

(No Model.)

J. GUTHRIE.
TANK.

No. 549,357.

Patented Nov. 5, 1895.

Fig. 1.

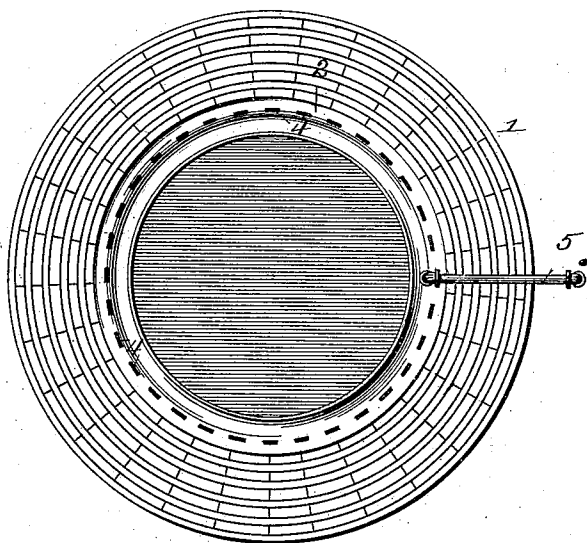


Fig. 2.

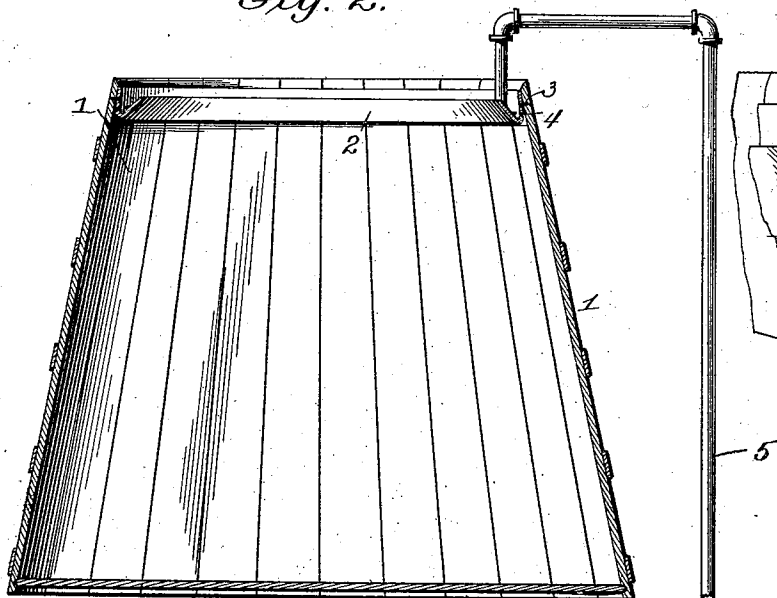
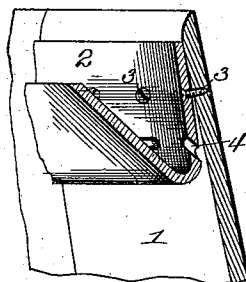


Fig. 3.



Inventor

Witnesses

Joseph L. Stack.
J. B. Owens.

By his Attorneys.

James Guthrie

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UNITED STATES PATENT OFFICE.

JAMES GUTHRIE, OF SUPERIOR, NEBRASKA.

TANK.

SPECIFICATION forming part of Letters Patent No. 549,357, dated November 5, 1895.

Application filed November 14, 1894. Serial No. 528,788. (No model.)

To all whom it may concern:

Be it known that I, JAMES GUTHRIE, a citizen of the United States, residing at Superior, in the county of Nuckolls and State of Nebraska, have invented a new and useful Tank, of which the following is a specification.

The object of this invention is to provide means for keeping the staves of a tank continually moistened, so that the hot weather will not shrink the tank and cause it to leak.

