

No. 865,499.

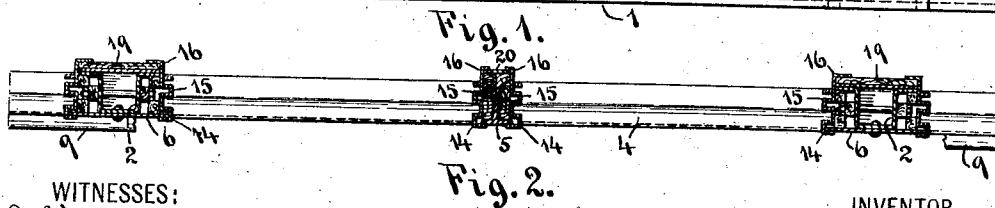
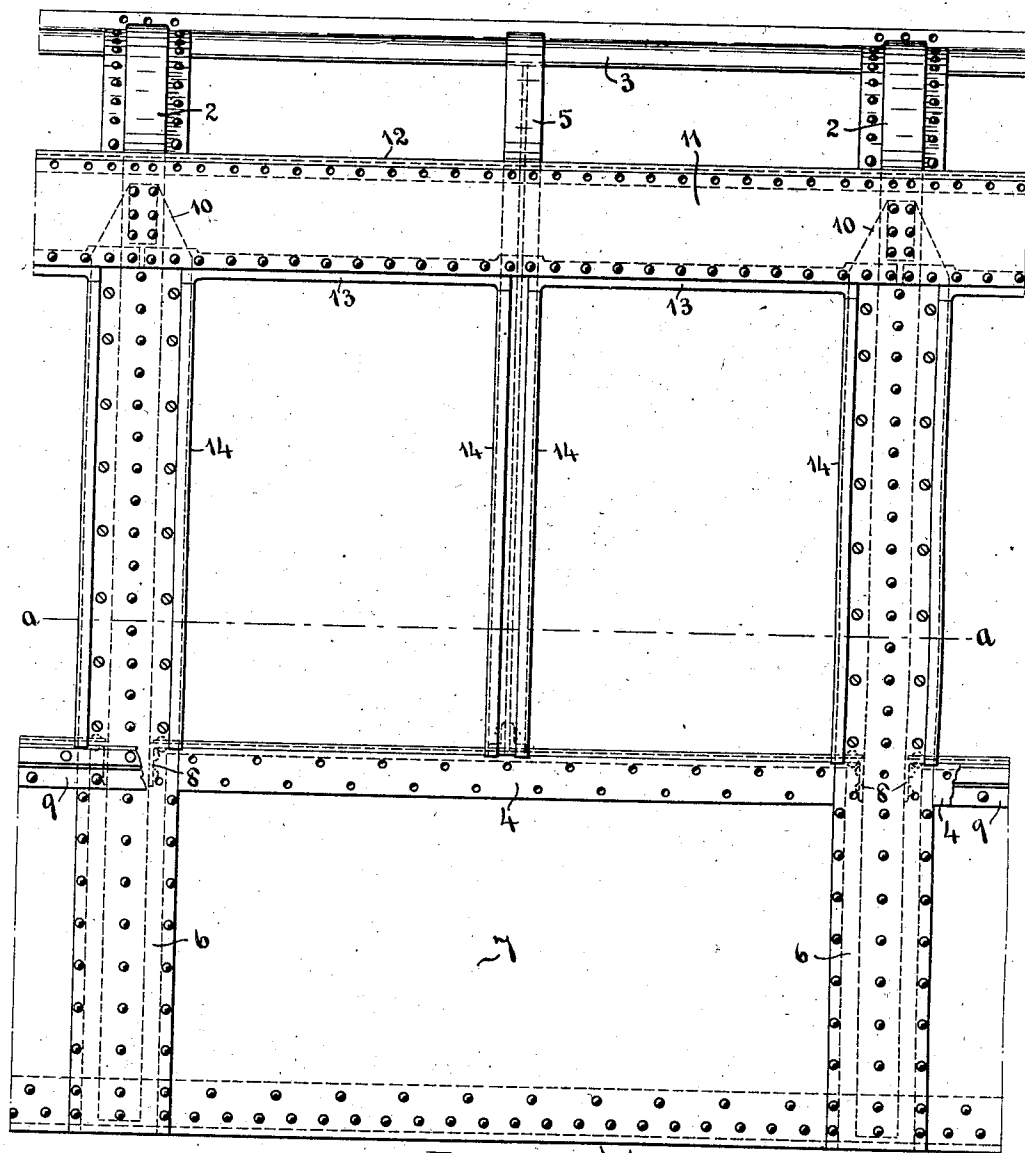
W. F. KIESEL, JR.

