

No. 718,991.

PATENTED JAN. 27, 1903.

J. ELLISON.

APPARATUS FOR DISTILLING WATER.

APPLICATION FILED MAY 31, 1902.

NO MODEL.

Fig. 1.

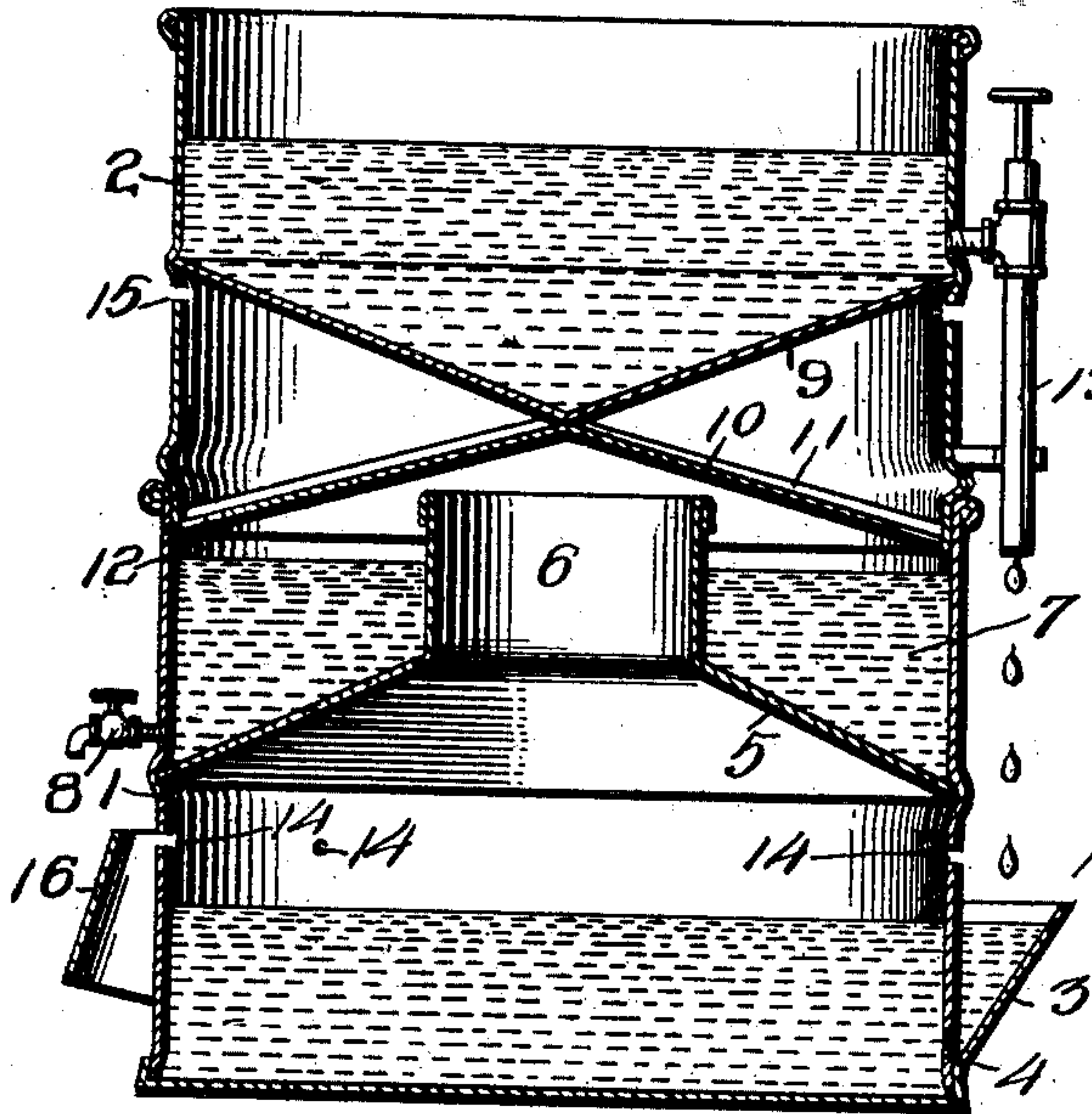


Fig. 2.