It is well known that all wooden tanks are subject to this disadvantage, and that in hot and dry weather the staves become contracted and partially separated from each other, so as to render the tank almost entirely useless until it can be swelled again. This disadvantageous operation is very much aggravated when the tank is supplied with water from wind-power and when the wind fails. Such a condition is by no means an uncommon one, and is, on the other hand, almost universal in the Western States of this country. It is to this class of tanks that my improvements are particularly applicable, though of course they are capable of use with all kinds of wooden tanks with the same advantage.

To this end the invention consists in an annular trough, rigidly secured around the inner side of the tank and at the upper end thereof, the said trough being perforated at one side and near its bottom, so that the water deposited therein will run out, and these perforations are so arranged that they will empty the water directly upon the staves, so that it may gravitate down the same. Thus the staves are supplied with water to keep them swelled. The trough is so arranged that when the amount of water deposited in it exceeds a certain degree the surplusage will flow over the inner edge of the trough and be emptied directly into the tank. This end is attained by arranging the inner end of the trough lower than the outer end or side.

In the drawings, Figure 1 represents a plan view of a tank having my improvements applied thereto; Fig. 2, a vertical section thereof; Fig. 3, an enlarged and detailed section

of the trough and the adjacent portion of the tank.

The reference-numeral 1 indicates the tank, which is of the usual or any preferred construction, it being essential, as before stated, that it be constructed of wooden staves, which alone are capable of shrinking in the manner described above.

2 indicates the trough, which is substantially V-shaped in cross-section, and which is made endless or annular in shape, so that it will fit snugly against the inner side of the tank. The trough is arranged at the upper end of the tank and on the inner side thereof, and is held in place by bolts or screws 3, which pass through its outer side and into the tank, as will be understood and as shown in Fig. 3.

4 indicates a series of slots or elongated openings which are formed in the trough 2 at a point just outward of the lower edge of the same, so that they will empty or discharge the water against the inner side of the tank and cause the same to move down the said side. The trough is preferably constructed of sheet lead or zinc, and this because such substance is non-corrosive and because it is easier to mold or form into the proper shape.

By reference to Fig. 3 it will be seen that the inner edge of the trough 2 is lower than the outer edge, as explained hereinbefore, and that this lower position of the said inner edge is attained by reason of the V-shaped character of the trough. Thus as one side of the trough lies flush against the inner side of the tank the remaining side of the trough will be caused to extend diagonally at an angle a little more than forty-five degrees; and since the sides are of the same length the inner side will be placed much below the upper side. This arrangement is provided for the purpose hereinbefore explained—namely, to permit the trough to overflow when more than a certain amount of water is emptied into it. In this manner the tank is filled by the overflow from the trough 2, while water is first caused to trickle down the inner faces of the staves for swelling and tightening the same.

5 indicates the pipe which carries the water

up to the tank, and this pipe may be of any kind or construction, as will be understood. It is necessary that this pipe should empty into the trough 2, as distinguished from the direct discharge into the tank.

The operation of my invention will be obvious. All that is essential is that the trough be properly placed and that the pipe 5 be made to empty into it. When this takes place, the water will be discharged through the openings 4 until the amount of water delivered by the pipe 5 becomes greater than the openings are capable of discharging, whereupon the surplusage will run over the inner edge of the trough and fall into the tank. As the water is delivered by the openings 4, it will trickle down the inner sides of the staves until the surface of the water in the tank is reached. This keeps the tank moistened at all times and prevents the shrinking of the staves, as has been explained. In very dry weather and in cases where the tank is to be filled by wind-power it is not infrequent that the pump will make but a few strokes a day. In some cases but one or two strokes will be made, and the amount of

water raised by this will be sufficient to prevent the tank from shrinking.

Having described the invention, I claim—

The combination with a tank, of a separately formed trough V-shaped in cross section and extending entirely around the inner wall of the tank, the trough having its outer side resting against and secured to the tank and extending parallel with the inner side thereof, and having its inner side arranged in a lower plane so as to allow the surplus water to flow over the same into the tank, a series of perforations providing for the escape of water from said trough against the inner faces of the staves, said trough being adapted to be supplied from the service pipe and to fill the tank by the overflow therefrom, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES GUTHRIE.

Witnesses:

H. N. BRADSHAW,
A. C. FELT.