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J. A. JENSEN

1,952,867

TANK CONSTRUCTION

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FIG. I.

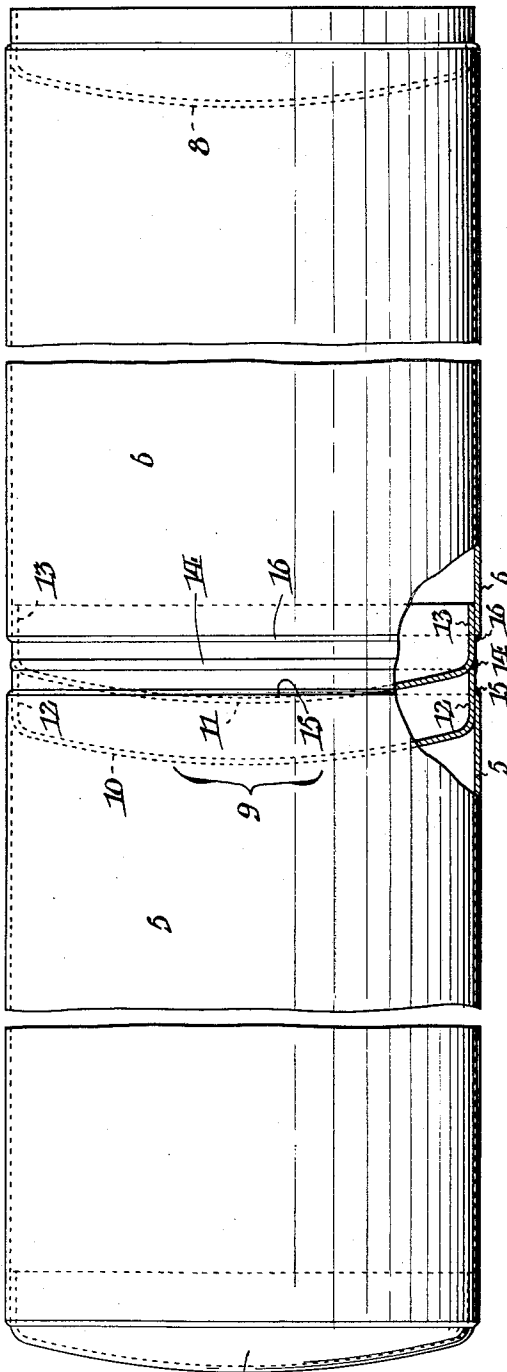


FIG. IV.

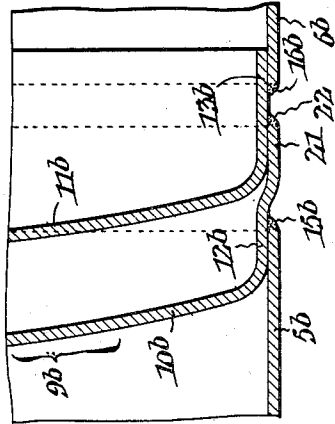


FIG. III.

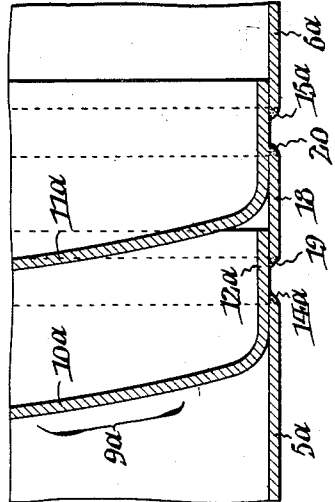
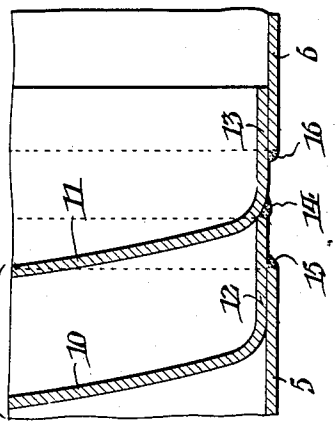


FIG. II.



