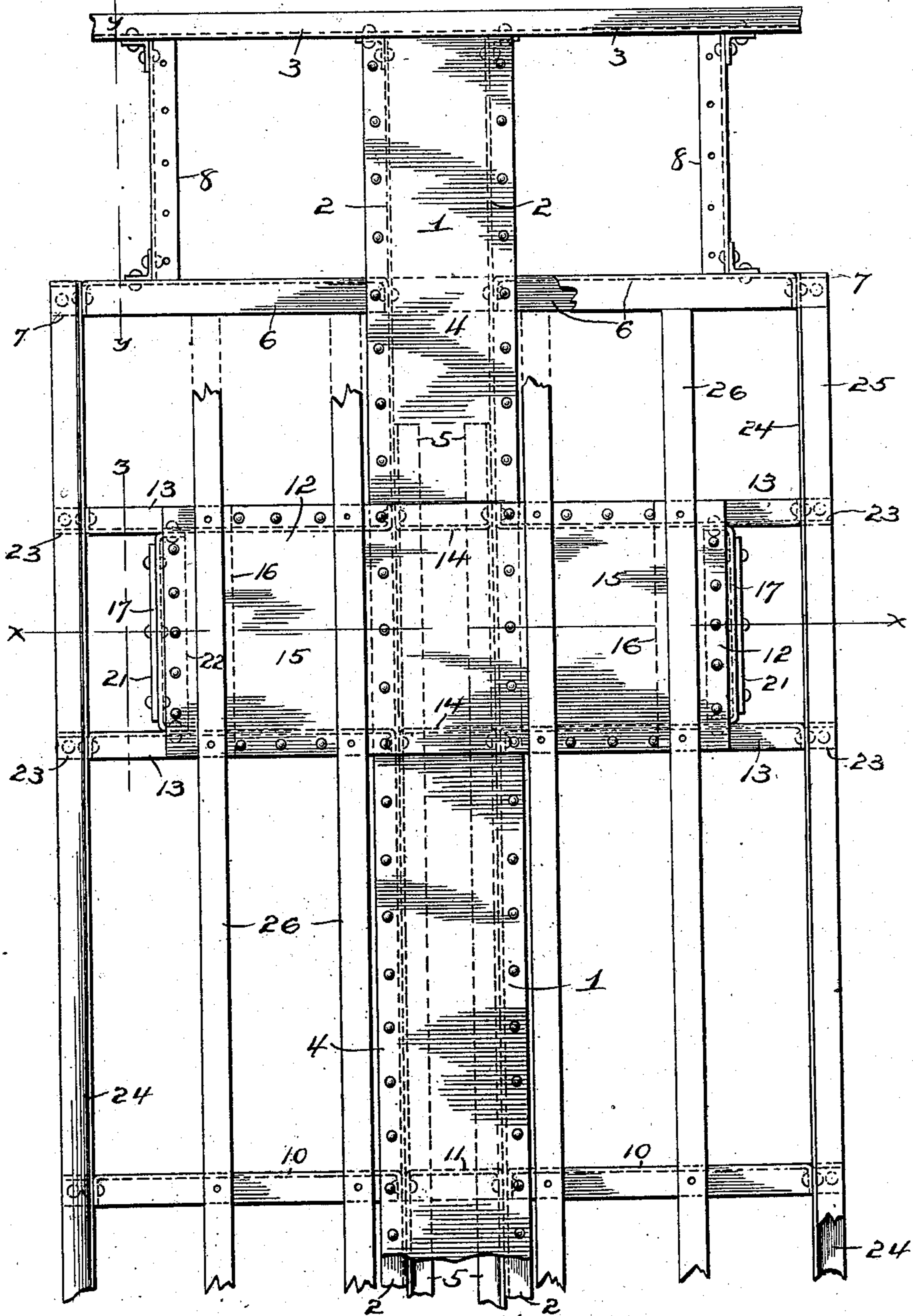


A. BECKER.
CAR UNDERFRAME.
APPLICATION FILED JAN. 6, 1909.

920,813.

