A. BECKER.

UNDERFRAME FOR CARS.

APPLICATION FILED JAN. 14, 1908.

912,275.

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Fig. 1.

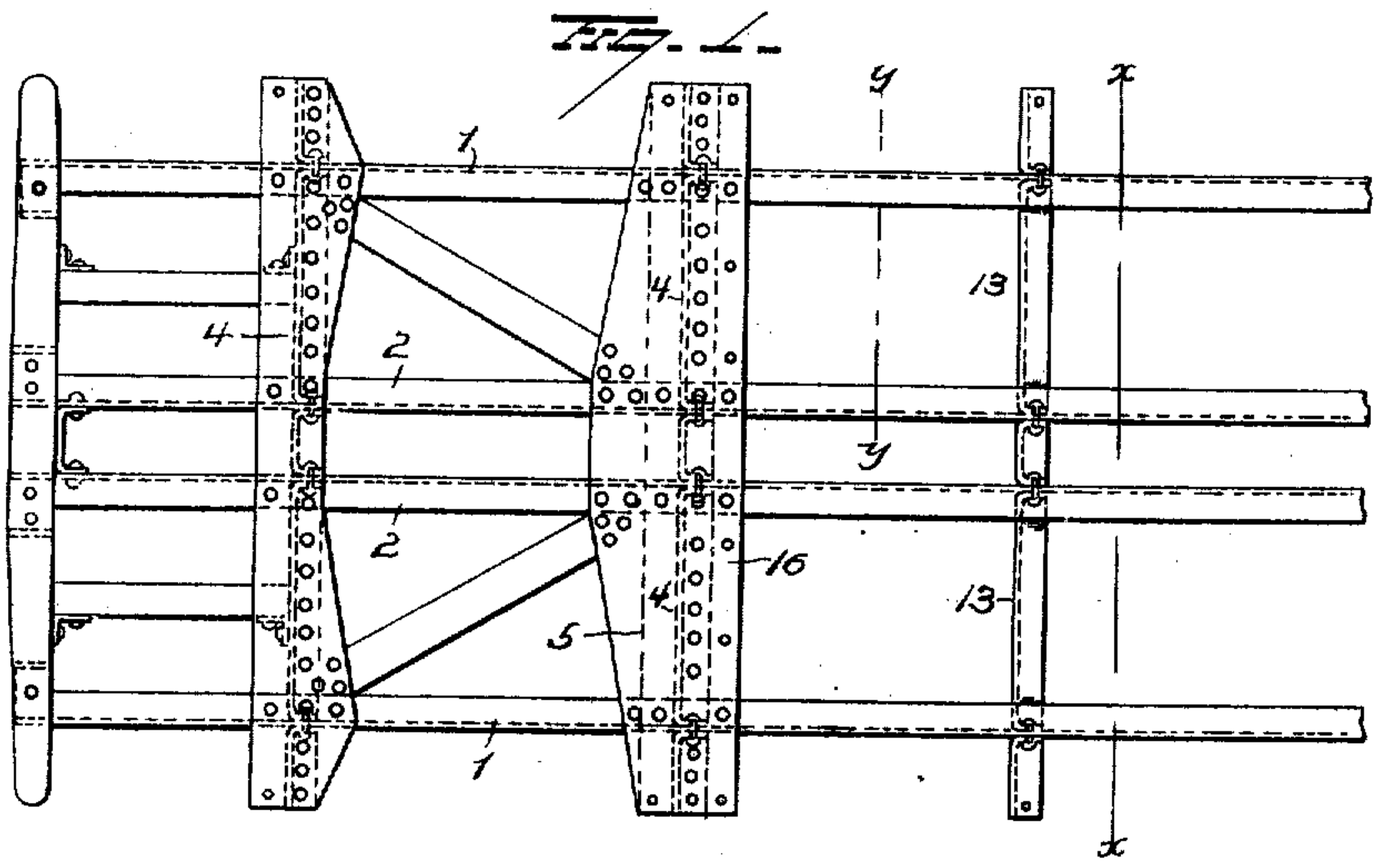



Fig. 2.

