Nov. 11, 1941. S. E. BLESSIN 2,262,133

LATCHING DEVICE

Filed July 3, 1940

Fig. 1

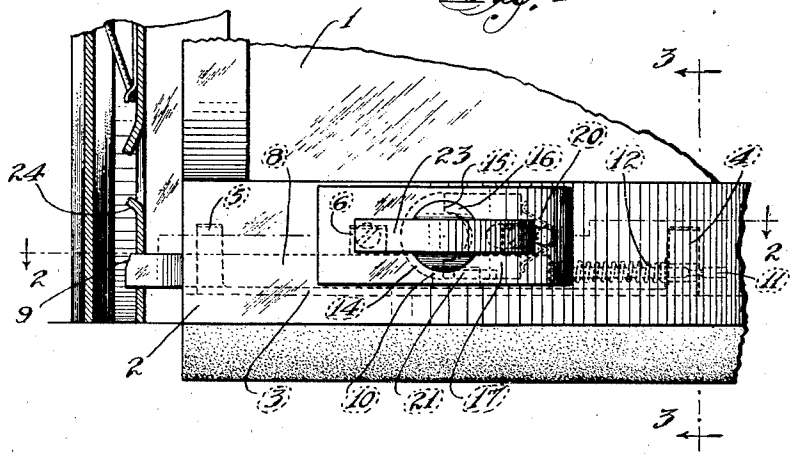


Fig. 3

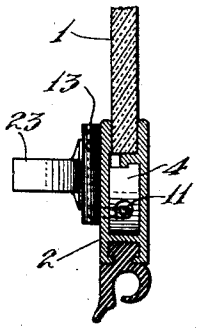


Fig. 2

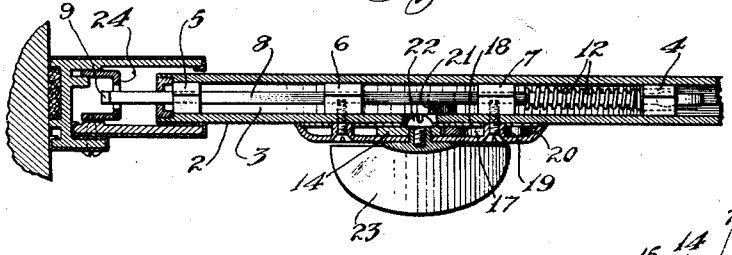


Fig. 4

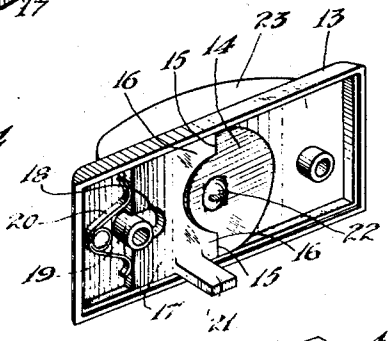
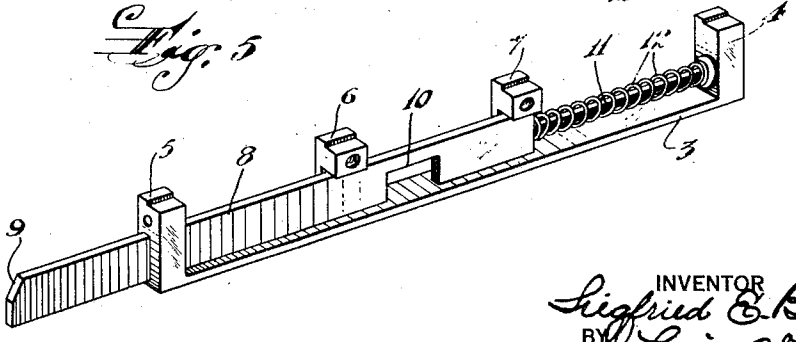


Fig. 5



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LATCHING DEVICE

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Application July 3, 1940, Serial No. 343,731

3 Claims. (Cl. 292—169)

This invention relates to latching devices and more particularly to improvements in latching devices especially adapted for use on windows of public conveyances.

Heretofore, latching devices as used on windows for railway cars, buses and the like have comprised a pawl and ratchet arrangement which required the placing of the fingers beneath a ledge and the simultaneous pressing downward of the thumb on a trigger to release a pawl in order to raise or lower the window. This has not only been inconvenient and awkward but often requires the exertion of considerable force. Such devices also have been objectionable in that the manipulating handles for the latches project above the framework of the window and presents an obstacle which prevents easy and thorough cleaning of the window.

It is, therefore, an object of this invention to provide a latch for use on windows of public conveyances which is simple in construction and capable of being released by manipulating a handle in any direction, so that a person need grasp only the latch releasing handle in order to raise or lower a window.

A further object is to provide a latch for windows in which the manipulating parts are spaced from the window glass and do not present an obstacle when the window is being cleaned.

