W. H. HEULINGS, Jr.

RAILWAY CAR CONSTRUCTION.

APPLICATION FILED JUNE 18, 1915.

1,241,116.

Patented Sept. 25, 1917.

4 SHEETS—SHEET 1.

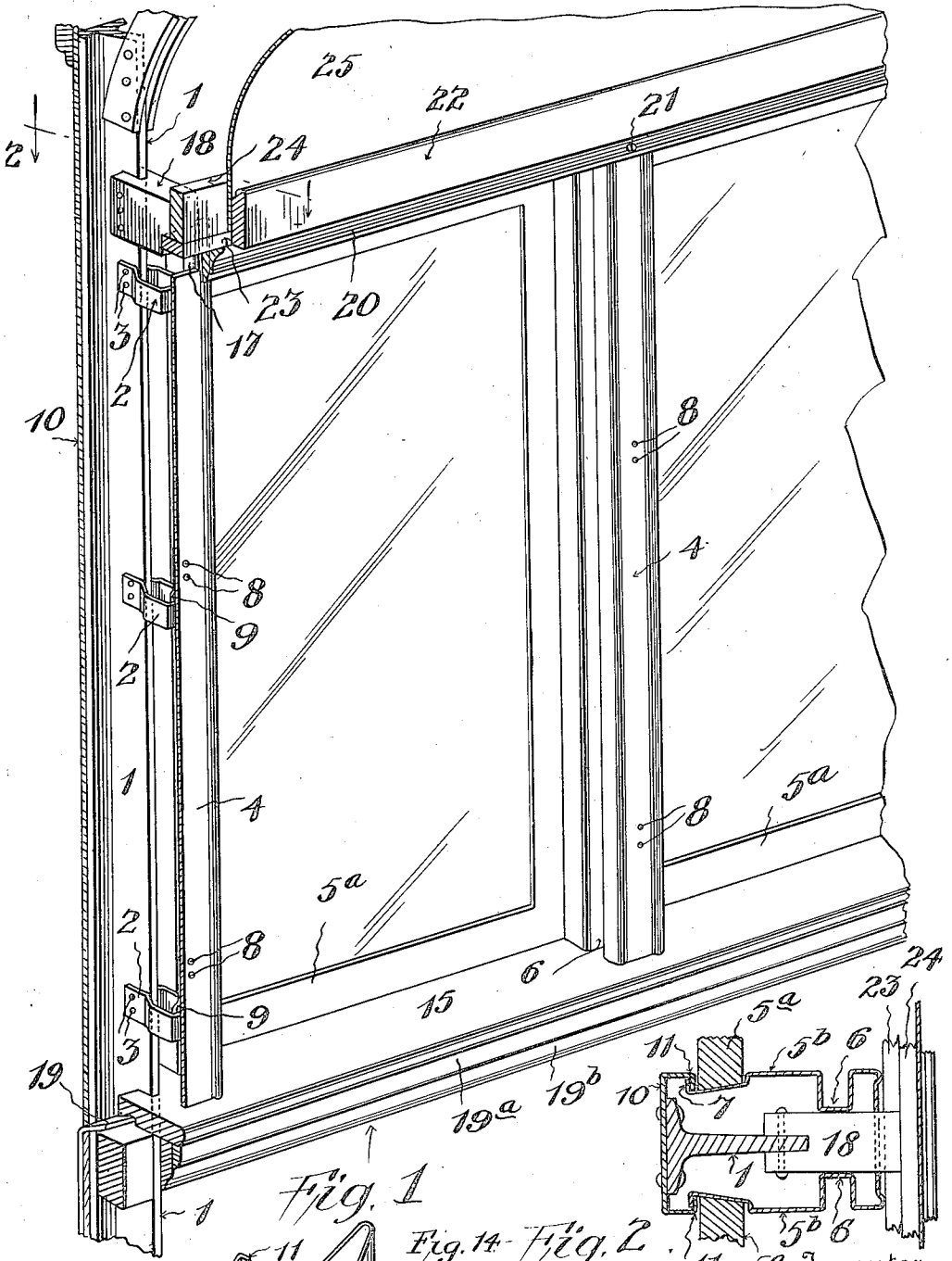


Fig. 1

Fig. 1a

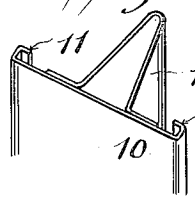


Fig. 2

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By his Attorney
Joseph L. Levy

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4 SHEETS—SHEET 2.

