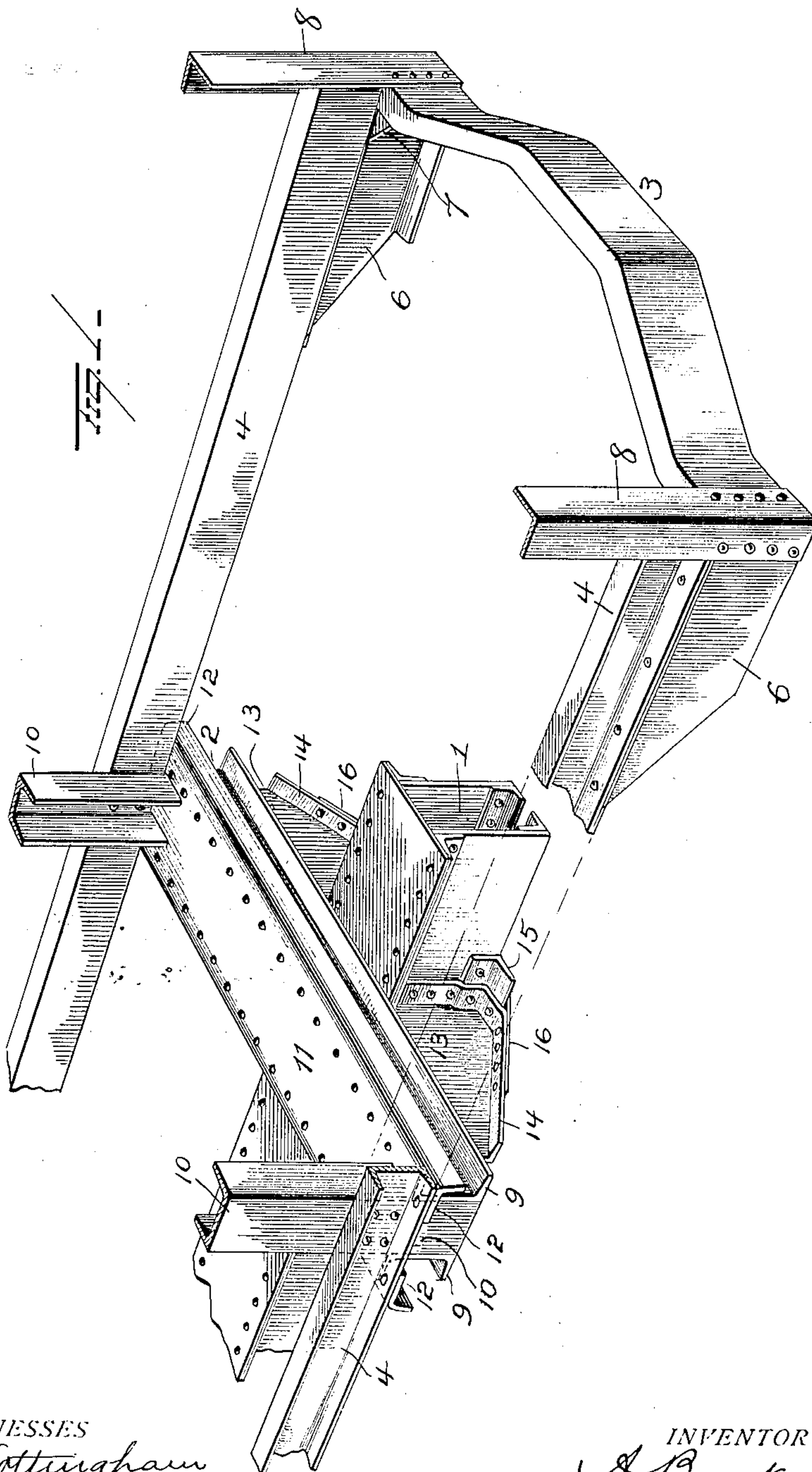


No. 872,044.

PATENTED NOV. 26, 1907.

