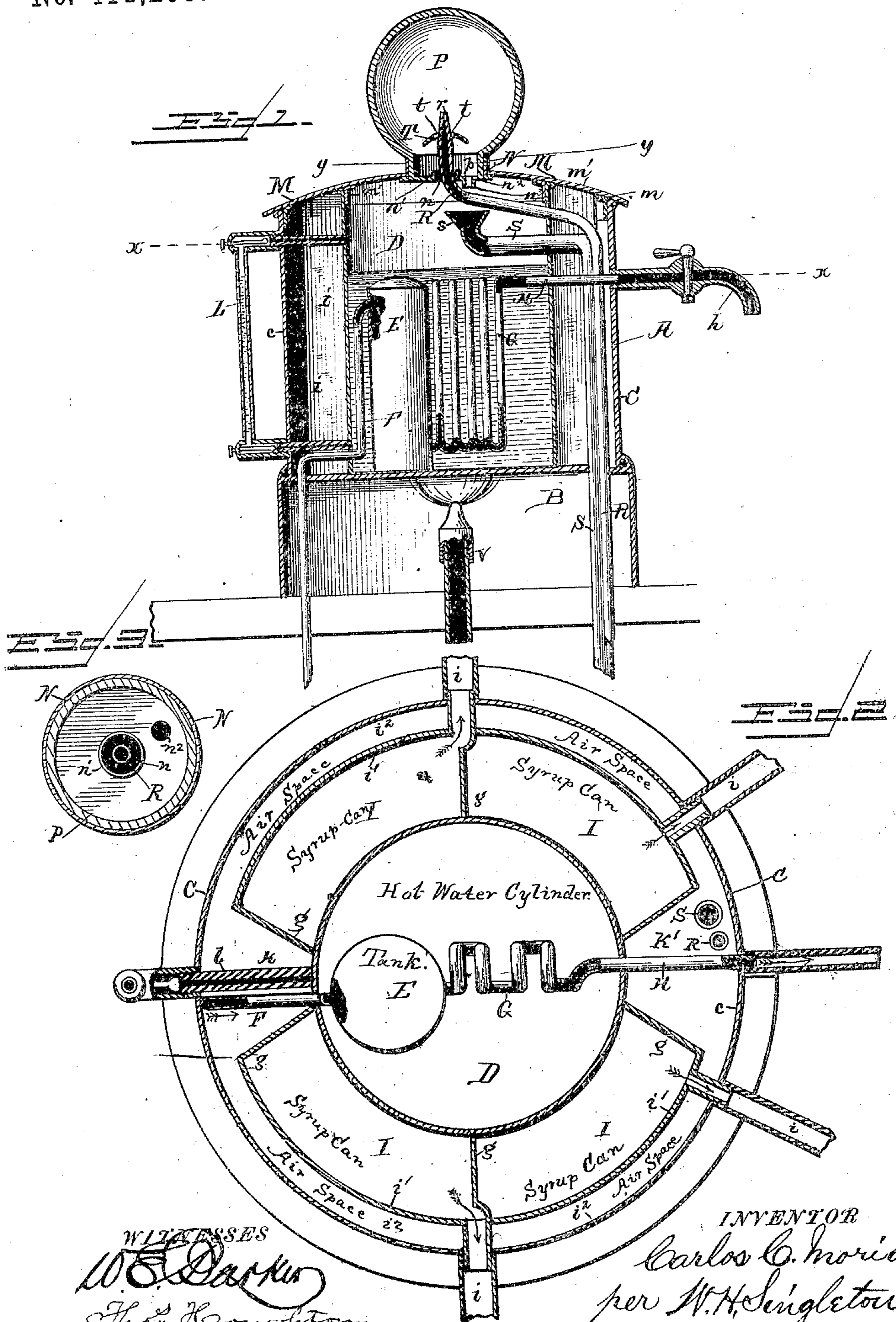


(No Model.)

C. C. MORIAN.  
HOT SODA APPARATUS.

No. 411,293.

Patented Sept. 17, 1889.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## HOT-SODA APPARATUS.

SPECIFICATION forming part of Letters Patent No. 411,293, dated September 17, 1889.

Application filed February 18, 1889. Serial No. 300,322. (No model.)

*To all whom it may concern:*

Be it known that I, CARLOS C. MORIAN, a citizen of the United States, residing at Olean, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in a Hot-Soda Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical section of the device. Fig. 2 is a horizontal section on line  $x x$ , Fig. 1; Fig. 3, a similar section on line  $y y$  at the neck of the globe.