Fig. 5.

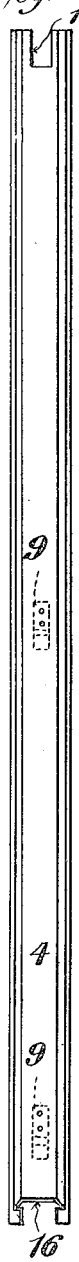


Fig. 6.

Fig. 3.

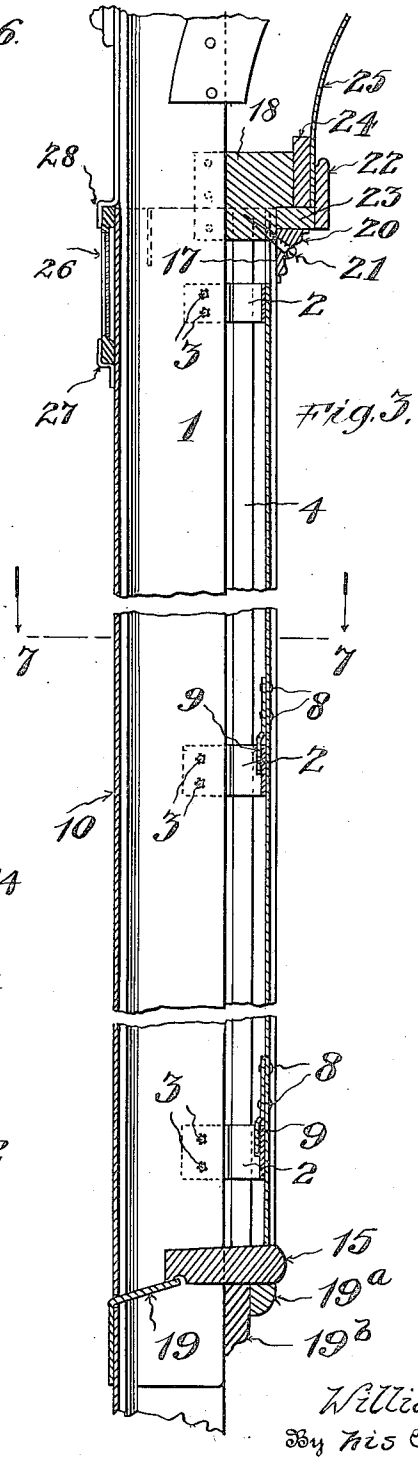
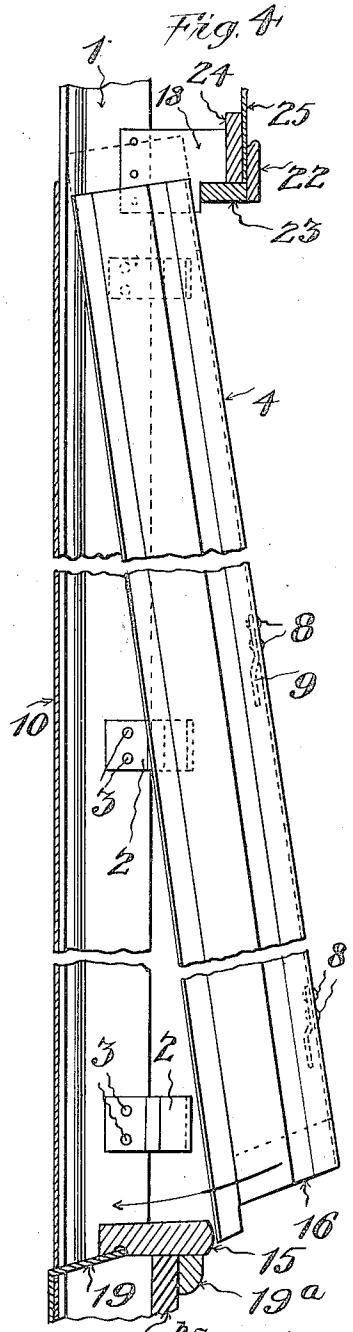


Fig. 4.



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4 SHEETS—SHEET 3.