A. BECKER.  
UNDERFRAME FOR CARS.  
APPLICATION FILED MAR. 18, 1907.

2 SHEETS—SHEET 1.



WITNESSES  
*E. J. Nottingham*  
*G. J. Downing*

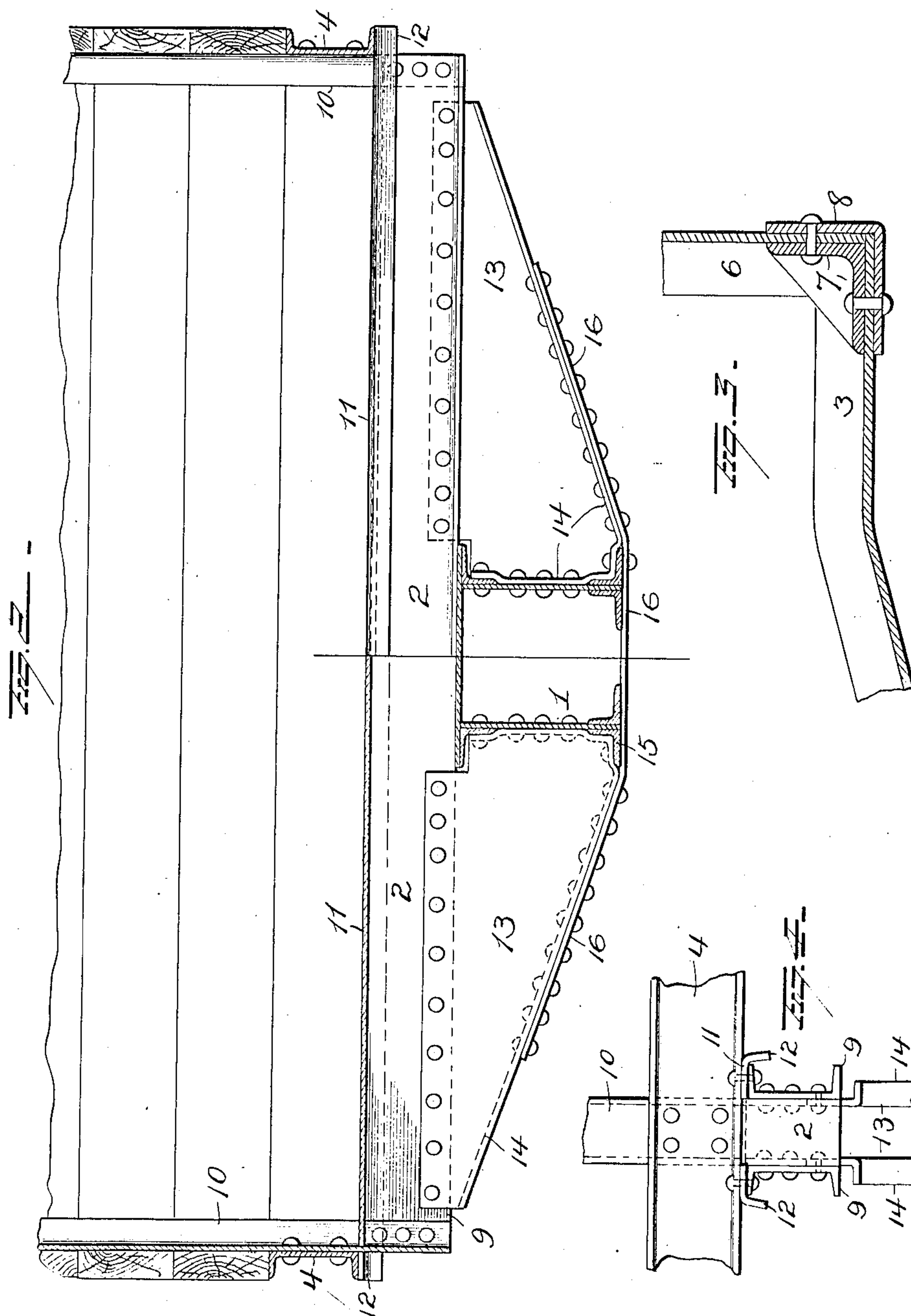
INVENTOR  
*A. Becker*  
*By H. A. Seymour*  
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*WITNESSES*

W. J. Nottingham  
G. F. Downing.

INVENTOR

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*By H. A. Seymour*  
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# UNITED STATES PATENT OFFICE.

