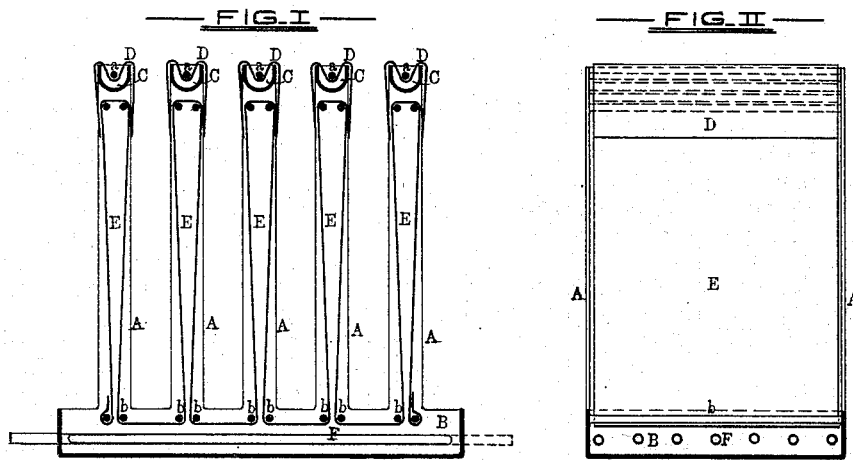


G. ALLEN.

APPARATUS FOR TREATING PETROLEUM.

No. 182,625.

Patented Sept. 26, 1876.



WITNESSES

Pho. Mungen
H. A. Daniels

INVENTOR

Geo. Allen
by A. H. W. Howard
Attorney

UNITED STATES PATENT OFFICE.

GEORGE ALLEN, OF FRANKLIN, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR TREATING PETROLEUM.

Specification forming part of Letters Patent No. 182,625, dated September 26, 1876; application filed April 20, 1876.

To all whom it may concern:

Be it known that I, GEORGE ALLEN, of Franklin, in the county of Venango and State of Pennsylvania, have invented certain improvements in apparatus for increasing the density of, and removing impurities from, petroleum lubricating oils, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to apparatus for the above purpose, in which the oil is drawn from elevated troughs by capillary attraction, and conducted by means of muslin or other fibrous sheets to a pan or oil-receptacle below, the oil in its passage to the said pan being subjected to the action of currents of heated air caused by suitable heating apparatus located in or near to the pan, as hereinafter fully described.

In the further description of my invention which follows, due reference must be had to the accompanying drawing, forming a part of this specification, and in which—

Figure 1 is a longitudinal section of my improved apparatus, and Fig. 2 a transverse section of the same.

Similar letters of reference indicate similar parts in both figures.

A A are stands, extending vertically from the tray or pan B. C C are troughs, supported at their ends by the stands A. D D are sheets of some fibrous material, secured to and partially within the troughs C by means of bolts *a*, which extend lengthwise of the troughs. The ends of the sheets D hang over the sides of the troughs, and come into con-

tact with a second series of sheets, E, of similar material, formed by a continuous piece being secured by bolts *b* with reference to the troughs C and tray B, as shown in the drawing. F is a steam-pipe, preferably located in the tray B, designed to cause upward currents of heated air between the sheets E, and thereby facilitate the evaporation of the lighter constituents of the oil in its passage to the tray B, where it is stored in a condition to be drawn off for shipment.

The process of refining and increasing the density of petroleum by means of my apparatus is as follows: Upon the troughs being filled the oil is caused by capillary attraction to pass slowly down the sheets D to the sheets E, and thence to the tray B. In this transfer of the oil from the troughs C to the tray B the said oil is freed from dirt and other foreign matter, which is left as a sediment or residuum, and, in coming into contact in its passage with air rarefied by means of the steam-pipe F, is separated from its lighter constituents, which pass off in the form of vapor.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

In combination with the elevated troughs C and sheets of fibrous material D, secured thereto substantially as shown, the fibrous sheets E, tray B, and steam-pipe F, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

GEORGE ALLEN.

Witnesses:

WM. H. BIRGE,
G. W. BRIGHAM.