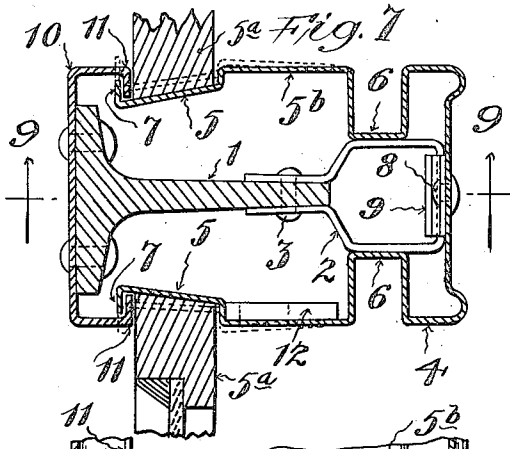


Fig. 7.

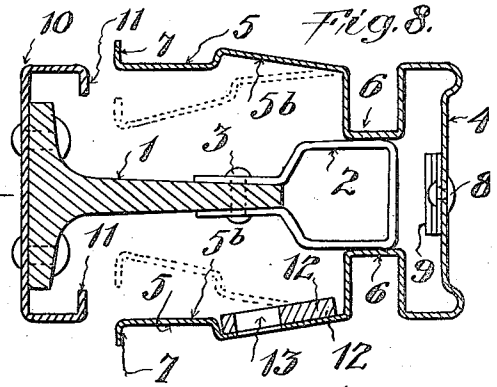


Fig. 8.

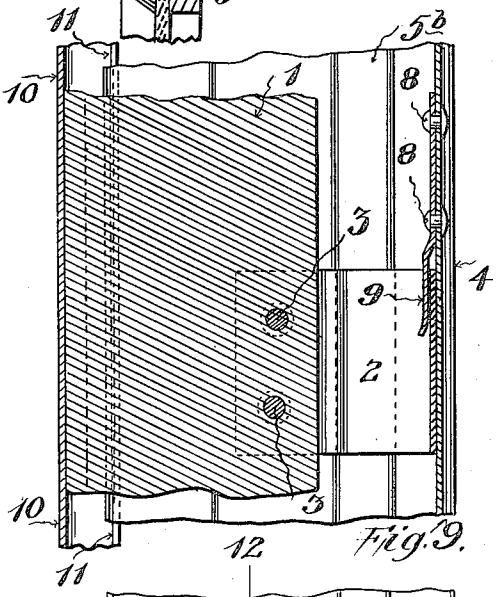


Fig. 9.

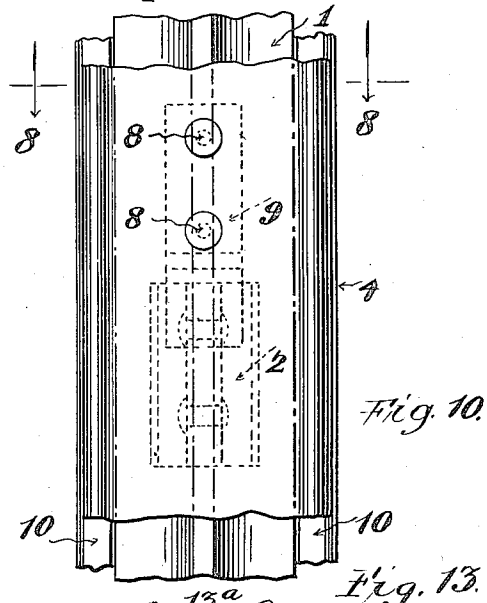


Fig. 10.

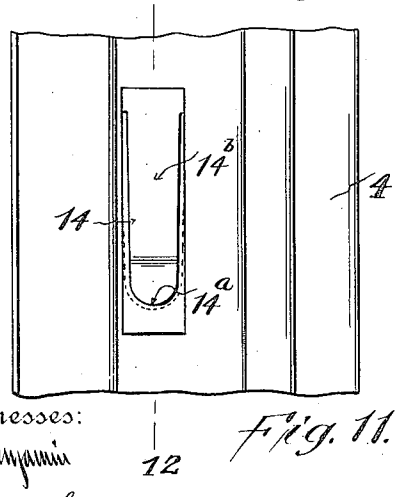


Fig. 11.

