A. BECKER.

UNDERFRAME FOR CARS.

APPLICATION FILED JUNE 13, 1908.

912,440. Patented Feb. 16, 1909.

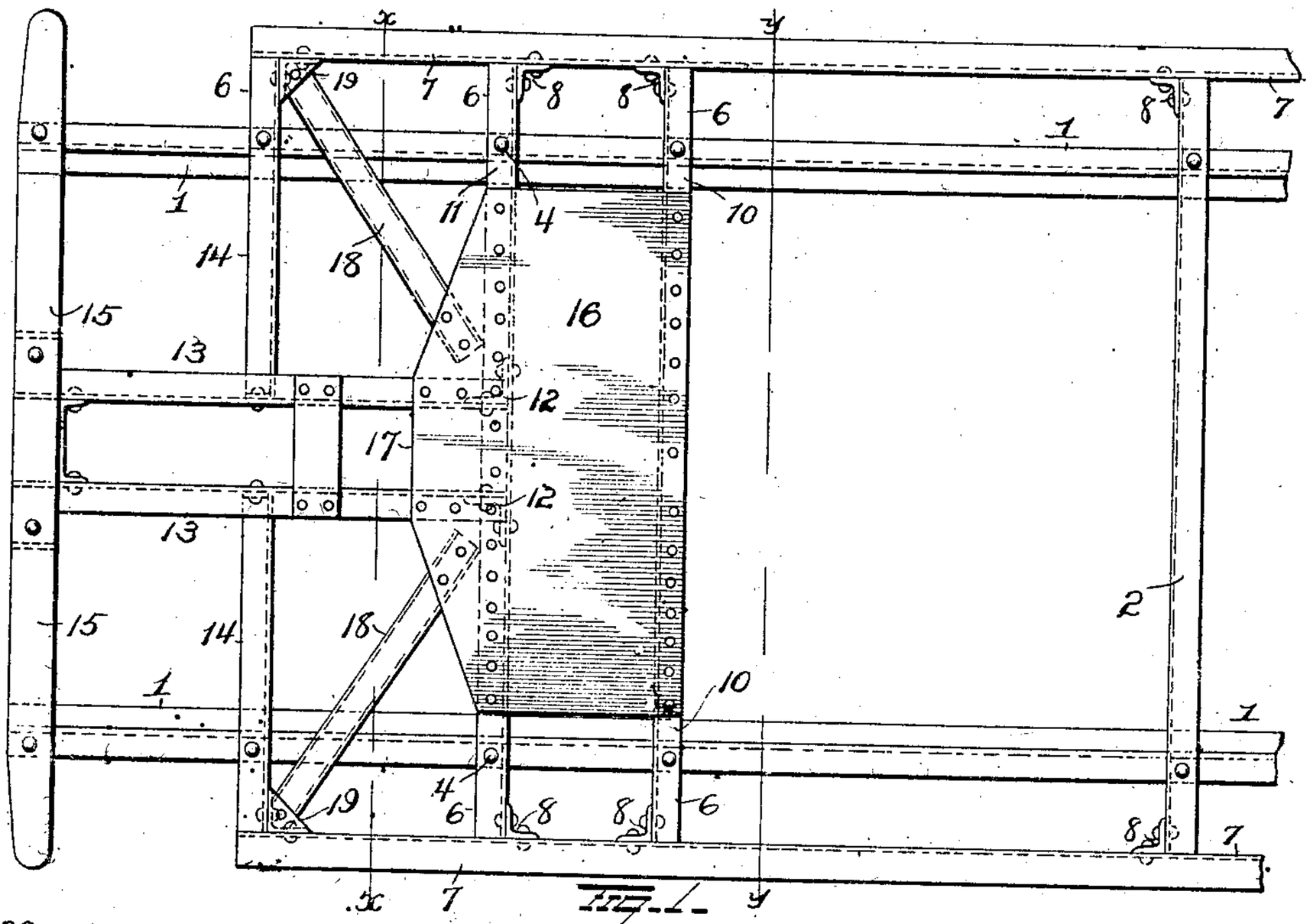

Fig. 1.

