R. MENDE.

SASH WINDOW FOR RAILWAY CARS.

APPLICATION FILED DEC. 18, 1907.

900,407. Patented Oct. 6, 1908.

Fig. 1.

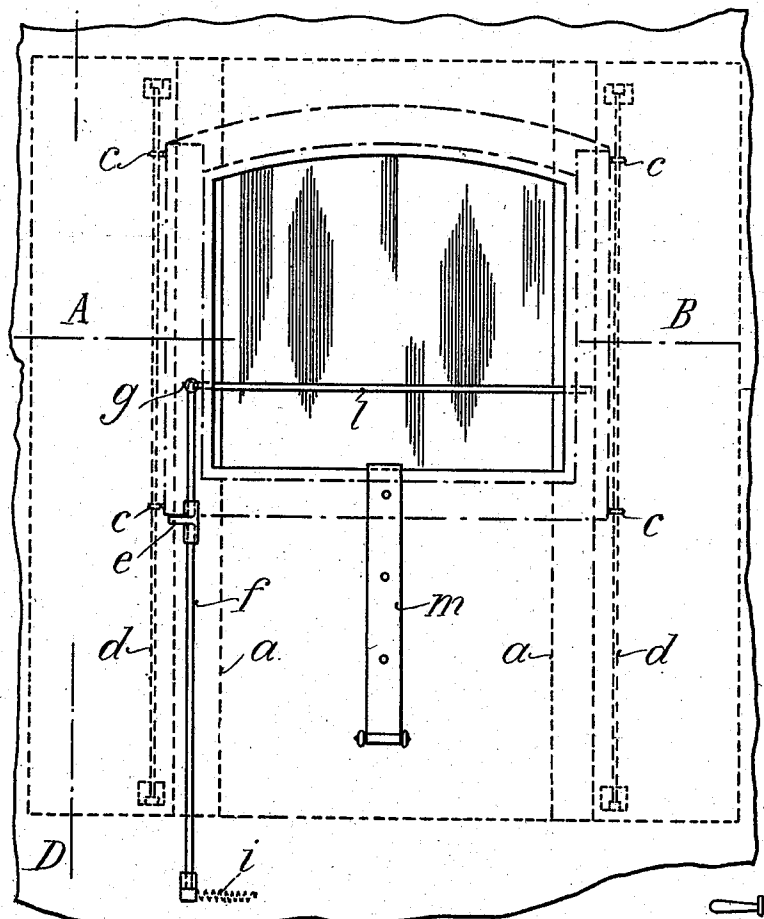


Fig. 3.

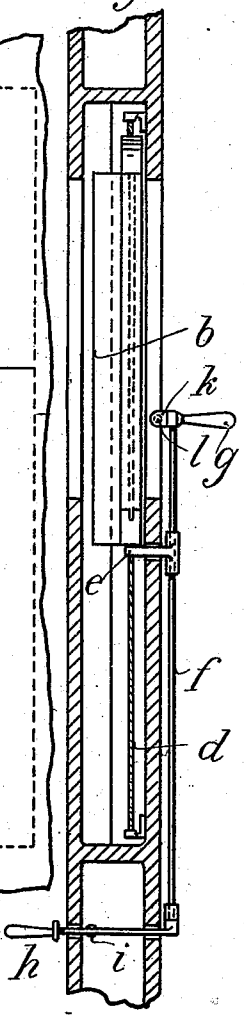
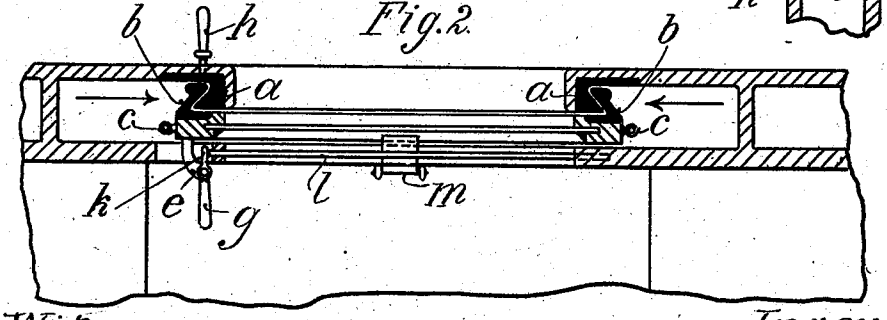


Fig. 2.



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SASH-WINDOW FOR RAILWAY-CARS.

No. 900,407. Specification of Letters Patent. Patented Oct. 6, 1908.

Application filed December 18, 1907. Serial No. 407,011.

To all whom it may concern:

Be it known that I, REINHOLD MENDE, citizen of Germany, residing at Munich, Bavaria, Germany, have invented certain new and useful Improvements in Sash-Windows for Railway-Cars; 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.

In railway accidents it often happens that the sash windows are jammed by the telescoping of the sides of the car and can not then be opened.

The present invention aims at the prevention of such jamming of the car windows by providing said windows with grooved guide pieces of a particular form running in guides of the car wall, as will be hereinafter described.

Reference being had to the accompanying drawing, Figure 1 is a front view of one embodiment of this invention, Fig. 2 a horizontal section along the line A—B of Fig. 1, and Fig. 3 a vertical section along the line C—D of Fig. 1.

