(No Model.)

A. L. SCHILLER.

SASH LOCKING AND OPERATING DEVICE.

No. 561,820. Patented June 9, 1896.

Fig. 1.

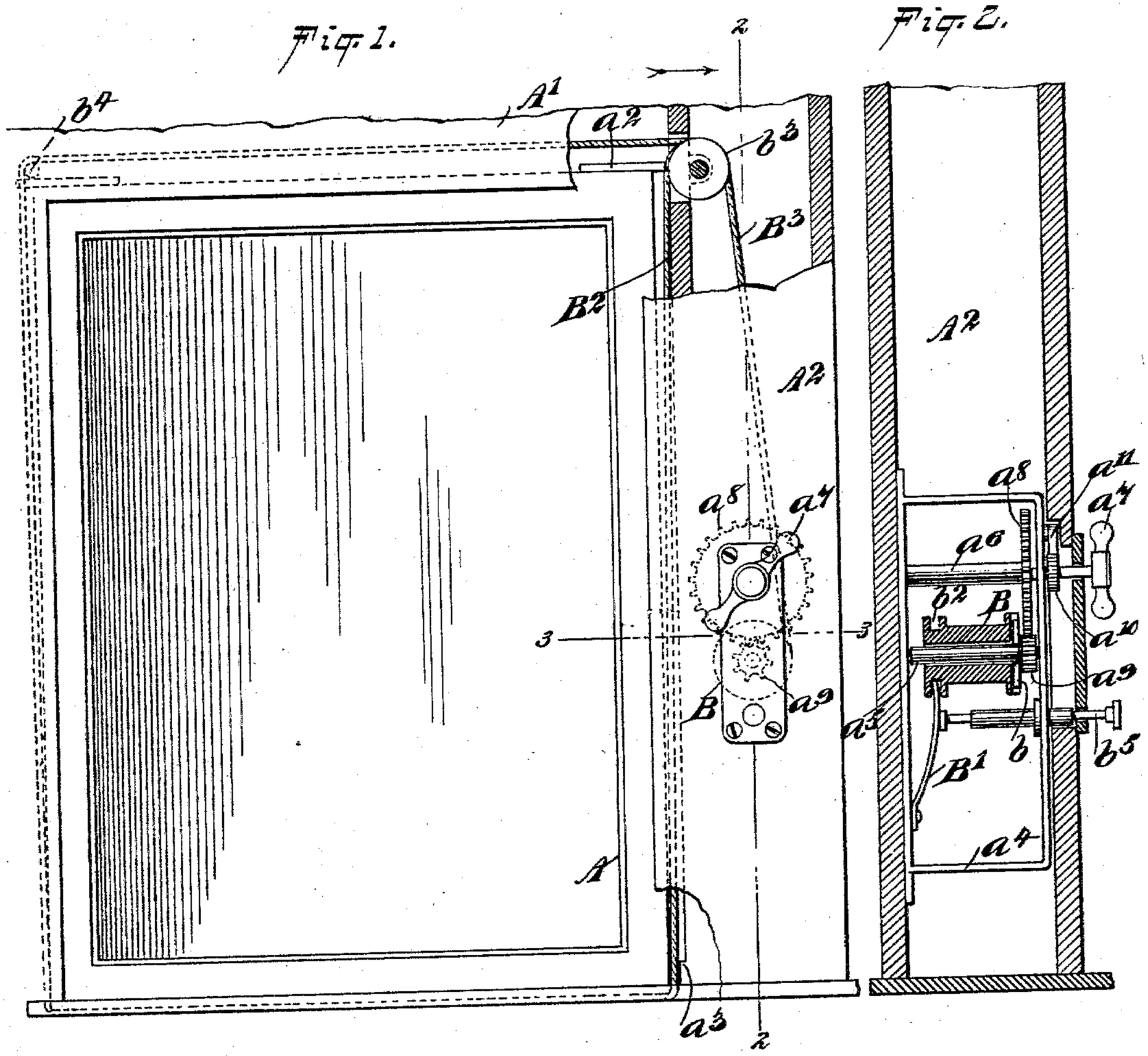
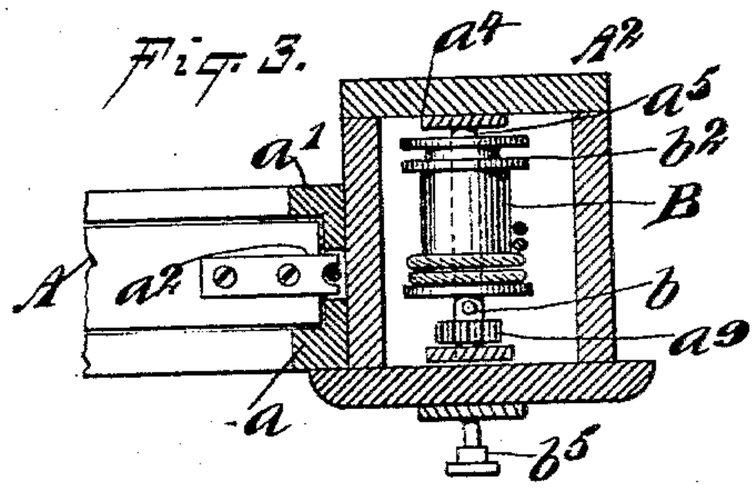


Fig. 2.

