This invention has general reference to means for the support of liquid containers, tanks and drums such as are used for the storage of gasoline, fuel oil and so forth on farms, at construction jobs, and in other localities where portable means for such storage is not only desirable but expedient. Heretofore, such means have generally consisted of metal tanks mounted on spaced runners or sleds rigidly attached to the tank, with associated means whereby the liquid can be pumped therefrom as needed or required. These runners or sleds are usually made of angle-iron sections directly connected to the tank, or the like, by suitable supports or cradles; while it is current practice to attach said cradles or supports to the tank at several points by welds for example. However, as these tanks are frequently made of thin sheet metal, and as the welded on skids transmit the weight of the tank, as well as any strains occasioned incidentally to moving the tank, to the body shell mainly at the weld points only, it not infrequently happens that such tank shell becomes disrupted or torn when moving it from place to place, with attendant loss of the contents. Furthermore, the use of cradles for supporting liquid containing tanks, not welded to said tanks but secured in place by bands circumscribing each tank is known, being standard practice for railroad tank cars, as well as for gasoline transporting tank trucks. However, structures of the above referred to types have the disadvantage that sooner or later, under general service conditions the clamping band becomes strained or loosened, with the obvious result that it does not properly serve its intended purpose, while it fails to efficiently resist the load and weight strains to which such tank trucks are normally subjected.

The fundamental object of my invention is to overcome the foregoing noted disadvantages in a simple and effective manner by providing a combination cradle and clamping-band device that includes tensioning means whereby the load of the tank proper is positively distributed throughout the entire length of said clamping band and the central portion of the cradle.

Another object is the provision of a device, such as specified in the preceding paragraphs, wherein the forces resisting the weight of the tank are wholly distributed round said tank and the associated cradle except negligible portions included within the actual supports of said cradle. Other objects, with ancillary advantages, of my invention, will be hereinafter manifest or suggested, as the nature and purpose of said invention is revealed, by the following description and accompanying sheet of drawings wherein there is illustrated a practical and preferred embodiment thereof.

In the drawings: Fig. 1 is a side view of a conventional gas storage tank equipped with the novel supporting cradle, clamping band and tensioning elements of this invention.

Fig. 2 is a fragmentary longitudinal or side view thereof, but drawn to larger scale for clearer illustration; and Fig. 3 is an end view of the lower half of the tank and cradle drawn to the same scale as Fig. 2.

In said figures the reference character 3 comprehensively designates a cylindrical gas tank which is conveniently made of thin sheet steel, in accordance with prevailing practice.

Each cradle 4, which is preferably made of strip metal, embodies a pair of spaced bifurcate legs or supports 5, which are united by an arcuate connection 6 embodying divergent end portions 7 conveniently, although not essentially, opposingly-directed at angles of sixty-degrees relative to the horizontal. It is to be also observed that the lower end portions of the respective supports are turned outwardly to define foot-pieces 8 and then continued vertical at 9, with the upper free portions 10 of the latter bent outwards to conform with the circumferential curvature of the tank 3; while it is furthermore noticeable that the curvature of the connection 6 also correspondingly conforms to the cylindrical body surface of the tank shell. Angle-section skids 11 are opposingly positioned, as best seen from Fig. 3, and are united to the leg portions 8 and 9 by welds 12, whereby said portions 8, 9 are lengthwise coordinated.

For attaching the tank 3 to the spaced cradles 4 use is made of a band element 13, preferably of narrower width than the associated cradle 4, while each such element has its free ends conveniently shaped to define angularly-contoured loops having one part 15 straight, for coaction with the outer face of the relative confronting leg vertical 9, whereas the other, or substantially Z-shaped part 16 functions as a buttress intermediate the vertical 9 and the clamping band adjoining end, as well as the associated over-lapping free portion 10 of the leg or support 5. To clamp the band element 13 in active position 7 employ tensioning elements or bolts 17 with associated lock-washers 18 and nuts 19, for securing said element to the respective legs or supports 5. The bolts 17 are engaged through aligned holes, 20, 21 and 22 in...
the respective parts 16, 15, 9 and 7, preferably with the longitudinal axis of each said bolt directed downwardly inward at an angle of approximately thirty degrees to the horizontal for example, as readily understood from Fig. 2. It is also to be noted that the cradle divergent end portions 7 and the web portions of the Z-shaped buskess parts 14 of the band elements are approximately parallel when in active position which has been found in practice to greatly enhance the stability of the structure as a whole, while positively preventing the cradle 4 and clamping band 13 from working loose relative to the tank 3 when the latter is moved from place to place, or incidental to other vibrating influences.

