

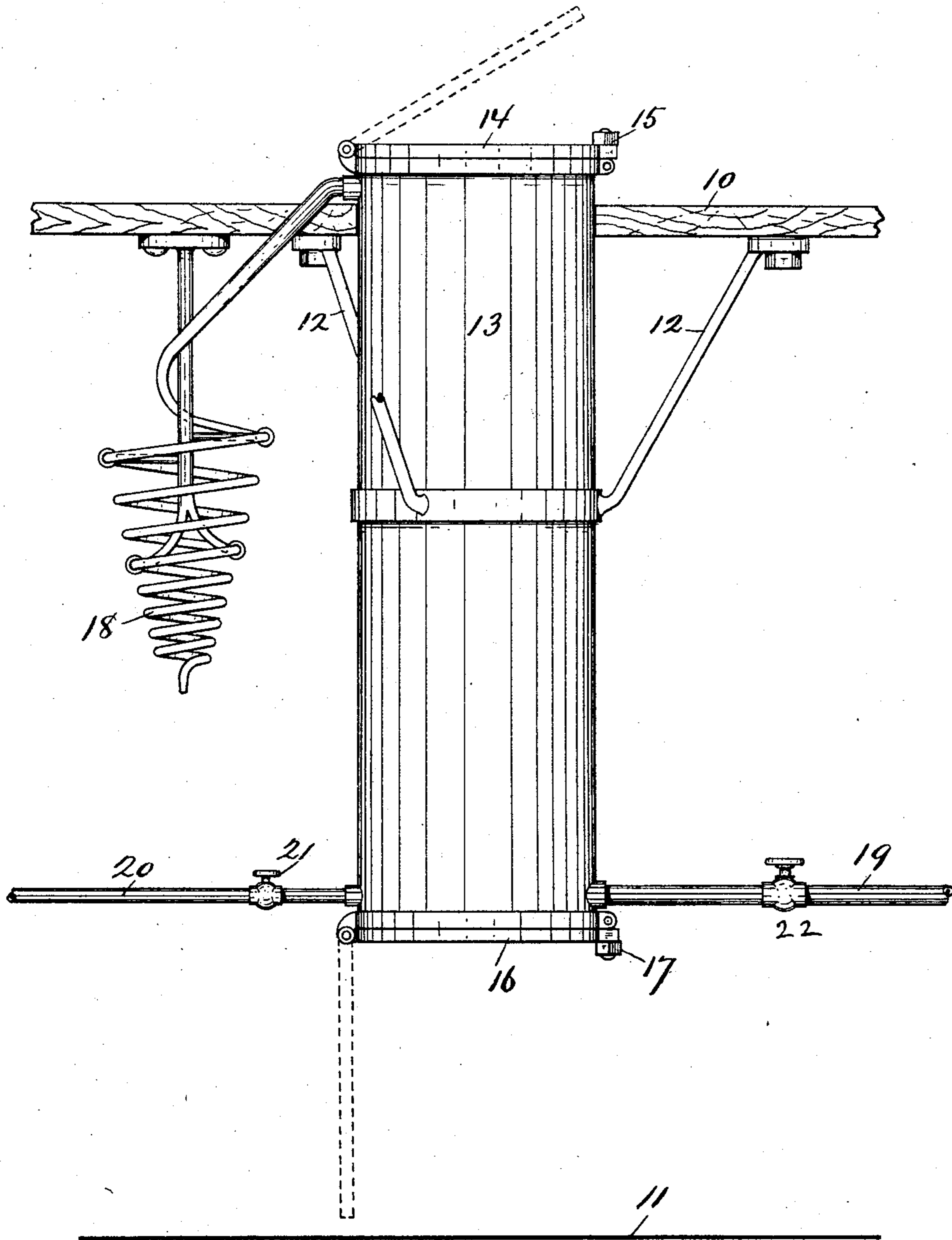
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J. W. LATHROP.
METHOD OF DISTILLING EXTRACTS.

(Application filed Jan. 17, 1898.)

(No Model.)



WITNESSES

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METHOD OF DISTILLING EXTRACTS.

SPECIFICATION forming part of Letters Patent No. 606,789, dated July 5, 1898.