PATENTED SEPT. 10, 1907.

CAR WINDOW.

APPLICATION FILED DEC. 24, 1906.

3 SHEETS—SHEET 1.



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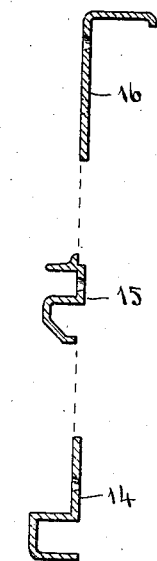


Fig. 5.

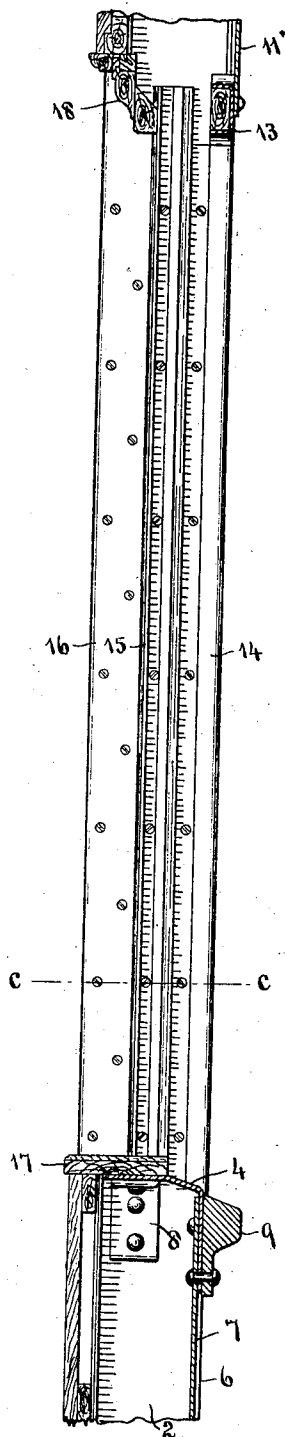


Fig. 3.

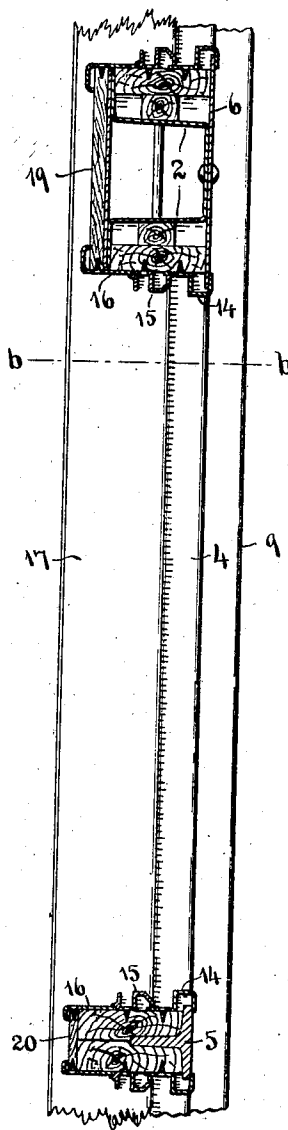


Fig. 4.

