W. H. PARTON.

TANK OR STORAGE RECEPTACLE.

APPLICATION FILED OCT. 14, 1920.

1,427,166. Patented Aug. 29, 1922.

Fig 1.

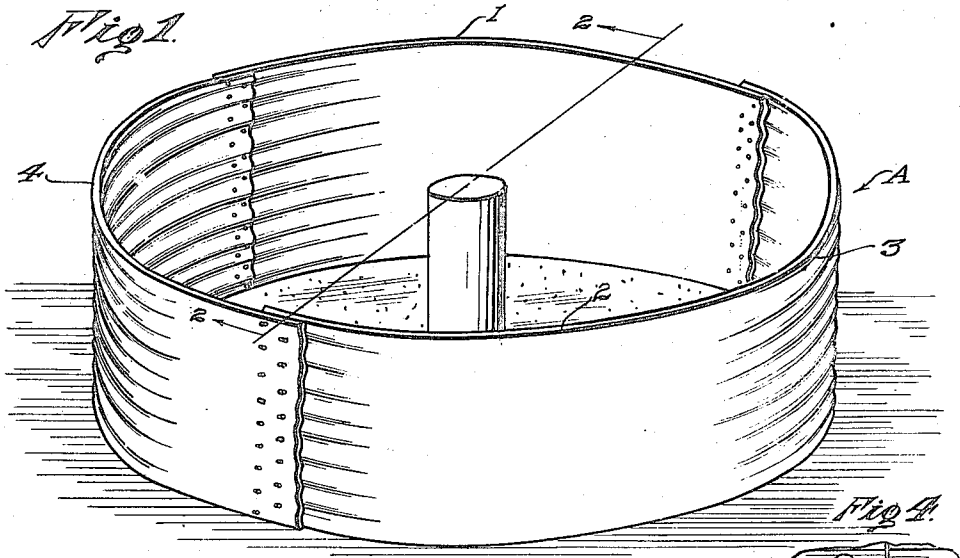


Fig 4.

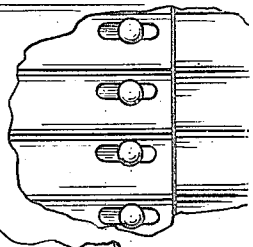


Fig 2.

Fig 3.

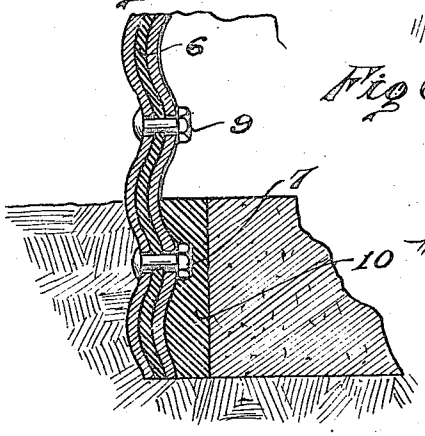


Fig 6.

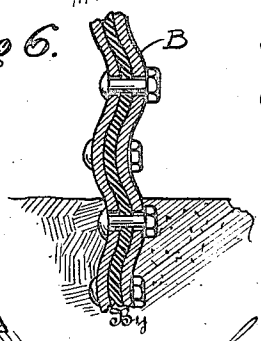
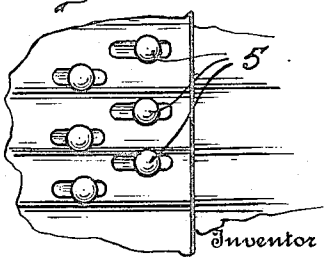


Fig 5.



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TANK OR STORAGE RECEPTACLE.

1,427,166. Specification of Letters Patent. Patented Aug. 29, 1922.

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To all whom it may concern:

Be it known that I, WILLIAM H. PARTON, a citizen of the United States, residing at Huron, in the county of Beadle and State of South Dakota, have invented certain new and useful Improvements in Tanks or Storage Receptacles, of which the following is a specification.

This invention relates to a tank such as is used for watering stock and storing grain or other commodities and which is so placed that it is subject to the action of the elements inasmuch as it is usually placed in a barn or barn yard or, at least, in an unheated building.

In tanks of the above mentioned class it is difficult to provide a construction which is unaffected by changes in temperature, such as extreme heat of the summer and freezing weather of the winter and accordingly the ordinary tanks go to pieces very quickly and are expensive to replace.

With the present invention a tank is provided which is extremely simple, relatively inexpensive and is constructed so as to compensate for extreme temperatures, remaining intact regardless of the fact that the water in the tank might, at various times, freeze solid.

