W. H. ROSSMAN.

CAR WINDOW CONSTRUCTION.

APPLICATION FILED JAN. 30, 1913.

1,077,857.

Patented Nov. 4, 1913.

2 SHEETS—SHEET 1.

FIG. 1

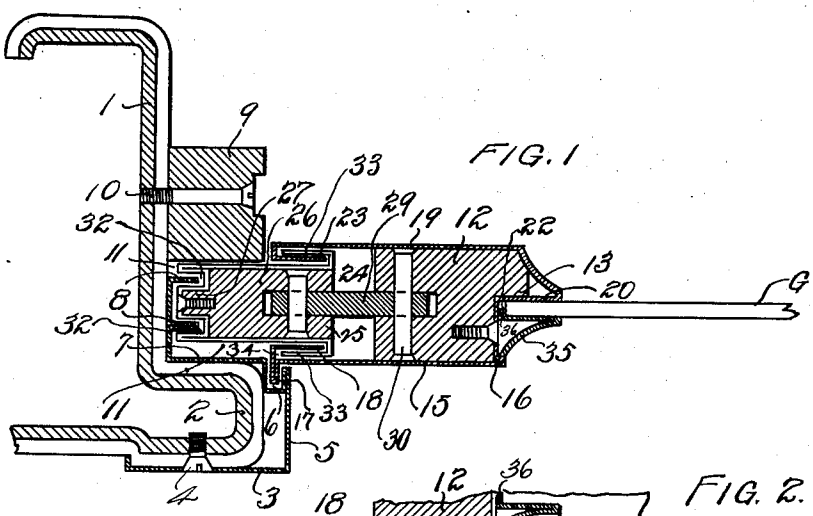
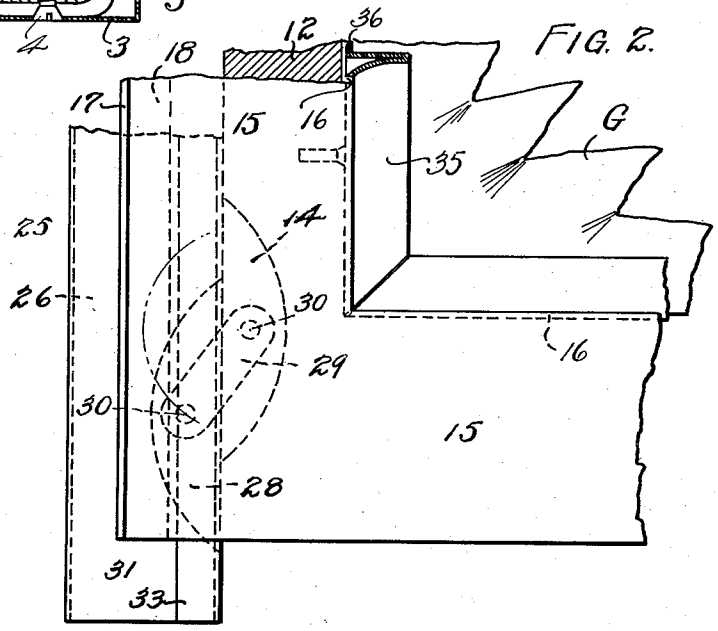


FIG. 2.



WITNESSES:

Emory L. Groff.

Mary K. Koogle.

INVENTOR

WILLIAM H. ROSSMAN

BY

N. E. Gee

ATTORNEY

W. H. ROSSMAN.

CAR WINDOW CONSTRUCTION.

APPLICATION FILED JAN. 30, 1913.

1,077,857.

Patented Nov. 4, 1913.

