J. B. Pollock,

Manf. Varnish.

No. 109245. Patented Nov. 15. 1870.

Fig: 1.

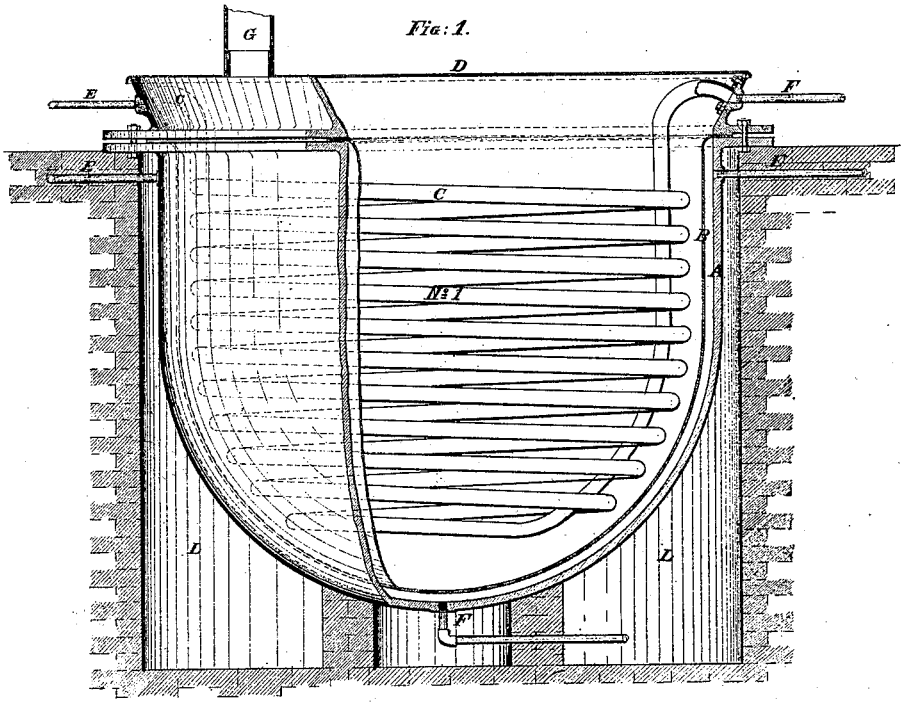
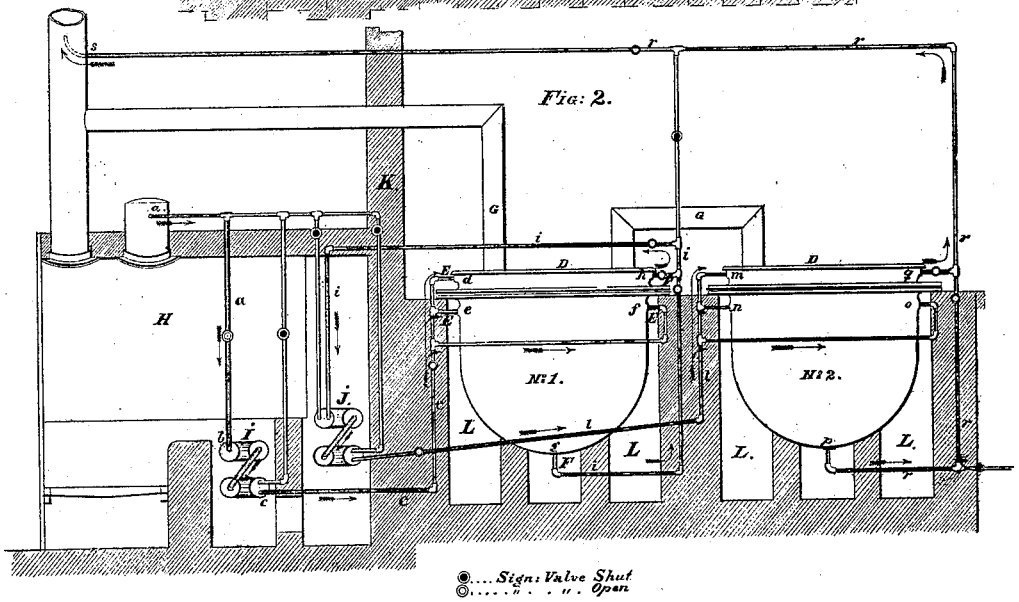


Fig: 2.



