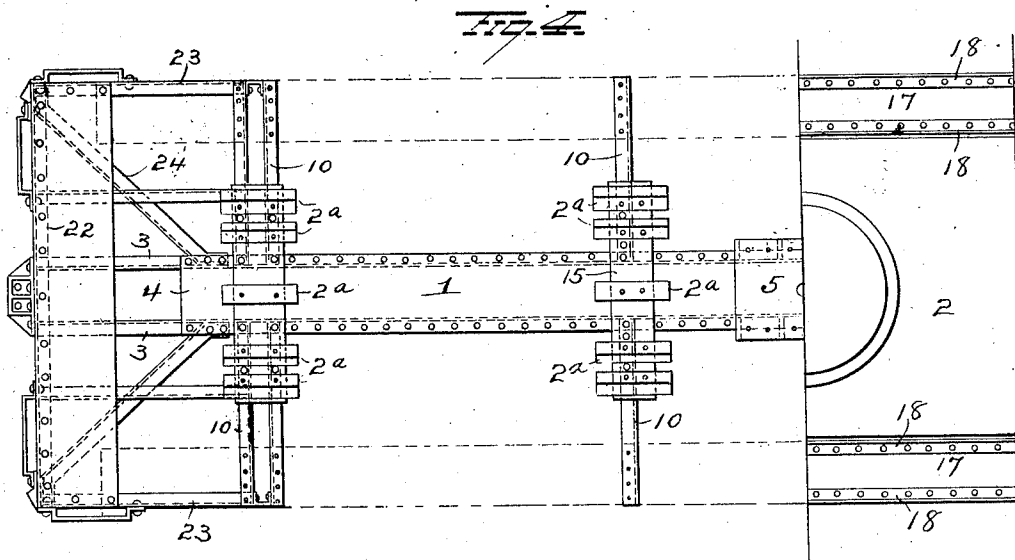
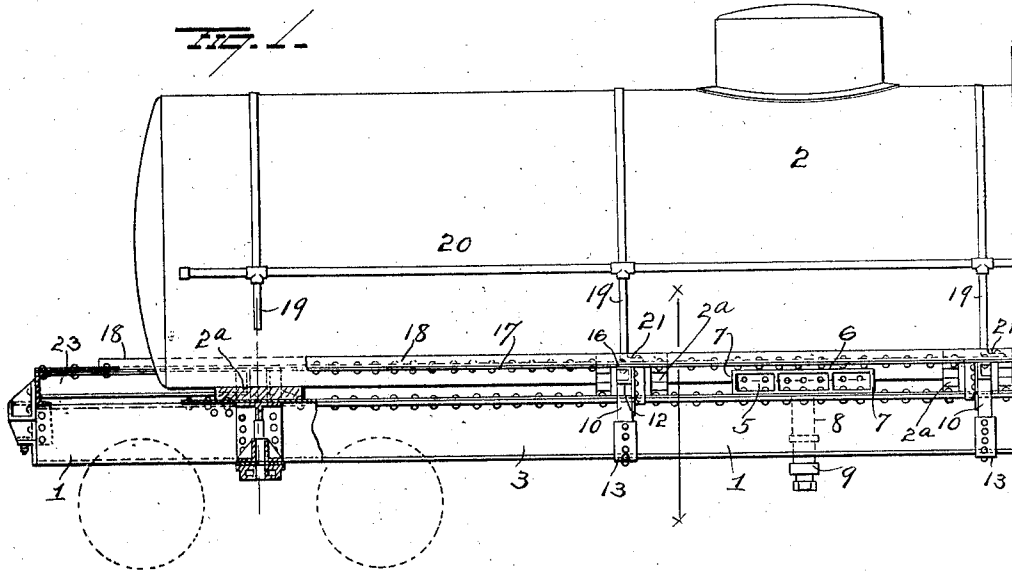


1,043,550.

2 SHEETS—SHEET 1.



WITNESSES

WITNESSES
E. Nottingham
G. J. Downing.

