

No. 645,667.

Patented Mar. 20, 1900.

W. E. HENDRICKS.

CAR WINDOW.

(Application filed Jan. 13, 1900.)

(No Model.)

2 Sheets—Sheet 1

Fig. 2.

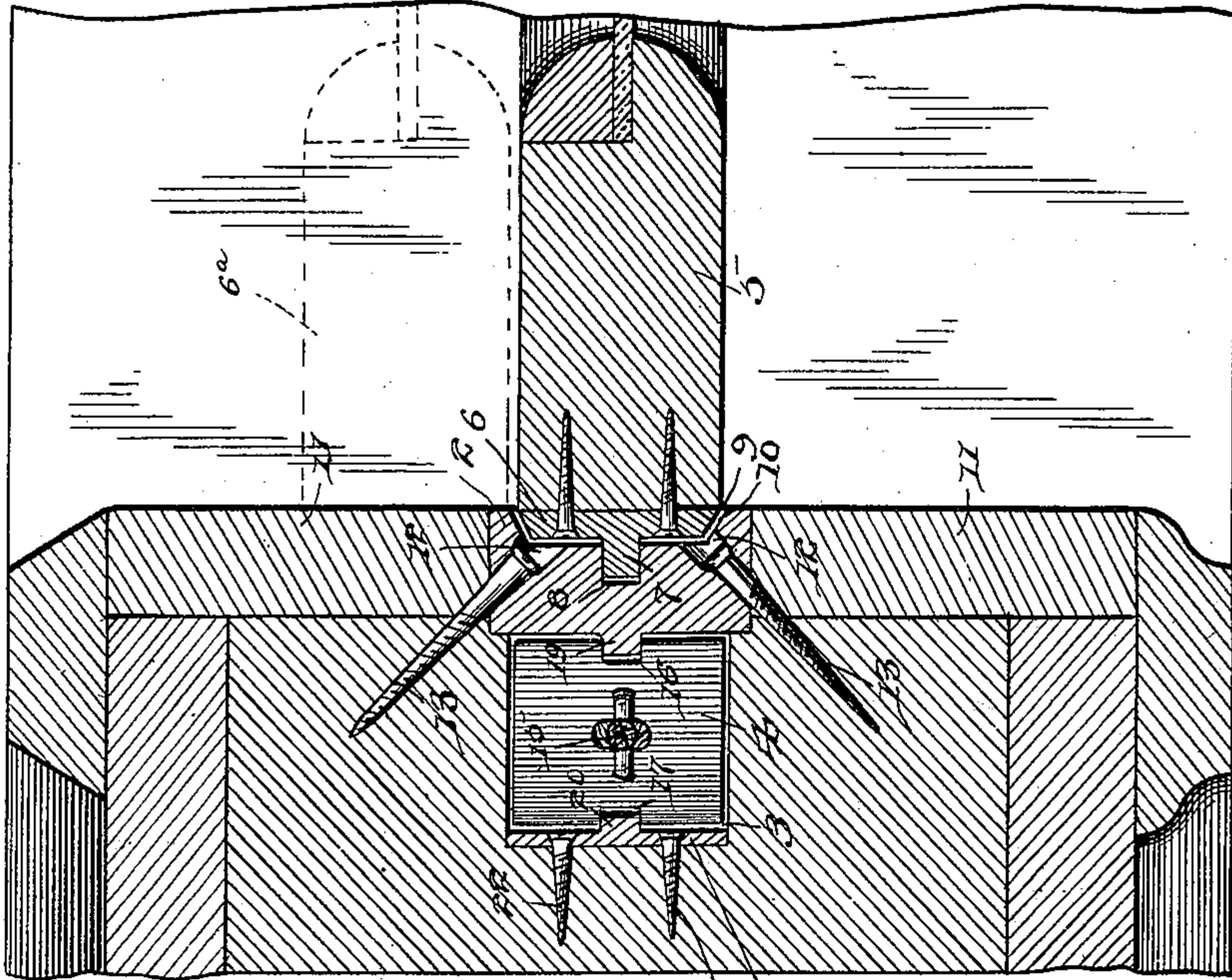


Fig. 1.

