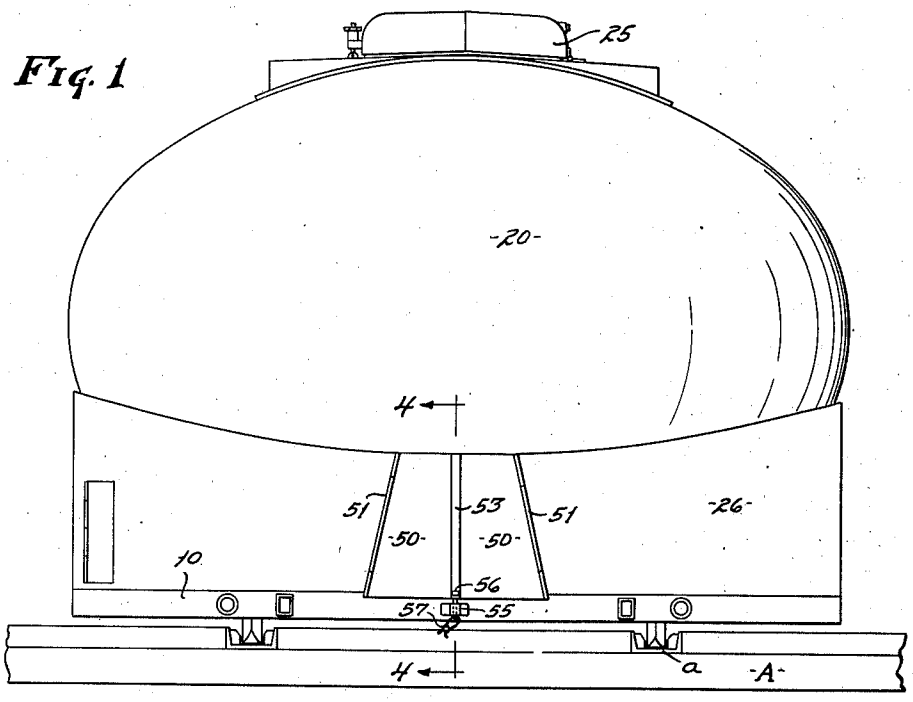
Feb. 13, 1940. B. F. FITCH 2,189,945

DEMOUNTABLE TANK BODY

Original Filed July 28, 1936 2 Sheets-Sheet 1

FIG. 1



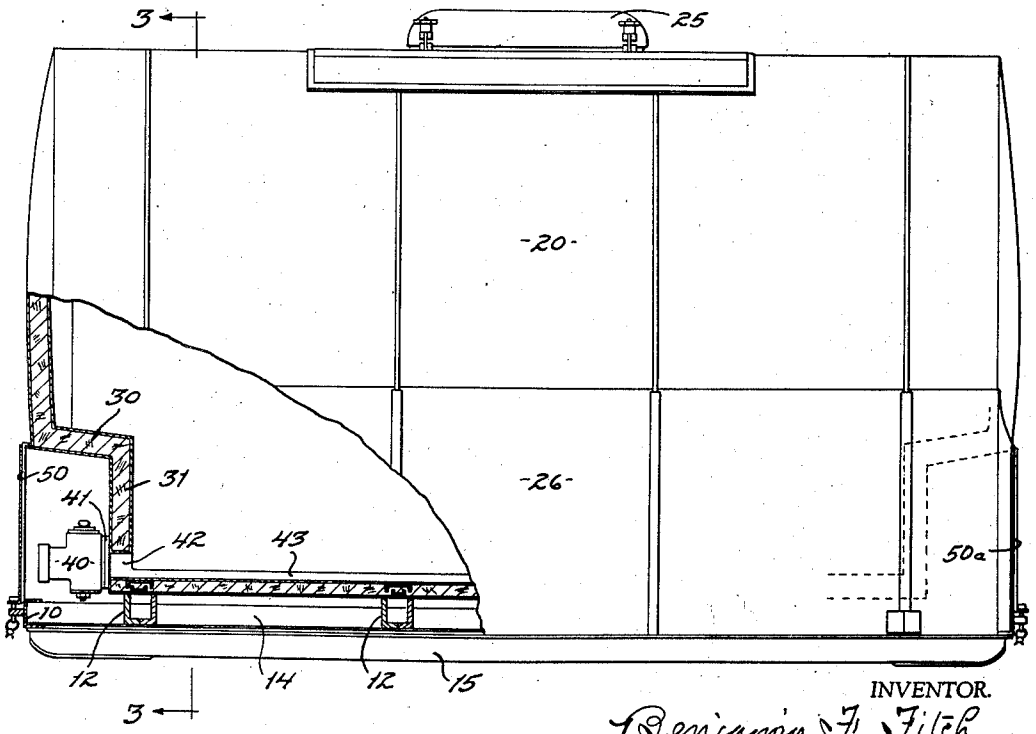


FIG. 2

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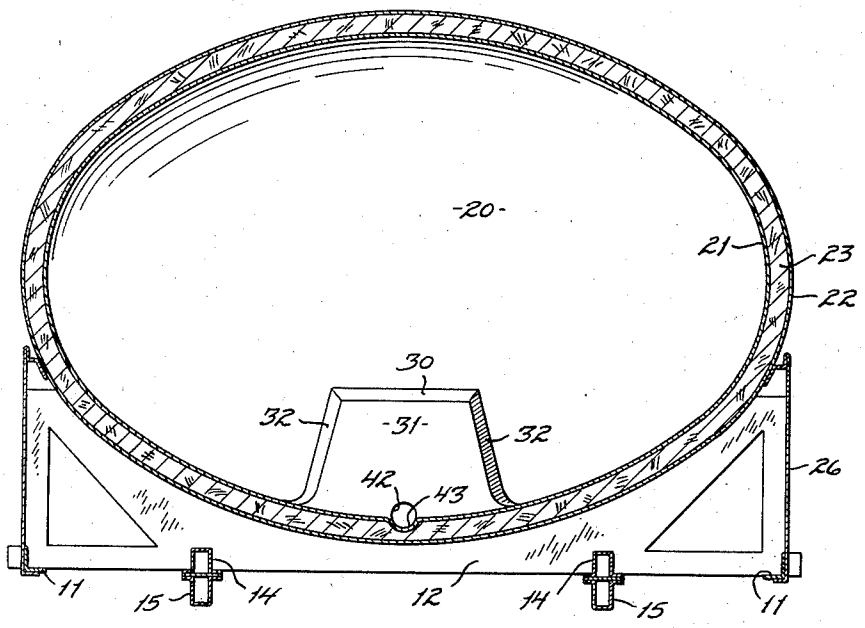


FIG. 3

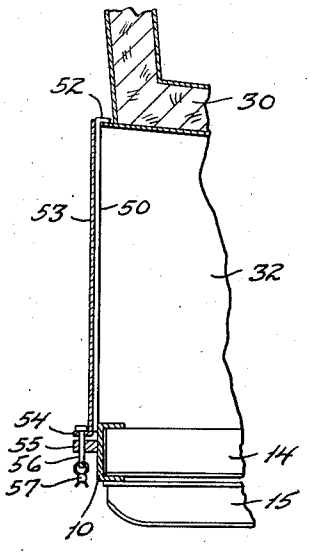


FIG. 4

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Patented Feb. 13, 1940

2,189,945

UNITED STATES PATENT OFFICE

2,189,945

DEMOUNTABLE TANK BODY

Benjamin F. Fitch, Greenwich, Conn., assignor to Motor Terminals, Inc., Cleveland, Ohio, a corporation of Ohio

Original application July 28, 1936, Serial No. 92,984. Divided and this application April 12, 1937, Serial No. 136,349

4 Claims. (Cl. 220—1)

This invention relates to a demountable tank body for vehicles and is especially concerned with a type body which may be slid from one vehicle to another, such as from the highway truck to a railway vehicle or vice versa, or between a vehicle and a shipper's platform. The present invention is a division of my copending application for Letters Patent filed July 28, 1936, and assigned, Serial No. 92,984.

This invention is particularly concerned with the provision of an improved valve and drain structure for a demountable tank body. This, therefore, is the general object of the present invention.

One of the features of this invention is concerned with the provision of a pocket in the end portion of the tank body, in which the discharge valve is mounted, whereby a simple form of valve may be used and the same readily protected from dirt, cold or direct rays of the sun.

Other objects and features of this invention will become more apparent from the following description, reference being had to accompanying drawings which illustrate a preferred embodiment of the invention. The essential features of the invention will be set forth in the claims.

In the drawings, Fig. 1 is an end elevation of a demountable tank provided with the valve and drain construction of this invention; Fig. 2 is a side elevation of the tank body, certain parts being broken away to more clearly illustrate the valve and drain construction; Fig. 3 is a transverse vertical section through the body, as indicated by the lines 3—3 of Fig. 2; Fig. 4 is a fragmentary vertical section, on an enlarged scale, taken through one of a pair of doors for the valve pocket, the plane of the section being indicated by the lines 4—4 on Fig. 1.

The tank body is provided with a base frame comprising end sills 10; longitudinal side sills 11; a series of transverse bolsters 12; and a pair of longitudinal intermediate beams 14, which are inverted channels set into notches in the bolsters. Beneath the longitudinal beams 14 are suitable longitudinal skid rails 15 in the form of upwardly facing channels. These skid rails 15 are arranged and adapted to support the tank, while enabling it to be slid from place to place or from one vehicle to another in suitable ways or guide channels *a* which are provided in the vehicle or platform A onto or from which the body is to be slid.

