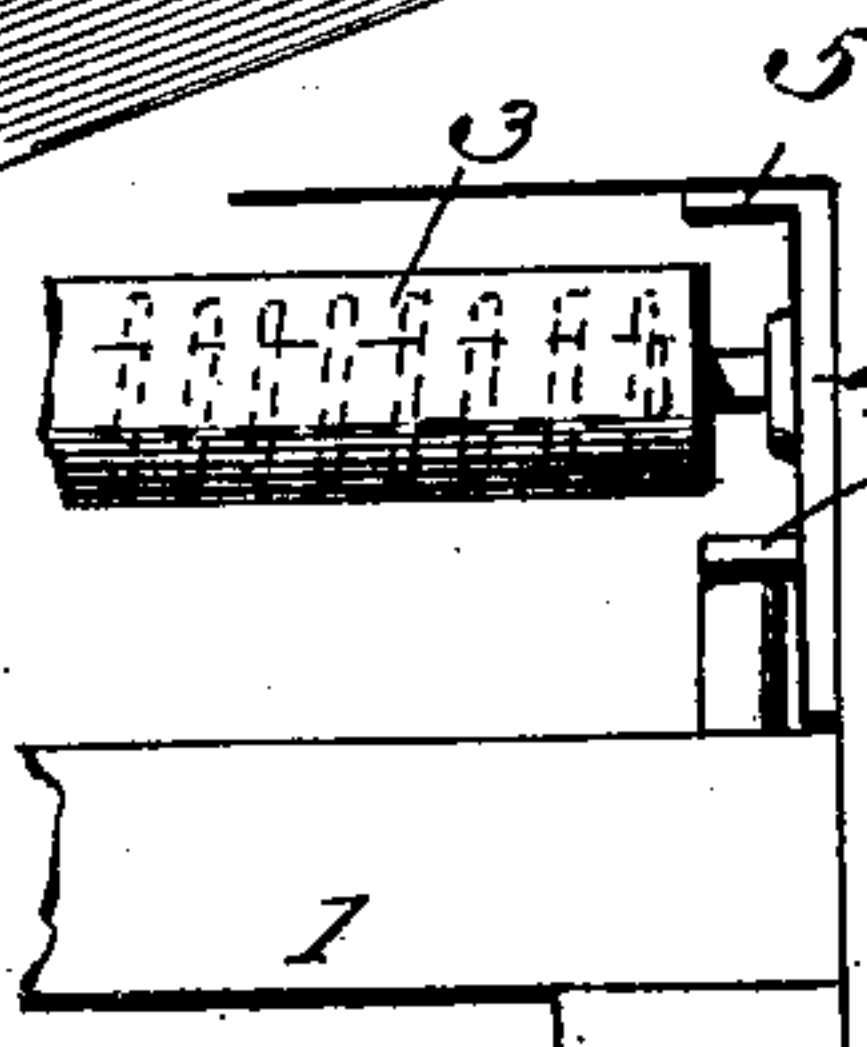
APPLICATION FILED NOV. 10, 1903.

NO MODEL.



Witnesses

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## UNITED STATES PATENT OFFICE.

GEORGE H. LAWRENCE, OF MIDDLETOWN, NEW YORK.

## WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 754,575, dated March 15, 1904.

Application filed November 10, 1903. Serial No. 180,612. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. LAWRENCE, a citizen of the United States, residing at Middletown, in the county of Orange and State of New York, have invented certain new and useful Improvements in Window-Sashes, of which the following is a specification.

This invention relates to improvements in that type of window-sash operable by means of a spring-roller adapted to normally exert a tension to raise the sash, and aims to provide a general simplicity of structure more especially adapted for use in cars. The sash is adjustable to different positions relative to the window-opening, and lock means are provided, whereby the desired adjustment of the sash may be secured.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a window, showing the application of the invention thereto. Fig. 2 is a vertical sectional view through a window with the invention applied. Fig. 3 is a broken view showing the relative disposal of the roller when mounted in the brackets.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The window-sash is designated by the numeral 1 and is of any ordinary structure as usually employed. The sash is vertically movable, sliding in ways on the window-frame, being held in position by lock means, which will be more fully described hereinafter. Upon the upper portion of the window-frame and mounted transversely thereof between the jambs 2 is a spring-roller 3, which roller is of any suitable form adapted for the purpose of the invention and sufficiently substantial to raise the window-sash 1 when the latter is re-

leased by operation of the lock means aforesaid. The roller 3 is supported by brackets 4, which brackets are provided with securing members 5 at their lower portions, within which are formed openings through which screws or like fastenings are passed, whereby the brackets are attached to the window-frame, as will be readily comprehended. The lower portions of the brackets 4 are provided with laterally-extending stops 6, the purpose of which will be seen as the description proceeds. From the roller 3 extends a cord or like flexible support 7, the ends of which are attached to the roller and which pass under pulleys 8, mounted in brackets 9, secured to the upper side of the sash 1. Brackets 9 are attached by screw-fastenings or analogous means. Adjacent the brackets 9 and upon the upper side of the sash are secured the rubber buttons 10, which are adapted to engage the stops 6 of the brackets 4 to limit the upward movement of the sash, as well as to serve as cushion means to prevent injury should the sash be accidentally released and carried upward by the spring-roller. The cord 7, which suspends the sash in the window-frame, equalizes in a manner which will be easily understood as the sash 1 moves upwardly, this being of importance to the perfect operation of the invention.

The sash is adapted for adjustment at different heights, as before mentioned, the rack-bar 12 being secured to a side of the window-frame to be engaged by the lock means carried by the window. The lock means consists of the casing 13, secured to the lower portion of the sash, within which is mounted the bell-crank member 14. One of the arms of the member 14 projects without the casing and is formed into a finger-piece 15 to be grasped in operating the lock. A latch-bolt 16 is slidable within the casing and is provided with a lug 17, which is engaged by the inner arm of the member 14 in actuating the said bolt.

In the operation of the device it is only necessary to actuate the finger-piece 15 so as to disengage the latch-bolt 16 from the rack-bar and the sash will move upwardly under the influence of the spring-roller 3 and may be locked at any desired adjustment by release of the finger-piece. As the sash moves upwardly

the cord 7 winds upon the roller and equalizes, as described hereinbefore.

Having thus described the invention, what is claimed as new is—

5 1. In a device of the class described, the combination with a window-frame, brackets secured to the said frame, stops projected from said brackets, a spring-roller mounted in the said brackets, a sash movable in the window-  
10 frame, connecting means between the spring-roller and the sash for actuation of said sash, the movement of the sash being limited by the stops of the brackets aforesaid.

15 2. In a device of the class described, the combination with a window-frame, brackets secured to the said frame, a spring-roller mounted in the said brackets, stop-flanges pro-

jected laterally from the lower portion of the brackets, a sash movable in the window-frame, pulleys secured to the upper portion of the sash, a cord having its ends secured to the spring-roller and passing about the pulleys upon the sash, and cushion means carried by the upper portion of the sash for coöperation with the stop-flanges of the supporting-brackets aforesaid to limit the upward movement of the sash.

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

GEORGE H. LAWRENCE. [L. s.]

Witnesses:

IRA CODDINGTON,  
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