As will be seen in Fig. 2, the grooved guides *b b* of the window sash are formed to overlap and engage the guides *a a* of the car wall forming the window frame, the latter being preferably of prismatic shape. By this arrangement the outer edges of the window sash are out of contact with the car wall or any part secured thereto, and a free space is thus provided at the edges of the window sash in the plane thereof between the sash and the car wall into which space the sash can enter in case of the walls telescoping. If now in a case of collision or other accident the car walls are telescoped or pushed together in the direction of the arrows shown in Fig. 2, the window cannot jam but can be easily lowered, if it does not immediately fall of its own accord.

In order that the window may not be entirely without guides in case of the car walls telescoping, strong guide cords *d* may be provided, one on each side of the window, passing through rings *c c* of the window frame. It will also be advisable to construct the window fastener, which serves to hold the window in position when up or open, in such a way that it will not, in the case of the walls telescoping, oppose the opening of the window but rather favor the opening of the same. To attain this end, said fastener is constructed as a swivel bolt *e*, which when the window is up, can be turned under the window frame, thus holding the window in position. This swivel bolt *e* is rigidly attached to a rod *f*, which can be turned either by means of the handle *g* from the inside of the car or by the handle *h* from the outside of the car. The rod *f* and with it the bolt *e* always have the tendency to return to their initial position under the influence of a spring *i*. When the window is in any other but the uppermost position this bolt *e* will rest against the frame of the window. In order to cause this bolt *e* to release the window in case of an accident, a short nose or pin *k* is provided on the handle *g*, on which one end of a bar *l* abuts. The other end of this bar *l* is fixed in the car wall on the opposite side of the window. Now if in a case of accident the walls of the car move together in the direction of the arrows shown in Fig. 2, this bar *l* will push the bolt *e* back, thus automatically releasing the window.

The window, when opened, can either be adjusted at different heights with the help of the strap *m* or several bolts similar to the already described bolt *e* may be arranged to press singly against the window frame under the action of springs and to disengage all together when the rod *f* is turned; this latter arrangement has the advantage that in a case of collision, partly open windows will also be released.

What I claim as my invention and desire to secure by Letters Patent, is:

1. In a car or the like, side walls provided with a window opening, and sash lapping said openings, the outer edge of the sash being out of contact with the car side whereby to prevent jamming of the sash by any contraction of the opening.

2. In a car or the like, side walls provided with a window opening, and sliding sash lapping said openings and guided by the walls, a free space being provided outside the outer edges of the sash, whereby to prevent jamming of the sash by any contraction of the opening.

3. In a car or the like, side walls provided with a window opening, guides carried by the wall and facing away from the opening, and sliding sash lapping the opening and having inturned flanges bearing on the guides, a free space being provided outside the outer edges of the sash, whereby to pre-

vent jamming of the sash by any contraction of the opening.

4. In a window for cars and the like, the combination, with side walls provided with window openings, guides carried by the window frame and facing away from the window, of a sash taking over the frame and having inturned guides bearing on the frame guides.

5. In a car or the like, side walls provided with a window opening, and sliding sash lapping said openings and guided by the walls, a free space being provided outside the outer edges of the sash, whereby to prevent jamming of the sash by any contraction of the opening, in combination with a catch to hold the sash up, and means actuated by the collapsing of the window frame to release the catch and permit the sash to drop.

6. In a car or the like, side walls provided with a window opening, guides carried by the wall and facing away from the opening, and sliding sash lapping the opening and having inturned flanges bearing on the guides, a free space being provided outside the outer edges of the sash, whereby to prevent jamming of the sash by any contraction of the opening, in combination with a bolt mounted one side of the window frame to hold the sash closed, and an actuating bar bearing with one end on the bolt and with the other end on the opposite side of the frame, whereby the collapsing of the window frame will release the bolt and permit the sash to open.

7. In a window for cars and the like, the combination, with side walls provided with window openings, the sash, and window frame, of a bolt carried by a vertically arranged rod mounted on one side of the frame to hold the window closed, and a bar connected at one end to the bolt rod and having its other end fixed in the opposite side of the frame, whereby the collapsing of the frame will release the bolt.

8. In a window for cars and the like, the combination, with side walls provided with window openings, the window frame, and a sash taking over the window frame and arranged in guiding contact with the outer edge of the frame, of a swivel bolt carried by a vertically arranged rod mounted on one side of the frame to hold the window closed, and a bar connected at one end to the bolt rod and having its other end fixed in the opposite side of the frame, whereby the collapsing of the frame will release the bolt.

9. In a sash window for railway cars, window guides *b* having grooves opening towards the center of the window sliding in or on guides *a* fastened to the car wall and so arranged that when the car walls are telescoped or pressed together in a collision or the like, the window will not be able to jam in its guides.

10. In a sash window for railway cars as described in claim 1, a swivel bolt, a rod abutting with one end on a pin of the swivel bolt serving to fasten the window when up, the other end of said rod being fixed in the car wall, said rod being arranged to push the bolt back and thus to release the window in a case of collision or similar accident.

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

REINHOLD MENDE.

Witnesses:
MATHILDE K. HELD,
LOUIS F. MUELLER.