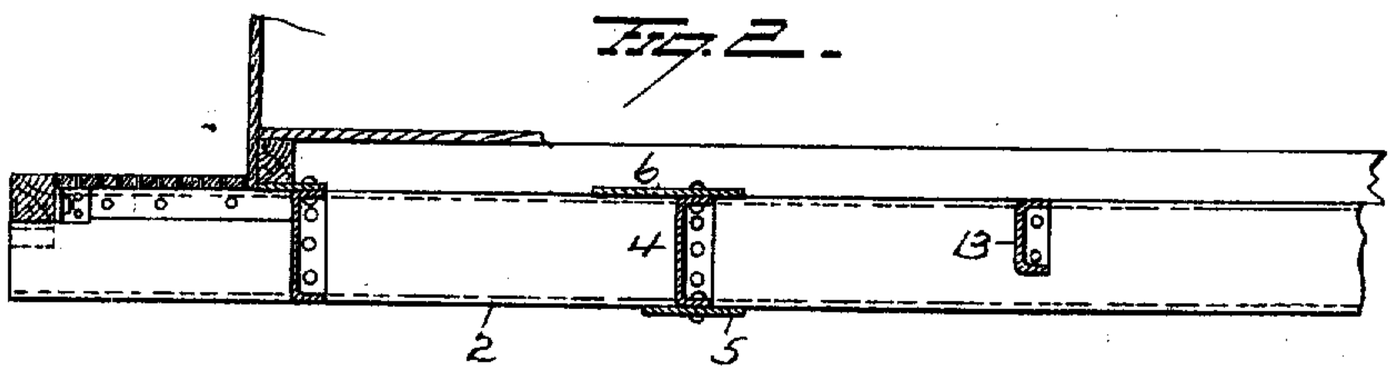



Fig. 3.

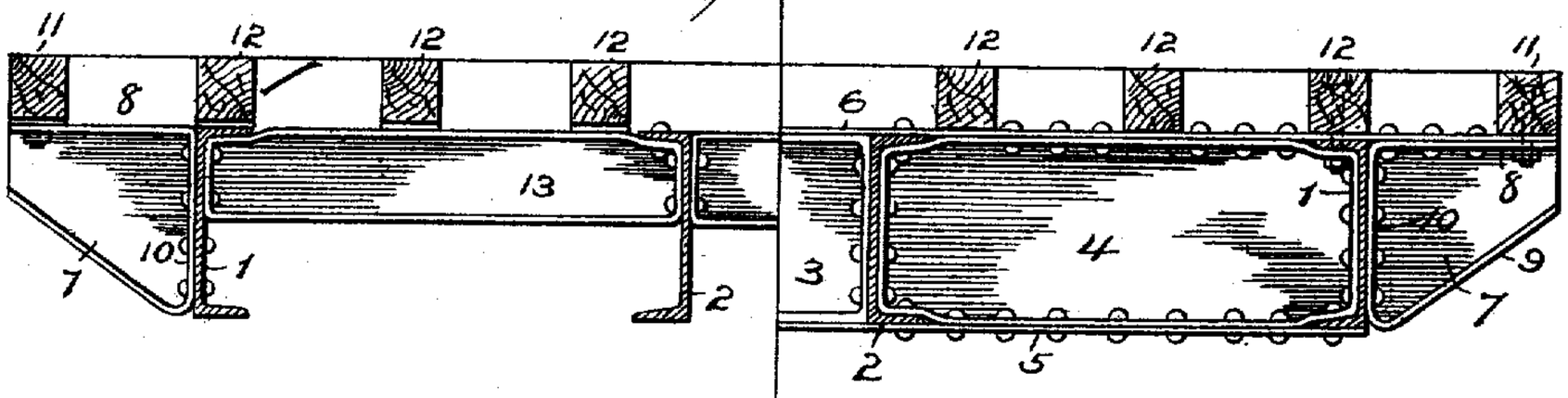
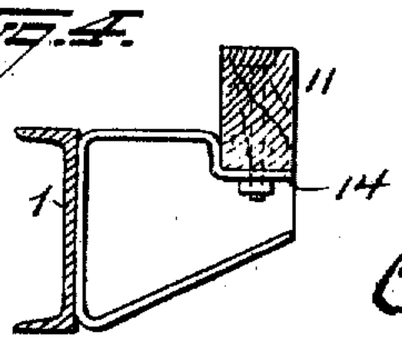



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## UNDERFRAME FOR CARS.

