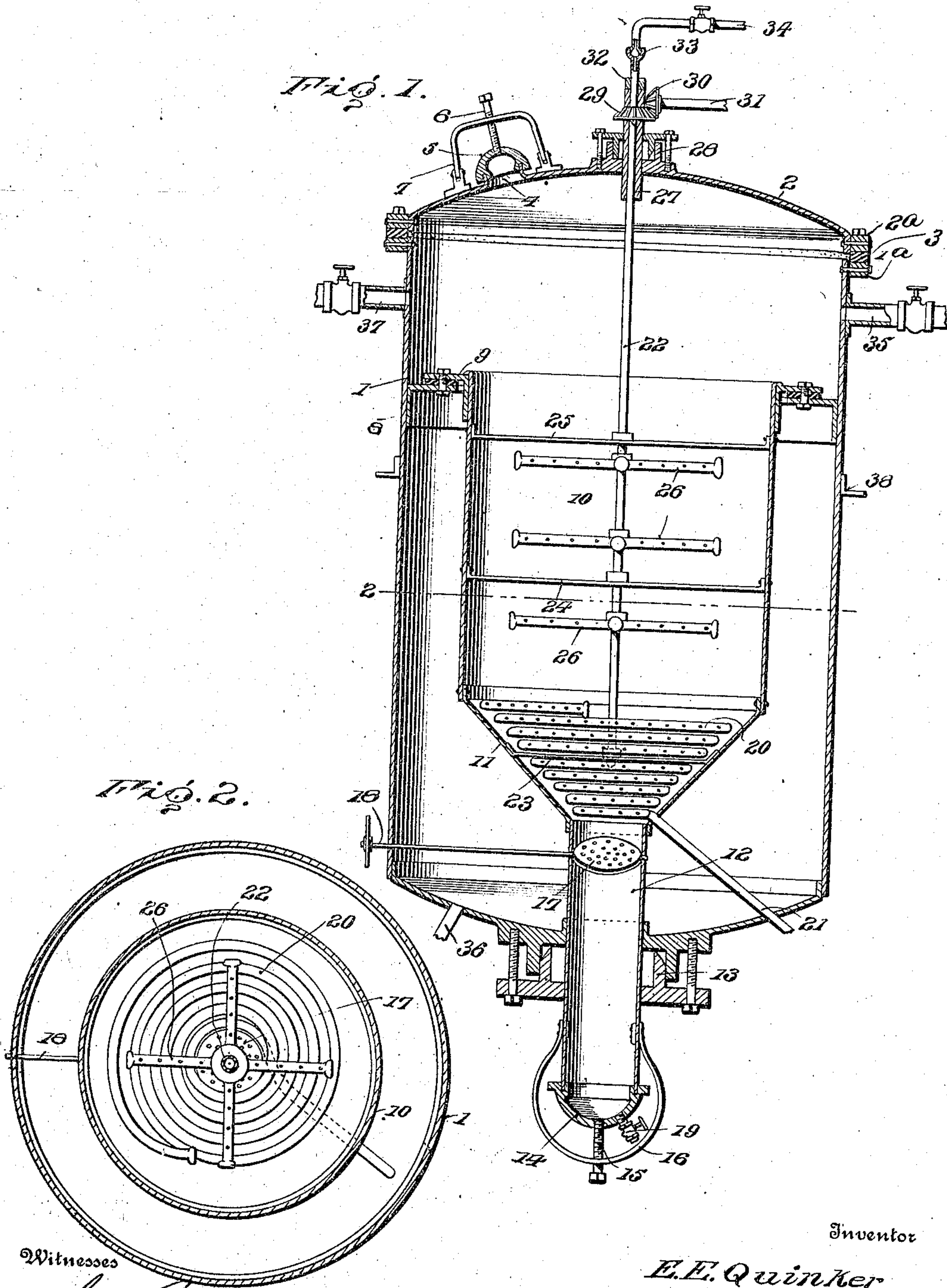


900,203.

E. E. QUINKER.
TURPENTINE STILL.
APPLICATION FILED DEC. 11, 1907.

Patented Oct. 6, 1908.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN E. QUINKER, OF VALDOSTA, GEORGIA.

TURPENTINE-STILL.

