(No Model.)

A. WERNER.

VESSEL.

No. 486,006. Patented Nov. 8, 1892.

Fig. 1.

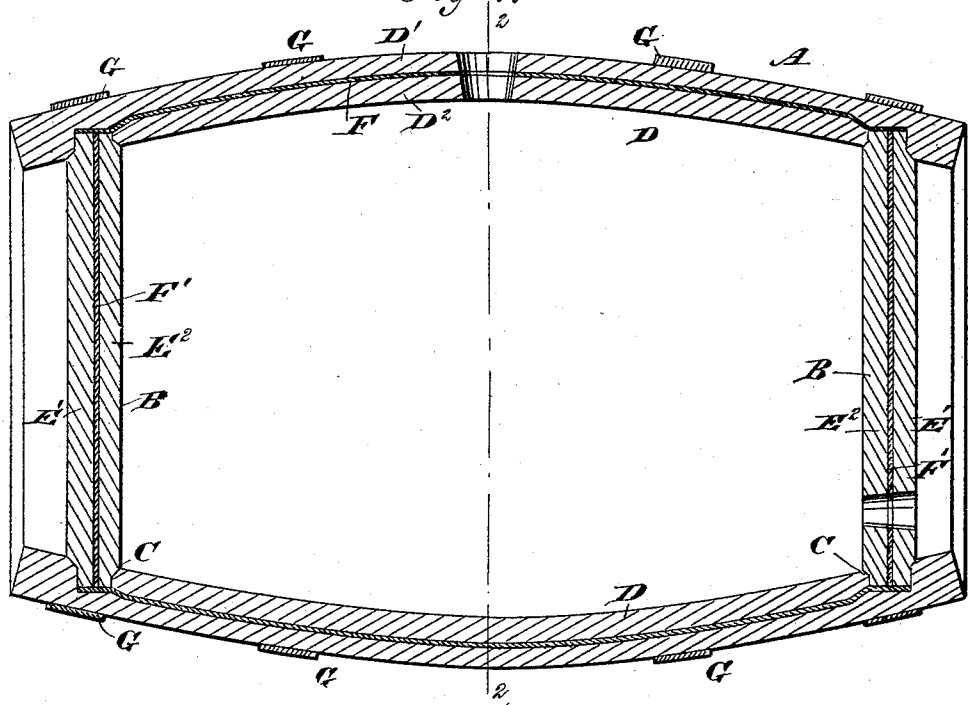
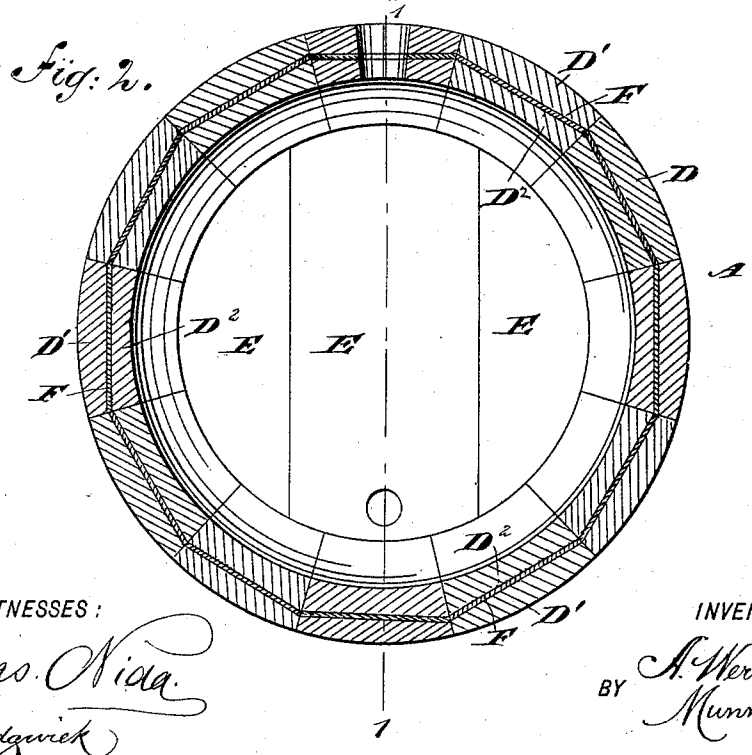


Fig. 2.