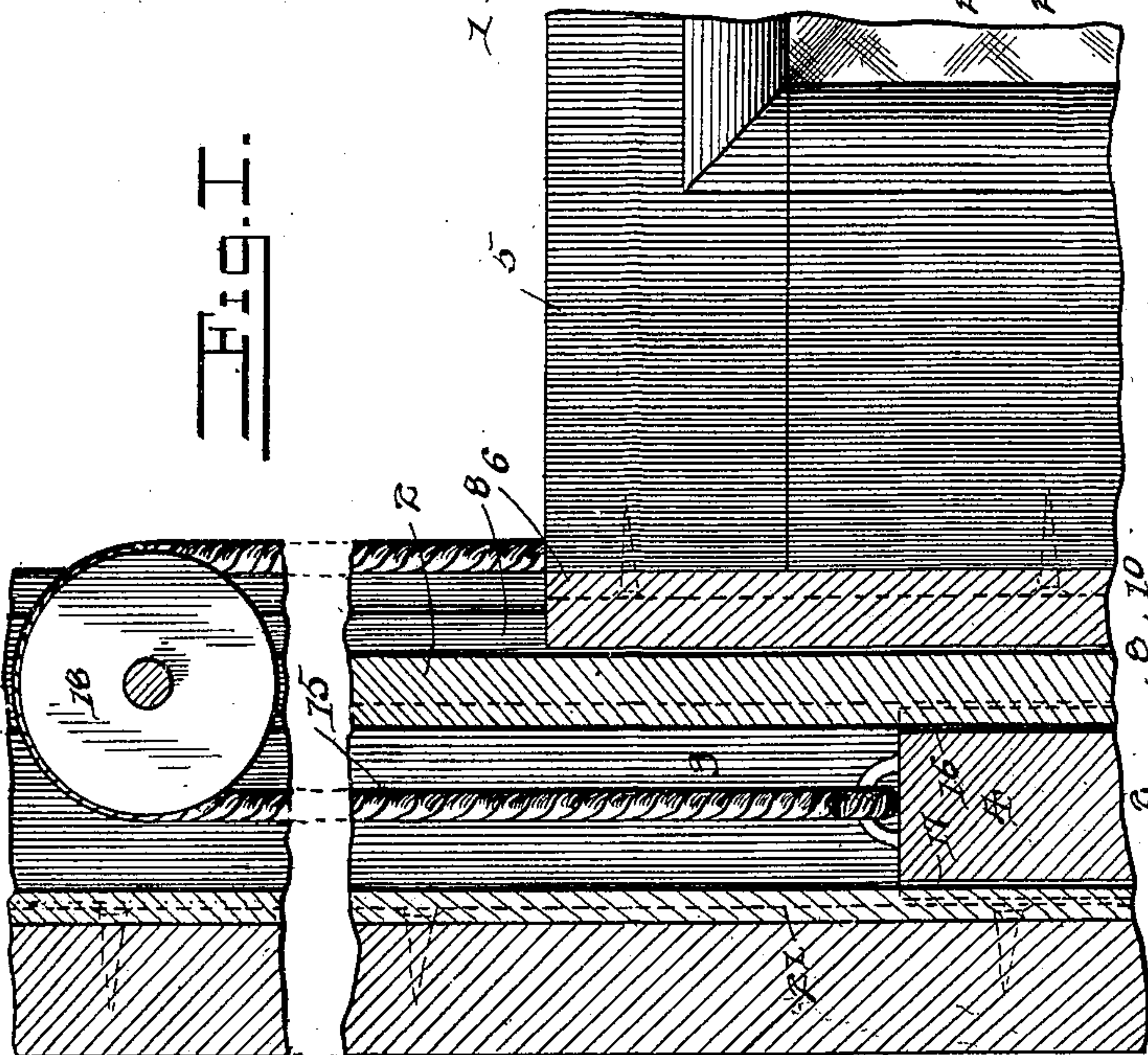