Fig. 4.

Fig. 3.



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SASH LOCKING AND OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 561,820, dated June 9, 1896.

Application filed January 30, 1896. Serial No. 577,354. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM L. SCHILLER, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented new and useful Improvements in Sash Raising and Locking Devices, of which the following is a full, clear, and exact description.

This invention relates to devices for raising and locking window-sashes, and is particularly adapted to the single sash generally employed in vehicles—such, for instance, as cars—and the object is to provide such a device whereby the sash may be lowered by gravity to an open position and raised to a closing position by the simple arrangement of a drum and flexible connections between the drum and sash, and also wherein the window-sash may be secured at any desired opening.

I will describe a device embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is an elevation of a window sash and casing having the device embodying my invention embodied therein. Fig. 2 is a vertical section on the line 2 2 of Fig. 1. Fig. 3 is a horizontal section substantially on the line 3 3 of Fig. 1, and Fig. 4 is a face view of a clutch-section employed.

Referring to the drawings, A designates a window-sash adapted to slide vertically in a window-casing A', which is open at the bottom, so that the sash may slide downward into the body of the vehicle. The sash slides between the stop-beads a a', and its upper rail is provided with laterally-extending fingers a^2, adapted to engage stop-blocks a^3 in the lower part of the casing to prevent the sash from moving entirely out of the same.

Secured within a boxing A^2 at one side of the window-casing is a frame a^4, within which is journaled a shaft a^5. A drum B is mounted on the shaft a^5. This drum is designed to be moved longitudinally of the shaft a^5 when it is desired to lower the window-sash, but is adapted to rotate therewith when it is desired to raise the sash. As a means to cause the drum B to rotate with the shaft, I provide a clutch mechanism between the two parts, comprising a pin b, extended transversely through an opening in the shaft a^5 and adapted to engage in grooves b' in the adjacent end of the drum B. These clutch-sections are held in yielding connection by means of a spring B′, secured at one end to the frame a^4 and having its opposite free end engaged in an annular groove b^2, formed in the inner end of the drum B.

A flexible connection B^2 extends from the drum B over a pulley b^3, pivoted in the upper portion of the boxing A^2, and through an opening in the sash to a connection with the lower end of the side rail of the sash, and a similar connection B^3 extends from the drum B over the said pulley b^3, thence across the upper end of the sash over a pulley b^4, and down the adjacent side rail of the sash to a connection therewith.

A push-pin b^5 engages its inner end with the spring B′ and extends outward through an opening in the front wall of the boxing A^2, or in a plate secured thereto, and by pushing inward on this push-pin the drum B will be moved longitudinally of the shaft a^5, releasing the clutch-sections, so that the drum B may freely rotate and allow the window-sash to move downward by gravity. Upon releasing the push-pin the spring will cause the drum B to move to its locking position with the shaft a^5, so that by rotating the shaft the connections B^2 B^3 will be wound upon the drum and consequently raise the window-sash.

As a means to rotate the shaft a^5 and the drum thereon to raise the sash, I employ a shaft a^6, having bearings in the frame a^4 and one end of which is extended outward and provided with a finger-piece a^7. A gear-wheel a^8 on the shaft a^6 meshes with a pinion a^9 on the shaft a^5, and to prevent a backward rotation of the shaft a^6 I provide it with a ratchet-wheel a^{10}, which is engaged by a dog a^{11}, pivoted to the frame a^4.

It is obvious that the sash may be held at any desired opening upon releasing the push-pin when said desired opening shall have been reached.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A sash raising and locking device, com-

prising a rotary shaft, a drum movable longitudinally on said shaft, a clutch mechanism between the drum and shaft, whereby the said drum and shaft may rotate together, means for moving said clutch-sections into engagement, means for separating the sections, and flexible connection between the drum and window-sash, substantially as specified.

2. The combination with a window-casing, of a sash movable vertically therein, a rotary shaft arranged at one side of the casing and having a finger-piece extended through the front wall thereof, a ratchet mechanism to prevent the backward movement of the said shaft, a second shaft rotated from the first shaft, a drum movable longitudinally on the second shaft, a clutch mechanism between the said drum and shaft, whereby said drum and shaft may rotate together, a spring having its free end in an annular slot in the said drum, a push-pin engaging said spring and extending outward through the front of the casing, and flexible connections extending from said drum over pulleys to the window-sash, substantially as specified.

ABRAHAM L. SCHILLER.

Witnesses:

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