INVENTOR

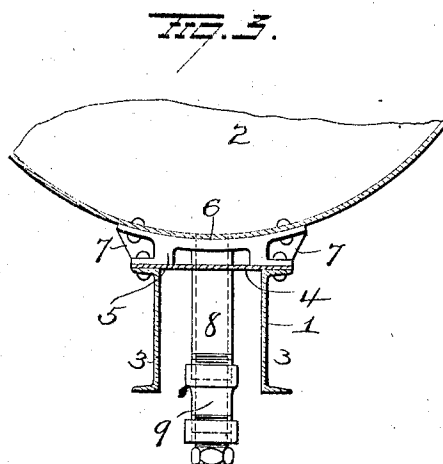
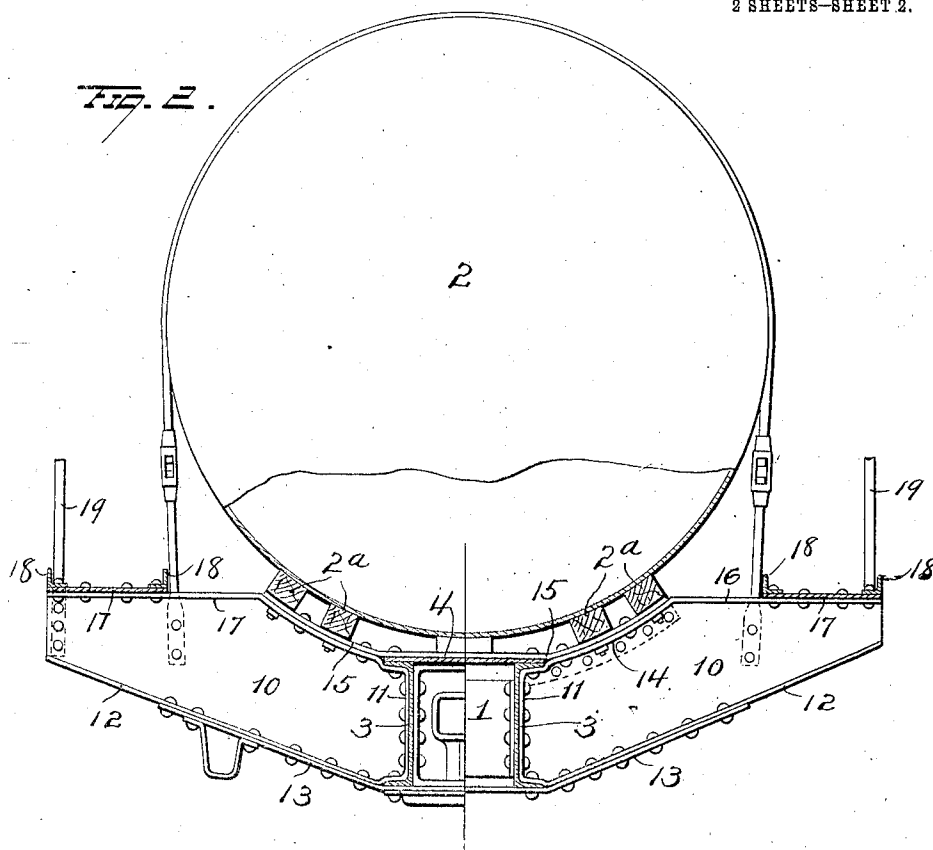
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J. E. TESSEYMAN.
TANK CAR.
APPLICATION FILED APR. 16, 1909.

1,043,550.

Patented Nov. 5, 1912.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN E. TESSEYMAN, OF COLUMBUS, OHIO.

TANK-CAR.

1,043,550.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed April 16, 1909. Serial No. 490,294.

To all whom it may concern:

Be it known that I, JOHN E. TESSEYMAN, a citizen of the United States, and a resident 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 and more particularly to means for connecting the valve with the tank and the latter with the center girder.

Heretofore, the valve connection with the tank has been made directly to the bottom of the tank proper and for its accommodation a hole was cut through the top cover plate of the center girder. As the dimension of the valve is such as would require a large hole in the cover plate, the latter was reinforced to provide sufficient flange area.

An object of my invention is to avoid the use of such a reinforced cover plate and to provide means which will possess the double function of a connection for the valve with the tank and a reinforcement for the center girder, such means being located at the center of the tank thus giving a symmetrical appearance to the car.

A further object is to so construct the underframe as to insure adequate strength and rigidity and at the same time reduce the cost of manufacture to a minimum.

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 partly in section of a tank car embodying my improvements. Fig. 2 is a transverse sectional view showing the construction of the bolsters and cross bearers. Fig. 3 is a section on the line $x-x$ of Fig. 1 and Fig. 4 is a plan view partly broken away.

