

A. BECKER.

TANK CAR.

APPLICATION FILED APR. 16, 1909.

1,028,181.

Patented June 4, 1912.

2 SHEETS-SHEET 1.

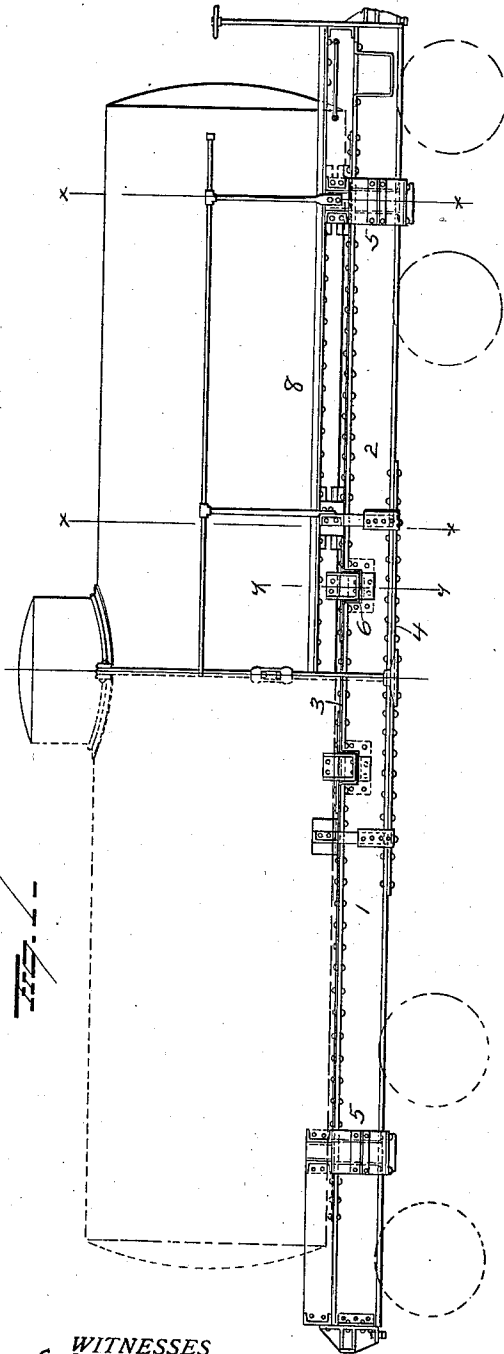
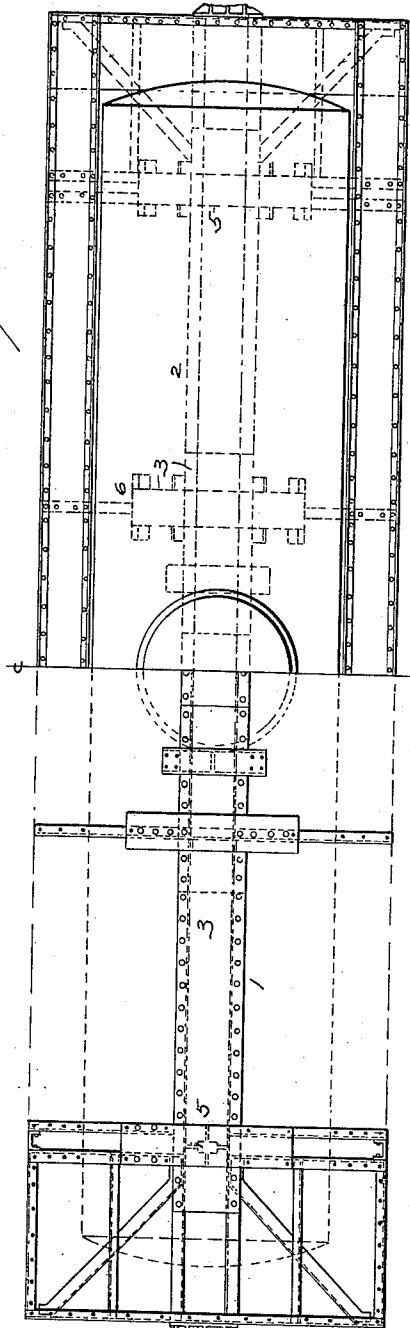


Fig. 2



WITNESSES
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Fig. 3.