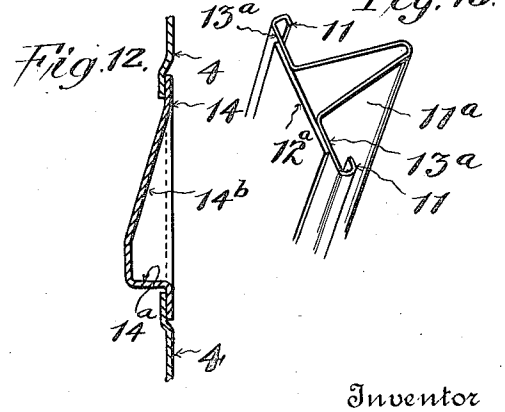


Fig. 12.

Fig. 13.

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4 SHEETS—SHEET 4.

Fig. 15.

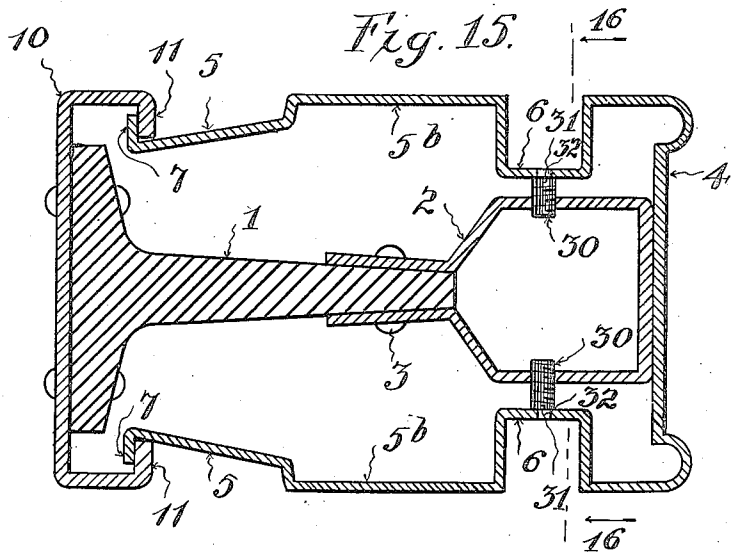
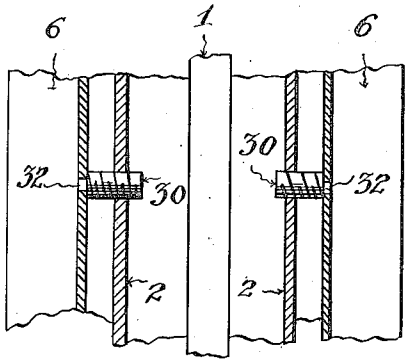


Fig. 16



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UNITED STATES PATENT OFFICE.

WILLIAM H. HEULINGS, JR., OF PHILADELPHIA, PENNSYLVANIA.

RAILWAY-CAR CONSTRUCTION.

1,241,116. Specification of Letters Patent. Patented Sept. 25, 1917.

Application filed June 18, 1915. Serial No. 34,884.

To all whom it may concern:

Be it known that I, WILLIAM H. HEULINGS, Jr., a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, and whose post-office address is c/o The J. G. Brill Company, 62nd St. & Woodland Ave., in said city, have invented certain new and useful Improvements in Railway-Car Construction, of which the following is a specification.

My invention relates to improvements in the construction of railway cars, particularly those devoted to the carrying of passengers, and more particularly to improvements on the constructions shown and described in my application, Ser. No. 750,628, filed February 25th, 1913.

The special object of my invention is to so improve the construction of cars, particularly those portions of the cars relating to the window frames or housings for the sashes, curtains, and other devices used in and about window openings, that economy and great facility in construction and assemblage of the parts will ensue, proper and desirable maintenance of the sash in place be had, and greater facility in removal and re-instalment of the sash than heretofore may be secured.

My invention, therefore, resides in the special construction and combination of parts hereinafter described and finally pointed out in the claims appended hereto.