From the foregoing it will be readily apparent to those conversant with the art that, incidental to the tensioning elements or bolts 17 being part of the cradle 4 they serve not only to draw the clamping bands down into frictional binding engagement with the shell of the tank 3, but that they likewise distribute the load of said tank evenly throughout the entire length of the "belly-band" or arcuate section 6 of the associated cradle 4. It is also to be particularly noted that the weight of the tank, that tends to force the parts 7 and 9 of the respective legs 5 apart at their upper ends, is positively resisted by the bolts 17 which places the arcuate section 6 under tension, whereas the entire length of the clamping band 13 is also under tension due to its connection at 20, 21 to said bolts, while the buttress portions 16 of the loops 14 positively resist any collapse of such loops under lock-tightening as of the washers 18, by the nuts 19. It is to be further noted that the forces resisting the weight of the tank are thus distributed substantially around the surface of said tank, where the respective bands 13 are contactively clamped, except for the negligible arcuate portions intervening the parts 7 and 9 of the respective legs or supports 5. This results in an infinitely better distribution of said load than heretofore possible; or over that attainable when the cradles 4 are rigidly made and consequently incapable of being subjected to tension, as aforesaid. In other words, if the cradles 4 were of rigid formation, and the straps 13 were served the purpose of keeping the tank 3 from rolling-off said cradles, the efficient distribution of the tank load attained by my invention could not be accomplished.

While there has been particularly described and shown one practical embodiment of this invention, it is to be understood that changes and variations in the details of construction may be effected without departing from the spirit of said invention; while the device, obviously, may be provided with a hauling bail or yoke 28, as conventionally indicated in Fig. 1, for use and convenience in moving the device about.

Having thus described my invention, I claim:

1. In a tank supporting device, the combination of spaced cradles each including a pair of bifurcate legs with an intervening arcuate section; associated clamping bands adapted to engage around the tank and having looped collapse-resistant terminal-portions for coaction with the outer ends of the spaced cradle legs; and intervening arcuate sections of the cradle are subjected to tension throughout the entire length thereof, for the purpose specified.

2. A tank supporting device, in accordance with claim 1 further including said clamping elements integrally to the relatively aligned foot portions of the pairs of spaced legs.

3. In a tank supporting device, the combination of spaced strip-like cradles, each embodying a pair of bifurcate legs and an intervening arcuate section with interspacing-related end continuations of said section; a clamping band, for each cradle, engageable about the shell portion of the tank and embodying suitably shaped loop-terminals for abutment against the outer ends of the associated cradle legs; and tensioning elements engageable through and across the loop terminals and bifurcate legs of the respectively associated cradle whereby the load of the tank is positively distributed throughout the length of the clamping band and cradle arcuate portions.

4. A tank supporting device in accordance with claim 3 further including angle-section skids integrated to the relatively aligned leg bifurcation inner portions, and haulage means at one end of said skids.

5. A tank supporting device in accordance with claim 3 wherein each cradle leg portion embodies an inclined and a straight section, with an intervening foot piece; and wherein the straight section upper end portion is curved, for the purpose specified.

6. A tank supporting device in accordance with claim 3 wherein each bifurcate leg portion of the cradle includes an approximately sixty-degree outwardly inclined portion, a vertical portion, and an intervening horizontal foot-piece; and wherein the upper terminal section of the vertical portion is shaped to conform with the body curvature of the tank.

7. A tank supporting device in accordance with claim 3 wherein each loop terminal of the tank clamping band is of angular-contour, for the purpose specified.

8. A tank supporting device in accordance with claim 3 wherein each loop terminal of the tank clamping band includes a straight section for coaction with the associated cradle leg confronting vertical, and a substantially Z-shaped section serviceable as a buttress to effectively resist collapse of the loop terminal under tensioning of the clamping band about the tank.

9. A tank supporting device in accordance with claim 3 wherein each tensioning element consists of a lock-bolt, and wherein said bolt passes through relatively inclined holes in and across the loop-terminal and associated cradle leg, for the purpose specified.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>846,646</td>
<td>Brown</td>
<td>Mar. 13, 1907</td>
</tr>
<tr>
<td>1,131,477</td>
<td>Crofoot</td>
<td>Mar. 9, 1915</td>
</tr>
<tr>
<td>1,792,007</td>
<td>Engberg et al.</td>
<td>Feb. 10, 1931</td>
</tr>
<tr>
<td>2,127,456</td>
<td>Adams</td>
<td>Aug. 16, 1938</td>
</tr>
<tr>
<td>2,343,597</td>
<td>Wachter</td>
<td>Mar. 7, 1944</td>
</tr>
<tr>
<td>2,356,438</td>
<td>Craig</td>
<td>July 25, 1944</td>
</tr>
<tr>
<td>2,376,338</td>
<td>Brown</td>
<td>Mar 25, 1945</td>
</tr>
</tbody>
</table>