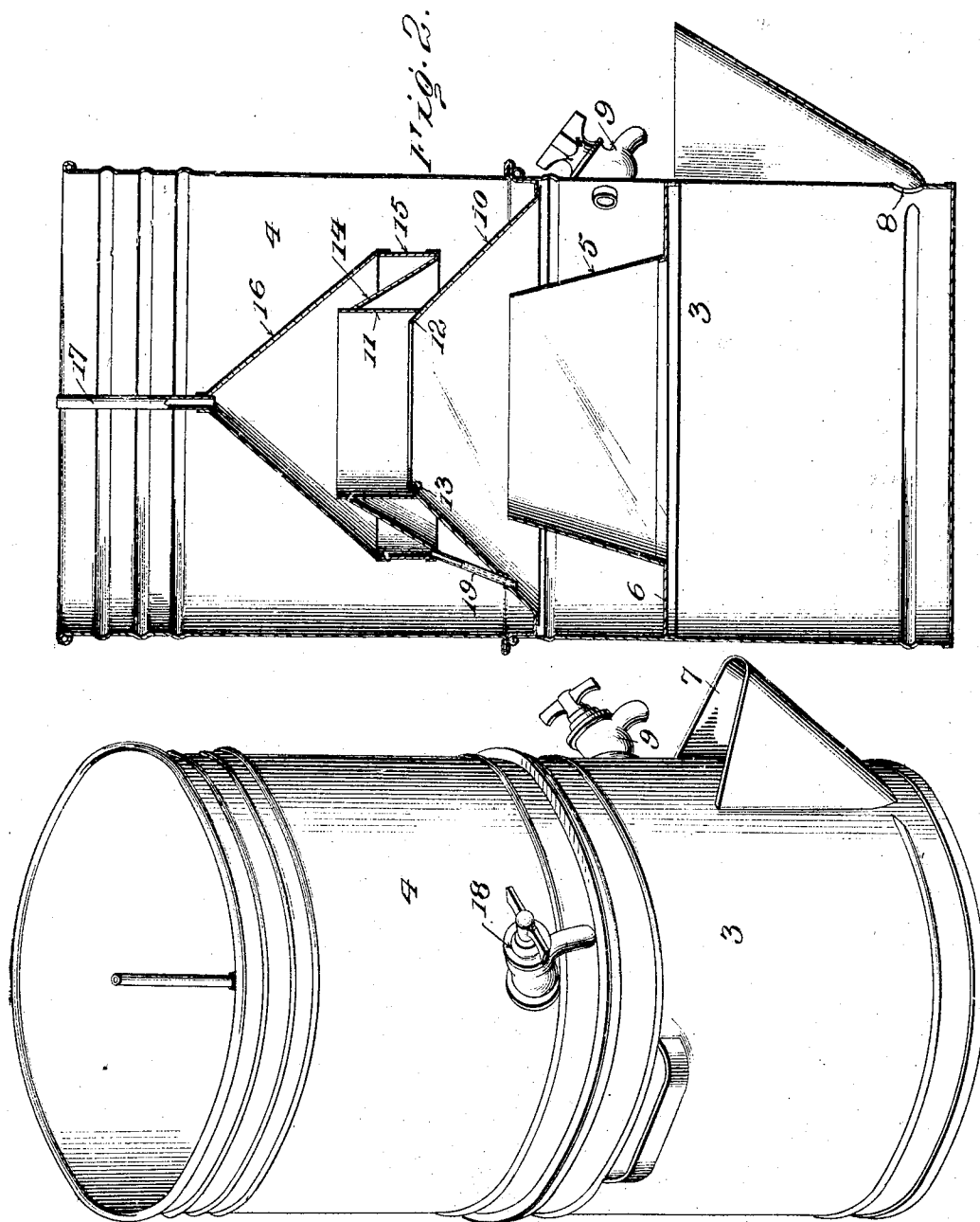


H. J. BEHRENS.
WATER STILL.
APPLICATION FILED JUNE 1, 1909.

932,950.

Patented Aug. 31, 1909.



Inventor

Witnesses

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Fig. 1.

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HENRY J. BEHRENS, OF WINONA, MINNESOTA.

WATER-STILL.

932,950.

Specification of Letters Patent.

Patented Aug. 31, 1909.

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To all whom it may concern:

Be it known that I, HENRY J. BEHRENS, a citizen of the United States, residing at Winona, in the county of Winona and State of Minnesota, have invented certain new and useful Improvements in Water-Stills, of which the following is a specification.

My invention relates to certain new and useful improvements in water stills, and the object of my invention is to provide a novel, simple, highly efficient and practicable water still particularly adapted for household purposes.

With these and other objects in view my invention consists in certain constructions, combinations and arrangements of parts the preferred form of which will be first described in connection with the accompanying drawings and then the invention particularly pointed out in the appended claims.

Referring to the drawings wherein the same part is designated by the same reference numeral wherever it occurs Figure 1 is a perspective view of a still constructed in accordance with my invention and Fig. 2 is a central longitudinal section of Fig. 1.