Patented May 4, 1909.

2 SHEETS—SHEET 1.



WITNESSES
E. Nottingham
G. J. Downing

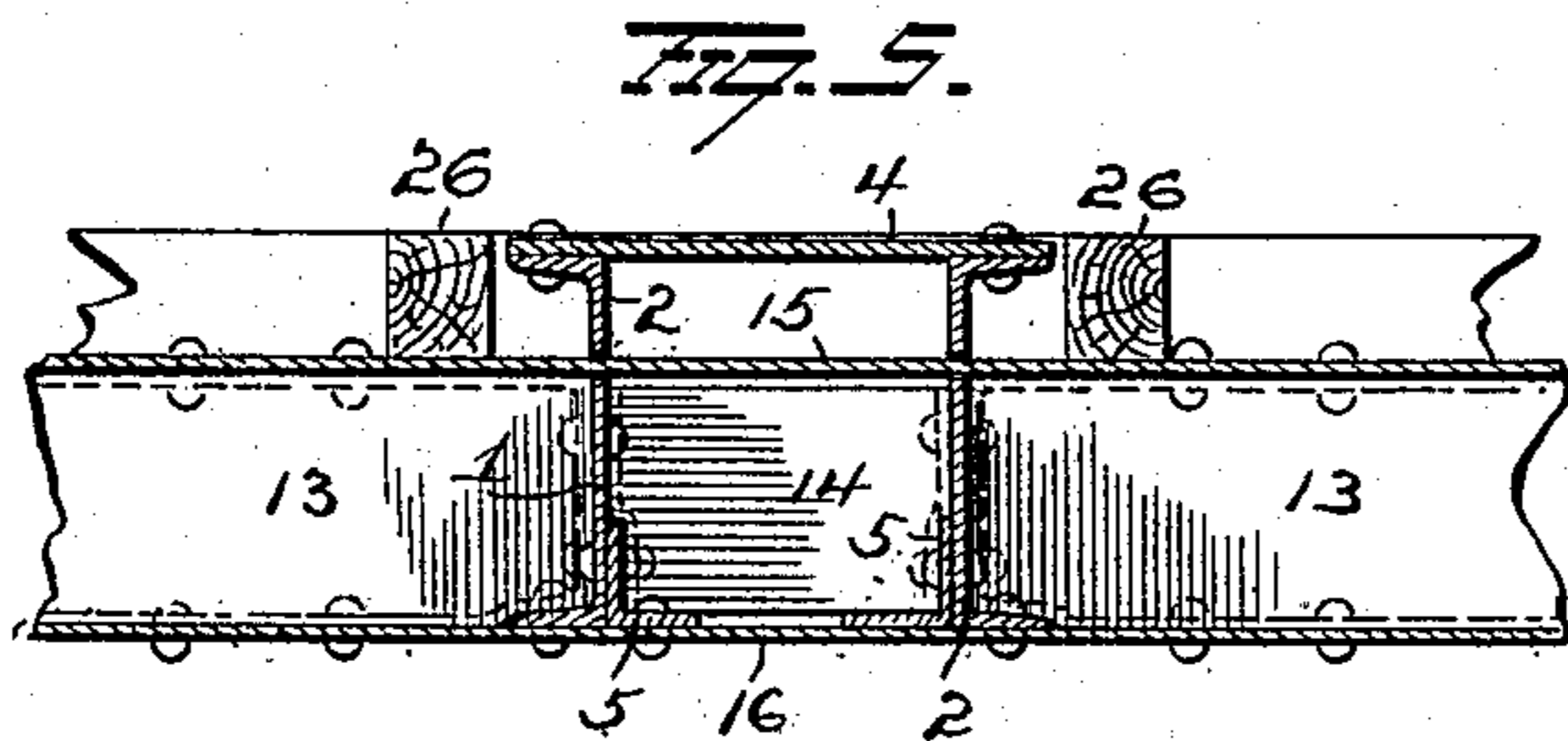
