

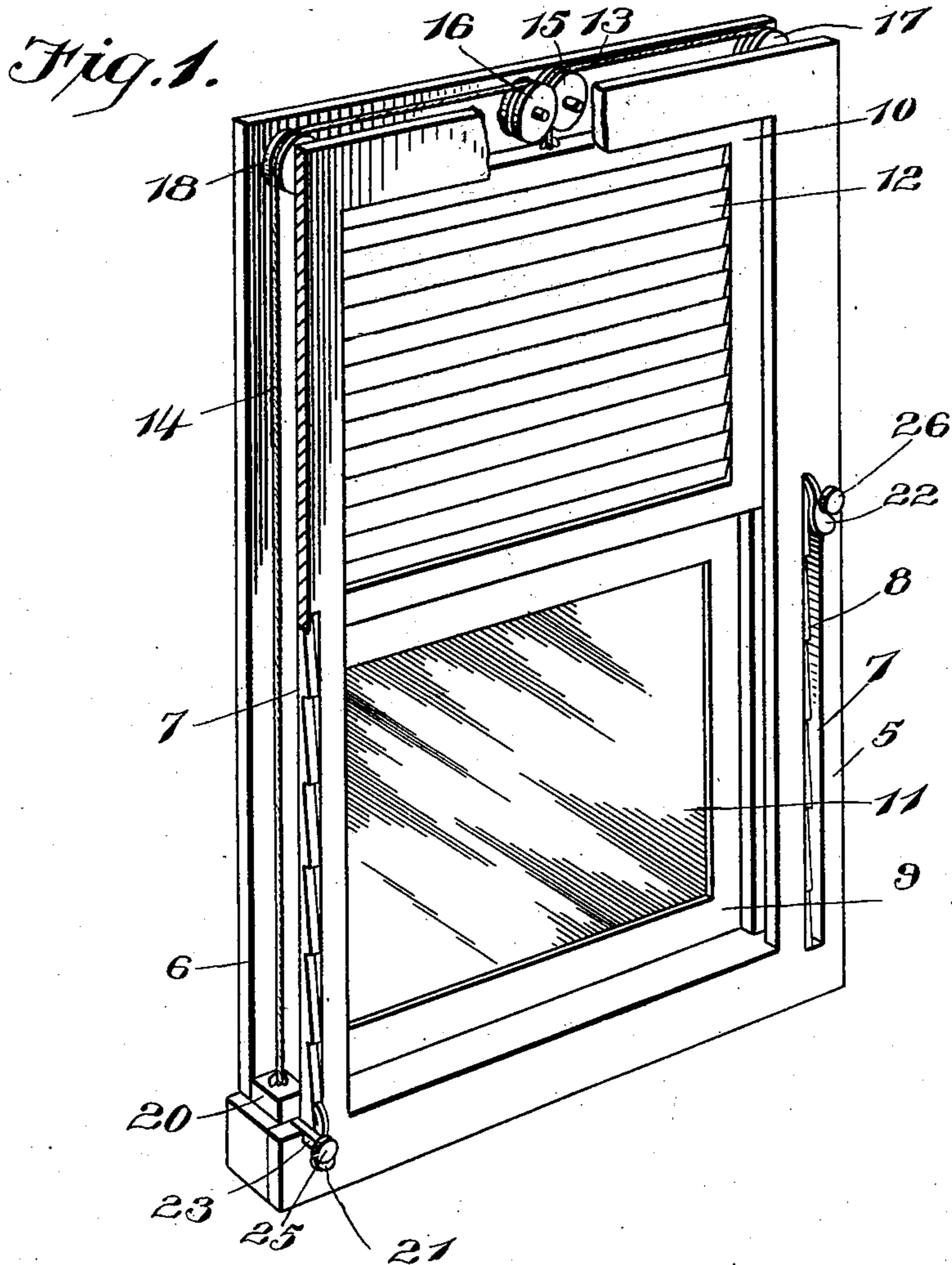
No. 754,634.

PATENTED MAR. 15, 1904.

