

*J. Brakeley,
Oil Vessel.*

No 52,023.

Patented Jan. 16, 1866.

Fig. 1.

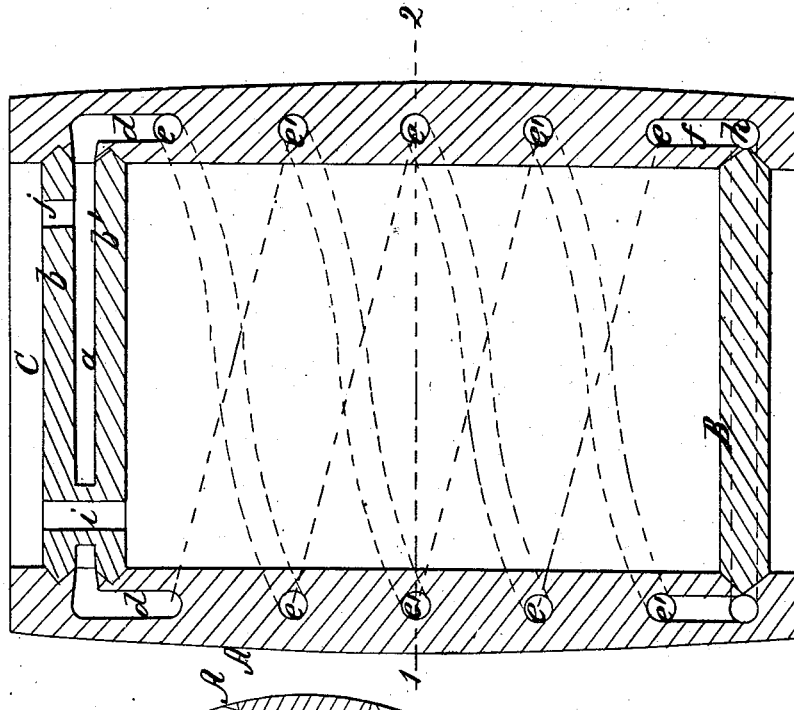
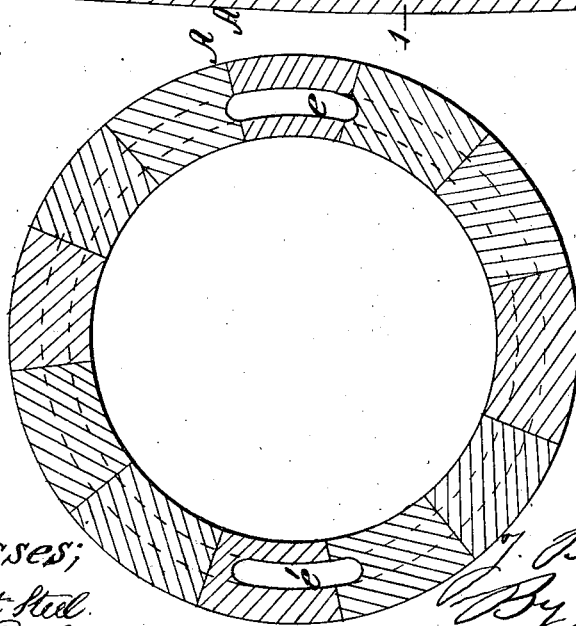


Fig. 2.



*Witnesses;
Wm. Albert Reed.
John Parker*

Inventor;

*J. Brakeley
By his Att'y
H. Howson*

UNITED STATES PATENT OFFICE.

JOSEPH BRAKELEY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED VESSEL FOR PETROLEUM.

Specification forming part of Letters Patent No. 52,023, dated January 16, 1866.

To all whom it may concern:

Be it known that I, JOSEPH BRAKELEY, of Philadelphia, Pennsylvania, have invented an Improved Vessel for Containing Petroleum and other Fluids; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a barrel or other vessel, through the solid wood composing which passages are formed for the reception of water or other fluid, which, permeating the fibers of the wood, maintains the whole vessel so tight as to prevent such contents as petroleum and other penetrating fluids from escaping.

My invention further consists in the use, in combination with the above, of a hygroscopic agent which will absorb moisture from the atmosphere and transfer it to the wood, thereby maintaining the vessel in the desired swollen state.

In order to enable others to make and use my invention, I will now proceed to describe the manner in which it may be carried into effect.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a vertical section of my improved barrel for containing petroleum and other fluids, and Fig. 2 a sectional plan on the line 1 2, Fig. 1.

A represents the body, B the bottom, and C the heads, of the barrel. The body is made of a series of staves, as usual, but instead of being solid they are bored through edgewise at intervals and at suitable angles; a hole in one stave coinciding, or nearly coinciding, with a hole in the adjacent stave, so that there may be a circuitous or zigzag passage or passages throughout the entire body of the barrel. In the present instance the staves are so bored as to form spiral passages communicating with the space *a* between the two pieces *b* and *b'*, which form the head C of the barrel. Thus the said space *a* communicates, through a passage, *d*, with the hole *e*, which is continued in the spiral course (indicated by dotted lines) through the staves downward to the passage *f*, through which the spiral channel communicates with an annular chamber, *h*, formed

in the staves near the bottom of the barrel. In like manner another spiral passage, *e'*, forms a communication between the space *a* and the said annular chamber *h*; and there may be as many spiral passages as deemed desirable, and these passages may be arranged at any inclination which may be deemed most appropriate, the object being to make such openings and passages through the staves that water or other fluid passing through the same will permeate the fibers of the wood and maintain the barrel in that swollen condition which will insure its complete tightness.

In the head of the barrel are two holes, *i* and *j*, the first having no communication with the space *a*, but forming the usual bung-hole through which the barrel is filled, and through which its contents may be withdrawn. The hole *j* passes through the upper piece, *b*, only of the head C, and is the opening through which the space *a* and passages communicating therewith are filled with water or other fluid, referred to hereinafter. Both holes are filled with appropriate detachable stoppers.

The space *a* in the head of the barrel may be dispensed with and the passages through the staves filled with fluid through openings made in the barrel at any suitable points, these openings being plugged after the passages have been filled. I prefer the use of a space or reservoir, however, for containing a supply of fluid over and above that required to fill the passages, whether that reservoir be formed in the head of the barrel, as illustrated and described, or in the upper portion of the staves, or otherwise.

In place of water I propose to introduce into the passages formed through the staves of the barrel water in which chloride of calcium or other substance has been dissolved, in order to convert the water into a hygroscopic fluid, which, on passing through the pores of the wood, will absorb moisture from the atmosphere, and thus maintain the barrel in the desired damp and swollen state to insure its thorough tightness without the necessity of replenishing the passages with fresh supplies of water. A hygroscopic agent may be introduced into the passages in a powdered state or in a molten state, the agent subsequently becoming solid.

Although I have referred to my invention as applied to barrels, it will be evident that it

is applicable to other wooden vessels, and may be used to advantage in all cases when the contents of the vessel are of such a penetrating character that the preventing of leakage has been a matter difficult to accomplish.

It will also be evident that the passages may be formed in the staves in a variety of ways without departing from the main features of my invention.

I claim as my invention, and desire to secure by Letters Patent—

1. A barrel or other vessel in the solid wood composing which passages are formed, sub-

stantially as and for the purpose herein set forth.

2. In combination with the above, the use of a hydropic agent, substantially in the manner and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH BRAKELEY.

Witnesses:

H. HOWSON,

W. J. R. DELANY.