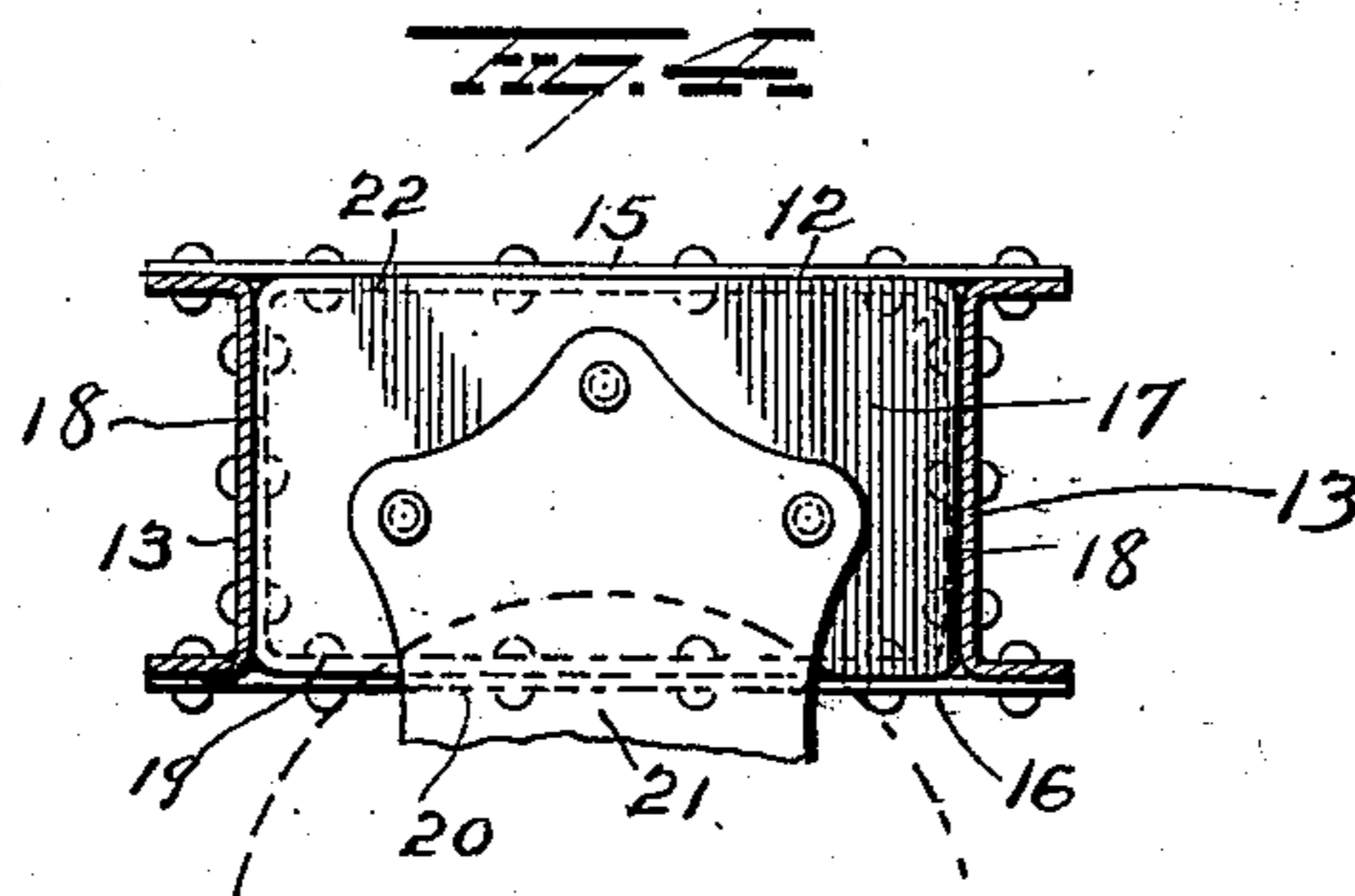
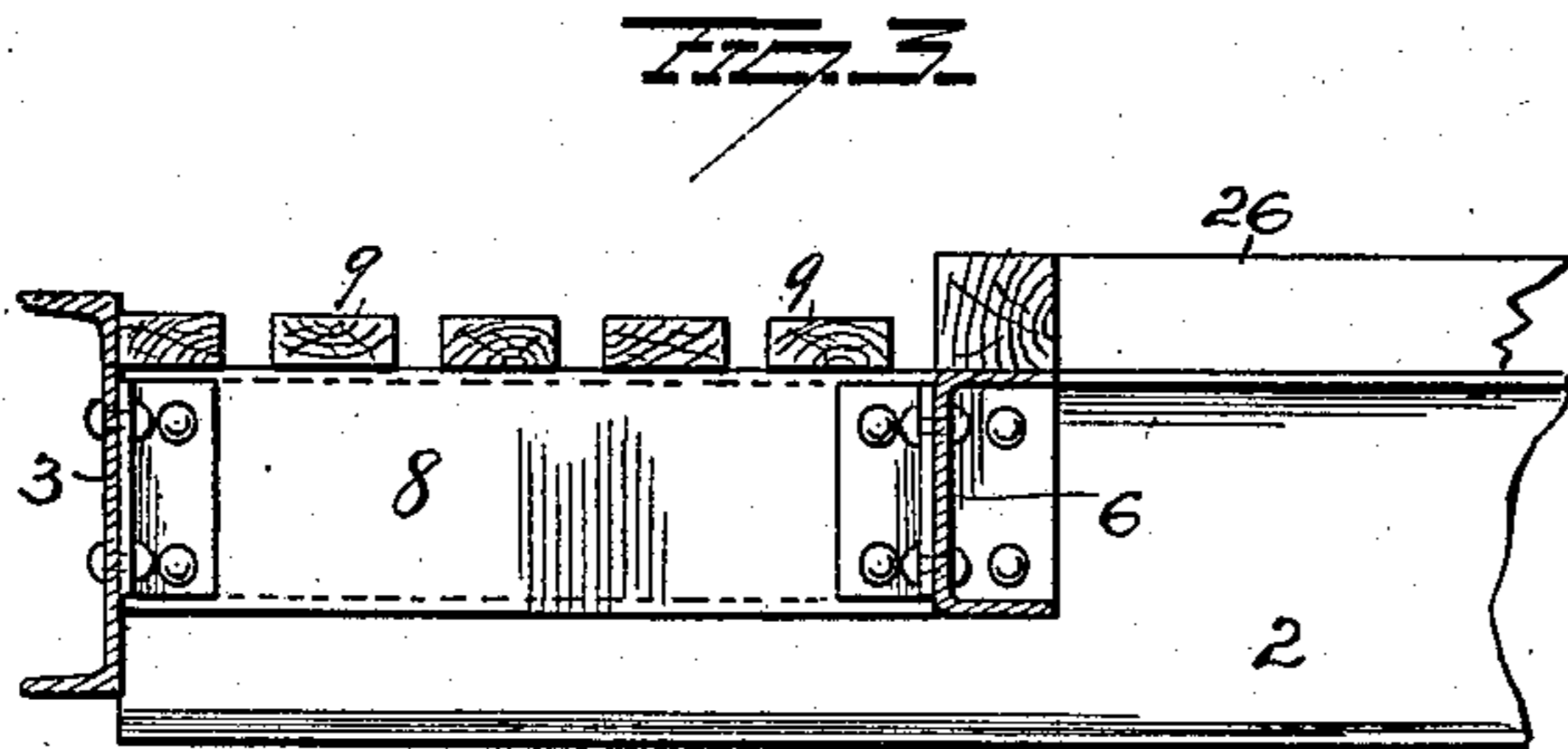