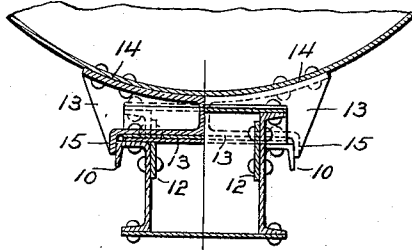


Fig. 5.

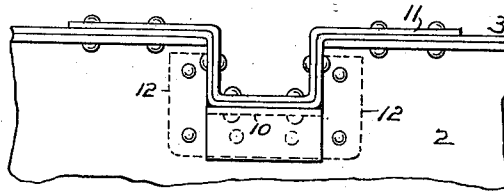
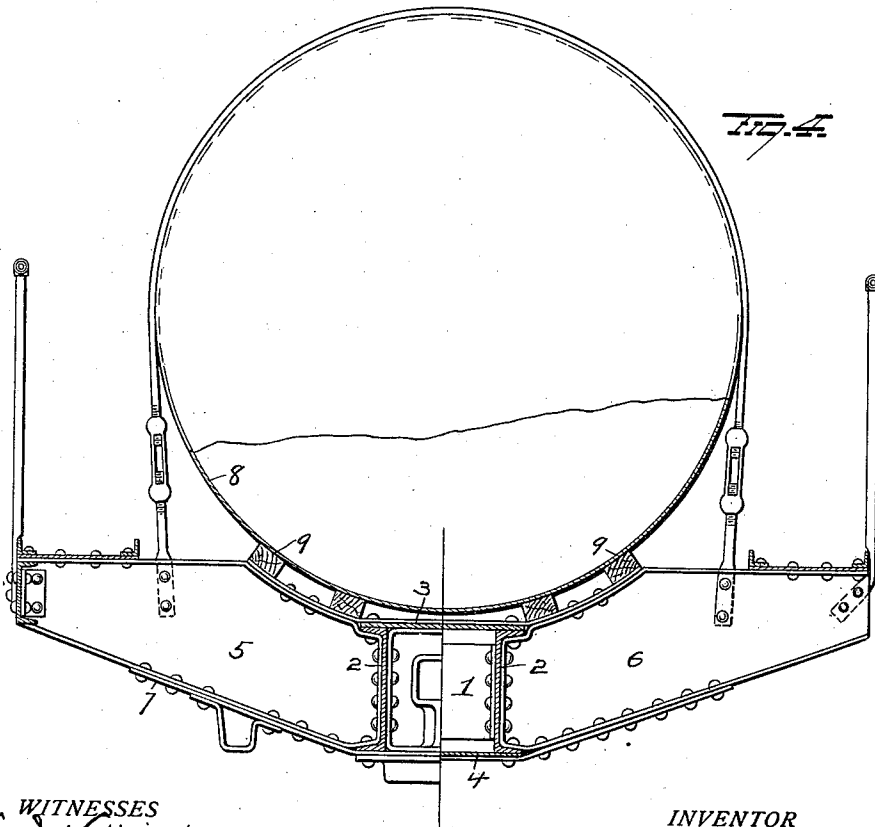


Fig. 4.



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UNITED STATES PATENT OFFICE.

ANTON BECKER, OF COLUMBUS, OHIO.

TANK-CAR.

1,028,181.

Specification of Letters Patent.

Patented June 4, 1912.

Application filed April 16, 1909. Serial No. 490,307.

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 Tank-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 tank cars,—the object of the invention being to construct the underframe in such manner that longitudinal displacement of the tank relatively to the center girder on which it is supported shall be effectually obviated and so that the employment of head-blocks at the ends of the tank shall be avoided.

