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MOTOR VEHICLE BUS WINDOW OPERATING MECHANISM

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Fig. 1.

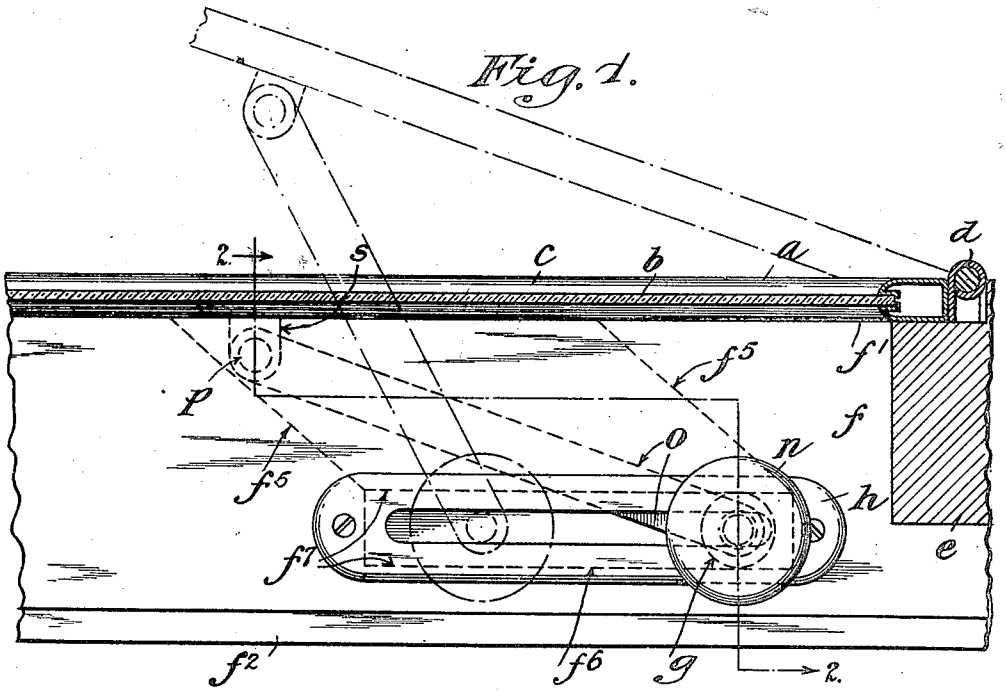
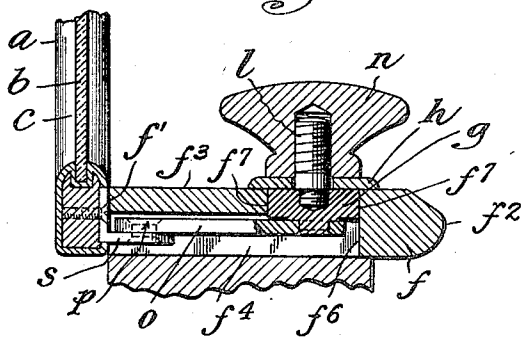


Fig. 2.



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UNITED STATES PATENT OFFICE.

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MOTOR-VEHICLE BUS-WINDOW-OPERATING MECHANISM.

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In motor vehicle buses it is often found desirable to provide hinged windows and particularly windows hinged along a vertical side because of the increased ventilation afforded thereby. The interior of bus bodies is provided, usually, with relatively wide window sills upon which may be mounted mechanisms for opening and closing the windows. The operating mechanism in the past has been exposed and has been a constant source of annoyance on account of damage to the wearing apparel of passengers occasioned by resting their arms on the sills for support. It is therefore an object of the present invention to provide operating means on the sills for opening and closing the windows of motor buses which will prevent damage to the wearing apparel of passengers.

Another objection to the use of exposed operating mechanisms for the windows of motor buses is that the interior of the vehicle is rendered unsightly, and it is therefore a further object of the invention to provide mechanical means for opening and closing such windows, which means shall be hidden from view.

Further objects of the invention are the provision of means for opening and closing the windows of motor buses which are simple of operation and are capable of being operated by persons within the vehicle without the necessity of touching the window. The latter consideration is important because of the danger to passengers leaning out of the windows of a rapidly moving vehicle.

More particularly, the invention proposes the provision of a motor bus window operating mechanism disposed within a recess in the window sill and below the surface thereof. A track or guide is provided near the inner edge of the sill in which is slidably mounted a handle or knob by means of which the operating mechanism is controlled. The window may be held closed or open at any desired angle by locking means co-operating with the track and knob. The controlling means are so mounted that movement thereof along a fixed path determined by the track or guide will cause arcuate movement of the window about a fixed point.