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3 SHEETS—SHEET 3.

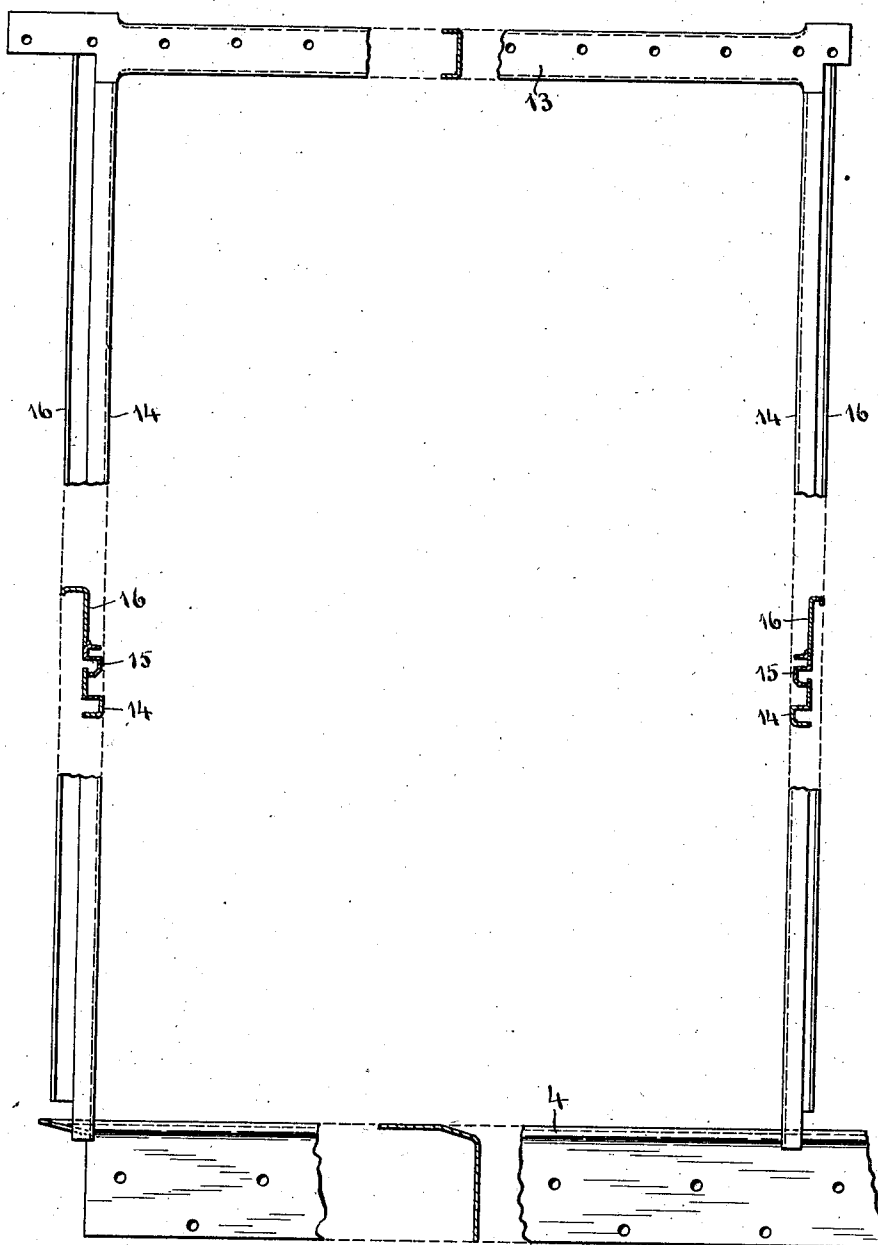


Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM F. KIESEL, JR., OF ALTOONA, PENNSYLVANIA.

CAR-WINDOW.