No. 900,203.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWIN E. QUINKER, citizen of the United States, residing at Valdosta, in the county of Lowndes and State of Georgia, have invented certain new and useful Improvements in Turpentine-Stills, of which the following is a specification.

This invention has for its object a simple, durable and efficient construction of turpentine still, the parts of which are so arranged that the wood pulp may be easily discharged from its receptacle or container after the turpentine has been extracted therefrom without the necessity of removing the pulp receptacle from the still, and a further object of the invention is an apparatus of this character which embodies an improved construction of steam distributing device that may be used to assist in cleaning out the pulp receptacle, in addition to its primary function of thoroughly impregnating the wood.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a vertical section of my improved turpentine still; and, Fig. 2 is a horizontal sectional view thereof on the line 2-2 of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates the cylindrical body portion of the still which is provided with a preferably removable cover 2 secured to the body portion by bolts extending through the corresponding rings 2^a, and 1^a, a gasket or packing 3 being preferably interposed. The cover 2 is formed with an opening through which the wood pulp is intended to be inserted into the still, and said opening is preferably surrounded by an upstanding collar 4 adapted to be engaged with a rim of the man-hole cover 5. The cover 5 is secured to a screw rod 6 having a threaded bearing in a yoke 7, said yoke being hinged

to lugs on the cover 2 at diametrically opposite sides of the man-hole.

An angular ring 8 is riveted or otherwise secured to the interior of the body portion 1 near the upper end of the same, and a corresponding collar 9 is secured to the ring 8 by means of bolts or similar fastening devices, a gasket as shown being preferably placed between the collar and ring to secure a tight joint. The collar 9 is riveted or otherwise secured to the upper or rim edge of the wood pulp receptacle 10 which is thereby suspended within the cylindrical body portion 1 and spaced from the walls thereof, the upper end of the receptacle or container being open and designed to receive the wood pulp inserted through the opening in the main lid or cover 2. The lower end of the receptacle 10 is preferably tapered as indicated at 11, and to the lower end of this tapered portion a pipe 12 is secured, said pipe extending downwardly through the body portion of the apparatus and passing outwardly through a stuffing box 13. The lower end of the pipe 12 is normally closed by a cap or closure 14 to which a screw rod 15 is secured, and said screw rod works in a bearing in the stirrup 16 hinged to the lower end of the pipe 12, as clearly illustrated in the drawing.

17 designates a damper or gate valve which is perforated as shown and which is positioned within the upper end of the pipe 12, said valve being secured to the inner end of a rotatable actuating rod 18 extending outwardly through the side walls of the body portion 1 and provided at its outer end with a handle. By turning the rod 18, the valve 17 may be moved to close the upper end of the pipe 12 in which position it constitutes a foraminous or perforated bottom of the pulp receptacle 10, so that the resinous residue may percolate through the valve into the pipe 12 and be drawn off whenever desired through the valved drain cock 19 secured in the cap or closure 14. When it is desired to "blow-out" the apparatus, that is, clean out the wood pulp, as will be hereinafter described, the valve 17 is turned to a vertical position where it will not intercept the pulp forced out through the pipe 12.

A worm or coil 20, a portion of which is in the form of an inverted spiral, is mounted in the lower tapered end 11 of the wood receptacle 10, said worm being provided with

a steam inlet pipe 21, which extends through the outer wall of the cylindrical body portion 1. The coil is perforated in all of its convolutions, the orifices distributing the steam effectually throughout the mass of wood pulp. In addition to the coil or worm 20, the steam distributing mechanism includes a hollow vertically disposed shaft 22 which is journaled in cross bars 23, 24 and 25 secured in the receptacle 10, the said shaft being mounted to turn about its longitudinal axis and carrying a plurality of superposed headers 26, each of which comprises a series of radially extending perforated arms. The upper end of the shaft 22 is secured in a stub shaft 27 which is mounted in the stuffing box 28 and which is provided with a miter pinion 29. This pinion meshes with a corresponding pinion 30 on one end of an actuating shaft 31 which receives its motion from any desired source of power (not shown). In addition to the pinion 29, the stub shaft 27 may carry a polygonal head 32 so that a wrench or similar tool may be applied thereto in order to manually turn the shaft. The shaft 22 projects upwardly from the shaft 27 and has a revoluble connection, such as that effected by the ball joint 33 with the steam inlet pipe 34, said pipe being provided with a globe or other form of valve, as clearly illustrated in the drawings.