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TANK CONSTRUCTION

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1 Claim. (Cl. 220—20)

This invention relates to multi-compartment sheet metal tanks intended for vehicles used in the transportation of gasoline, oils and similar liquid commodities; and it has reference more particularly to multi-compartment tanks, where-
5 in the subdivisions are defined by double hollow partitions.

Considered from the broadest aspect, my invention is directed toward facilitating the fabrication of tanks of the kind specifically referred to. This desideratum I secure, as hereinafter fully explained, by constructing such tanks from parts capable of economic production from sheet metal and of ready assembly and of permanent jointer,
15 by welding, into a unified organization, which, although relatively light, is amply sturdy and strong to withstand the strains induced by surging of the liquids incident to transportation, and in which the welding seams are all exposed and
20 therefore accessible, so that if leaks should occur, they can be easily detected and repaired.

Other objects and attendant advantages of this invention will be manifest from the detailed description following considered in connection with the attached drawing wherein Fig. I is a side elevation of a multi-compartment tank conveniently embodying the present improvements, a portion of the tank being broken out and shown in section to better illustrate important details of construction.
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Fig. II is a fragmentary sectional view drawn to a larger scale and showing to better advantage the parts in the vicinity of the portion of the tank broken out in Fig. I.

Figs. III and IV are views similar to Fig. II showing modifications of my invention.
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The tank illustrated in Figs. I and II has a shell embodying a number of tubular sections 5, 6 of sheet metal, said shell being closed at the ends by heads 7 and 8. At the interior, the shell is subdivided into a number of separate compartments by double hollow partitions, whereof one is indicated at 9. In accordance with my invention, each such partition is made up of a pair of similar or corresponding spherically-dished, perimentrically-flanged heads 10 and 11 die stamped or otherwise fashioned from sheet metal which may be of the same gage as that of the tank shell sections 5, 6, the perimetric flanges being respectively designated 12 and 13. As shown, the heads 10 and 11 are arranged with their dished curvatures substantially-parallel and both facing in the same direction and with the edge of the perimetric flange 12 of the head 10 abutting the face of the head 11, whereto the said
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flange is permanently secured by welding as conventionally indicated at 14. The diameters of the heads 10 and 11, it will furthermore be observed, is such that they fit into the contiguous ends of adjacent sections 5 and 6 of the tank shell. Preferably the heads 10 and 11 are first permanently joined as just explained, and the completed partitions subsequently assembled with the sections 5 and 6 of the tank shell and in turn permanently joined with said shell sections by welding along the edges of the head flanges 12, 13 as indicated at 15 and 16.
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By virtue of the described procedure, it is thus possible, notwithstanding the use of comparatively light gage sheet metal, to produce an interiorly reinforced multi-compartment tank which is light, yet amply sturdy and strong to withstand the strains which it is called upon to resist. My improved tank has the further advantage that all its welded seams are exposed at the exterior. Accordingly, repairs may be easily made in the event of leaks along the seams.
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In the modification of Fig. III, the two component heads 10a and 11a of the partition 9a are surrounded by a connecting band 18, which is permanently incorporated with the head assembly by welding at 19 and 20. As in the first described embodiment, the two heads 10a and 11a of the partition 9a are of such diameter as to telescope into the sections 5a and 6a of the tank shell whereto they are secured permanently by welding at 14a and 15a.
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In the alternative embodiment of my invention illustrated in Fig. IV, the head 10b of the partition 9b has its perimetric flange 12b circumferentially expanded as at 21 to fit over the head 11b, the two heads being permanently joined together by welding at 22. As in the previous instances, the partition 9a fits into the shell sections 5b and 6b with which it is permanently united by welding at 15b, 16b.
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Having thus described my invention, I claim:
A multi-compartment tank embodying a sectional tubular shell; and hollow subdividing partitions each consisting of a pair of corresponding perimentrically-flanged spherically-dished heads arranged with their dished curvatures both disposed substantially-parallel in the same direction and joined by an exterior welded-on connecting band, the said heads fitting into the ends of the contiguous sections of the tank shell and being permanently secured to the latter by welding.
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