

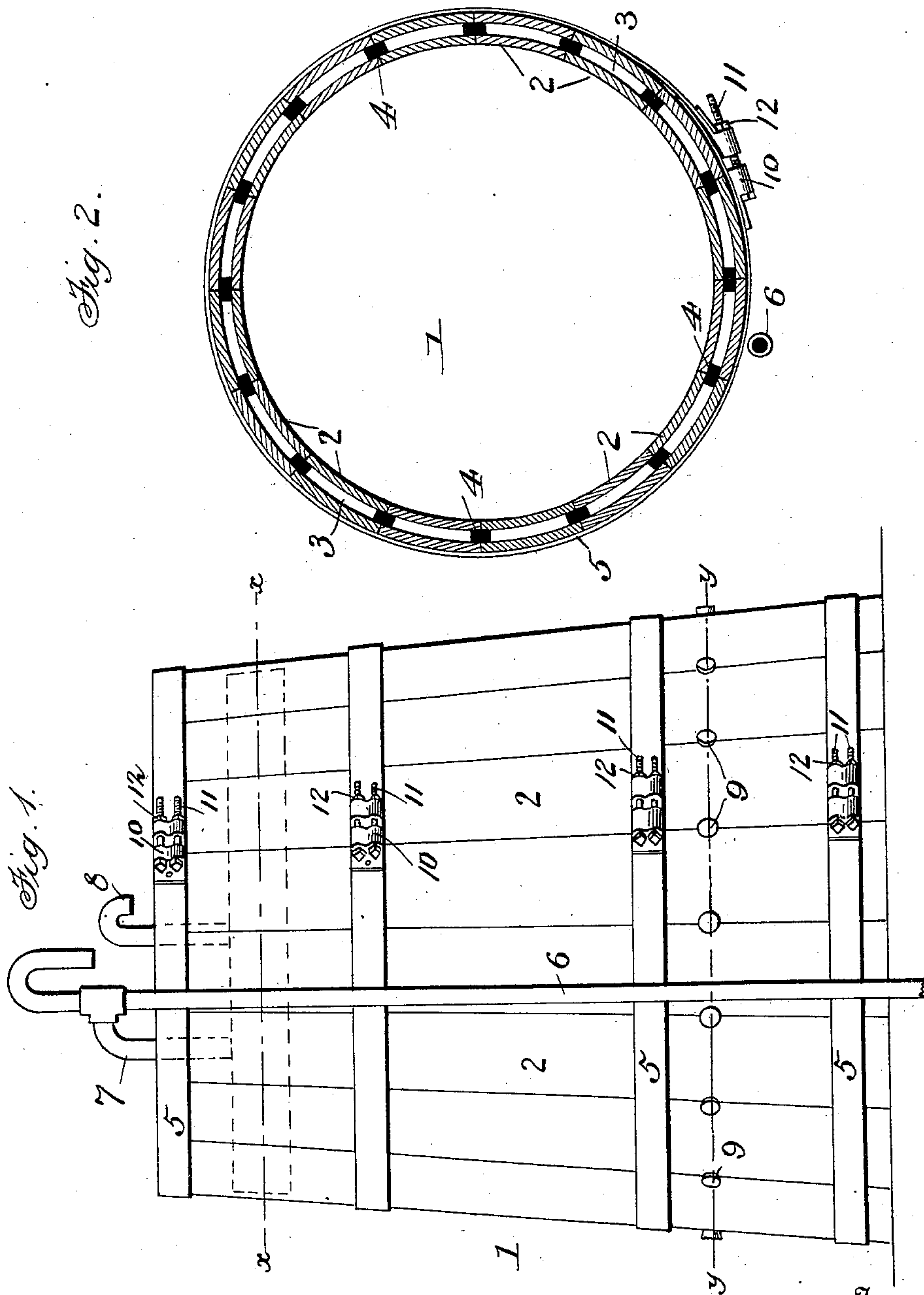
(No Model.)

2 Sheets—Sheet 1.

F. H. PFLUGER.  
TANK.

No. 565,503.

Patented Aug. 11, 1896.



Inventor.