35 designates the outlet pipe for the vapors, said pipe being provided with a globe valve.

36 designates the steam inlet pipe which enters the body portion 1 at the lower end thereof and through which steam is admitted into the chamber between the body portion 1 and receptacle 10 to assist in maintaining the wood pulp receptacle 10 properly heated.

37 designates a steam inlet pipe which is secured to the body portion 1 at such a point as to admit the steam therein and to the wood pulp receptacle 10.

In the practical use of my improved turpentine still, the pulp wood to be acted upon is inserted through the man-hole in the cover 2 and deposited in the receptacle 10, steam being admitted in the worm or coil 20 as well as through the headers 26 and therefore being distributed so as to act effectively on all the fibers. While I do not deem it necessary that the shaft 22 shall be rotated during the turpentine extracting operation, yet obviously, it may be either continuously or intermittently turned, if desired. Whenever it is desired to clear out the still preparatory to inserting another charge, it is only necessary to close the pipe 35, open the pulp discharge pipe 12 and the valve 17, and admit steam through the pipe 37, whereupon it is manifest that the steam thus admitted will force the pulp out

through the discharge pipe 12 and clear out the receptacle 10 for the succeeding operation. At the same time the shaft 22 is turned, so as to stir up the wood pulp and dislodge it from the walls of the receptacle 10. It is evident that the headers 26 will perform this function mechanically if desired, although should it be found expedient, steam may be at this time admitted into the pipe 22 and out through the orifices of the several headers 26, to assist in moistening and loosening up the fibers as the headers stir around in the receptacle. One of the headers 26, as illustrated, is positioned within the coil 20 to stir up the wood pulp in the coil.

If desired, the entire still may be supported in a suspended condition by means of angle brackets 38 secured to the cylindrical body portion 1.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided an improved construction of turpentine still which enables the operator to effectively clear out the receptacle 10 after every operation of the still, thereby avoiding the customary laborious operation of hoisting the entire receptacle from the still in order to dump its contents or otherwise extract the pulp from the upper end of the still.

Having thus described the invention, what is claimed as new is:

1. A turpentine still, comprising a body portion, an angular ring secured to the interior of said body portion near the upper end of the latter, a collar secured to the ring, a pulp receptacle secured to the collar and suspended thereby within the cylinder, the lower end of the said pulp receptacle being tapered, a pulp discharge pipe extending downwardly from the lower end of the pulp receptacle and extending out through the bottom of the body portion, a removable closure for the upper end of the body portion, a vapor outlet pipe secured to the body portion above the pulp receptacle, and a worm mounted within the lower tapered end of the pulp receptacle, said worm being of inverted spiral form and formed in its convolutions with orifices, one end of said worm extending through the cylinder and designed to admit steam into the worm.

2. A turpentine still, comprising a body portion, a pulp receptacle mounted within said body portion, means for admitting steam to said receptacle, a pulp discharge pipe connected to said receptacle, and extending out through the bottom of the body portion, and a perforated damper adapted to control the communication between the receptacle and the discharge pipe.

3. In a turpentine still, the combination of a pulp receptacle, means for admitting steam to said receptacle, a pulp discharge pipe con-

nected to said receptacle and a perforated damper adapted to control the communication between the receptacle and discharge pipe, said damper being arranged to be turned across the discharge pipe as well as in a position to provide a free opening there-through.

4. A turpentine still, comprising a body portion, a pulp receptacle mounted in said body portion, means for admitting steam to said receptacle, a pulp discharge pipe connected to said receptacle, a perforated damper adapted to control the communication between the receptacle and the discharge pipe, and an operating rod for said damper extending out through the body portion.

5. A turpentine still comprising a body

portion, a pulp receptacle mounted within said body portion, a discharge pipe connected to the lower end of said pulp receptacle, and extending out through the bottom of the body portion, means for admitting steam to the pulp receptacle, a closure for the lower projecting end of the discharge pipe, a draw-off cock secured to the closure, and a perforated damper mounted in the upper end of the discharge pipe.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN E. QUINKER. [L. s.]

Witnesses.

L. M. MARSHALL,

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