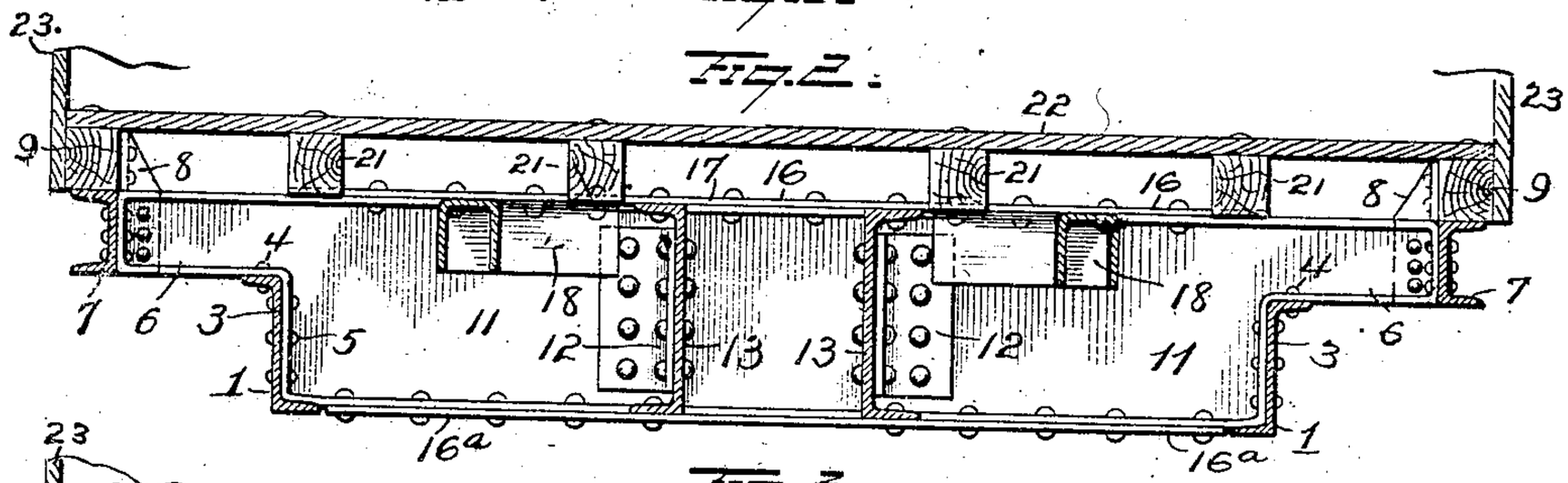

Fig. 2.

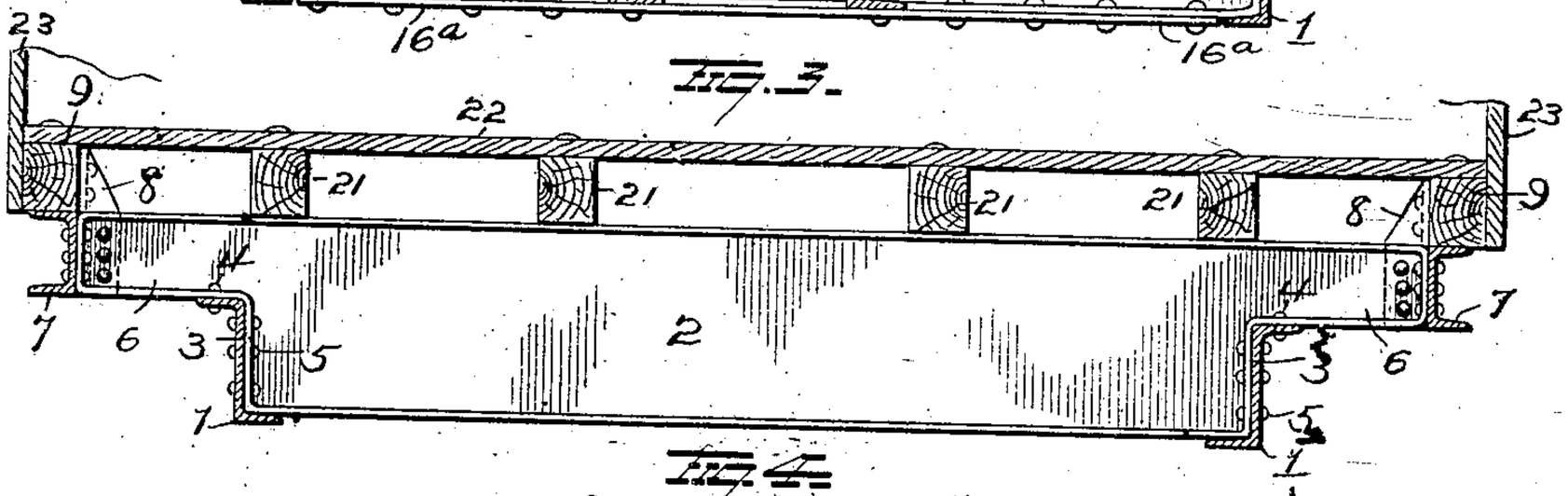

Fig. 3.

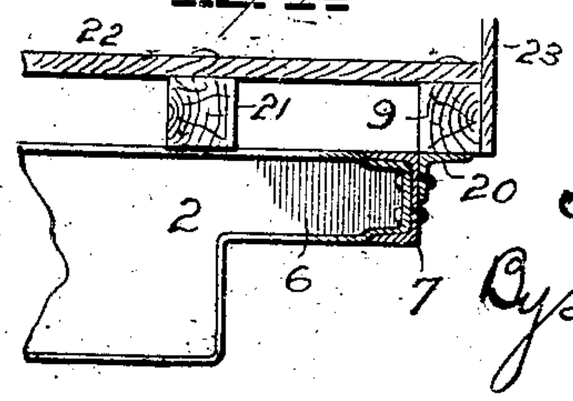

Fig. 4.