These and other advantageous objects, which will later appear, are accomplished by the simple and practical construction and arrangement of parts hereinafter described and exhibited in the accompanying drawing, forming part hereof, and in which:

Fig. 1 is an elevational view of a portion of a window having a latch mounted thereon,

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1,

Fig. 3 is a sectional view taken on line 3—3 of Fig. 1,

Fig. 4 is a perspective view of the inside of a casing for the latch, and

Fig. 5 is a perspective view showing details of the latching device.

Referring to the drawing, in Fig. 1 there is shown a section of a window 1 having a sash with a bottom rail 2, which is substantially hollow and has positioned therein a bar 3 provided with upstanding lugs 4 and 5, at the ends thereof, and intermediate upstanding lugs 6 and 7 which support and guide a plunger 8 having a bevelled nose 9 and a cut-out portion 10 adjacent one end thereof. The plunger has attached thereto a rod 11 which passes through the lug 4 and is encircled by a coil compression spring 12 which abuts the lug 4, and the plunger 8.

Mounted on the outside of the bottom rail 2 is a flat casing 13 which is secured to the lugs 6 and 7 by means of screws as shown in Fig. 2. Pivotally mounted in casing 13 is a semi-circular segment 14 having diametrically arranged shoulders 15 which abut the arms 16 of a small plate 17 slidably mounted in the casing and having a slot 18 which enables the plate 17 to be guided by a pin 19. The plate is constantly urged towards the segment 14 by spring 20. Projecting from the plate 17 is a lug 21 which passes through the cut-away portion 10 in the plunger 8.

The segment 14 is fixed to a pin 22 which is rotatably mounted on the casing 13 and has fixed thereto a manipulating handle 23. The plunger 8 is adapted to engage a rack 24 to hold the window in different elevations.

In operation, when it is desired to release the plunger from the rack 24, rotation of the handle 23 in either direction will cause a shoulder 15 of segment 14 to move the plate 17 against the action of spring 20. Movement of plate 17 to the left as shown in Fig. 4, will move the lug 21 in the same direction and the lug 21 will engage the plunger 8 and move it to the right (see Fig. 5) against the action of the compression spring 12 and disengage the plunger from the rack 24. As soon as the handle is released, the coil spring will urge the plunger 8 automatically to a position to reengage the rack 24.

From the above description it will be seen that movement of the handle 23 in any direction is sufficient to release the latch and it is not necessary to simultaneously bear down on a pawl releasing trigger and exert force on a ledge in order to raise or lower a window, as the handle itself also serves as a means for raising or lowering the window.

It will be seen that the handle 23 is positioned an appreciable distance below the window pane so that it will in no way interfere with the cleaning of the window as has been the case with latching devices heretofore provided on windows for public conveyances. The latch is of extremely simple construction and positive in operation with no parts to get out of order.

The foregoing disclosure is to be regarded as descriptive and illustrative only and not as restrictive or limitative of the invention of which obviously embodiments may be constructed, including many modifications, without departing

from the spirit and scope of the invention herein set forth and denoted in the appended claims.

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

1. A latching device for use with a window sash having a substantially hollow bottom rail, said device comprising a bar positioned in said bottom rail, said bar having upstanding lugs, a plunger mounted on said bar and guided by said lugs, said plunger having a rod attached thereto and passing slidably through one of said lugs, a compression spring encircling the rod and bearing against the plunger and said lug, a casing adapted to be mounted on the bottom rail, a segment pivotally mounted in the casing and having a pair of shoulders, a handle connected with said segment to rotate therewith, a plate slidably mounted in the casing and having arms engaging said shoulders on the segment, a spring bearing against said plate to constantly urge the said arms in engagement with the shoulders of the segment, means to guide the plate in the casing, said plunger having a cut-away portion therein, and a projection on said plate projecting through said bottom rail and positioned in the cut-away portion of the plunger.

2. In a latching device for use with a window sash having a substantially hollow bottom rail, a bar positioned in said bottom rail, a plunger slidably mounted on said bar, resilient means constantly urging the plunger in one direction, a casing adapted to be mounted on the bottom rail, a segment having a pair of shoulders pivotally mounted in said casing, a handle connected with said segment to rotate therewith, a plate slidably mounted in the casing and having arms engaging said shoulders, resilient means constantly urging said plate into engagement with said shoulders, and means on said plate projecting through said bottom rail and adapted to engage and move the plunger.

3. A latching device for use with a window sash having a substantially hollow bottom rail, said device comprising a bar positioned in said bottom rail, said bar having upstanding lugs, a plunger mounted on said bar and guided by said lugs, said plunger having a rod attached thereto and passing slidably through one of said lugs, a compression spring encircling the rod and bearing against the plunger and said lug, a casing adapted to be mounted on the bottom rail, a segment pivotally mounted in the casing and having a pair of shoulders, a flat handle connected with said segment to rotate therewith, a plate slidably mounted in the casing and having arms engaging said shoulders on the segment, means to guide the plate in the casing, said plunger having a cut-away portion therein, and a projection on said plate projecting through said bottom rail and positioned in the cut-away portion of the plunger.

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