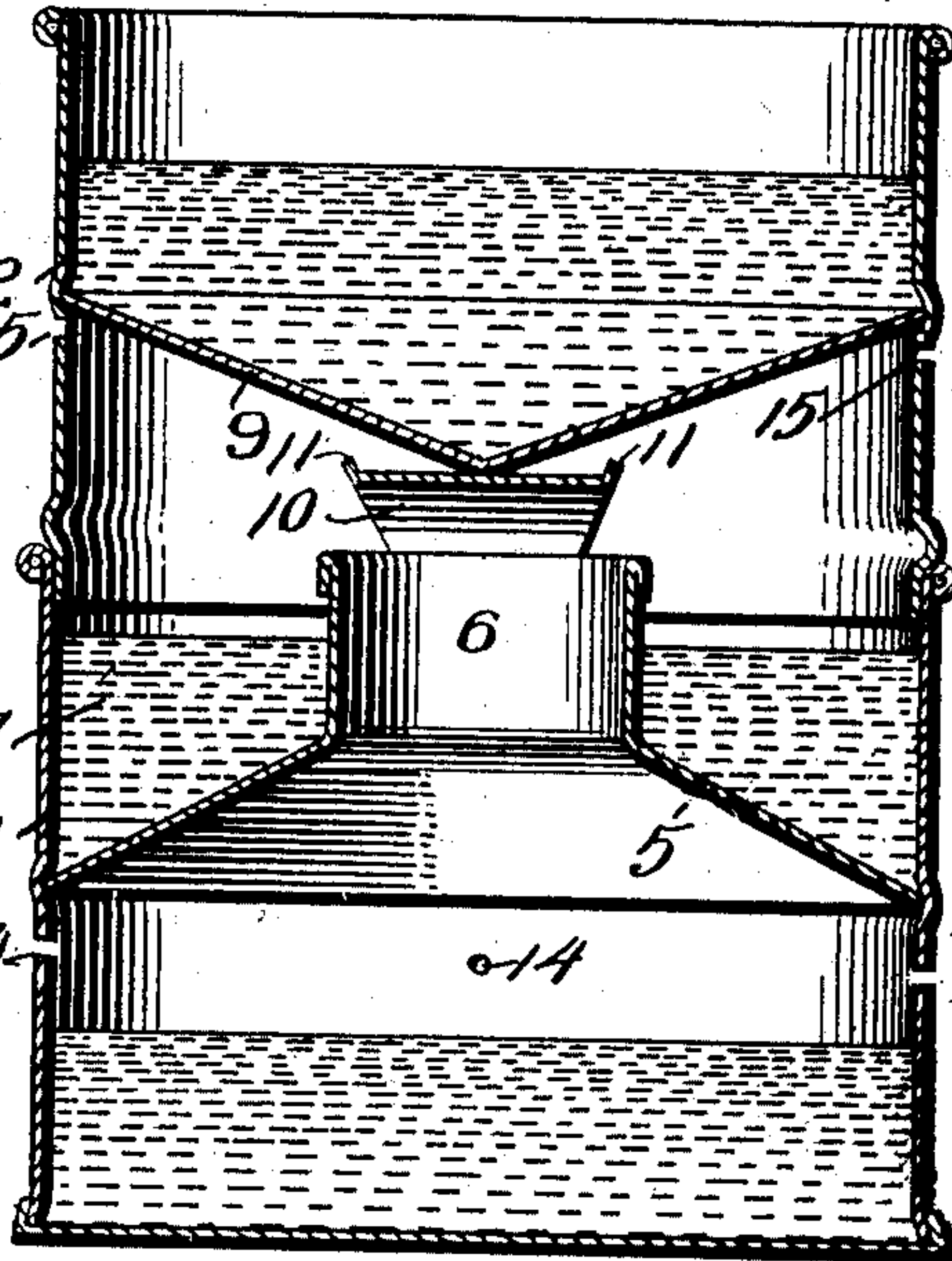