WITNESSES

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UNDERFRAME FOR CARS.

No. 912,440. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed June 13, 1903. Serial No. 438,379.

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.

This invention relates to improvements in underframes for cars and more particularly to such as are supported upon the car pedestals,—one object of the invention being to so construct an underframe that it will effectually support the superstructure directly upon the car pedestals and in which a center girder is dispensed with.

A further object is to provide simple and efficient means for connecting draft sills to a car underframe which employs no center girder and to so construct said underframe that it can be mounted upon the pedestals without danger of interference with the car wheels.

With these objects in view the invention consists in certain novel features in 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 transverse sectional view on the line *y*—*y* of Fig. 1, and Fig. 4 is a view of a slight modification.

1, 1, represent angle beams, preferably of the Z-type, said beams being mounted upon and secured to the car pedestals.

Between the ends of the structure, one or more cross-beams or diaphragms 2 will be located. Each cross-beam 2 is notched or recessed at its respective ends as shown at 3 and through the medium of flanges 4 and rivets 5, are secured to the Z-beams 1. The narrower portions 6 of the cross-beams are disposed in a plane above that of the Z-beams and project laterally beyond the same. The outer ends of the portions 6 of the cross-beams are secured to side sills 7 through the medium of angle gussets 8, which latter project above the plane of the cross-beam and are secured to furring strips 9 seated upon the side sills, which latter are preferably made in the form of channel-beams.

Near the end of the structure and in proximity to the connections of the Z-beams with the pedestals, cross-beams 10 and 11 are located and spaced apart a sufficient distance not to interfere with the car wheels, the journal boxes of which are mounted in said pedestals. These cross-beams are similar in construction and are secured to the Z-beams and side sills in the same manner as the cross-beams 2 above described. The rear ends of parallel draft-sills 13 are secured to the cross-beam 11 by means of angle irons 12. The ends of the side sills 7 are connected by a cross-beam or diaphragm 14 which is located at the point of the car end sill. The diaphragm 14 comprises two members located at respective sides of the draft sills and secured at their inner ends thereto. The Z-beams 1 and the draft sills 13 project beyond the cross-beam or diaphragm 14 and are connected by means of a sill 15, thus forming a frame upon which the car platform may be secured.

The cross-beams 10 and 11 are provided at their upper and lower edges with flanges, to which upper and lower cover plates 16 and 16ª are secured, said cover plates extending over and under the space between said cross-beams 10 and 11 and between the Z-beams 1. The upper cover plate 16 is provided with a forwardly projecting portion 17 secured centrally between its ends to the upper flanges of the draft sills. Diagonal braces 18 are secured at their outer, forward ends, to the side sills and cross beam 14 through the medium of gussets 19. The other ends of the diagonal braces are secured to the forwardly projecting portion 17 of the upper cover plate 16 in proximity to the juncture of the cross-beam members 11 with the draft sills 13.

In the construction shown in Fig. 4 the side sill is arranged with its flanges projecting inwardly and to the outer face of said side-sill, an angle iron 20 is secured for supporting the furring strip 9. Several of these angle irons 20 may be employed and secured at intervals to each side sill. Furring strips 21 are disposed upon and extend across the several cross-beams,—said furring strips being in horizontal alinement with the furring strips 9 for supporting the car floor 22. The

car sides 23 are secured to the outer faces of the side furring strips 9.

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

1. A car underframe comprising parallel Z-beams adapted to be supported upon car pedestals, continuous cross-beams secured to and connecting the respective Z-beams and projecting laterally beyond the same, and side sills secured to the projecting ends of the cross-beams.

2. In a car underframe, the combination with parallel Z-beams adapted to be supported upon the pedestals of a car, of cross-beams having their outer ends recessed and secured to the Z-beams at the inner ends of the recesses, the upper portions of said cross-beams projecting laterally beyond the Z-beams, and side sills secured to the projecting portions of the cross-beams.

3. In a car underframe, the combination with beams adapted to be supported upon car pedestals, of cross-beams secured to the first mentioned beams and having portions projecting laterally beyond the latter, and side sills secured to the projecting portions of the cross-beams.

4. In a car underframe, the combination with Z-beams, of cross-beams secured to said Z-beams and having portions above the plane of the latter and projecting laterally therefrom, side sills at the free ends of said laterally projecting portions of the cross-beams, and angle gussets connecting the cross-beams and side sills and projecting above the plane of both.

5. In a car underframe, the combination with Z-beams, of two cross-beams spaced apart and secured to said Z-beams, each of said cross-beams having portions projecting laterally beyond the Z-beams, draft sills secured at their rear ends to one of said cross beams, a cover plate secured upon the two cross-beams and having a forwardly projecting portion, and diagonal braces secured to the forwardly projecting portion of the cover plate and connecting the same with the forward ends of the side sills.

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

ANTON BECKER.

Witnesses:
C. H. WEBER,
E. J. CULVER.