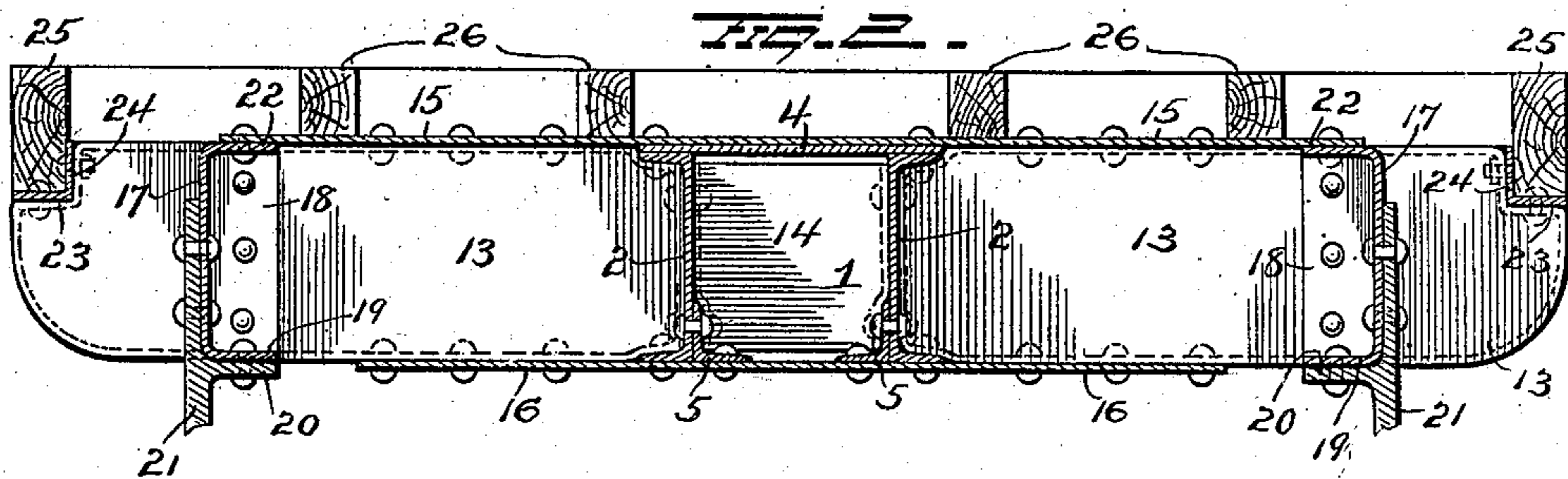
INVENTOR
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By H. A. Seymour
Attorney