The invention will appear more fully in the following detailed description when read in connection with the accompanying drawings, in which:

Figure 1 is a plan view of a motor vehicle bus window and its operating mechanism according to the invention.

Figure 2 is a view taken along the broken line 2—2 in Figure 1 and looking in the direction indicated by the arrows.

The window a, formed of a glass pane b mounted in a frame c, is hingedly mounted upon the upright post e of a window jamb, as by means of the hinge d. The lower portion of the window jamb comprises a sill f having an outer edge f', against which abuts the lower section of the window frame c, and an inner edge f^2. The sill f is formed with a recess f^4, below the upper surface f^3 thereof, having vertical sides f^5 inclined to the edge f' of the sill and passing from the edge f' to a point proximate the opposite edge of the sill f^2. At the end f^6 of the recess is formed a channel having vertical sides f^7, f^7, and opening on the upper surface f^3 of the sill. Above the channel f^7 the track or guide h is screwed to the sill. The follower g, disposed within the channel f^7, carries the threaded locking pin l on which is mounted the internally threaded locking nut n. To the bottom side of the follower g is pivoted the link o. The link o is pivoted at its other end to a pin p, to which is also pivoted an arm of the bracket s carried with the window frame c.

Assuming the window to be closed the locking nut n will be at the right-hand end of the track, as shown in full lines in Figure 1. To open the window it is only necessary to turn the nut counter-clockwise to release the pressure on the track and then to move the nut, and with it the pin l and the follower g, to the left along the track. The movement of the follower will cause the link o to force the window outwardly about its hinge d as shown by the dot and dash lines in Figure 1. To close the window the nut n is moved to the right along the track. It will be obvious that the window may be locked in any extreme or intermediate position, open or closed, by merely turning the nut n in a clockwise direction thereby setting up frictional engagement between the bottom of the nut and the top of the track h and between the top of follower g and the bottom of the track h.

Since the pin l is removably mounted with the follower g the operating mechanism may be assembled within the recess after the sill has been put in place on the vehicle body. Similarly, the operating mechanism may be

removed when necessary without removing the sill. As will be obvious, however, the pin *l* may be fixedly attached to the follower *g* if desirable.

It will be noted that arcuate movements are imparted to the window by merely moving the locking nut *n* in a fixed path determined by the track. The operation of the mechanism as herein described is simple and the arrangement of parts permits of a simple and rugged construction of great utility. The arrangement is sightly by virtue of the hidden disposition of the various mechanical elements. This fact also provides a degree of protection of the parts otherwise impossible and further lessens the liability of accidental damage to the wearing apparel of those engaged in opening or closing the window.

The construction herein set forth is adaptable to any situation wherein it is desired to open and close a window by means within easy reach, but remote from the window. It is therefore particularly suited for use in connection with windows situated near the driver of a motor bus since it permits him to open and close the window without leaving his seat and, on account of its simplicity of operation, without taking his eyes from the road. It thus also makes it possible for the driver to easily open and close the window in the dark. The invention, however, will find a wide variety of uses and no limitation upon its scope is intended except as indicated in the appended claims.

What I claim is:

1. In a motor vehicle having a hinged window, a sill for the window, a recess formed in the sill below the upper surface thereof, a channel formed in the sill between the recess and the upper surface of the sill, means to open and close the window slidably mounted in said channel, and means disposed in the recess and connecting said first named means with the window, whereby movement of the first named means will impart movement to the window.

2. In a motor vehicle having a hinged window, a sill for the window, a recess formed in the sill below the upper surface thereof, a channel formed in the sill between the recess and the upper surface of the sill, a guide mounted over said channel, means to open and close the window carried with said guide, means disposed in the recess and connecting said first named means with the window, whereby movement of the first named means will impart movement to the window, and means embodied in part in said first named means to lock the window in any extreme or intermediate position.

3. In a motor vehicle having a hinged window, a sill for the window, a recess formed in the sill below the upper surface thereof, a channel formed in the sill between the recess and the upper surface of the still, a guide mounted over the channel, a follower disposed in the channel immediately below the guide, a pin carried with the follower and projecting upwardly through the guide, a nut threaded on the pin above the guide, and a link disposed in the recess and pivotally connected at one end with the follower and at the other end with the window, whereby movement of the nut will impart movement to the window, said nut and follower cooperating with the guide to lock the window in any extreme or intermediate position upon turning down the nut on the pin.

This specification signed this 26th day of April, A. D. 1927.

LEWIS L. CORCORAN.