No. 865,499.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Original application filed March 6, 1906, Serial No. 304,534. Divided and this application filed December 24, 1906, Serial No. 349,252.

To all whom it may concern:

Be it known that I, WILLIAM F. KIESEL, Jr., 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-Windows, of which the following is a specification.

This invention relates to improvements in the window frames employed in steel railway car construction; and more particularly to an arrangement of sash frames applicable to the railway car frame described in my application for Letters-Patent of the U. S. filed March 6, 1906, Serial No. 304534, of which this is a divisional application.

The object of my improvements is to provide a window frame for this type of cars which, in combination with the side posts and outside and inside sheathing, will furnish a strong and durable structure; into and from which the sash may be easily inserted and removed; which will hold the sash firmly with dust proof joints; and which will at the same time present a finished and pleasing appearance.

I attain my object by arranging the parts of the sash frames and applying them to the posts and outside and inside sheathing in the manner illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a panel of a car body between two main side posts embodying my improvements, the upper deck parts being omitted; Fig. 2, a longitudinal section on the line *a-a* in Fig. 1; Fig. 3, a vertical section through one of the window openings on a larger scale and on line *b-b* in Fig. 4; Fig. 4, a corresponding horizontal section on the line *c-c* in Fig. 3; Fig. 5, a detail showing the transverse sections of the side frame plates on a still larger scale; and Fig. 6, an elevation showing an assembled view of a complete window frame, looking at it from the exterior side.

Like numerals designate like parts in the several views.

As described in my aforesaid application, the side framing of the car is supported upon side sills 1, from which rise the main side posts 2 dividing the car sides into panels of equal widths. These posts are of pressed steel, of U-shaped cross section, bent inward at the top to form the lower deck carlines, and having outside and inside cover plates riveted thereto.

The free ends of the carline extensions of the posts 2 are fastened to longitudinal angle bars 3, which run continuously through the length of the car at each side. Between the main posts 2 are fastened sill plates 4 for the windows, short posts 5 being supported upon these sill plates to divide the space between main posts into two or more window openings. These intermediate window posts 5 are curved at the top to correspond with the carline extensions of the main posts and are riveted at their free ends to the longitudinal angles 3. The verti-

cal limbs of the sill plates 4 extend between, and lie flush with, the outside cover plates 6 riveted to the main posts, and the panels below the sill plates are filled in with the sheathing plates 7; said plates being riveted at the bottom to the outside of the side sills and at each end and at the top being riveted back of the cover plate 6 and the sill plates 4. The ends of the sill plates back of the cover plates 6 are fastened to the sides of the main posts by angle plates 8, see Figs. 1 and 3, and the series of sill plates are further strengthened and supported by the metal belt rails 9, the vertical limbs of the sill plates being riveted in between the belt rails and the sheathing plates 7, as shown in Fig. 3.

At their upper ends, the outside cover plates 6 are carried up behind the top side plates 11 and riveted thereto, as indicated at 10, these top side plates extending continuously from one end of the car to the other at each side and being strengthened along their upper edges by longitudinal angles 12. At the lower edges of the top side plates are riveted pressed steel lintels 13, said lintels being of U-shaped cross-section with their ends flattened out and cut to fit in between the top side plates and the cover plate 6 at the main posts, and between the top side plates and the outer face of the intermediate posts.