1 represents a center girder and 2 a tank which is supported upon the center girder and the transverse members secured to the latter. Between the tank and the center girder and transverse members, wooden strips 2^a are located. The center girder shown in the drawings is of the box type,

comprising parallel channel beams 3, and a cover plate or compression member 4. A cast or pressed member 5 is located centrally upon the center girder and is securely riveted to the respective members of the latter. The casting 5 is made with a curved seat 6 to receive the tank 2 and is securely riveted to the latter. The casting 5 extends some distance in both directions from the vertical center of the tank and is provided at intervals with strengthening ribs 7.

The casting 5 is provided centrally with an integral depending tube 8 adapted to communicate at its upper end with the tank. The tube 8 passes through the cover plate 4 and is threaded at its lower end for the reception of a valve 9. The discharging means for the tank are thus located at the center thereof and the tube 8 depending between the center girder members, may terminate at its lower end above the plane of the bottom of the center girder, as shown in Fig. 3, or if desired it may be extended somewhat below the bottom of the center girder.

The devices above described afford simple and efficient means for connecting the tank with the center girder at the center of the car, avoiding the use of tie rods at this point and also the necessity for the use of head-blocks at the ends of the car, providing also simple means for connecting the discharge valve with the tank. It will be observed that with my improvements the outlet for the tank is made through the tank and girder connection.

The bolster and cross-bearer diaphragms comprising the transverse members of the underframe are substantially the same in construction and may be either singly or doubly disposed and each side of the center girder. Each transverse member comprises diaphragms 10 secured in horizontal alignment with each other at respective sides of the center girder, each diaphragm being provided at its inner end with a flange 11 riveted to the side of the center girder. The diaphragms project outwardly in diagonal directions from the sides of the center girder and are provided at their lower diagonal edges with flanges 12 to which a compression plate 13, passing under the center girder, is secured. The inner portions of the upper edges of the diaphragms are curved upwardly in conformity to the contour of the

tank, while the remaining portions of the
 upper edges of the diaphragms are dis-
 posed horizontally in a plane above that of
 the center girder and extend to the sides of
 the underframe. The curved upper edges
 5 of the diaphragms are provided with lat-
 eral flanges 14, and to these, a curved ten-
 sion plate 15 is secured, said tension plate
 being passed over the center girder and se-
 10 cured. The horizontal upper edges of the
 diaphragms are also provided with flanges
 16, and to the latter, floor plates 17 are se-
 cured and braced at their edges by angle
 15 irons 18. The posts 19 of rails 20 are pro-
 vided at their lower ends with lateral pro-
 jections 21 located upon the outer angle
 irons on the floor plates and riveted thereto
 and to the floor plates.

The end sills 22 of the underframe are
 20 connected at their ends with the bolsters by
 means of side sills 23. Diagonal braces 24
 are secured at their forward ends to the ver-
 tical webs of the end sills near the ends of
 the latter and the rear ends of said diagonal
 25 braces are secured to the vertical webs of
 the center girder.

Slight changes might be made in the de-
 tails of construction of my invention with-
 out departing from the spirit thereof or
 30 limiting its scope, and hence I do not wish
 to restrict myself to the precise details here-
 in set forth.

Having fully described my invention what

I claim as new and desire to secure by Let-
 ters-Patent, is:—

1. In a tank car, the combination with a
 tank and a center girder, of an anchoring
 member secured to the tank and to the center
 girder and provided with an integral con-
 40 duit communicating with the tank and form-
 ing an outlet for the latter.

2. In a tank car, the combination with a
 tank and a center girder, said center girder
 composed of parallel members spaced apart,
 of a tank anchoring member secured to the
 45 parallel members of the center girder and
 to the tank, and a tubular member integral
 with the anchoring member and forming an
 outlet for the tank, the said tubular member
 depending between the center girder mem- 50
 bers.

3. In a tank car, the combination with a
 tank and a center girder comprising par-
 allel members spaced apart, of a casting se-
 55 cured to said parallel members of the center
 girder and to the tank, said casting having
 an integral tubular portion depending be-
 tween the center girder members.

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

JOHN E. TESSEYMAN.

Witnesses:

E. S. CULVER,
 C. H. WEBER.