

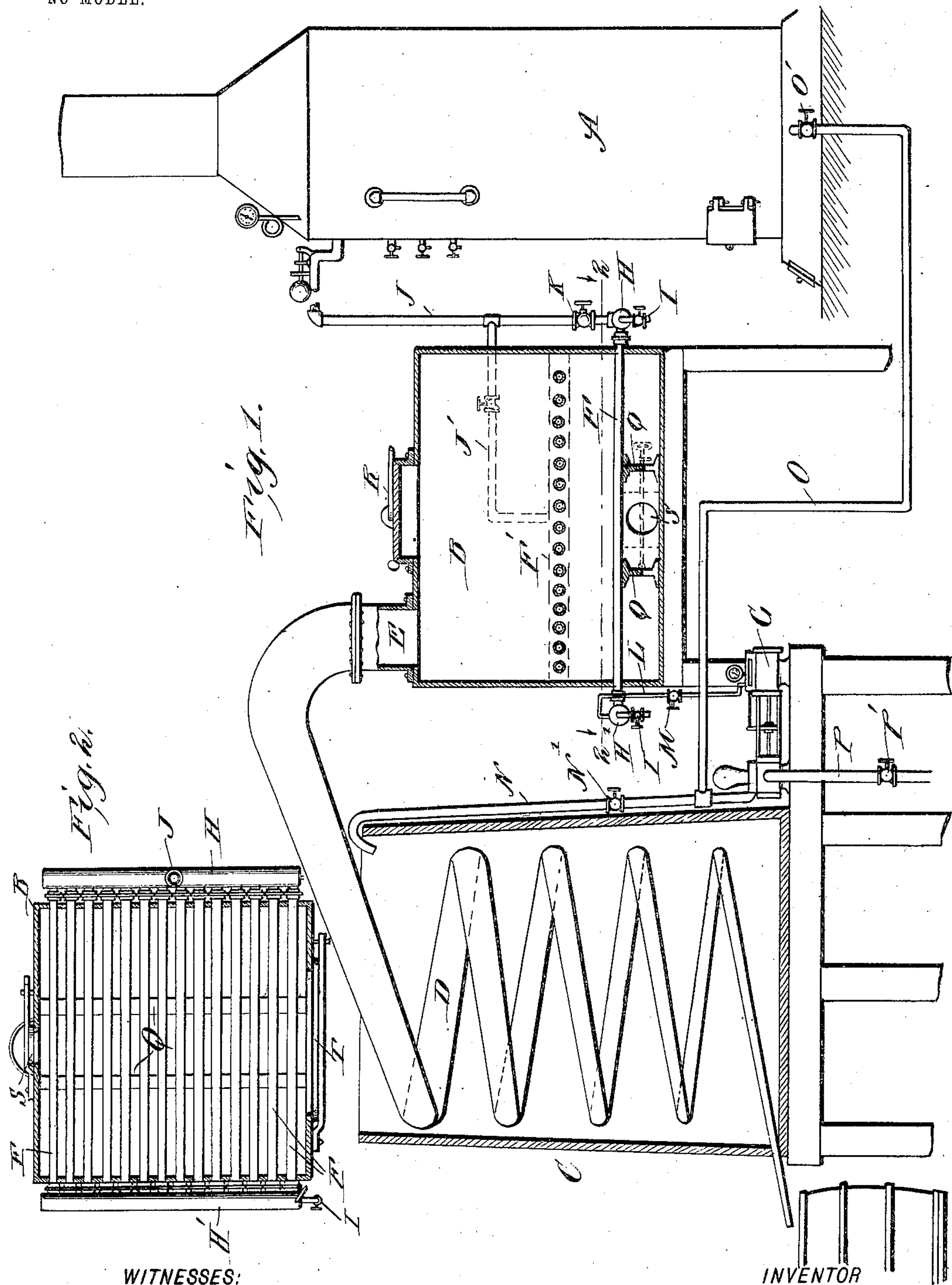
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PATENTED SEPT. 13, 1904.

J. F. BAILEY.
TURPENTINE STILL.

APPLICATION FILED DEC. 3, 1903.

NO MODEL.



WITNESSES:

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JAMES FRANKLIN BAILEY, OF VALDOSTA, GEORGIA.

TURPENTINE-STILL.

SPECIFICATION forming part of Letters Patent No. 770,149, dated September 13, 1904.

