(No Model.)

N. SORENSEN.

TANK.

No. 383,194. Patented May 22, 1888.

Fig. 1.

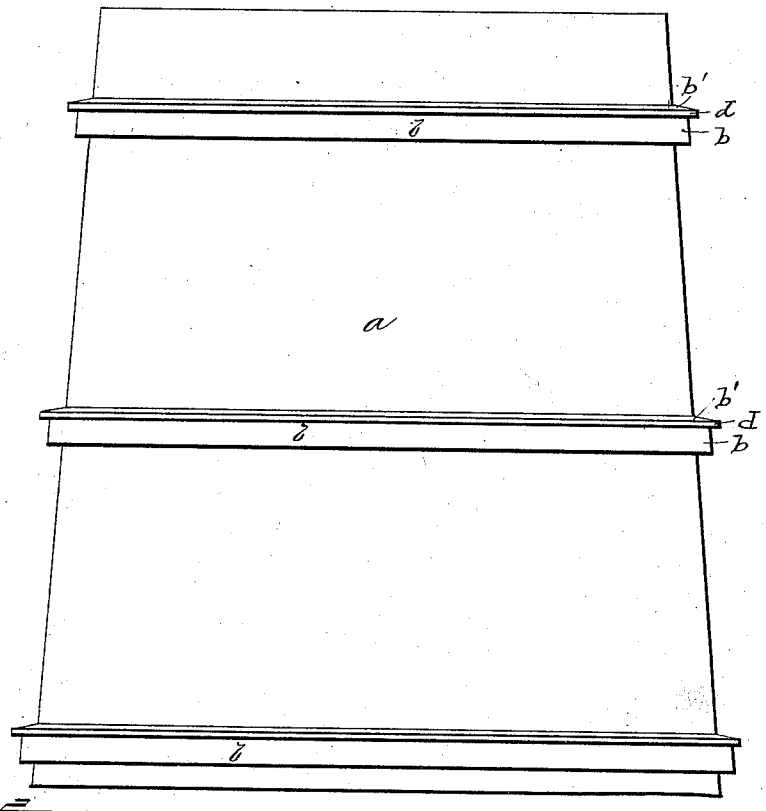


Fig. 2.

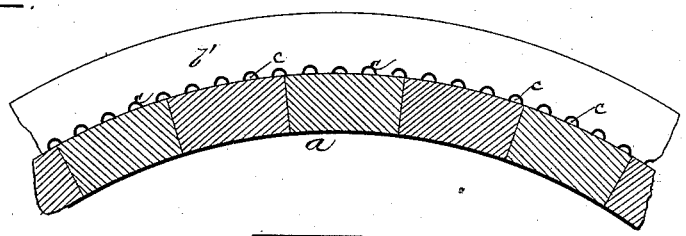


Fig. 3.

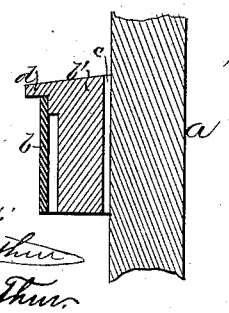


Fig. 4.

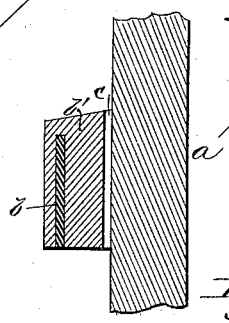
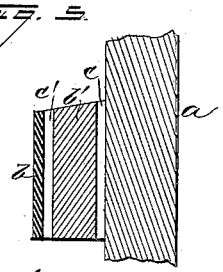


Fig. 5.



Witnesses:
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per
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UNITED STATES PATENT OFFICE.

NELS SORENSEN, OF CHICAGO, ILLINOIS.

TANK.

SPECIFICATION forming part of Letters Patent No. 383,194, dated May 22, 1888.

Application filed November 18, 1887. Serial No. 255,511. (No model.)

To all whom it may concern:

Be it known that I, NELS SORENSEN, a subject of the King of Denmark, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tanks, of which the following is a specification, to wit:

This invention relates to an improvement in tanks; and it consists in certain novel peculiarities of the construction and arrangement of the same, substantially as will be hereinafter more fully set forth and claimed.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe its construction and operation, referring to the accompanying drawings, in which—

Figure 1 is a side elevation of a tank such as I shall describe; Fig. 2, a horizontal section of one side of the same; and Figs. 3, 4, and 5 are detail views of the hoops and mode of protecting them.

a represents a tank of any shape and size and made in the usual way. These tanks are used in various places to contain liquids—such as water, vinegar, &c.—and the overflow, which necessarily often occurs, runs down the sides of the tank and soaks in behind the metal hoops. This rots the wood and rusts the metal, and soon ends in the collapse of the tank, if not carefully watched and repaired or replaced by a new one. This is especially the case where the tank is used to contain vinegar or other liquid containing acids, and it is the protection of the hoops and staves of the tank and the prolongation of their life that I have in view.

I place beneath the hoop *b*, between it and the tank, a wooden backing, *b'*, shaped to conform to the tank and made in one or more pieces, as desirable. This wooden backing I form on its inner side with a series of vertical grooves, *c*, which form air-ducts between the backing and the tank. These air-ducts *c* carry off the overflow without allowing it to pass out to and over the hoop, and also permit a circulation of air to dry out both the staves and the backing, and thus prevent undue rotting of the parts. In some cases, where cheapness is desirable, the device is constructed as in Fig. 5, and the outer side of the backing also grooved, as at *c'*, to give an air-circulation under the hoop in case the overflow should be so excessive as to reach the latter. I prefer, however, to wholly protect the hoop from contact with the liquid by forming the backing with an extension or flange, *d*, as in Fig. 3, at its outer edge, beneath which the hoop is placed, and which prevents any liquid from reaching the hoop. The same effect may be had by forming the wooden backing *b'* with a groove extended partially through it from its under side and setting the hoop therein, as in Fig. 4.

In any case the metal hoop is not allowed to touch the tank-sides directly, but has interposed between them a suitable wooden backing, grooved to carry down the overflow and allow a free circulation of air to keep it dry.

I am aware that the sides of the tank itself have been grooved; but this does not attain the object, and serves to weaken the staves, the strength of which is of great importance in large tanks. My device, however, does not in any way weaken the tank, is readily applied to any tank now in existence, and fully protects the hoops, which are most rapidly affected by rust and corrosion.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a tank, of a retaining-hoop and a filling interposed between the two, having its inner side formed with vertical grooves, substantially as and for the purpose set forth.

2. The combination, with a tank, of a retaining-hoop and a wooden filling interposed between the two, formed with an extension over the hoop to protect it from the overflow, substantially as and for the purpose set forth.

3. The combination, with a tank, of a retaining-hoop and a wooden filling-piece between the hoop and tank, formed with grooves in its inner side, and having its outer edge extended over the hoop to protect it, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

NELS SORENSEN.

Witnesses:
W. C. MCARTHUR,
W. S. MCARTHUR.