The tank is generally indicated at 20 and comprises an inner shell 21 and an outer shell 22, and is supported by the upper surface of the bolsters 12. The space between the two shells is filled with an insulating material generally indicated at 23 in Fig. 3. The tank is provided with a suitable opening at its top, forming a manhole which is shown as covered with a cap 25, (Figs. 1 and 2). The lower portion of the body is enclosed by skirting 26 which extends over the ends of the bolsters and reaches from the base to approximately the mid-region of the tank. This skirting enables the exterior of the tank to be readily cleaned, and if desired may be removable.

The tank construction above set forth is more fully described and claimed in my copending application heretofore referred to. Therefore, reference may be had to such application for a complete description of the tank and frame construction per se.

The present invention is particularly concerned with the valve and drain construction. As heretofore mentioned, the discharge valve of the tank is contained within a pocket formed in the tank, as illustrated in Figs. 2 and 3. At one end of the tank, adjacent the bottom, I divert the shells and the housed insulation to extend inwardly and slightly downwardly as shown at 30, to form the top of the pocket and then downwardly, as at 31, to form the vertical back wall of the pocket. The sides of the pocket are composed of similar metal shells with intermediate insulation forming walls 32.

The valve 40, preferably of the vertical plug type, occupies the pocket described, and has a flange 41 which is welded or otherwise secured to the back wall 31 of the pocket, so that the opening in the valve aligns with an opening 42 in such wall. The opening 42, in turn, aligns with the longitudinal depression 43 in the inner shell of the tank. This is an aid in draining, as near the finish of the draining operation all of the liquid flows into this groove, thus passing directly to the valve. This is particularly desirable when cleaning or rinsing the tank.

To protect the valve 40 from cinders or dirt in transit, also to keep it shielded from snow in winter or the direct rays of the sun in summer, I have provided a pair of doors 50 which are hinged at their outer edges to the side walls of the pocket, as indicated at 51. The upper edges of these doors have inwardly extending flanges 52 which extend across the projecting undersheet of the pocket top 30, as shown in Fig. 4. One of the doors has a vertical batten 53 overlapping the edge of the other door. This batten, at its lower end, has an outward flange 54 adapted to stand above a bracket 55 of the end frame sill 11. A

pin 56, Fig. 4, may be passed through registering openings in the flange and bracket, and receive at its lower end a car seal 57, thus protecting the valve from unauthorized access.

The pocket construction described in addition to keeping the valve under seal and protecting it from dirt, heat and cold, has also the very decided advantage of preventing the valve striking anything and becoming displaced or injured during the transfer of the tank body from one vehicle to another.

The doors 50 which cover the pocket to protect the valve 40 from dirt, etc., form a part of and complete the skirting 26 at the ends of the tank body. Such doors, when closed are in substantially the same vertical plane as the skirting and the top line of the doors forms a continuation of the top line of the skirting.

While I have specifically described and illustrated the discharge pocket and valve, as located at one end of the tank, I contemplate the provision of a discharge pocket and valve at both ends of the tank to facilitate discharge of the contents from either end thereof, as indicated by the door construction shown at 50a in Fig. 2.

It may be noted that the particular construction of the skid rails and their surmounting brace beams is not claimed per se herein, but in my copending application, Serial No. 39,726, filed December 9, 1935, now matured into Patent No. 2,166,134.

I claim:

1. A tank body having a pocket formed therein adjacent the bottom of the tank, discharge means located within said pocket and communicating with the interior of the tank, a supporting frame for said body, and side and end skirts extending upwardly from the frame in an embracing relation to the side and end walls of the tank, said skirts including a movable skirt section forming a closure for said pocket.

2. A tank body having a pocket formed therein adjacent the bottom at one end of the tank, said pocket having a top and an end wall together with side walls all comprising parts of the tank wall, a discharge valve located within said pocket and communicating with the interior of the tank, a supporting frame for said body, side and end skirts extending upwardly from the frame in an embracing relation with the walls of the tank, the side and top walls of the pocket extending outwardly from the tank to the plane of said skirt and a pair of doors hinged adjacent the intersection of the side walls of the pocket with said skirt and foldable toward each other to close the pocket and form a continuation of said skirt.

3. A horizontal tank having inner and outer walls both diverted inwardly to provide a recess in one end wall and the adjacent bottom wall of the tank, a valve in said recess communicating with the interior of the tank, said valve being located entirely within the general contour of the tank, and a longitudinal groove in the bottom wall of the tank extending a considerable distance along it and registering with the opening to the valve.

4. A tank body having a pocket formed therein adjacent the bottom at one end thereof, a discharge passage in the tank wall communicating with the interior of the tank and said pocket, the side walls of said tank curving downwardly and inwardly to join the bottom of the tank, a supporting frame for said body, side and end skirts extending upwardly from the frame to the side and end walls of the tank and including movable skirt sections which form a closure for said pocket.

BENJAMIN F. FITCH.