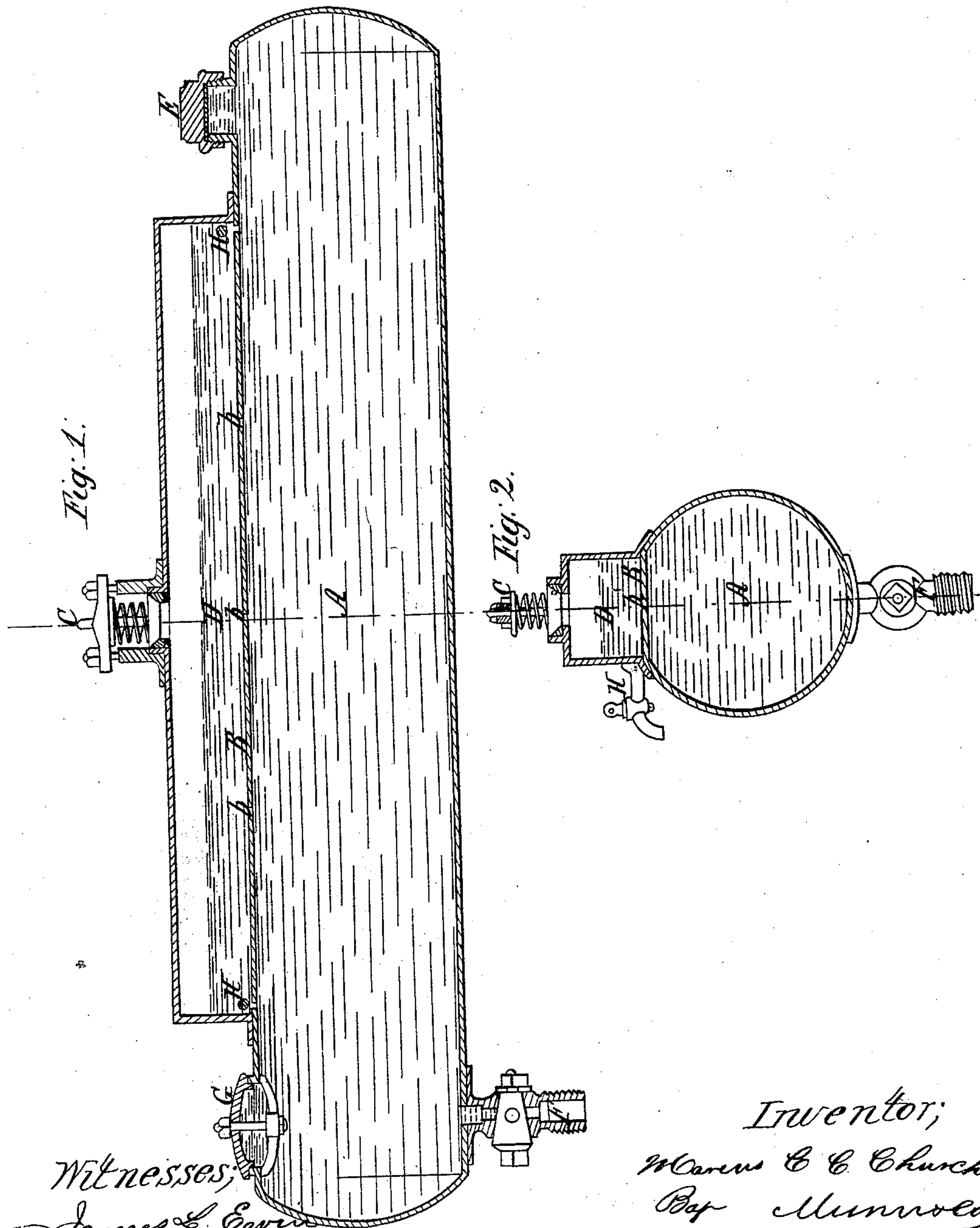


M. C. C. Church,

Oil Tank.

No 57,479.

Patented Aug. 28, 1866.



Witnesses;
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UNITED STATES PATENT OFFICE.

MARIUS C. C. CHURCH, OF PARKERSBURG, WEST VIRGINIA.

IMPROVED TANK FOR PETROLEUM.

Specification forming part of Letters Patent No. 57,479, dated August 28, 1866.

To all whom it may concern:

Be it known that I, MARIUS C. C. CHURCH, of Parkersburg, in the county of Wood and State of West Virginia, have invented a new and Improved Tank for Transportation or Storage of Petroleum; and I do hereby declare the following to be a full, clear, and exact description of the same, sufficient to enable one skilled in the art to which the invention appertains to make use of it, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a central vertical longitudinal section. Fig. 2 is a vertical transverse section.

The improvement consists of a tank, metallic or otherwise, of a cylindrical shape, except that a segment is removed from the upper side, leaving a flat surface with openings. Upon this flattened portion is raised a dome or chamber having a safety-valve for the relief of the chamber in case of any undue pressure of gas therein.

The purpose of the dome or chamber is to keep the tank full by re-enforcement of liquor therefrom, and to afford a place for containing the liquor which leaves the main portion of the tank under the expansion of the liquor by heat. The dome or chamber affords the means of keeping the tank always full, so as to hold a definite quantity, the surplus, if any, being drawn off by the faucets H, near the floor of the dome-chamber, leaving the tank quite full without surplus.

In the drawings, A is the body of the tank, being nearly cylindrical. A segment is removed from the upper edge, making a flat bottom, B, to the upper chamber or dome, D. C is a safety-valve on the crown of the dome or upper surface of the chamber D.

E is the opening for the reception of the petroleum or other liquid, and F the opening for its discharge. The former is closed by a valve or plug, and the latter has a faucet.

G is a man-hole for affording entrance into the tank to clean it out. *b b* are orifices in the floor B to permit the petroleum, liquor, or gas to pass out of the tank into the dome or chamber when expanded by heat.

It is desirable for many reasons to have the tank full, especially for transportation, as the full tank will rest more quietly than will one in which the oil is swashing about, as the cars are careened by the inequalities of the road, turning curves, and in the sudden checks or accessions of speed.

If the tank be filled and the temperature rises the liquor must expand, and will either burst the tank or escape somewhere; and to receive it under these circumstances I have provided the dome or chamber D, into which the oil or gas passes through the openings *b*, and returns when the original temperature is again reached, any undue expansion tending to rupture the vessel being relieved by the safety-valve C.

The flat bottom B permits the liquid to run back into the tank, and the present arrangement is therefore preferred to one which would merely form a dome or cap over the upper cylindrical surface of a tank where the oil might collect between the sides of the tank and dome in positions unfavorable to escaping back into the tank. What evaporation takes place from direct exposure to the air is not direct from the liquid in the tank, but from the amount contained in the dome.

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

1. The combination, with the tank A, of the chamber D, provided with the safety-valve C, and connected by orifices, as described, and for the purpose of the storage and transportation of petroleum or other liquid.

2. The tank A, segment-shaped in transverse section, the flat upper surface forming the floor of a secondary chamber.

To the above specification of my improvement in tanks for the transportation and storage of petroleum I have signed my hand this 1st day of August, 1866.

M. C. C. CHURCH.

Witnesses:

EDWARD H. KNIGHT,
C. D. SMITH.