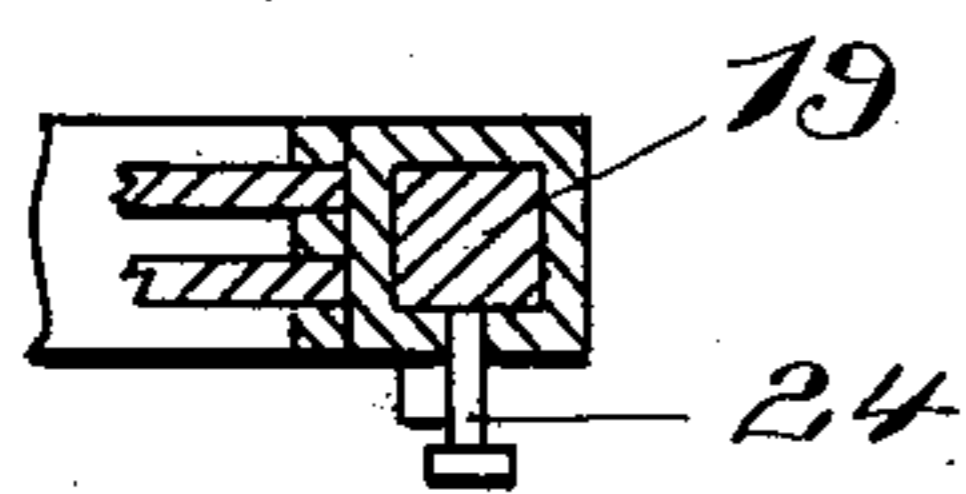
A. R. BELL.  
SASH LIFTER FOR CAR WINDOWS.

APPLICATION FILED DEC. 2, 1902.

NO MODEL.

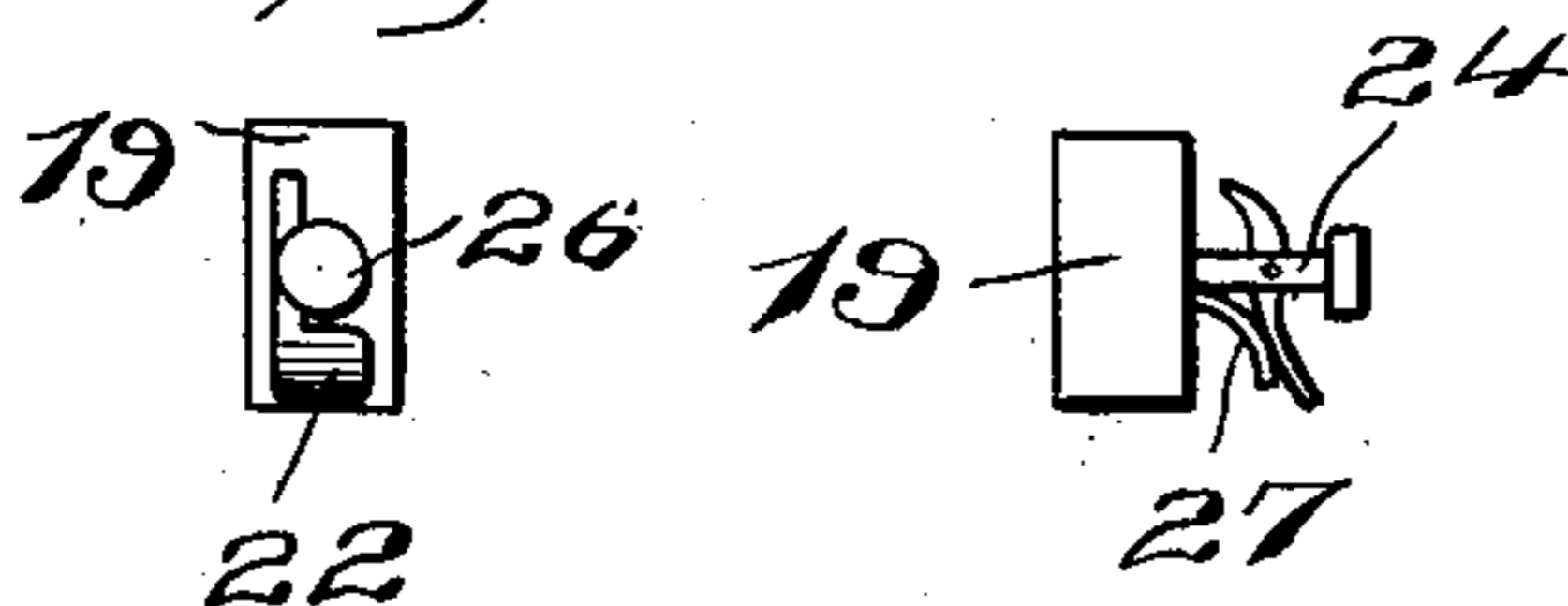


*Fig. 2.*



*Fig. 3.*

*Fig. 4.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ANGELINE R. BELL, OF KNIGHTSTOWN, INDIANA.