In the drawings, in which similar reference characters designate corresponding parts throughout the several views,

Figure 1 is a perspective elevation of a portion of a car side embodying features of my improvement;

Fig. 2 is an enlarged sectional view, taken approximately on the line 2—2, Fig. 1, looking in the direction of the arrows;

Fig. 3 is an enlarged sectional elevation substantially on the plane of the edge of Fig. 1;

Fig. 4 is a like view, showing the manner of placing the post casing-cover;

Fig. 5 is a front view of the post casing-cover;

Fig. 6 is a side elevation thereof;

Fig. 7 is an enlarged sectional view through one of the posts taken substantially on the line 7—7 of Fig. 3, showing the opposing window sash in place;

Fig. 8 is a sectional elevation similar to Fig. 7, but with the detachable post casing-cover partly detached;

Fig. 9 is a sectional elevation, taken substantially on the line 9—9 of Fig. 7, looking in the direction of the arrows;

Fig. 10 is an inside elevation of the parts shown in Fig. 9;

Fig. 11 is a side elevation of the side of the post casing-cover, showing a modified form of stop for a sash lock;

Fig. 12 is a sectional elevation of the same on the line 12—12 of Fig. 11;

Figs. 13 and 14 are perspective views showing modifications of the car posts or stanchions;

Fig. 15 is an enlarged sectional view through one of the posts showing means for increasing or decreasing the tension of the side plates of the casing cover; and

Fig. 16 is a sectional view on the line 16—16 of Fig. 15, looking in the direction of the arrows.

The side posts or stanchions of the car are indicated at 1 and are of T form. Secured to the outstanding web of the post are filler clips 2, these clips being secured to the post by rivets 3. The sash holding portion consists of a casing-cover 4 constructed of a single plate of metal, conformed as shown, each of its sides 5^b being flexible and having grooves 5, these grooves being outwardly inclined as shown for the reception of the sash 5^a, the ends of the sash being inclined to correspond. There are also grooves 6 for the reception of the shade rollers, and flanged ends 7. The grooves 6 for the shade rollers are made deep enough so that their inner ends bear against the sides of the clips 2. This obviates the necessity of extending the outstanding web of the post forward so that it bears against the front of the casing 4, as is the usual method.

Secured on the inner side of the casing 4 by rivets 8 are spring clips 9 spaced and adapted to coöperate with the filler clips 2. The outer sides of the posts 1 are covered by casing plates 10 having flanges 11 behind which the flanges 7 on the casing-cover 4

lie. The flexible sides 5^b of the casing 4 have a tendency to spring outwardly and are restrained by the flanges 7 bearing against the flanges 11. The plate 10 and cover 4 together constitute the post casing, which conceals the parts, provides the finish for the same, and grooves for the sash and curtain.

If desired, the posts or stanchions 1 may be formed of sheet metal as shown in Figs. 13 and 14. In Fig. 13 the flanges 11 are formed on the ends of the outstanding portion 11^a and a plate 12^a is secured to the portions 13^a. In Fig. 14 the plate 10 is secured to the outstanding portion 11^a as shown.

Reinforces 12 having perforations 13 for the reception of the sash lock are secured to the inside of one of the sides of the casing 4, the casing being correspondingly perforated, the perforation alining with the perforation in the reinforce 12.

Stops 14 are provided in the sides 5^b of the post casing 4 to hold the sash in a raised position. These stops extend into the sides of the post casing, the lower ends 14^a being rounded for the reception of the cylindrical latch of the lock mounted on the lower end of the sash. The rear wall 14^b is inclined so that the latch of the lock does not have to be drawn back by hand if it is desired to move the sash higher, the inclined wall 14^b automatically pushing the latch in the lock as the sash is moved upward.

The casing-cover 4 is placed in position from the inside of the car, and is sprung over the clips 2 as shown in Fig. 8. As shown in Fig. 4, the upper end is placed in position first and then moved upward to allow the bottom end to swing clear of the molding 15, as indicated by the arrow, this molding being beveled to correspond to the beveled end 15 of the casing 4. In order to allow the casing-cover 4 to be pushed upward in this manner it is slotted as at 17 at its upper end to clear the blocks 18 secured adjacent its upper end to the post 1. It is then dropped downwardly into position, the clips 9 engaging the insides of the clips 2 and the lower beveled end 16 of the casing 4 resting on the molding 15 and sill 19. Other moldings 19^a and 19^b are secured below the molding 19. In order to cover the slot 17 thus exposed in the casing-cover 4, a molding 20 is secured in front of it by screws 21 or other fastening means to the blocks 18. Other moldings 22, 23 and 24 and the head-lining 25 are also secured to the blocks 18. The molding 20 secured to the blocks 18 firmly secures the upper end of the casing 4 in place so that a clip 9 to coöperate with the filler clip 2 at the upper end of the casing 4 is unnecessary.

A fixed upper sash 26 is held in place by flanged plates 27 at its bottom and by the flanged bottom 28 of the letter panel 29.