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2 SHEETS—SHEET 2.



WITNESSES

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G. J. Downing

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UNITED STATES PATENT OFFICE.

ANTON BECKER, OF COLUMBUS, OHIO, ASSIGNOR TO THE RALSTON STEEL CAR COMPANY,
OF COLUMBUS, OHIO.

CAR-UNDERFRAME.

No. 920,813.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed January 6, 1909. Serial No. 471,002.

To all whom it may concern:

Be it known that I, ANTON BECKER, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Car-Underframes; 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.

This invention relates to improvements in car underframes and more particularly to such as are adapted for use with cars in which the superstructure is supported upon the pedestals.

The object of the invention is to provide an underframe which will be very rigid and strong and yet comparatively light and which shall be adapted to be connected with the pedestals of a car without the use of a continuous flanged member carried by the pedestals.

With this object in view the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a portion of a car underframe embodying my improvements. Fig. 2 is a transverse sectional view on the line $x-x$ of Fig. 1. Fig. 3 is a sectional view on the line $y-y$ of Fig. 1. Fig. 4 is a section on the line $z-z$ of Fig. 1, and Fig. 5 is a view illustrating a slight modification.

1 represents a center girder which may comprise two channel members 2, 2, which extend from one end sill 3 to the other and a cover plate 4 secured to the upper flanges of the center sill members and also extending continuously from one end sill 3 to the other. Angle irons 5 are secured to the inner faces of the center girder members in line with the lower flanges of the latter and serve to reinforce said girder members and the open space between said angle irons will afford access between the girder members. End sill diaphragms 6 are secured to the center girder members some distance rearwardly of the end sills 3 and project laterally from the center girder members and at their outer ends said diaphragms 6 are provided with seats 7 for the accommodation of the ends of side sills. Channel pieces 8 connect the end sill diaphragms with the end sills at respective sides of the center girder.