Witnesses  
F. L. Curran  
J. B. Smith

Frank H. Pfluger  
By *J. B. Smith*  
Attorney

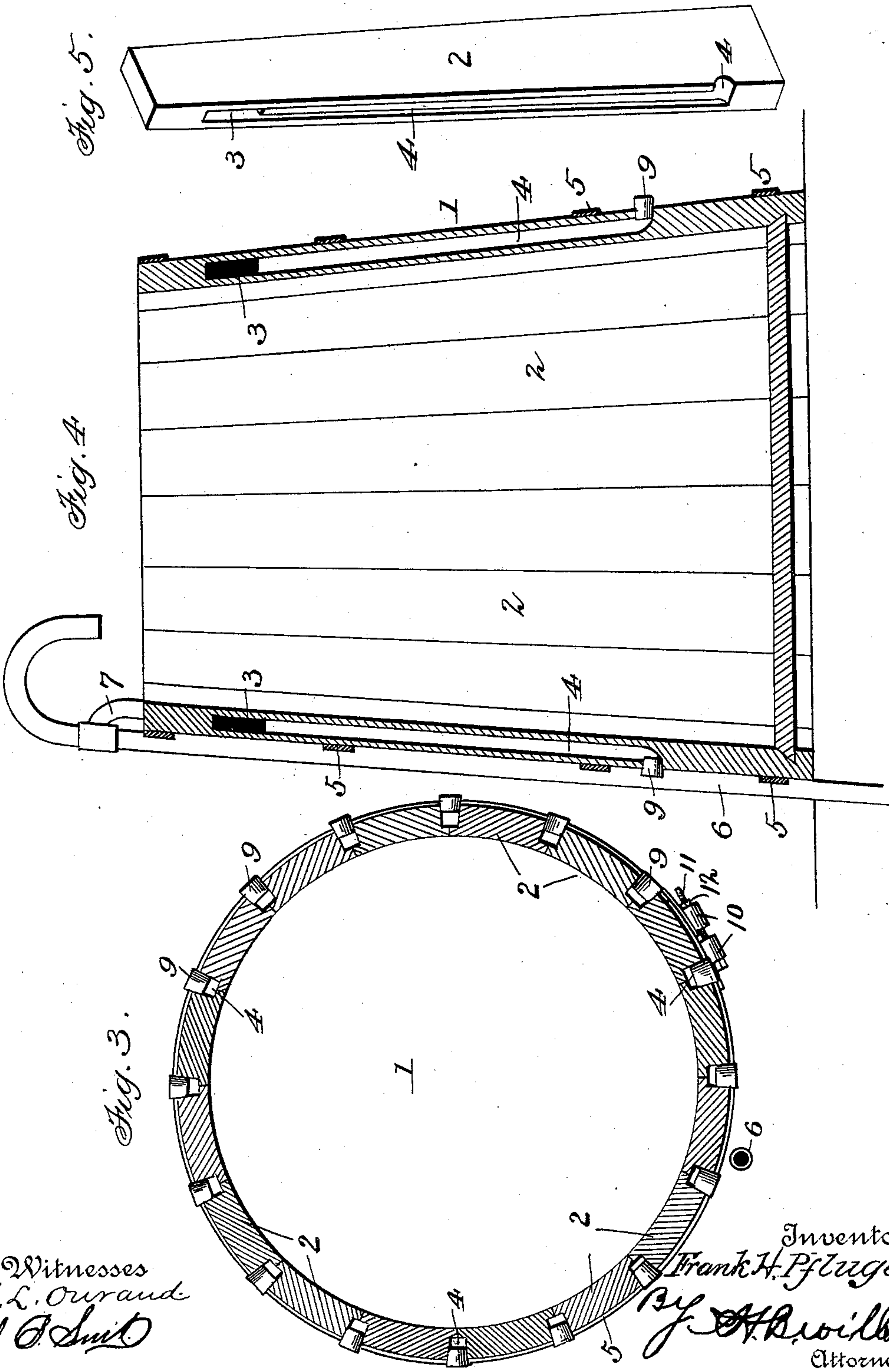
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# UNITED STATES PATENT OFFICE.

FRANK H. PFLUGER, OF PORTLAND, OREGON.

## TANK.

SPECIFICATION forming part of Letters Patent No. 565,503, dated August 11, 1896.

Application filed December 17, 1895. Serial No. 572,443. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK H. PFLUGER, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Tanks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to tanks, and more particularly to that class of tanks employed in connection with windmills for storing the water pumped by the same.

The object is to provide a tank or vessel which shall be of such construction as to prevent its shrinking when it becomes dry or partially empty.

With this object in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of my improved tank. Fig. 2 is a cross-sectional view on line *x x*, Fig. 1. Fig. 3 is a similar view on line *y y*, Fig. 1. Fig. 4 is a longitudinal vertical sectional view, and Fig. 5 is a detail perspective view of one of the staves.

In the drawings, 1 denotes the tank, which may be of any suitable or well-known form. The tank is made up of a series of staves 2, which are provided at their upper ends with transverse passages 3, and in their edges with channels 4, which communicate with the passages. These staves are arranged in the usual and well-known manner and held in place by the hoops 5.

6 denotes the water-pipe, which leads from the pump and supplies the tank with the water pumped by the windmill. This pipe has a branch 7, which extends down through the upper end of one of the staves and communicates with the annular passage formed by each passage of each stave.

8 denotes the overflow-pipe, which communicates with the annular passage and is for the purpose of conducting any overflow from the annular passages into the tank.

It will be seen that as water is pumped into the tank a portion of it will flow into the annular chamber formed by the transverse pas-

sages in the staves, and will, by its own weight, descend into the channels formed in the edges of the staves, thus moistening them at their joints or points of contact. This will effectively prevent the shrinking or warping of the staves during dry weather when the tank is empty, as the water and moisture within the chamber and channels are inclosed and protected from the action of the heat and sun. In the course of time the channels may perhaps be clogged with sediment. To remove the sediment, I have provided the plugs 9, which fit into the lower ends of the channels, and by removing these plugs and closing the end of the supply-pipe the water from said supply-pipe will be forced down through the channels and will drive the sediment out at their lower ends.

Another feature of my invention relates to the hoops and the means for clamping the same to the tank. The hoops are of a greater circumference than the tank, and their ends are brought past each other and overlap, as shown. The portions of the hoops near each end are provided with perforated lugs 10, through which pass bolts 11, having nuts 12, by screwing which the hoops are tightly bound around the cask.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my invention will be readily understood. Although I have described the present invention in connection with a tank, I would have it distinctly understood that I do not wish to be restricted to its application thereto, as other vessels, such, for instance, as tubs, may be constructed with the water-chamber and channels leading therefrom to moisten or swell the joints of the staves. My invention, therefore, may be applicable to a large class of vessels.

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

1. A vessel composed of staves having water-channels at their joints, and transverse water-chambers near their upper ends in line and communicating with each other and with the water-channels, substantially as set forth.

2. A water-vessel composed of staves having water-channels at their joints and plugs

closing the lower ends of the water-channels, substantially as set forth.

3. A vessel composed of staves having water-channels at their joints, a water-chamber  
5 communicating with said channels and formed in the staves at their upper ends, and a supply-pipe for furnishing the chamber with water, substantially as set forth.

4. A stave for vessels having water-channels in its edges, and a transverse water-

chamber near its upper end, which communicates with said channels, substantially as set forth. 10

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