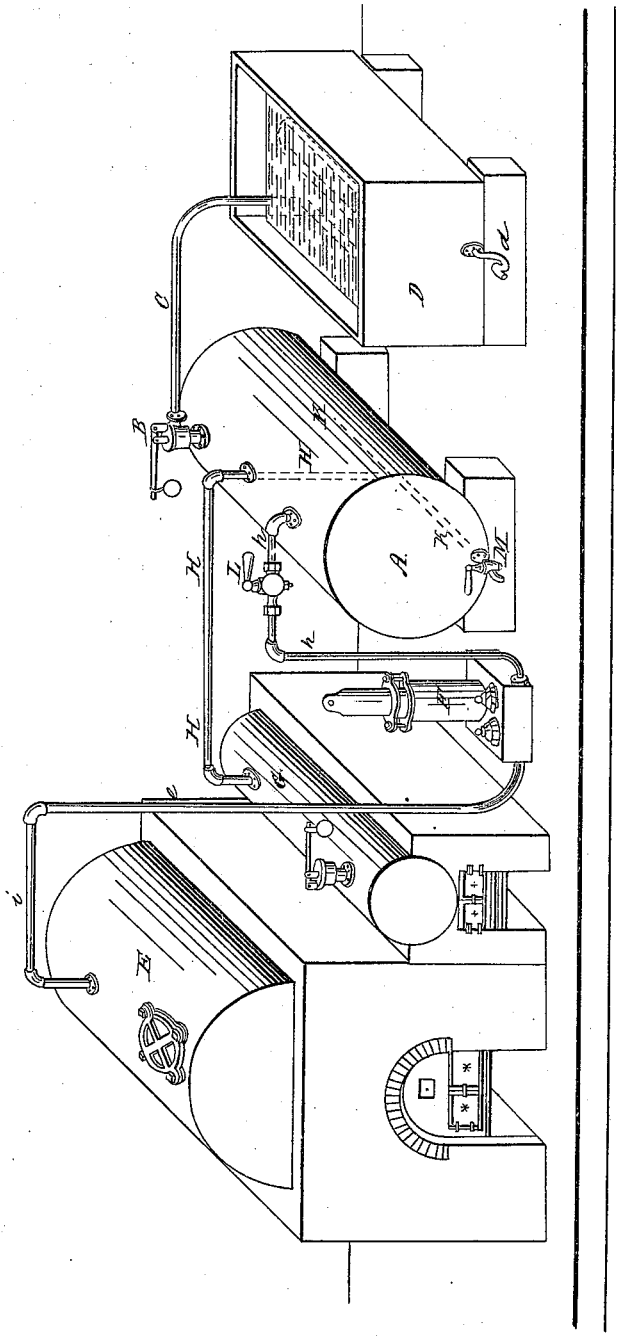
C. ADAMS.

Refining Oil.

No. 52,509. Patented Feb. 13, 1866.



Witnesses:

J. N. Glogger

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Inventor:

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UNITED STATES PATENT OFFICE.

CHARLES ADAMS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED APPARATUS FOR BLEACHING OIL, PARAFFINE, WAX, &c.

Specification forming part of Letters Patent No. **52,509**, dated February 13, 1866.

To all whom it may concern:

Be it known that I, CHARLES ADAMS, of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new and Improved Apparatus for Bleaching Oil, Paraffine, or Wax; 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.

My invention consists in an apparatus for bleaching oil, paraffine, or wax, so constructed as to submit these substances, while in the shape of vapors, to the action of steam under pressure, varying at pleasure, whereby all the impurities are removed from the oil, paraffine, or wax, and they are rendered perfectly white without the use of any chemicals.

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

A is the bleaching-vessel, made of boiler-iron, perfectly tight and of sufficient strength to resist a high pressure.

B is a safety-valve by which the pressure in the vessel A is regulated.

C is the pipe which conveys off the vapors when the pressure exceeds the point fixed upon in the condensing-worm D.

D is the worm and tank, with its goose-neck *d*.

E is a still of ordinary construction.

e e e is a pipe by which the vapors of oil leave the still.

F is a force-pump, which creates a suction in the pipe *e* and forces the oil-vapors through the pipe *h h h* into the bleaching-vessel A.

G is the steam-boiler, with gage-cocks and safety-valve.

H H H is a steam-pipe used for conveying the steam from the boiler to the bleaching-vessel A. The end of that pipe is prolonged in the vessel A until it reaches almost the bottom, when it branches right and left, K K, and it is perforated with small holes to distribute the steam equally. This is shown by the dotted lines.

L is a stop-cock, and M is a proving-cock.

I have represented my apparatus in the above shape, but do not confine myself to the exact one represented, as it can be changed or varied without altering the general working of the apparatus.

For bleaching oil the crude oil is placed in the still E, and steam is generated in the boiler G. As soon as the oil begins to distill in the ordinary way the pump F is put in motion. The pressure in the bleaching-vessel A will soon become too great for the valve B, which will be raised and allow the gases and vapors to pass off into the worm D, where the oil is collected in the usual manner.

For bleaching paraffine or wax the stop-cock L is to be shut, the paraffine or wax is put into the vessel A, steam is introduced, the paraffine or wax becomes melted, the volatile matter passing through the valve B is collected in the worm D, and the quality of the paraffine or wax is ascertained by drawing off a small quantity from the vessel A through the proof-cock M.

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

1. The vessel A, in combination with the pump F, still E, steam-boiler G, pipe H K, valve B, pipe C, and worm D, for the purpose specified.

2. The pump F, pipe *e*, pipe *h*, and valve L, when used for forcing oil in a state of vapor into the vessel A, for the purpose specified.

3. The valve B, when used for regulating the pressure in the vessel A, where oil in vapor and steam or paraffine or wax and steam are kept, for the purpose specified.

CHARLES ADAMS.

Witnesses:

LEWIS GODBOU,

D. GODBOU.