Another feature of the present invention consists in the provision of means for conducting heat from below the frost line to that portion of the tank which freezes last, namely the center, whereby under fairly normal conditions the tank will not freeze solid.

A still further feature resides in the manner of connecting arcuate corrugated metal sections to form a tank body which is susceptible of diametric expansion or contraction.

In the drawings annexed hereto and which illustrate specific forms of the invention;

Figure 1 is a perspective view of a metal tank;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is an enlarged vertical section of the joint;

Figure 4 is an enlarged side elevation of the joint;

Figure 5 is a fragmentary view of a modified form of joint;

Figure 6 is a sectional view of the joint shown in Figure 5.

In detail:

The tank as shown in Figures 1 to 4 inclusive comprises the side wall A formed of sections 1, 3 and 4 of corrugated sheet metal, the corrugations running lengthwise of the sections.

These sections are punched, at the end, in a vertical row for assembling in overlapped relation, the holes in the underneath end being of a diameter to accommodate a proper fastening member 5 such as a bolt or the like and the holes in the outside end being elongated, as shown in Figure 4, for a purpose to be hereinafter described. In making up the joints between the ends of the sections 1, 3 and 4, a strip of packing 6 is interposed between the ends and the two ends drawn tightly together by means of the nuts 7 so that no leakage past these joints can occur. The corrugations in the sections correspond so that they interfit when the sections are assembled and the packing used is flexible, such as building paper or the like, and accordingly conforms to the configuration imposed upon it by the meeting walls of the sections.

If desired the type of section joint shown in Figures 5 and 6 may be used wherein the fastening means are located in two parallel rows, one in which the fastening means is on the corrugated ridges and the other in the grooves. Also the edges of the sections may be rolled or beaded for strength if desired.

The tank body A is separate from any base and the base may consist of simply dirt enclosed within the body puddled or tamped and covered with a heavy oil or a cement, asphalt or other base may be poured into the body to form a suitable bottom for retaining the water. In the event that the cement or asphalt bottom is used a building paper or other packing strip 10 is placed around the side wall for a portion of its height and the cement or asphalt then maintains the packing in place and forms a tight joint with the side wall section which is sufficiently flexible to permit of contraction and expansion of the side wall.

In the freezing of a body of water the center always freezes last and it is not until this central portion freezes that any damage to the receptacle results. In order to overcome, as far as possible, this objectionable feature of the freezing of a stock

watering tank and also to provide against damage in the event of actual freezing, a wooden post 11 is placed centrally of the tank and extends even with the outer wall and into the ground a sufficient distance. This wooden post, in the case of a tank with an asphalt or concrete bottom, is provided with a paper or other packing ring 12.

The central post being made of material that is a bad heat conductor, will prevent the freezing of the central portion of the body of water under substantially normal conditions. However, in the case of extreme temperatures should the tank freeze, no damage will result to the side wall for the reason that the pressure will be relieved by the packing strips which will prevent the bursting of the side wall.

It is of course obvious that various types of side walls may be used with the center post and hence my invention is not limited to the combination of this post with any specific type of side wall.

I claim:

1. In a tank, a sectional wall comprising a series of arcuate sheet metal sections having expansible joints, a packing for said joints between said sections, a bottom formed in the ground, a porous packing element between the bottom and the wall, and a central member extending from the level of the upper edge of the wall to a point well beneath the frost line of the ground.

2. In a tank, a sectional wall comprising a series of corrugated sheet metal sections having expansible joints, a bottom formed in the ground, a packing element in said joints and between the bottom and the wall, and a central member extending from the level of the upper edge of the wall to a sufficient depth in the ground, a packing being provided between said post and the surrounding bottom.

3. In a tank, a sectional wall comprising a series of corrugated sheet metal sections having overlapped ends some of which are provided with elongated holes, a packing element bewteen the overlapped ends, fastening means extending through the elongated holes and the packing element to unite the sections in a fluid tight joint permitting expansion and contraction, and a central member extending from the level of the upper edge of the wall to a point well beneath the frost line of the ground, a bottom of mineral material enclosed by said sectional wall and surrounding said central member.

4. In an expansible tank having a foundation, forming the bottom, built of hard mineral material in the ground, a central post placed firmly in the ground and extending upwardly through said bottom to the top of the tank, a cylindrical wall around the edge of said bottom, said wall comprising a plurality of corrugated sheet metal sections having overlapping edges provided with elongated holes and bolts engaging in said holes to draw the edges together, a packing of porous material being inserted between the edges of said sections and between said bottom and post on the one hand and said bottom and the sides on the other hand.

In testimony whereof I affix my signature.

WILLIAM H. PARTON. [L.S.]