## SASH-LIFTER FOR CAR-WINDOWS.

SPECIFICATION forming part of Letters Patent No. 754,634, dated March 15, 1904.

Application filed December 2, 1902. Serial No. 133,634. (No model.)

*To all whom it may concern:*

Be it known that I, ANGELINE R. BELL, a citizen of the United States, residing at Knightstown, in the county of Henry, State of Indiana, have invented certain new and useful Improvements in Sash-Lifters for Car-Windows; 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.

This invention relates to sash-lifters, and it is particularly designed for manipulating the sash of car-windows, although it will be understood that it may be used in other specific connections, the object of the invention being to provide a construction by means of which the sash may be raised and lowered and may be held securely at the desired elevation.

A further object of the invention is to provide an arrangement of shift and latch which will facilitate the simultaneous operation of both.

Other objects and advantages of the invention will be understood from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view of a window equipped with the present invention, one of the boxes in which operates a slide being shown in section to illustrate the arrangement of the slide and a portion of the upper part of the frame being broken away to show the pulleys over which one of the lifting-cords operates. Fig. 2 is a transverse section through the window, including the weights, the latches, and the sashes. Fig. 3 is a side elevation of the sliding block with the finger-piece attached. Fig. 4 is a front elevation of the sliding block and finger-piece.

Referring now to the drawings, there is shown a window including a frame 5, at the sides of which are weight-boxes 6, having vertical slots in the lower portions of the front walls, as shown at 7, and at the inner sides of the slots are secured the racks 8. Mounted in the window-frame are the vertically-slidable sashes 9 and 10, the former of which

carries a glass 11, while the latter has transverse slats 12 and forms a blind, and attached to the upper ends of these sashes are cords 13 and 14, which are taken upwardly through the top of the sash and over pulleys 15 and 16 in opposite directions and then downwardly over pulleys 17 and 18 and into the boxes 6, where they are connected to the weights 19 and 20, the sash 9 being thus connected to the weight 19, while the frame 10 is connected to the weight 20. These weights are not quite heavy enough to counterbalance the weights of the sashes to which they are attached, and to hold the weights against upward movement to prevent downward movement of the sashes latches are provided. The latches for holding the weights against upward movement consist of the thumb-levers 21 and 22, which are pivoted upon the stems 23 and 24 of knobs 25 and 26, and which stems are passed through the slots 7 and engaged with the weights 19 and 20, respectively, so that by grasping either knob the attached weight may be moved downwardly to raise the corresponding sash or may be permitted to rise gradually to slowly lower the attached sash. The thumb-levers are adapted for engagement of their upper ends with the racks 8 at the lower sides of the teeth of the latter to prevent upward movement of the weights, and as the upper faces of the rack-teeth are beveled the weights may be readily drawn downwardly to raise the corresponding sashes, and at which time said levers will snap over the teeth, the levers being held yieldably in engagement with the rack-teeth by means of leaf-springs 27, which are engaged with or attached to the stems of the knob and rest with their outer ends against the thumb-pieces at the lower ends of the latch-levers. With this construction it will be seen that if either knob be grasped and moved downwardly the corresponding sash will be raised and the connected latch-lever will run freely over the adjacent rack, and when the sash has been raised to the proper height the sash will hold the weight with the knob in position with its latch-lever in close engagement with the corresponding teeth of the rack, the utility of making the weight less heavy than the sash being that the

sash can thus hold the weight with the latch-lever securely in its engaged position. If the counterbalance and sash were of the same weight, there would be a vertical working of the sash in the frame, with a corresponding objectionable movement of the latch-lever from its proper position. The relative arrangements of the knobs and latch-levers are such that when the knob is grasped with the thumb and forefinger the forefinger will hold the latch in disengaging position, while the knob is manipulated to raise or lower the sash. For this reason the finger-piece 29 of each latch-lever projects laterally below the corresponding knob.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

The combination with a window-frame having weight-boxes, longitudinal slots in the fronts of the weight-boxes, sashes slidably mounted in the frame, weights in the boxes, cords connecting the sashes with their respective weights, and racks upon the faces of the boxes at the sides of the slots, of knobs having stems passed through the slots engaged with the weights, and latch-levers pivoted to the stems and having finger-pieces projecting laterally below the knobs for operation simultaneously with the knobs.

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

ANGELINE R. BELL.

Witnesses:

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