No. 912,275. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed January 14, 1908. Serial No. 410,795.

*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 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 improvements in underframes for cars,—the object of the invention being to provide an underframe for a short four-wheeled car of the "caboose" type and to construct such frame with a minimum number of parts without sacrificing strength and rigidity and still reducing to a minimum the cost of construction of such cars.

With this object in view the invention consists in certain novel features of construction and their relative arrangement as hereinafter set forth and more particularly defined in the appended claims.

In the accompanying drawings, Figure 1 is a partial plan view of a car underframe embodying my improvements; Fig. 2 is a longitudinal sectional view of the structure shown in Fig. 1; Fig. 3 is a transverse sectional view, taken on the lines *x*—*x* and *y*—*y* of Fig. 1, and Fig. 4 is a detail view illustrating a slight modification.

1, 1, represent channel-beams which are disposed upon the pedestals of a car, and 2 represents a center girder comprising two parallel channeled members spaced apart by a suitable filler 3. The center girder is connected with the supporting channels 1 by means of cross-beams 4. Each cross-beam 4 comprises two members and each of these members consists of a diaphragm provided at it edges with flanges and these flanged diaphragms may be made of either pressed or rolled steel. The vertical flanges at the inner ends of the respective members of each cross-beam is secured to the web of the adjacent center girder member, while the vertical flange at the outer end of each diaphragm is secured to the web of the adjacent supporting channel 1. A tension plate 5 extends from one supporting channel 1 to the other and is riveted to the lower flanges of said channels and to the lower flanges of the center girder members, as well as to the flanges at the lower edges of the diaphragms composing the cross-beam members. A cover-plate 6 extends over the center girder and the cross-beam members; is secured to the flanges of the cross-beam members and also to the upper flanges of the supporting channels 1 and the center girder 2, and at its ends said cover plate projects over brackets 7 to the upper flanges 8 of which it is riveted. The brackets 7, above referred to, have a general triangular form and in addition to the upper flange 8, each bracket is provided at its lower diagonal edge with a flange 9 and at its inner vertical edge with a flange 10. The flange 10 of each bracket 7 is secured by means of suitable bolts or rivets to the web of the adjacent supporting member or channel 1. The brackets 7 serve as supports for the side-sills 11 and furring strips 12, similar in construction and size to the side-sills 11, are supported upon the cross-beams and one of these furring strips will preferably be located over each channel supporting beam 1.

The cross-beam at the center of the underframe may, if desired, be made of less depth than the others, as illustrated at 13 in Figs. 1 and 3. The construction however of this cross-beam is the same as that above described.

If desired each bracket 7 may be formed with an integral depressed seat 14 when it is deemed necessary in a particular case to employ a side-sill 15 of greater depth than the side-sill 11, shown in Fig. 3.

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

1. A car underframe comprising supporting channels adapted to be disposed upon the car pedestals, a center girder, cross-beams, each of said cross-beams comprising two flanged diaphragms secured at their inner ends to the outer faces of the center girder and at their outer ends to the inner faces of the supporting channels, brackets secured to the outer faces of the supporting channels and projecting laterally therefrom in line with the cross-beams, and a cover plate extending over each cross-beam, the supporting channels, the adjacent brackets and the center girder and secured to the cross-beam members and said brackets.

2. The combination of center girder mem-

bers, side supporting channels, cross-beams located between the center girder members and the side supporting channels and secured to the side faces thereof, said side supporting channels being in a position to be supported upon the pedestals of the car, triangular flanged brackets secured to the outer faces of the side supporting channels, furring strips supported by the cross-beams, and furring strips supported upon the triangular brackets.

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

ANTON BECKER.

Witnesses:
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