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

## UNDERFRAME FOR CARS.

No. 872,044.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed March 18, 1907. Serial No. 362,956.

*To all whom it may concern:*

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

My invention relates to metal underframes for cars and more particularly to improvements upon the construction shown and described in Letters Patent No. 841,221, granted to me January 15, 1907.

One object of my present invention is to simplify and improve the manner of securing the side stakes in place at the ends of the bolster.

A further object is to improve the manner of supporting the side sills at the ends of the bolster and simplify the manner of connecting the bolster diaphragms in place.

A further object is to strengthen the corner construction of the underframe.

With these objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings: Figure 1 is a perspective view of a portion of an underframe embodying my improvements; Fig. 2 is a detail sectional view; Fig. 3 is a detail view of the corner construction; Fig. 4 is a fragmentary side elevation.

1 represents the central girder of a car under-frame, and 2 the bolster located transversely on the center girder, the end sill 3 of the underframe being secured at the forward ends of draft sills (not shown) secured to the center girder. The side sills 4 are supported upon the bolster, and at their forward ends, said side sills are secured upon the end sill,—the end sill being thus disposed below the plane of the side sills, as clearly shown in my patent above referred to. Sub-side sills 6 are disposed to depend from the side sills, at the ends thereof and are secured thereto and to the end sills. In the angles formed by the sub-sills and the end sills, triangular brackets 7 are secured for the purpose of strengthening the corners of the framework, and these corners are further strengthened by angle irons 8 which may be secured, not only to the

side sills, sub-sills, and end sill, but also to the superstructure.

The bolster 2 comprises two channel irons 9, 9 spaced a short distance apart and at the ends of the bolster, stakes 10 are located. These stakes are made of angle or channel irons (being U-shaped in cross section) and are disposed between the channel-iron members 9 of the bolster, said stakes extending to the plane of the bottoms of said channel-iron members, and securely bolted to the webs of the latter. A cover plate 11 is disposed upon the bolster and is of a length to extend beyond the end stakes 10, said cover plate being recessed at its ends for the accommodation of said stakes. Upon the projecting ends 12 of the cover plate, the side sills 4 are mounted and may be secured thereto. The side sills are thus disposed against the outer faces of the stakes 10 and are bolted thereto.

To the inner face of each member 9 of the bolster, a diaphragm 13 is securely bolted. This diaphragm is provided at its lower and inner edges with a laterally projecting flange 14, the vertical portion of which is bolted to the vertical wall of the center sill, and said flange being bolted, at the juncture of its vertical and inclined portions, to an angle iron 15 secured at the base of the center sill. It will, of course, be understood that two diaphragms such as above described, will be provided for each bolster member and that they are located at respective sides of the center girder or sill. A strap 16 extends under the center girder, and is secured at its respective ends to the inclined flanges of the diaphragms.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to limit myself to the precise details herein set forth.

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

1. In a car under-frame, the combination with the bolster members, of stakes secured between said members and side sills supported upon the bolster members outside of said stakes and secured thereto.

2. In a car underframe, the combination with the bolster members, of stakes secured between said bolster members, each of said stakes consisting of a channel iron having its flanges projecting inwardly, and side sills lo-

cated upon the bolster members outside of said stakes and secured to the body of said stake between the inwardly projecting flanges of the latter.

- 5 3. In a car underframe, the combination with the bolster members, of stakes secured between said members, a cover plate mounted upon said bolster members and extending beyond the stakes, and side sills mounted

upon the ends of said cover plate and secured 10 to the stakes.

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

ANTON BECKER.

Witnesses:

C. H. WEBER,

T. H. LIVINGSTON.