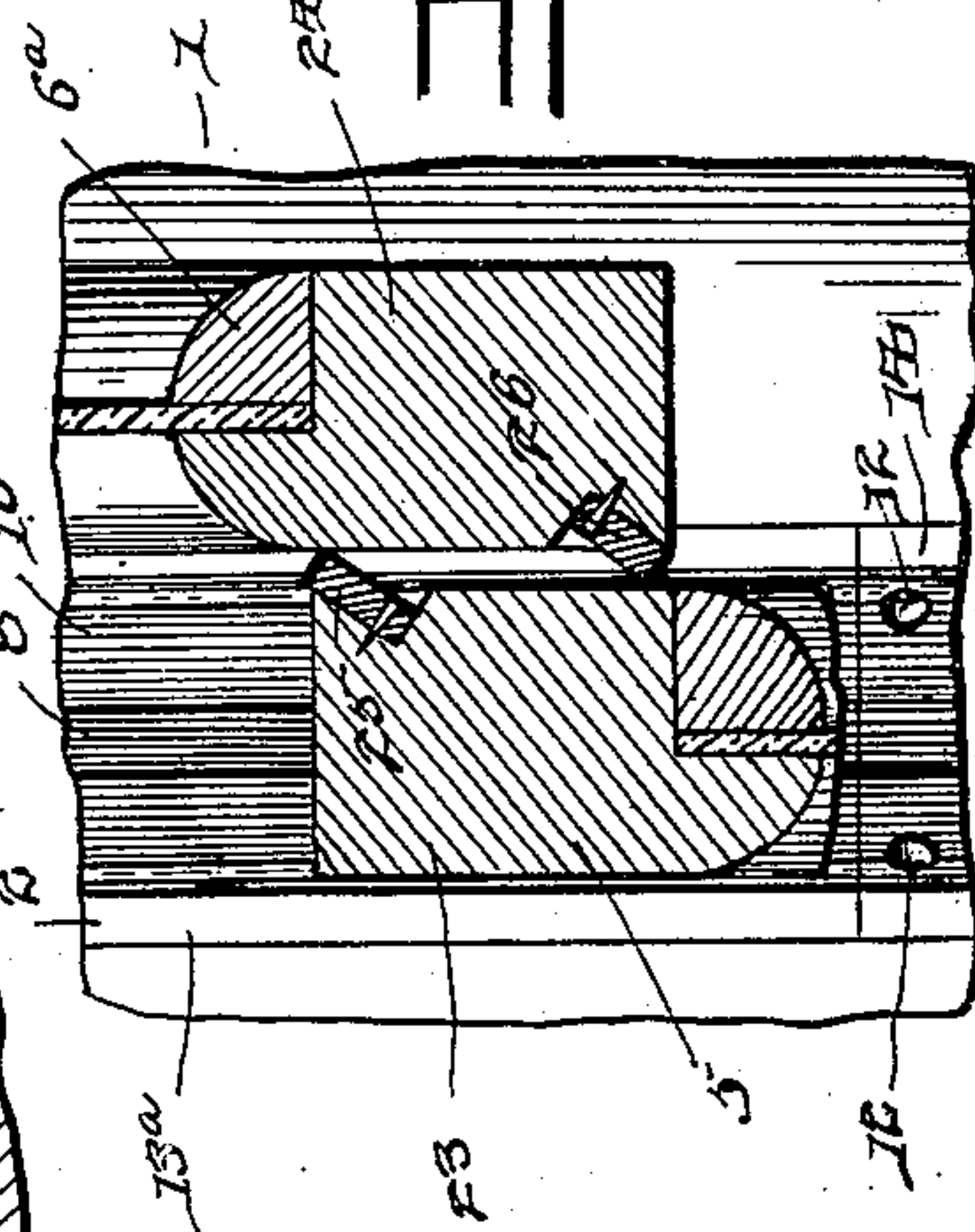