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Witnesses.
Washington Hawes
Hugo N. Lillichook

Inventor:
James B. Pollock

United States Patent Office.

JAMES B. POLLOCK, OF PORT RICHMOND, NEW YORK.

Letters Patent No. 109,245, dated November 15, 1870.

IMPROVEMENT IN THE MANUFACTURE OF VARNISH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES B. POLLOCK, of Port Richmond, in the county of Richmond and State of New York, have invented new and useful Improvements in Apparatus for Making Varnish; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

My invention relates to an improved arrangement of steam-pipes, in connection with superheaters, and kettles or pans for containing the oil to be treated.

I will proceed to describe the apparatus.

Figure 1 is a sectional elevation of one kettle, showing its construction.

Figure 2 is an elevation of the kettles and the steam-generating apparatus, showing the whole operation.

Similar letters of reference indicate corresponding parts.

A is the outer shell of kettle.

B, the inner shell, leaving a space of one inch between the two shells.

C is a coil of copper pipe, laid in and around the sides of the kettle, for the purpose of giving additional heating-surface.

D, metal covering to kettle, with ventilating-pipe G leading into the furnace of boiler, for carrying off the noxious gases or fumes arising from the boiling oil, where they are consumed.

E E E are steam-pipes, leading from the superheater to kettle.

F F are the exhaust-pipes, leading back to the superheater, to superheat the steam that has passed through the kettle and coil before introducing it to the second kettle, as shown in fig. 2.

H is an ordinary cylinder-boiler, set up in brick-work, with superheaters I and J set under it, and directly behind the bridge-wall.

K is a divison-wall, separating the boiler-room from the kettle-room so as not to have any communication between them, making it perfectly safe as to fire.

Kettles No. 1 and No. 2 are cast-iron or copper kettles, made double, with a space of about one inch between the two shells, with a copper coil of pipe running in and around the kettles, as shown in fig. 1.

These kettles are set up in brick-work, with an air-space, L, extending around the kettles, as shown in figs. 1 and 2.

When the kettles are filled with oil and the proper driers put in, the steam is let in from the boiler H into the steam-pipe *a*, and runs thence, as the arrows indicate, to the superheater I; from thence passes through the pipe *c* to the kettle No. 1, where it enters at the points *d*, *e*, and *f*. After passing through the coil and around the kettle it makes its exit at *g* and *h*; from thence it passes through the pipes *i* back to the superheater J, where the steam is superheated again, and passes through the pipes *l* to kettle No. 2, and enters at points *m n o*, and, passing through the coil and kettle as in No. 1, it makes its exit at *p* and *q*. If more kettles are used it is passed to a superheater again, and thence to kettle No. 3. From the last kettle it is carried through pipe *r* to the chimney, for the purpose of creating draught in the furnace.

Kettles No. 1 and No. 2 are covered with a metal covering, D, and connected by pipe G.

Kettle No. 1 has a pipe, G, leading from it to the furnace or chimney, for the purpose of carrying the noxious fumes or gases from the room.

In this new and improved apparatus for making a siccative oil or varnish from linseed-oil, all danger of burning the oil, or of its frothing, boiling over and setting it on fire, is entirely avoided, as the flow of steam can be so regulated that it is impossible to create heat sufficient to produce such results as the action of a direct fire. A great economy of steam is thus effected by working the steam over.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The arrangement, with two or more kettles and superheaters, of one or more systems of return steam-pipes, for conveying the steam used in one kettle back to be reheated, and thence conveyed to another kettle to be used over, substantially as herein shown and described.

JAMES B. POLLOCK.

Witnesses:

WASHINGTON HANEY,

HUGO H. LILLIEHOCK.