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 side elevation of a tank car showing an embodiment of my invention. Fig. 2 is a plan view. Fig. 3 is a transverse sectional view on the line $y-y$ of Fig. 1. Fig. 4 is a transverse sectional view on the lines $x-x$ of Fig. 1, and Fig. 5 is a side view showing one of the center girder channels at a recessed portion thereof.

1 represents a center girder of the box type comprising channels 2, 2, and a cover plate 3, and a bottom plate 4 may be secured at its edges to the lower flanges of the respective center girder members.

Bolster diaphragms 5 and cross-bearer diaphragms 6 are secured at their inner flanged ends to the center girder members and the respective members of the bolsters and cross-bearers are connected by compression plates 7. The upper portions of the bolster and cross-bearer members are curved at respective sides of the center girder to conform to the contour of the tank 8, and between said tank and the seats afforded by the bolster and cross-bearer members, wooden strips 9 are disposed, as shown in Fig. 4.

At intervals, the center girder members or channels are slit or cut vertically from the upper edges of said members or channels. These slits or cuts are arranged in pairs and the metal between each pair of cuts is bent outwardly and downwardly, as

shown in Fig. 3. Thus it will be seen that the center girder is provided at intervals with recesses and that the laterally bent portions of the girder members will constitute seats 10 at the bottoms of said recesses. The cover plate 3 of the center girder is bent downwardly into the recesses of the center girder and made to extend over the seats 10 at the bottoms of said recesses.

At each recess portion of the center girder, a supplemental cover plate 11 is secured at its ends upon the cover plate 3 and its intermediate portion is made to enter the recesses in the girder members and be disposed over the seats 10. Brace plates 12 are riveted to the inner faces of the center girder members 2 at each recessed portion of the latter for the purpose of reinforcing the same,—such reinforcement being also assisted by those portions of the cover plates which enter the recesses of the center girder members.

Located within each recess of the center girder are tank blocks 13 which abut at their inner ends in line with the longitudinal center of said center girder, or a single tank block provided with a central vertical web may be located in each recess of the center girder. Each tank block rests upon and is secured to the depressed seat 10 and their upper edges are curved and provided with flanges 14 which are riveted to the tank sheet. With such construction, it is apparent that longitudinal displacement of the tank on the center girder will be effectually prevented,—the tank blocks 13 being secured directly to the tank and entering recesses in the center girder wherein said tank blocks are securely fastened. In order to guard against possibility of lateral displacement of the tank or the tank blocks, the latter are provided at their outer ends with depending flanges 15 which engage the outer ends of the seat portions 10. The tank blocks 13 may also be provided at respective sides with flanges 16 adapted to rest upon and extend transversely across the top of the center girder for the purpose of distributing the strain directly to the top of the girder and these flanges may be secured to the girder or not, as desired.

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

1. In a tank car, the combination with a recessed center girder provided with seats at the bottom of the recessed portion there-

of, and a tank, of supporting means secured to the tank, projecting into the recessed portion of the center girder and secured to said seats.

5 2. In a tank car, the combination with a center girder having a recessed portion, of a cover plate secured to said center girder and following the contour of the recessed portion of the latter, and a tank block secured in said recessed portion of the center
10 girder.

3. In a tank car, the combination with a center girder comprising parallel channels having alined recesses, of reinforcing plates
15 secured to the inner faces of said channels at the recessed portions thereof, and tank blocks secured in the recessed portions of the center girder channels.

4. In a tank car, the combination with a

center girder provided intermediate of its 20 ends with laterally projecting depressed seats, a tank block mounted on said depressed seats and provided with depending flanges engaging the outer ends of said seats.

5. In a tank car, the combination with a 25 center girder having depressed seats intermediate of its ends, a tank block located upon said depressed seats and flanges projecting from said tank block and disposed transversely over the center girder. 30

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

ANTON BECKER.

Witnesses:

MARIE RYAN,
E. S. CUEVER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."