The still, preferably, is constructed in circular form and composed of two main parts 3 and 4, the latter seated on the former and readily detachable therefrom. The lower part 3 is provided in its upper portion with a part 5 in the form of a truncated cone which is supported in the interior of the part 3 by the flange 6 which extends from the lower edge of the cone to the side of the part 3. Preferably, and as shown, the part 3 is provided with a spout 7 secured on its side and communicating with the interior of the part 3 by means of the opening 8 whereby water to be distilled can be poured into the part 3 without removing the upper part 4. The cone 5 and the flange 6 divide the lower part 3 into two sections, that portion above the flange and outside of the cone being adapted to receive the distilled water as will be hereinafter described.

9 is a faucet by means of which the water can be drawn from the chamber above the flange 6 as desired. Located at the lower end of the upper part 4 is a truncated cone 10 which extends from substantially the lower edge of the upper part 4 upwardly into the same. 11 is a collar secured adjacent to the upper edge of the cone and extending upwardly therefrom. Preferably, and as shown, the lower edge of the collar

is secured a short distance down from the upper edge of the cone, whereby a shelf 12 is formed which is perforated as shown at 13 to permit water condensed on the inner surface of the collar to flow down through the opening and trickle down the under side of the cone 10.

14 is a truncated cone secured at its upper edge to the upper portion of the outside of the collar 11, said cone extending down and having its lower portion located above the cone 10. At the lower edge of the cone is secured a collar 15 which surrounds the cone and extends upwardly therefrom.

16 is a cone secured at its lower edge to the upper edge of the collar 15 and extending over the collar 11. Extending from the apex of this cone is a vent pipe 17.

18 is a faucet extending out through the side of the upper part 4 in order to draw off the water contained therein.

19 is a section of pipe extending through the cone 10 and up into the lower edge of the cone 14, whereby water contained in the space between the cone 14, the collar 15 and the cone 16 will be drawn off into the section of the lower part 4 above the flange 6, as will be clearly seen from Fig. 2.

In the operation of my still the lower portion 3 is filled with water to be distilled. Heat is applied and the water brought to a boil. The upper portion 4 is then filled with cooled water, said cool water surrounding the exterior of the cone 10, extending up between the collar 11 and the cone 14 and covering the cone 16. As the steam from the water contained in the lower part 3 rises it comes in contact with the cooled surfaces of the underside of the cone 10, condenses thereon and runs down the side of the cone and drips into the portion of the lower part above the flange 6. The steam also condenses on the collar 11, runs down the interior thereof and passes through the opening 13 whence it runs down the underside of the cone with the water condensed upon the under surface thereof. A portion of the steam also passes up into the cone 16 where it condenses and accumulates between the collar 15 and the cone 14, this water being drawn off by the pipe 19, through which it runs into the receiving chamber in the lower portion. When the water in the upper portion becomes warm it can be drawn off through the spigot 18 and replaced with cold water. The distilled water can be drawn off through the

spigot 9 and the lower part filled by pouring water through the spout-like projection 7. It will thus be seen that the still can be re-filled without disturbing the parts, thus rendering interruption of the operation unnecessary. The pipe 17 is to prevent too great a pressure being produced in the still. In the ordinary action of the still no steam escapes through this pipe, as the water which condenses therein operates as a sort of valve to prevent the escape of the steam.

I realize that considerable variation is possible in the details of construction and arrangement of parts without departing from the spirit of my invention, and I therefore do not intend to limit myself to the specific form shown and described.

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

1. A water still comprising two parts one located above the other, a truncated cone supported within the lower part and dividing the same into a lower chamber for the water to be distilled, and an upper annular chamber adapted to contain the distilled water, a truncated cone-shaped part extending from the lower edge of the upper part, a collar extending upwardly from the inner portion of said truncated-cone, a second truncated-cone extending outwardly from the upper edge of said collar, a second collar supported on the outer edge of said last-mentioned truncated cone, and a cone extending from the upper edge of said collar in-

closing the structure within the second part of the still, said two truncated cones, said collars, and the cone which are in the upper part of the still forming the inner walls of said upper part, whereby said walls form condensing surfaces.

2. A water still comprising two parts one located above the other, a truncated cone supported within the lower part and dividing the same into a lower chamber for the water to be distilled, and an upper annular chamber adapted to contain the distilled water, a truncated cone-shaped part extending from the lower edge of the upper part, a collar extending upwardly from the inner portion of said truncated-cone, a second truncated-cone extending outwardly from the upper edge of said collar, a second collar supported on the outer edge of said last-mentioned truncated-cone, and a cone extending from the upper edge of said collar inclosing the structure within the second part of the still, and an open pipe extending from the apex of said cone, said two truncated cones, said collars, and the cone which are in the upper part of the still forming the inner walls of said upper part, whereby said walls form condensing surfaces.

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

HENRY J. BEHRENS.

Witnesses:

MAUDE R. WHITE,
W. J. SMITH.