To complete the window frames and to provide the requisite grooves or slides for the sash and window shades, I provide a series of side plates comprising outer side plates 14 having hollow beads, the outward sides of which beads overlap the cover plates 6 and the intermediate posts 5. These outer side plates are provided with transverse flanges which are placed against the wood filling strips which are employed to complete the posts, being secured thereto by counter-sunk screws, as shown in Figs. 3 and 4. Back of these outer side plates, I attach by counter-sunk screws intermediate side plates 15, said intermediate side plates being provided with hollow beads, the outward sides of which overlap the transverse flanges of the outer side plates 14 and form with the beads on the latter plates the slides for the window sash. These hollow beads on the intermediate plates have their outward sides bent inward at an angle where said sides join the head of the beads, thereby adapting the free edge of these outward sides to act as spring plates to hold the sash against the outside beads, thereby providing dust-tight joints and also preventing the rattling of the sash. These intermediate side plates are further provided with grooves for the window shades; and along their inward edges they are rabbeted to receive the inner side plates 16, which latter plates are simply flat plates flanged along their inward edges to overlap the inside finish of the window posts, which inside finish consists of the panels 19 at the main posts and 20 at the intermediate posts, said panels being of wood, composite board, metal

or other suitable material. The flanges of the inner side plates provide finished joints and at the same time act to secure the inside post panels in place, as will be seen from an inspection of Fig. 4.

- 5 Resting upon the horizontal limbs of the sill plates 4 and extending continuously along the sides of the car are the inside sills 17, which may be of wood or metal or other suitable material. These inside sills are fitted around the main and intermediate posts, and upon them
- 10 the lower ends of the intermediate and inner side plates rest. The outer side plates, at their lower ends, are cut to fit the incline of the sill plates 4 and rest at their outward sides upon the belt rails 9. At their upper ends, the outer side plates are fitted to the ends
- 15 of the lintels 13, said lintels on their under side being of the same width as the beads on these side plates, thereby permitting the window sash to pass up back of the lintels. At the inside of the car, the tops of the window casings are finished by suitable moldings of
- 20 wood or metal which pass across between the inner side plates 16, as shown at 18 in Fig. 3, the window sash and window shades passing up through the spaces between the top casing members 18 and the lintels 13.
- As so constructed, the intermediate side plates 15
- 25 may be readily removed and reinserted without disturbing the side plates 14 and 16, for inserting or removing a window sash. Moreover, this construction gives to the sides of the window frame a complete metal sheathing which protects the wood filling and also provides a smooth and perfect slideway for the window
- 30 sash. These side plates 14, 15 and 16 may be formed from extruded brass or from light steel plates, which are drawn or pressed into the desired shapes. The joints between plates are perfectly made and the contour of the plates presents a pleasing and finished
- 35 appearance, when the framework is completed.

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

1. In a sash frame for railway cars, a middle side plate provided along its outward edge with a hollow bead adapted to form the inner wall of the sash slide, and having a groove for a window shade formed on the plate back of said bead, the bottom of said groove being provided with holes to receive attaching screws. 40
2. In a sash-frame for railway cars, a middle side plate adapted to be attached to a frame post and provided along its outward edge with a hollow bead, the outward side of said bead being adapted to overlie an outer side plate and form the inner wall of the sash slide, a groove for a window shade formed on the plate back of said bead, and a rabbet along the inward edge of the plate to receive an inner side plate. 45
3. In a sash-frame for railway cars, an outer side plate provided with an outside bead for the sash-slide, in combination with a second side plate provided with a hollow inside bead, the outward side of said inside bead being adapted to overlap the outer side plate and to act as a spring strip to hold the sash against the outside bead. 50
4. In a sash frame for railway cars, an outer side plate forming an outside bead for the sash-slide, in combination with a second side plate provided with a hollow inside bead, the outward side of said inside bead being bent inward at an angle where it joins the head of the bead and being left free along its outer edge to adapt it to act as a spring strip to hold the sash against the outside bead. 55
5. In a sash frame for railway cars, the side plates 14, 15 and 16, of metal formed and fitted together substantially as herein set forth. 60
6. A sash frame for railway cars, comprising the outer sill plate 4, the side plates 14, 15 and 16 and the lintel 13 of metal formed and fitted together substantially as herein set forth. 65

In testimony whereof I have affixed my signature, in presence of two witnesses.

WILLIAM F. KIESEL, JR.

Witnesses:

FRANCIS N. PARIS,
D. S. BROWN.