These channel pieces, together with the center girder members which project beyond the end sill diaphragms, serve to support the platform flooring 9, as shown in Fig. 3.

At the center of the underframe, transverse diaphragms 10 are secured to the center girder members and project laterally therefrom, said diaphragms being provided at their outer ends with seats for the accommodation of the side sills of the car. A filler 11 may be secured between the center girder members and in alinement with the diaphragms 10.

A cross beam 12 is located a short distance in rear of each end of the underframe and each of said cross-beams comprises two diaphragms 13, 13, at each side of the center girder and rigidly secured at their inner ends to the center girder members. Fillers 14 may be secured between the center girder members in alinement with the diaphragms 13 of the cross beam. In addition to the diaphragm 13, the cross-beam 12 comprises a top cover plate 15 and a bottom plate 16 which pass over and under the center girder. The cross beam 12 is made of considerable width, the diaphragms 13 thereof being so spaced apart as not to interfere with the car wheels when the pedestals are connected with the cross-beam in the manner which will now be explained.

Inwardly removed from the outer end of the cross-beams 12 and between the separated members or diaphragms 13 thereof, a flanged plate 17 is located. Each plate 17 is provided at its side edges with flanges 18 which are riveted to the diaphragms 13 and at the lower edge, each plate 17 is provided with a flange 19 riveted to a shoulder 20 on a car pedestal 21. The pedestal 21 projects above the lower edge of plate 17 and is riveted to the latter as clearly shown in Fig. 2. Each plate 17 is provided at its upper end with a flange 22 and to these flanges the respective ends of the top cover plate 15 are secured.

The outer ends of the diaphragms composing the cross-beams 12 are provided with seats 23 in line with the seats at the outer ends of the center diaphragms 10 and the end sill diaphragms 6 and on these alined seats angle members 24 are secured. Upon these angle members the side sills which may, in effect, be side furring strips 25 are located. Furring strips 26 are also sup-

ported upon the various crossbeam diaphragms so that their upper faces will be in horizontal alinement with the upper faces of the side furring strips or sills 25.

5 In Fig. 2 of the drawing the top of the center girder is substantially in horizontal alinement with the tops of the diaphragms of the cross-beams, but if desired, in order to lower the floor line of the car, the tops
10 of the cross-beams may be dropped a sufficient distance so that the tops of the furring strips will be substantially in horizontal alinement with the top of the center girder, but in such construction it would be necessary to slot the center girder members for
15 the passage of the top cover plate 15. Such construction is shown in Fig. 5 of the drawings.

20 With my improvements the entire load is carried by the center girder and the latter is supported by the car pedestals through the medium of the cross-beams 12 and the plates or brackets 17 secured between the members thereof,—the use of continuous
25 flanged members carried by the pedestals begin thus avoided.

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is,—

30 1. A car underframe, comprising a center girder, transverse members secured thereto and affording supports for side sills, plates secured to said transverse members for sup-

porting the under frame upon a car pedestal, and cover plates secured upon said transverse members and to the upper ends of said plates. 35

2. A car underframe, comprising a center girder, transverse diaphragms projecting laterally therefrom and spaced apart, plates 40 disposed between said diaphragms at points inwardly removed from the outer ends of the latter, each of said plates having flanges secured to said diaphragms, a cover plate extending over the center girder, and flanges 45 on the upper ends of said plates and secured to the said cover plate.

3. The combination with center girder members, each having outwardly projecting flanges at both edges, a continuous cover 50 plate secured to the upper flanges of the respective center girder members, and angle irons secured to the inner faces of the center girder members at their lower edges, of a cross-beam comprising parallel members 55 spaced apart and secured to the center girder members, and means for connecting said cross-beam members with the pedestals of a car.

In testimony whereof, I have signed this 60 specification in the presence of two subscribing witnesses.

ANTON BECKER.

Witnesses:

F. A. LIVINGSTON,
E. J. CULVER.