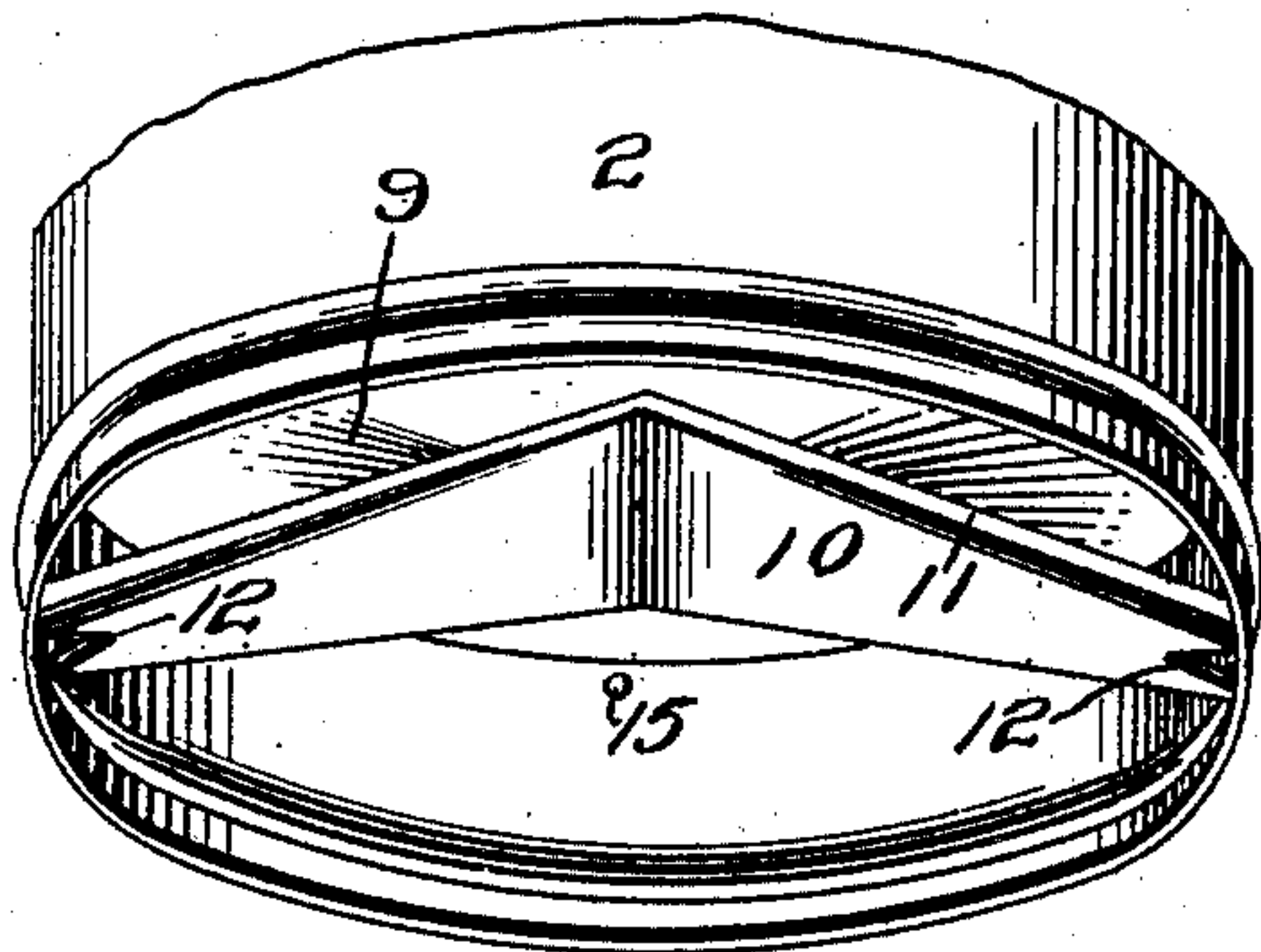