Application filed December 3, 1903. Serial No. 183,545. (No model.)

To all whom it may concern:

Be it known that I, JAMES FRANKLIN BAILEY, a citizen of the United States, and a resident of Valdosta, in the county of Lowndes and State of Georgia, have invented a new and Improved Turpentine-Still, of which the following is a specification.

The object of my invention is to provide a new and improved distilling apparatus adapted for distilling wood in addition to the use of distilling pine-gum in the manufacture of tar, rosin, and turpentine, and, in fact, is adapted for general similar use.

The invention consists of the special apparatus or combination of features illustrated in the accompanying drawings, which will hereinafter be fully described, and the novel features pointed out in the claim.

In the drawings, Figure 1 is an elevated plan view, part in central vertical section, showing my improved distilling apparatus; and Fig. 2 is a horizontal sectional view through the still, the section being taken on line 2 2 and looking in direction of the arrow.

Broadly stated, the invention comprehends a still, special steam-heating means, a steam-generator, a cold-water tank having therein any suitable worm or column condenser, the worm or column being in open communication with the upper part of the still, and a steam-operated pump having suitable pipe connection with a supply of cold water, the condenser-tank, and the steam-generator. The power or engine cylinder of the pump is worked through pipe connection by steam which has in its live state served for heating the still. In other words, steam supplied for heating the still is also utilized for working the pump-engine. The steam-generator, still, and the steam-pump are arranged in series order, as stated. Improved results are attained through inductive action produced by the pump in the steam passage-ways through the still, whereby with a minimum use of steam an improved production of turpentine, tar, and rosin is had over any similar distilling apparatus known to me.

In the practice of my invention I employ any suitable form of steam generator or boiler A, a still B, a cold-water tank C, and a con-

densing-coil D or suitable similar serving-column, arranged in the cold-water tank. The coil D is in open communication at E with the interior of the still. I also employ a steam pumping-engine G.

In the still B, I arrange pipes F in horizontal series, as shown in Fig. 2, connecting exterior headers H H', each of which latter is provided with a drain or blow-off I. The header H is made communicating with the steam-space of the boiler A through a pipe J, closed by a valve K. The power-cylinder of the steam-pump has communication with the header H' through a pipe L, closed by a valve M. It will be noticed that all steam fed to the engine must pass through the still, as the boiler A, still B, and pumping-engine G are arranged in series order with respect to the circulation of the steam-supplying means. It will be further noticed that the pump-cylinder of the pumping-engine G has pipe connection N, arranged for delivering water into the tank C, and similar connection O, adapted for supplying the boiler A with feed-water. The pipes N and O have valves N' and O' for the purpose, as will be understood. Water is led to the pump from any source of supply through a pipe P, which may be provided with a cut-off valve P'.

The heating-pipes F may have any suitable supports Q in the tank B, and, if desired, an upper series of heating-pipes F', with pipe connection J', may be employed in the still.

R indicates a suitably-closed opening in the still B, through which the pine-gum, wood, or other material may be passed. The tank B has a draw-off S and an elongated suitably-closed clean-cut T.

The use of my improved distilling apparatus will be understood from the above description, taken in connection with the accompanying drawings. Its chief advantage resides in the simplicity and novel arrangement of parts and the increased production of turpentine, tar, and rosin at minimum expense over any similar distilling apparatus known to me.

In my invention steam which has been used for heating the still serves the further purpose of supplying the condenser with cold water.

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

5 The combination with a distilling apparatus
employing a distilling-tank having a series of
steam-pipes extending transversely there-
through, and headers on opposite sides of the
distilling-tank; in open communication with
projecting ends of the series of steam-pipes,
10 of a steam-pump receiving steam direct from
one said header, a steam-boiler with its steam-
space in direct communication with the other
said header, valves in the steam-conveying
means between the steam-boiler and the dis-
15 tilling-tank, and also between the latter and

the steam-pump, a cooling vessel with a con-
densing-tube extended therethrough; one end
of the condensing-tube being in open commu-
nication with the distilling-tank, a water-con-
veying pipe leading through the pumping-cyl- 20
inder of the steam-pump, a similar pipe lead-
ing from said pumping-cylinder into the cool-
ing-tank, a similar pipe adapted to convey
feed-water from the pumping-cylinder; into
the steam-boiler, and valves in the water- 25
pipes, substantially as described.

JAMES FRANKLIN BAILEY.

Witnesses:

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