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SPECIFICATION forming part of Letters Patent No. 486,006, dated November 8, 1892.

Application filed March 17, 1892. Serial No. 425,310. (No model.)

To all whom it may concern:

Be it known that I, AUGUST WERNER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Vessel, of which the following is a full, clear, and exact description.

The invention relates to barrels, kegs, casks, and other similar receptacles; and its object is to provide a new and improved vessel more especially designed to receive liquids, gases, and other fluids, and arranged to prevent the escape of gases or liquids even if the latter are under pressure within the vessel.

The invention consists of a receptacle formed of a flexible material and arranged within the parts forming the body of the vessel and the head.

The invention also consists of certain parts and details and combinations of the same, as will be hereinafter described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional side elevation of the improvement on the line 1 1 of Fig. 2, and Fig. 2 is a transverse section of the same on the line 2 2 of Fig. 1.

The improved vessel is provided with the body A and the heads B B, engaging at their outer edges the usual grooves C, formed in the body A near the ends thereof. The body A of the vessel is formed of a series of staves D, each made in two parts D′ and D^2, of which the inner part D^2 fits into a recess of corresponding size and formed on the inside of the outer part D′.

Between the two parts D′ and D^2 of each stave D is placed a strip F of flexible material—such as rubber, leather, or other fabric—as plainly illustrated in the drawings. The inner part D^2 of each stave D reaches with its ends to the inner faces of the heads B B, while the strip F extends to the end of the recess in the outer stave part D′—that is, terminates at the outer edge of the recess C. (See Fig. 1.) In a like manner each head B is made of sections E, each made of two parts E′ and E^2, between which is placed a strip F′, also of flexible material similar to the strip F. It will be seen by reference to Fig. 2 that the side edges of adjacent strips F abut one on the other, so that when the staves are assembled to form the body A the several strips F contained within the staves form the body of a receptacle, the heads of which are formed by the strips F′, placed in the head-sections E of the heads B. It will further be seen by reference to Fig. 1 that the outer edges of the strips F′ in the heads B abut against the outer ends of the strips F, so that a receptacle of flexible material is formed within the staves forming the body and the sections forming the heads B.

It will be readily understood that when the staves are assembled and the heads B are in place and the hoops G are driven on the outside of the staves then the several staves are pressed tightly together and the individual parts D′ and D^2 are pressed firmly one upon the other, so as to clamp the flexible strips F, thereby bringing their outer edges in close contact with the edges of the strip of the adjacent stave, whereby a very tight joint is formed between the adjacent staves, as well as between the strips F′ and the strips F, and also between the several sections E, forming each head B. One of the staves may be formed with the usual bung-hole and a like bung-hole may be formed in one or both of the heads B. A vessel constructed in this manner is completely air and gas tight, and if filled with a fluid under pressure all leakage is prevented.

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

1. A vessel comprising a body formed of staves and heads, each made in sections, and strips of flexible material arranged within the sections of the staves and the heads, substantially as shown and described.

2. A vessel comprising a body composed of staves, each made in sections, heads also made in sections, and strips of flexible material placed between the stave-sections and the head-sections and forming a closed receptacle within the body and heads of the vessel, substantially as shown and described.

3. A vessel provided with a body composed of staves, each made in sections, and a strip of flexible material placed between the two parts of the stave, substantially as shown and described.

4. A vessel provided with a body composed of staves, each made in parts, a strip of flexible material placed between the two parts of the stave, the side edges of the layers of adjacent staves abutting against each other to form a continuous layer of flexible material throughout the body, substantially as shown and described.

5. A vessel provided with a head made in sections, each composed of two parts, and a strip of flexible material placed between the parts of each section, the side edges of one strip abutting against the edges of the strip of the adjacent section, so as to form a continuous layer or lining within the sections forming the head, substantially as shown and described.

6. A vessel provided with a stave made in two parts and a strip of flexible material placed between the two parts of the stave, substantially as shown and described.

7. A vessel provided with a head-section made of two parts and a strip of flexible material placed between the two parts, substantially as shown and described.

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