In Figs. 15 and 16 is shown the means for increasing or decreasing the tension of the side plates 5^b of the casing-cover 4, consisting of threaded pins 30, threaded into the sides of the clip 2, the outer ends of these pins bearing against the inner sides of the groove 6 in the side plates 5^b. Perforations 32, smaller in diameter than the pins 30 are formed in the grooves 6 so that a suitable tool can be passed through the same to turn the pins 30, which are slotted at 31 for the reception of such tool. Turning the pins outwardly tends to spread the side plates and increase the tension, while turning the pins inwardly has the opposite effect.

The flexibility of the sides of the casing 4 tend to retain the sash without rattling, and the same can be readily removed by drawing toward the inside of the car. The dotted lines in Figs. 7 and 8 indicate the manner in which the sides of the casing 4 may be flexed to allow a withdrawal of the sash. If it is desired to remove the sash from the frame, the sash is raised slightly and the lower portion is seized on one end and pulled toward the inside of the car. The flexibility of the sides 5^b allows these sides to move inwardly until one of the ends of the sash is free, after which the remaining end is readily drawn out.

Having described one embodiment of my invention, it is obvious that the same is not restricted thereto, but is broad enough to cover all structures coming within the scope of the annexed claims.

What I claim is:

1. A window frame for railway cars comprising a post, a series of clips on said post, a casing for the post, a series of clips on said casing adapted to engage the clips on the post and retain the casing about the post. said casing having flexible sides adapted to resiliently bear against the edges of the sash and grooves in said sides for the reception of the window sash.

2. A window frame for railway cars comprising a post, a series of clips secured to said post, a casing for the post, a series of clips on said casing adapted to engage the clips on the post and retain the casing about the post, said casing having flexible sides, grooves in said sides for the reception of the window sash, flanges on said flexible sides, plates secured to the posts and having flanges adapted to engage with the flanges on the sides of the post casing and limit the outward springing movement of said sides.

3. A window frame for railway cars comprising a post, series of clips secured to said post, a detachable casing for the post, a series of clips adapted to engage detachably the clips on the post and retain the casing about the post, the post casing having a slot in its upper end for allowing an upward movement of the casing and a beveled lower end

on the casing adapted to fit a sill of the same contour.

4. A window frame for railway cars comprising a post, a series of clips secured to said post, a detachable casing for the post, a series of clips secured to said casing and adapted to detachably engage the clips on the post and retain the casing in position about the post, a block secured to the post adjacent its upper end, a beveled sill secured to said post, the upper end of the post casing being slotted to surround the block and a beveled lower end on the post casing adapted to fit the beveled sill.

5. A window frame for railway cars and the like comprising a post, a series of clips secured to said post, a detachable casing for said post, a series of clips secured to said casing, and adapted to detachably engage the clips on the post and retain the casing in position about the post, a block secured adjacent the upper end of said post, the upper end of the post casing having a slot surrounding the block, a molding strip secured to the block across the slot in the post casing, a beveled sill at the lower end of the post casing, said lower end of the post casing being beveled to correspond to the beveled sill.

6. A window frame for railway cars comprising a post, a series of clips secured to said post, a casing for said post, a series of clips secured to said casing and adapted to engage the clips on the post and retain the casing about the post, said casing having flexible sides, grooves in said sides, the rear of said grooves adapted to bear against the clips secured to the post.

7. A window frame for railway cars comprising a post, a plurality of clips secured to said post, a casing surrounding said post, a plurality of clips secured to said casing and engaging the clips on the post, a plate secured to the outer end of the post having flanged ends, a pair of flexible sides on the post casing, a plurality of grooves in said flexible sides, the rear portions of some of said grooves bearing against the clips on the post, and flanges on the ends of the flexible sides of the post casing adapted to engage the flanged ends of the plate secured to the post casing.

8. A window frame for railway cars comprising a post, a series of clips on said post, a casing for the post, a series of clips on said casing adapted to engage the clips on the post and retain the casing about the post, said casing having flexible sides with grooves therein, pins extending from the clips secured to the posts and bearings against said flexible sides for increasing or decreasing the tension of the same.

Signed at the city and county of Philadelphia, and State of Pennsylvania, this 7th day of May, 1915.

WILLIAM H. HEULINGS, JR.

Witnesses:
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H. F. MCKILLIP.