Fig. 3.



Witnesses
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No. 645,667

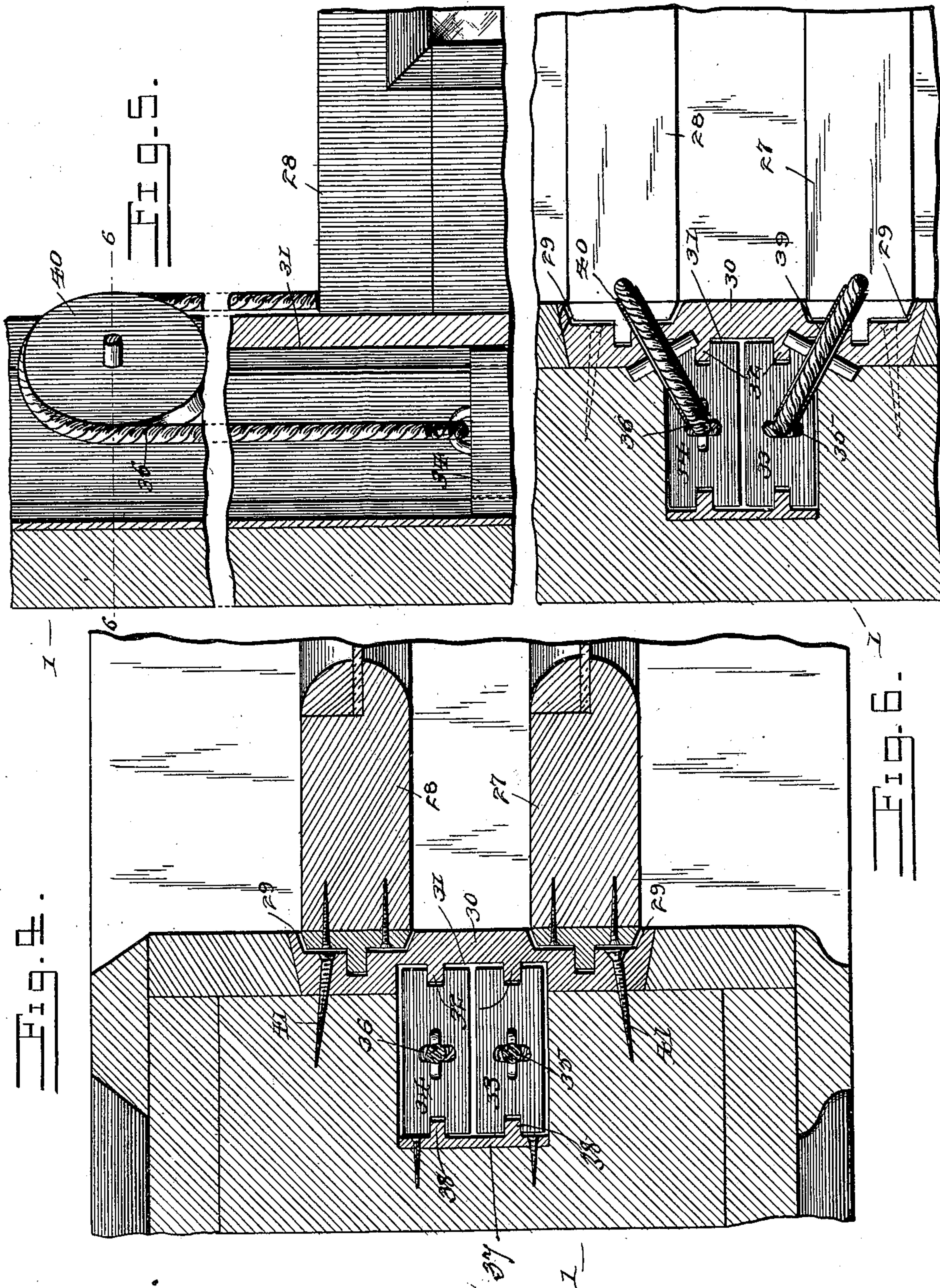
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UNITED STATES PATENT OFFICE.

WILLIAM E. HENDRICKS, OF CAIRO, ILLINOIS.

CAR-WINDOW.

SPECIFICATION forming part of Letters Patent No. 645,667, dated March 20, 1900.

Application filed January 13, 1900. Serial No. 1,335. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. HENDRICKS, a citizen of the United States, residing at Cairo, in the county of Alexander and State of Illinois, have invented a new and useful Car-Window, of which the following is a specification.

The invention relates to improvements in car-windows.