Application filed January 17, 1898. Serial No. 666,982. (No specimens.)

To all whom it may concern:

Be it known that I, JAMES W. LATHROP, a citizen of the United States, residing at Mystic, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Methods of Distilling Extracts, which invention is fully set forth and described in the following specification, reference being had to the accompanying drawing, which represents in side elevation apparatus specially suited for working my said invention.

This invention has for its particular object the production of an improved process for distilling extracts. Said process is specially valuable for use in the distillation of hamamelis or so-called "witch-hazel," and I shall therefore explain the same as applied to such use. Heretofore it has been most common to employ in the production of this class of extracts a retort formed of two cylindrical sections hinged together midway the height of the complete retort, and after the process of distillation is completed the retort is opened and the refuse or waste matter is removed therefrom. This requires that the "chips" shall be lifted into the still and the waste matter lifted out again, thus necessitating a great deal of labor and inconvenience, which are entirely overcome in the still illustrated herewith.

Referring to the drawing, 10 and 11 indicate the upper and lower floors of a building. Suspended from the upper floor by braces 12 or other suitable means is a cylindrical retort 13, whose upper end is at a level with or slightly above said upper floor, and said upper end is provided with a cover 14, that is hinged or otherwise removably attached to the cylinder. A clamping-bolt 15 is provided to secure cover 14 in its closed position. The lower end of said cylinder is provided with a similar hinged cover 16 and clamping-bolt 17, and the said lower end of the cylinder is elevated above floor 11 a distance sufficient to permit the cover 16 to be swung downward, as shown in dotted lines.

The described arrangement of floors, cylinder, and hinged heads provides a distilling or digesting chamber in which the chips may be deposited and from which the waste matter may be removed without handling. For

example, when it is desired to load the cylinder 13 the cover 14 is removed, thus exposing the upper open end of said cylinder. The chips which it is desired to distil are then brought in a barrow or other convenient form of conveyance and dumped into the cylinder until the latter is filled, the bottom 16 being meanwhile closed as in the drawing. Cover 14 is then closed and tightly clamped. After the process of distillation is completed the hinged bottom 16 is released and opened, whereupon the waste matter or residuum drops by gravity upon the lower floor 11 or into a barrow, by means of which it may be carried to a furnace and used for fuel or otherwise disposed of. It will thus be understood that the chips and residuum may respectively be placed in and removed from the retort without handling and with a great saving of time.

Leading from the extreme upper part of the cylinder 13 is a worm 18 of ordinary form and action. Leading into the said cylinder at its lower portion is a steam-pipe 19 and another pipe 20, through which alcohol may be introduced, said pipe 20 being provided with a suitable valve 21, by means of which the flow of alcohol may be regulated and controlled. A similar valve 22 in the pipe 19 controls the inflow of steam.

Heretofore it has been the common practice to pour into the still-cylinder before closing it a given quantity of alcohol, but because of the well-known fact that alcohol vaporizes and evaporates at a temperature far below the steaming-point of water the alcohol thus introduced is soon evaporated. In contradistinction to this I am able by my described arrangement of pipes to introduce the alcohol as needed during the process of distillation and in such quantity as to insure the continuous combined action of the alcohol and steam. As here illustrated, the steam and alcohol pipes are located at opposite sides of cylinder 13; but the location of said pipes relatively to each other is not material so long as the inflow of alcohol and steam may be controlled independently.

Having thus described distilling apparatus specially adapted for practicing my new process of distillation, I will now proceed to describe more particularly said process.

The chips or cuttings to be distilled are placed in the retort 13 until the latter is filled, whereupon the cover 14 is closed and securely clamped. Steam and alcohol are then introduced through pipes 19 20, the supply of each being properly regulated to produce the best result. The chips are thus softened, thoroughly steamed, and decomposed until the elements which it is desired to separate from the wood are set free and volatilized. Said extracted elements then pass off through the worm 18 and during such passage are condensed and finally discharged into a suitable receptacle.

Having thus described my invention, I claim—

The described process of distillation consisting of first placing the chips to be distilled in a tight retort having connected therewith a worm-still, heating the contents of said retort by steam, and introducing alcohol into said retort during the process of distillation.

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Witnesses:

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