2 SHEETS—SHEET 2.

FIG. 3

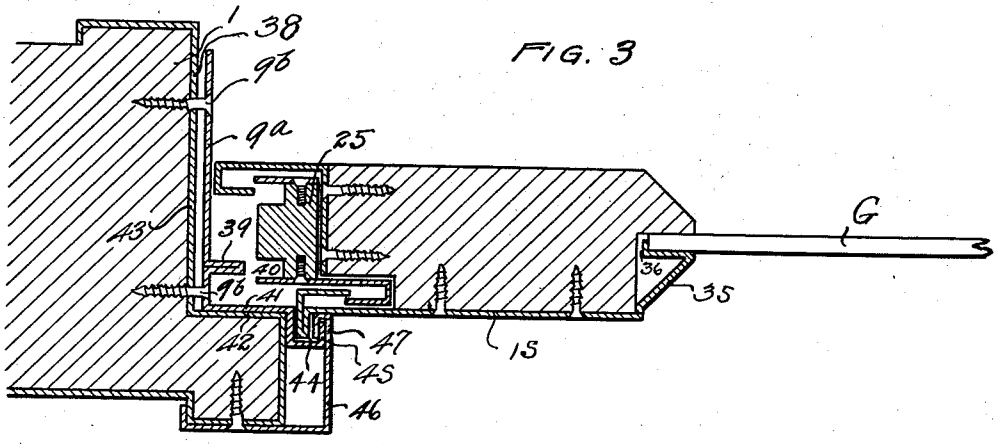
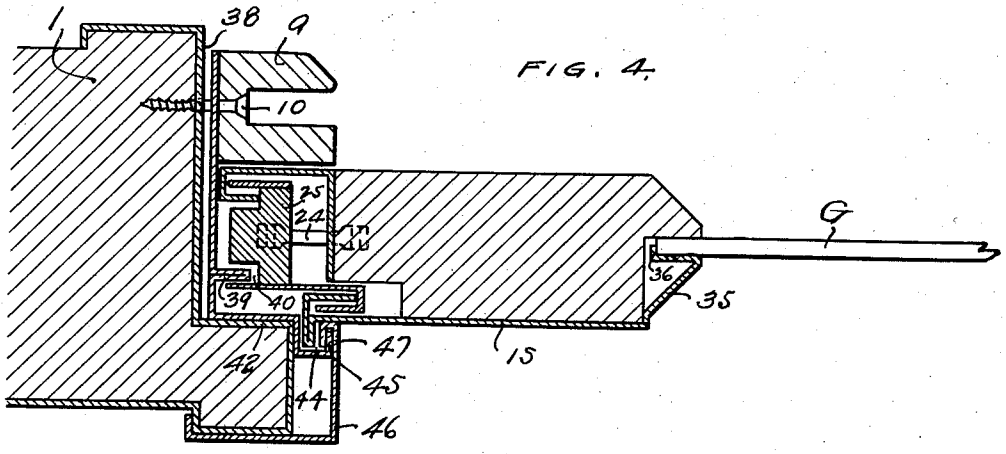


FIG. 4.



WITNESSES:

Emory L. Groff.

Mary K. Koogle

INVENTOR

WILLIAM H. ROSSMAN

BY

N. E. Ellen

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM H. ROSSMAN, OF ALTOONA, PENNSYLVANIA.

CAR-WINDOW CONSTRUCTION.

1,077,857. Specification of Letters Patent. Patented Nov. 4, 1913.

Application filed January 30, 1913. Serial No. 745,260.

To all whom it may concern:

Be it known that I, WILLIAM H. ROSSMAN, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Car-Window Construction, of which the following is a specification.

This invention relates to the subject of railway car windows and contemplates a car window sash, the construction of which effectively eliminates the rattling of the sash in the jamb, as well as to effectively exclude air, dust and water from the inside of the car.

Another object of the invention is to provide an improved sash locking means, though the sash when closed is automatically locked, thus excluding all foreign elements from the inside of the car.

A still further object of this invention is to provide an improved means of fitting the sash to the car window frame, as well as to provide for easy removal, which naturally facilitates repairs to broken or damaged sashes.

With the above and other objects in view, which will more readily appear, as the nature of the invention is better understood, the same consists of the novel construction and arrangement of parts, as will be hereinafter more fully described, illustrated and claimed.

The essential features of the invention involved in carrying out the above objects, are quite susceptible to structural modification, without departing from the spirit or scope of the invention. However, a preferred and practical embodiment is shown in the accompanying drawings, in which—

Figure 1, is a cross sectional view of the sash and jamb of a steel car employing the present invention. Fig. 2, is a front elevation of the improved window sash. Fig. 3, is a modification of the invention, wherein a wood sash is employed instead of a steel sash. The view shows a section of the sash together with a section of the window post. Fig. 4, is a view similar to Fig. 3; this view showing the window sash as it would appear when the window is closed.

Similar reference numerals designate corresponding parts throughout the several figures of the drawings.

In applying my improved window sash construction, no change is contemplated in the car body or car framing, the entire device being so designed as to be readily adapted to the type of steel cars now in service.

Referring specifically to the accompanying drawings, the numeral 1 designates the window frame of a steel car which is provided with the shoulder 2. A brass casing 3 is secured to the shoulder 2 by means of suitable fastening elements 4, and is provided with the right angularly disposed face 5 which is substantially parallel with the main face of the frame 1. This face 5 of the casing is formed with a groove 6, and then continues as at 7, parallel with the casing 3 along the opposite face of the shoulder 2, until it reaches the inner face of the frame 1. At this point it extends along the face of the frame 1, and is provided with integral ribs 8. Suitably spaced from the shoulder 2 is a continuous sash retaining strip 9 which is secured to the frame 1 by suitable fastening elements 10. This strip 9 extends vertically upon the face of the frame 1 and is parallel with the shoulder 2, thus forming a guideway 11 for receiving a portion of the window sash which will hereinafter be more fully described.

The window sash proper consists of a steel frame 12 which is provided with the shoulder 13 on its inner face, and also with the link receiving sockets 14. Suitably secured to the inner face of the sash 12 is an interior sheet 15, which is provided at one end with a rib 16 that is designed to engage the sash 12, and is also provided at the opposite end with a continuous offset tongue 17, which is adapted to slide in the groove 6 of the shoulder casing member of the frame. A portion of the casing sheet 15, after the tongue 17 has been formed therefrom, is bent backwardly and formed with the flange portion 18. The other side of the sash 12 is also provided with an exterior casing sheet 19 having at one end an inwardly extending portion 20, which fits over the shoulder 13 of the sash 12 and forms one wall of a glass receiving socket 22. The opposite end of the exterior casing sheet 19 is provided with the inturned flange portion 23, which is similar to the flange portion 18 of the casing sheet on the opposite side of the sash.