This invention relates to an apparatus for supplying "hot soda-water;" and it consists in the construction hereinafter set forth.

In the annexed drawings, the letter A indicates a suitable shell made cylindrical and of some metal, such as nickel. This shell consists of an inverted-cup-shaped bottom B and a receptacle C. Within the receptacle C is placed concentric with the wall  $c$  a boiler D, made of copper. Within this boiler D is a tank E. Leading from the top of this tank E is a pipe F, which passes down through water-tight openings and off from the apparatus. From the bottom of the tank E extends a coil of pipe G, which reaches to about the top of the tank and terminates in the pipe H, which, passing out of the shell through water-tight openings, is provided with the faucet  $h$ .

The space between the boiler D and the wall  $c$  of the receptacle C is divided by diaphragms  $g$  into compartments I, as many as may be desired, each having its own faucet  $i$ . These compartments are preferably arranged in two sets, as shown, having spaces  $k k'$ , and have the walls  $i'$ , between which and the wall of the shell is an air-space  $i^2$ . Through the space  $k'$  passes the pipe H, and through the space  $k$  the tubes  $ll$ , leading to the gage-glass L.

The cover M has the depending rings  $m m'$ , adapted to snugly fit within the shell and boiler. This cover M has the upwardly-projecting neck N, within which is a central opening  $n$ , around which is a flange  $n'$ , and to

one side a hole  $n^2$ , from which a nozzle  $n^3$  depends.

Closely fitting within the neck N of the cover M is the open neck  $p$  of a glass globe P.

Passing upward through the apparatus in the space  $k'$  are two pipes R and S. The former pipe R passes through the top of the boiler up through the central opening  $n$  without closing such opening and terminates in a jet-nozzle  $r$  within the globe. Around this nozzle  $r$  is placed a plate T, convex on top and having several holes  $t$  close to the jet-nozzle. The pipe S also passes into the boiler and terminates in a funnel  $s$  just below the nozzle  $n^3$ .

Underneath the apparatus is placed any source of heat, such as a gas-jet or lamp V.

Within the compartments I can be put various sirups, coffee, cream, &c.

Water is admitted through the pipe F into the tank E, filling the latter and the coil G, the flow of the water being controlled by the faucet  $h$ . At the start enough water is put into the boiler D to cover the tank and coil. Heat is supplied from the source V. As soon as the water in the boiler comes to the boiling-point and steam rises the latter passes through the opening  $n$  around the pipe R and into the globe P. Cold water is then admitted into the globe P through the pipe R, passing out through the jet-nozzle  $r$ . This water condenses the steam as it rises into the globe, and the water falling to the bottom of the globe and within the neck N runs down through the hole  $n^2$  into the pipe S and escapes. The flange  $n'$  around the opening  $n$  is high enough to prevent any of this water from running into the boiler D; but some of the spraying water falling on the plate T will trickle through the holes  $t$  down through the opening  $n$  and into the boiler, this amount being sufficient to supply the waste from evaporation. As the water in the boiler becomes hot, the heat warms the water in the tank and coil.

This forms a very efficient and attractive apparatus. The water in the boiler not only heats the water in the tank and coil, but keeps the entire apparatus hot, so that the substances in the compartments are kept warm, the air-chamber between the walls reducing

radiation of heat. As it is needed, hot water is drawn from the faucet *h*.

Having described my invention, what I claim is—

5 1. The combination of the receptacle C, the boiler D within and the compartments I between them, and the tank E and coil G with the pipe II within the boiler, the pipe II leading out of the boiler and receptacle, and with  
10 the pipe F, leading into tank, as set forth.

2. The combination of the receptacle and its inclosed boiler, the cover, and the globe supported thereby and communicating with the steam-space of the boiler with the water-  
15 pipe leading into the globe and a waste-pipe terminating below a hole in the bottom of said globe, as set forth.

3. The combination of the receptacle C, the

boiler D, the cover M, having the neck N, opening *n*, and hole *n*<sup>2</sup>, and the globe P, communicating with the steam-space of the boiler, with the pipes R and S, the former passing through the opening *n* into the globe and the latter terminating below the hole *n*<sup>2</sup>, as set forth. 20

4. The pipe R, having the jet-nozzle *r*, and the plate T, having the holes *t*, in combination with the globe and the cover, the latter having an opening below said holes, the boiler, and coil within it, as set forth. 25

In testimony whereof I affix my signature in presence of two witnesses. 30

CARLOS C. MORIAN.

Witnesses:

ALLEN J. HASTINGS,  
E. P. GILSON.