10 The object of the present invention is to improve the construction of car-windows, more especially the manner of mounting the same, and to provide a simple, strong, and close-fitting antifriction one capable of enabling weights to be employed for counterbalancing the sash and adapted to support the parts, so that the sash and the weights will slide freely and be unaffected by the jolting and twisting of cars when in motion.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is a vertical sectional view of a portion of a car-window constructed in accordance with this invention. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a detail sectional view illustrating the arrangement of the adjacent ends of the upper and lower sashes of the car-window. Fig. 4 is a horizontal sectional view showing the invention applied to a parlor-car window having two sliding sashes. Fig. 5 is 35 a vertical sectional view of the same. Fig. 6 is a detail sectional view on line 6 6 of Fig. 5.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

40 1 designates the framework of a car-window, provided with a vertical groove receiving a vertical guide-bar 2 and forming a well 3 for a weight 4, which counterbalances a movable lower sash 5, the upper sash 6^a being designed to be rigidly mounted in position in the usual manner. The vertically-movable lower sash is designed to be provided at each of its side edges with a slide strip or plate 6, constructed of suitable metal and 50 provided with a central longitudinal tongue 7, which is arranged in a corresponding vertical longitudinal groove 8 of the guide-bar 2.

The slide or strip 6 has its inner face of the same width as the sash. Its side edges 9 are beveled, and it fits in a corresponding longitudinal recess 10 of the outer face of the guide-bar 2. The vertical guide-bar 2 is of greater thickness than the facing strips or boards 11 of the window-frame, and as the movable sash is offset from the facing-pieces 11 and is arranged in the longitudinal recess of the guide-bar there is no liability of the wood-work shrinking, swelling, or otherwise compressing itself around the edges of the sash and interfering with the movement of the latter. The rib or tongue 7 keeps the movable sash centered in the longitudinal recess, as illustrated in Fig. 2 of the accompanying drawings, and prevents the slide or strip 6 from binding.

The guide-bar 2 is provided at opposite sides with inwardly-diverging perforations or openings 12, adapted for the reception of screws 13, which engage the woodwork of the car, as clearly shown in Fig. 2, and by arranging the fastening devices in this manner the guide-bar, which is composed of upper and lower sections 13^a and 14, is securely held in position and is prevented from being twisted by the vibration of a car.

The sash is connected by a suitable sash-cord 15 with the weight 4, which is provided at its front and rear faces with grooves 16 and 17, and the said sash-cord passes over a pulley 18, located at the top of the window-frame, as illustrated in Fig. 1 of the accompanying drawings. The weight is rectangular in cross-section, and the front and rear grooves 16 and 17 receive vertical ribs or tongues 19 and 20 of the guide-bar 2 and an inner guide-strip 21, which is secured by suitable fastening devices 22 to the inner or rear wall of the recess of the window-frame, as clearly shown in Fig. 2. These longitudinal ribs or tongues 19 and 20 retain the sliding weight in proper position and enable it to slide freely without binding. The guide-bar 2, the weight, and the strips or plates 6 and 21 are compactly arranged and occupy but a small amount of space and may be conveniently employed on passenger-coaches and similar vehicles where the windows are close together and where but a small amount of space can be allowed for such devices. The

lower section of the vertical bar is adapted to be removed when the lower sash is raised to afford access to the interior of the well 3, so that the weight may be taken out or inspected. The lower sash is preferably provided at its lower edge with an elastic strip of rubber or other suitable material to enable it to fit closely against the window-sill, and the horizontal rails 23 and 24 at the top of the lower sash and the bottom of the upper sash are provided with oppositely-disposed strips 25 and 26, of rubber or other suitable material, which close the space between such meeting rails. The meeting rails or bars 23 and 24 of the sashes may be spaced apart, as shown in Fig. 3, to prevent the movable sash from binding, and the elastic strips 25 and 26, which are arranged at an inclination, are secured in suitable recesses of the bars or rails 23 and 24. The lower sash is designed to be provided at its lower edge with a weather-strip, of rubber or other suitable material, secured to the sash and adapted to exclude air and at the same time form a cushion for the sash in closing.