The interior casing sheet 15, and the exterior casing sheet 19 are parallel with each other, and form there-between a housing 24 in which is supported a vertically movable

weather strip device, which is designated in its entirety by the numeral 25. The weather strip device 25, consists of a body portion 26 which is preferably aluminum, and is provided upon its face, which is adjacent to the frame 1, with a continuous rib 27. The other side of the body 26 is provided with a plurality of link receiving sockets 28. In this connection, it will be observed that the body 26 is connected with the frame 12 of the sash, by a plurality of links 29, which are fastened to the body 26 and frame 13 by the pins 30. This construction permits a portion of the body 26 to project below the lower edge of the window sash when the same is raised, but when the sash is pushed down flush with the sill, the said body is forced against the window frame to make an absolutely tight joint.

The body 26 of the weather strip device is provided with a casing of sheet metal, as indicated by the reference character 31. This casing is formed on each side of the continuous rib 27 of the body 26 with the parallel grooves 32, and is provided upon the portion adjacent the sash 12 with the out-turned flanged portions 33, which overlap the flanged portions 18 and 23 of the casing sheets 15 and 19 respectively, and are located in the grooves 34 formed between them and their casings.

In order to hold the glass G in the glass receiving socket 22, one side of which has been formed by the portion 20, a glass retaining strip 35 is provided. The said strip 35 is preferably formed with a ledge 36 which receives the edge of the pane of glass G, and the wall 37 of which is pressed against the glass within the socket 22 by reason of the retaining strip being sprung behind the rib 16.

In the modification disclosed in Figs. 3 and 4, the numeral 1 designates the window frame, which is provided with a sheet metal frame or facing 38, a strip 9^a, is secured to the jamb by suitable fastening elements 9^b. The metal strip 9^a is provided with an integral continuous right angled projection 39, which is adapted to enter the groove 40. The metal strip 9^a whose body is parallel to the body 43 of the facing 38 is further provided with a right angled face 41, designed to rest against the angled portion 42 of the window frame and terminating in the groove 44. The outside face of the window post is preferably provided with an angled metal strip 46, which terminates in an approximately U-shaped portion 47, adapted to receive the edge 45 of the strip 9^a.

From the foregoing description it will be observed that when the window sash is pushed down flush with the window sill, the weather strip device 25, because of its portion projecting below the lower edge of the sash, and because of its linked connection with the latter, will be forced into engagement with the frame 1. When this takes place, the flanged portions of the weather strip device 25 and the oppositely disposed flange portions of the frame casing sheets, will also be brought tightly together. In addition to this, the various tongues and ribs carried by the frame sheets and weather strip device, will be forced into their respective grooves, or against the walls of said grooves, so that it is practically impossible for any air to enter the car at the windows.

It will also be observed that because of the construction of the various parts of the device, caused by the cam action of the weather strip device, will force all of the parts so closely together that there will be no looseness to permit the various parts to rattle.

It is believed that the foregoing description, in connection with the accompanying drawings make the present invention entirely clear.

I claim:

1. In a device of the character described the combination with a window frame and a sash slidable therein, of frame incasing members bent to form shoulders and having a groove, ribs also formed from said frame incasing members, facing sheets carried by the sash, a tongue formed from one of said sheets and adapted to enter the groove in the frame incasing members, inturned flanges formed at the sides of the facing sheets, weather strips pivotally connected to the sash between said facing strips and provided with grooves engaging said ribs, and means carried by the said weather strips for interlocking with the flanges of the facing members.

2. In a device of the character described the combination with a window frame and a sash slidable therein, of frame incasing members bent to form shoulders and having a groove, ribs also formed from said frame incasing members, an interior facing sheet fitted to the said sash, a tongue formed from said sheet adapted to enter the groove in the frame incasing members, an inturned flange also formed at the side of the said interior sheet, an exterior facing sheet fitted to the outside of the sash, an inturned flange formed at the side of the said latter sheet, weather strips having pivoted connections with the sash, incasing members fitted to the said strips and formed with grooves for receiving the ribs on the frame incasing member, and out-turned flanges formed with the strip incasing members to interlock with the flanges on the sash facing sheets.

3. In a car window construction the combination with the window frame and sash slidable therein, of facing sheets fitted to said sash and projecting therefrom forming a housing, flanges inturned from the sides

of said sheets, a tongue projecting from the side of one of the facing sheets, frame incasing members having a groove to receive the said tongue, ribs also formed from the latter members, a weather strip device located in the housing formed by the said facing strips and pivotally connected to the sash, an incasing member fitted to the weather strip provided with grooves to receive the said ribs, and out-turned flanges on the said latter member adapted to slidably interlock with the flanges on the facing sheets.

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

WILLIAM H. ROSSMAN

Witnesses:
ADAM LEAKE,
N. E. GEE.