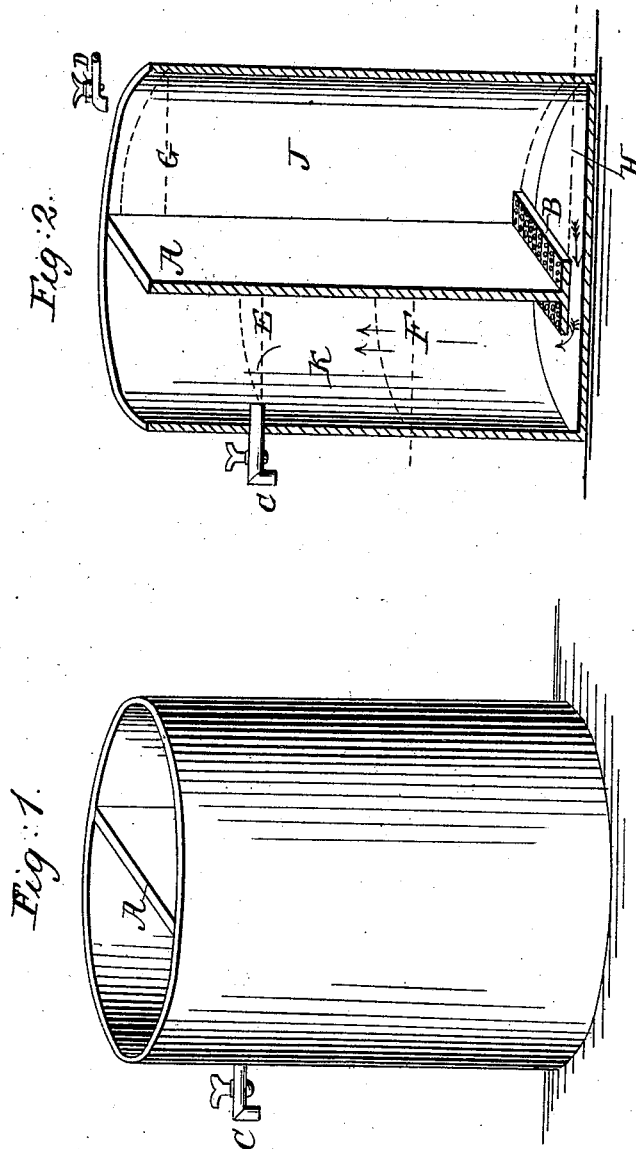


W. H. SANGSTER.  
Apparatus for Refining Petroleum.

No. 54,414.

Patented May 1, 1866.



Witnesses.  
C. W. Seely  
James Sangster

Inventor.  
William H. Sangster

# UNITED STATES PATENT OFFICE.

WILLIAM H. SANGSTER, OF BUFFALO, NEW YORK.

## IMPROVEMENT IN APPARATUS FOR REFINING PETROLEUM.

Specification forming part of Letters Patent No. 54,414, dated May 1, 1866.

*To all whom it may concern:*

Be it known that I, WILLIAM H. SANGSTER, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Vessels for Refining and Deodorizing Petroleum; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in placing a partition within the tank or vessel for holding the chemicals, which is so arranged as to separate it into two parts and leave an opening near the bottom, through which the oil is made to flow in its passage through the chemical solution from one division to the other, during the process of refining or washing; also, in combination therewith, of a perforated plate or its equivalent, for the purpose of increasing the distance of the flow of oil through the chemical solution.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 in the accompanying drawings represents a perspective view, showing a part of the partition near the top and the faucet for drawing off the oil. Fig. 2 is a vertical section through the center of the tank, representing the partition and the perforated plate.

In Fig. 2, A represents the partition, B the perforated plate, and C a faucet for drawing off the oil after it has passed under the partition A and through the chemical solution.

I do not confine myself to any particular form or shape of tank or vessel. It may be made either square or any other form desired, but I think a round form is preferable. It is constructed of copper, wrought or cast iron, or wood; but boiler-iron, I think, should be preferred, as being the strongest and most durable.

Its operation is as follows: The chemical so-

lution being placed in the tank, it of course finds its level on both sides of the partition A by means of the opening left between it and the bottom of the tank. The oil to be purified and deodorized is now poured from the faucet D into the division J, the weight of which, bearing down upon the chemical solution, changes its position by forcing it down to or near the level H in division J, and raises its level to or near F in division K, when the oil is forced through said solution, under the partition A and perforated plate B, and being lighter than the solution it rises up through it and passes off through the faucet C, taking the direction as shown by the arrows, the superior weight of the column of oil in the division J keeping up the action as long as it is supplied with oil from the faucet D.

The tendency of the perforated plate is to separate or spread the particles of oil as they pass through the solution.

By this means I claim that I can purify and deodorize or wash the oil in less time and more effectually than by the old and more expensive process of agitating by machinery.

I do not confine myself to any particular form of partition, as the same result may be obtained by means of separate vessels, the connection being made by a pipe or the equivalent thereof, which forms an opening similar to the one shown under the partition A and plate B in Fig. 2.

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

1. The partition A, or its equivalent, when constructed as and for the purposes herein substantially described and set forth.

2. In combination therewith, the plate B, or the equivalent thereof, as and for the purposes described.

WILLIAM H. SANGSTER.

Witnesses:

JAMES SANGSTER,  
S. M. SANGSTER.