In Figs. 4, 5, and 6 of the drawings the invention is shown applied to a parlor-car window having two sliding sashes 27 and 28, which are provided with slides or strips arranged in recesses 29 of a guide-bar 30, the latter being enlarged and provided at its outer face adjacent to its side edges with a pair of recesses 29, constructed similar to the recess of the guide-bar 2, heretofore described. The guide-bar is provided at its inner face with a recess 31, and it has a pair of tongues 32, fitting in grooves of and forming guides for a pair of weights 33 and 34, connected, respectively, by sash-cords 35 and 36 with the sashes 27 and 28. The inner guide-strip 37, which is arranged at the inner wall of the well of the window-frame, is provided with a pair of tongues 38, forming guides for and fitting in grooves of the weights 33 and 34. The weights, as clearly illustrated in Fig. 4 of the accompanying drawings, are located at the center of the inner face of the outer guide-bar, and the recesses 29, at the outer face thereof, are located at opposite sides of the recess 31, the sashes being spaced from each other, as shown.

The sash-cords 35 and 36 pass over pulleys 39 and 40, located at the top of the well of the window-frame and set at an angle, as clearly illustrated in Fig. 6, the pulleys diverging outwardly from the well of the frame to the recesses of the outer guide-bar. The outer guide-bar is secured to the window-frame by screws 41, which diverge slightly, as shown in Fig. 4.

It will be seen that the improvements are especially adapted for car-windows, that the balancing devices are compactly arranged, and that the movable sash is guided and enabled to slide freely without binding. It will also be apparent that the guide-bar which is interposed between the movable sash and the weight prevents the face-pieces of the window-

frame from contacting with and binding against the movable sash and interfering with the raising and lowering of the same. It will also be apparent that the improvements enable sash-weights to be employed on cars for counterbalancing the sashes and that the weights are held in proper position and are prevented from binding.

What is claimed is—

1. In a device of the class described, the combination with a window-frame provided with a longitudinal recess, of a guide-bar mounted in the recess and provided at its inner face with a longitudinal tongue and having a recess at its outer face, said guide-bar being provided with a longitudinal groove located between the sides of the recess, a sash provided with a slide or strip fitting in the recess of the guide-bar and having a tongue arranged in the said groove, a guide-strip arranged in the recess of the window-frame and provided with a tongue, and a weight connected with the sash and interposed between the guide-strip and the guide-bar and provided with grooves receiving the tongue of the said guide-bar and guide-strip, substantially as described.

2. In a device of the class described, the combination of a window-frame having a recess, a guide-bar arranged in the recess and provided at its outer face with a longitudinal groove and having a recess beveled at its side walls, diverging fastening devices securing the guide-bar to the window-frame, and a window-sash having a beveled slide or strip fitting in the recess of the guide-bar and provided with a tongue to engage the said groove, substantially as described.

3. In a device of the class described, the combination with a window-frame, having face-pieces 11, and provided between the same with a longitudinal recess, of a guide-bar mounted within the recess and being of greater thickness than the face-pieces, said guide-bar being provided at its outer face with a recess, a sash guided in the recess of the guide-bar and spaced from the face-pieces, and a counterbalancing-weight also guided by the said bar and connected with the sash, substantially as described.

4. In a device of the class described, the combination of an outer guide-bar provided at its outer face with recesses and having tongues at its inner face, an inner guide-strip provided with tongues arranged opposite the said tongues, sliding weights interposed between the guide-bar and the guide-strip and provided with grooves receiving the said tongues, pulleys arranged at an angle, and sash-cords connected with the weights passing over the pulleys, and designed to be attached to the sashes, substantially as described.

5. In a device of the class described, the combination of an outer guide-strip provided at its outer face with recesses adapted to be engaged by window-sashes, an inner guide-

strip, sliding weights interposed between the guide-bar and the inner guide-strips and interlocked with the same, pulleys set at an angle, and sash-cords passing over the pulleys and connected with the weights and adapted to be secured to the sashes, substantially as described.

6. In a device of the class described, the combination of an outer guide-bar, provided at its inner face with a central recess and having recesses located at its outer face and offset from the plane of the central recess,

sliding weights fitting in the central recess of the guide-bar, and pulleys set at an angle and adapted to receive sash-cords, substantially as described. 15

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. HENDRICKS.

Witnesses:

A. J. ROSS,
NICK KRUE.