Fig. 3.



Witnesses

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JOHN ELLISON, OF SPANISH FORK, UTAH.

APPARATUS FOR DISTILLING WATER.

SPECIFICATION forming part of Letters Patent No. 718,991, dated January 27, 1903.

Application filed May 31, 1902. Serial No. 109,694. (No model.)

To all whom it may concern:

Be it known that I, JOHN ELLISON, a citizen of the United States, residing at Spanish Fork, in the county of Utah and State of Utah, have invented a new and useful Apparatus for Distilling Water, of which the following is a specification.

This invention relates to apparatus for distilling water.

The object of the invention is in a ready, simple, economical, and rapid manner to distil water and at the same time to aerate or revitalize the same, thereby to remove the flat dead taste common to distilled waters that are not supplied with oxygen after having been distilled.

A further object is to obviate any return of distilled water to the boiling-water chamber, thereby to economize in the procedure.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of an apparatus for distilling water, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof, and in these drawings—

Figure 1 is a view in vertical section through a water-distilling apparatus characterizing the present invention. Fig. 2 is a similar view taken at right angles to Fig. 1. Fig. 3 is a perspective detail view of a portion of the water-reservoir, showing more particularly the construction of the distilled-water-collecting means.

The apparatus of this invention comprises two separable sections 1 and 2, the section 1 constituting a boiling-water chamber and a distilled-water chamber and the section 2 a condensing-chamber and a water-reservoir.

These sections may be of any preferred shape in cross-section, preferably circular, and may be made of any material best suited to the

purpose. The section 1 is provided near its bottom and on one side with a spout 3, constituting an indicator which communicates with the boiling-chamber through an orifice 4, as clearly shown in Fig. 1. Associated with the boiling-chamber in any suitable manner and preferably about midway of its height is an upper dished annulus 5, carrying a neck 6, which may be of any preferred length and constitutes an outlet for the vapors from the boiling-chamber to the distilled-water chamber 7, which is formed between the walls of the upper portion of the boiling-chamber and the dished annulus and neck, as clearly shown in Figs. 1 and 2. The distilled-water chamber is provided with a faucet 8 at a point near its bottom, through which water is drawn from the chamber.

Connected with the water-reservoir at a point approximately midway of its length is an inverted-cone-shaped disk 9, constituting a condensing-surface against which the steam or vapors from the boiling-chamber are projected and are condensed, this surface being kept cool by the water in the reservoir 2. The apex of the condensing-surface terminates centrally of the neck 6, and in order to prevent the condensed vapors that naturally collect at the apex from passing back into the boiling-chamber a baffle-plate 10, constituting a collector or conduit, is provided, which, as clearly shown in all of the figures, is bent at an angle opposite that of the condensing-surface and has its terminals connected with the inner walls of the lower portion of the condensing-chamber. This conduit is provided with side flanges 11, which extend throughout the length of its two members, and thus prevent the condensed water from escaping at the sides, and its terminals are provided with water-escape openings 12, through which the water will pass directly to the distilled-water chamber. As herein shown, the openings 12 are triangular in form; but it is to be understood that they may be of other shapes and still be within the scope of the invention.

The water-reservoir has associated with it a faucet 13, the discharge end of which is disposed directly over the indicator 3, as clearly shown in Fig. 1, thereby to permit fresh water from the reservoir readily to be supplied

to the boiling-chamber as required. As the water in the indicator will always occupy the same level as that in the boiling-chamber, it will only be necessary to observe the indicator from time to time to determine when a fresh supply of water for the boiler is required.

The boiling-chamber is provided with a plurality of air-inlets 14, through which oxygen is supplied to the boiling-chamber and is sterilized and unites with the vapors from the water and revitalizes them, thus to aerate the distilled water to cause it to have the same sweet taste as ordinary pure spring-water.

The condensing-chamber is provided with a plurality of openings 15, by which to permit escape of air, thus to cause a perfect circulation through the apparatus.

The boiling-chamber may be provided with handles 16, (one only of which is shown in Fig. 1,) by which to facilitate handling of the apparatus.

By the provision of the inverted-cone-shaped condensing-surface 9 rapid condensing of the vapors from the boiling water is effected, and by the employment of the peculiar collector or conduit 10 return of any of the condensed vapors back to the boiler is obviated, thereby effecting conservation of the entire output of the apparatus.

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

1. In an apparatus for distilling water, the combination with a boiling-chamber provided with a tubular outlet, of a water-reservoir provided with an inverted-cone-shaped bottom, and an upward-hipped baffle-plate disposed beneath the bottom and provided with marginal flanges and terminal openings discharging into the distilled-water chamber.

2. An apparatus of the character specified, comprising a combined boiling-chamber and distilled-water chamber separated by a partition having an upward-extending tubular outlet, the boiling-chamber being provided with air-inlets and with a spout constituting an indicator, a combined condensing-chamber and water-reservoir separated by an inverted substantially cone-shaped partition, the condensing-chamber being provided with air-outlets, an upward-hipped baffle-plate disposed beneath the center of the last-named partition and provided with marginal flanges and with terminal openings discharging into the distilled-water chamber, and a draw-off cock associated with the distilled-water chamber and with the reservoir.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN ELLISON.

Witnesses:

LOUIS YORK,
CLARA YORK.