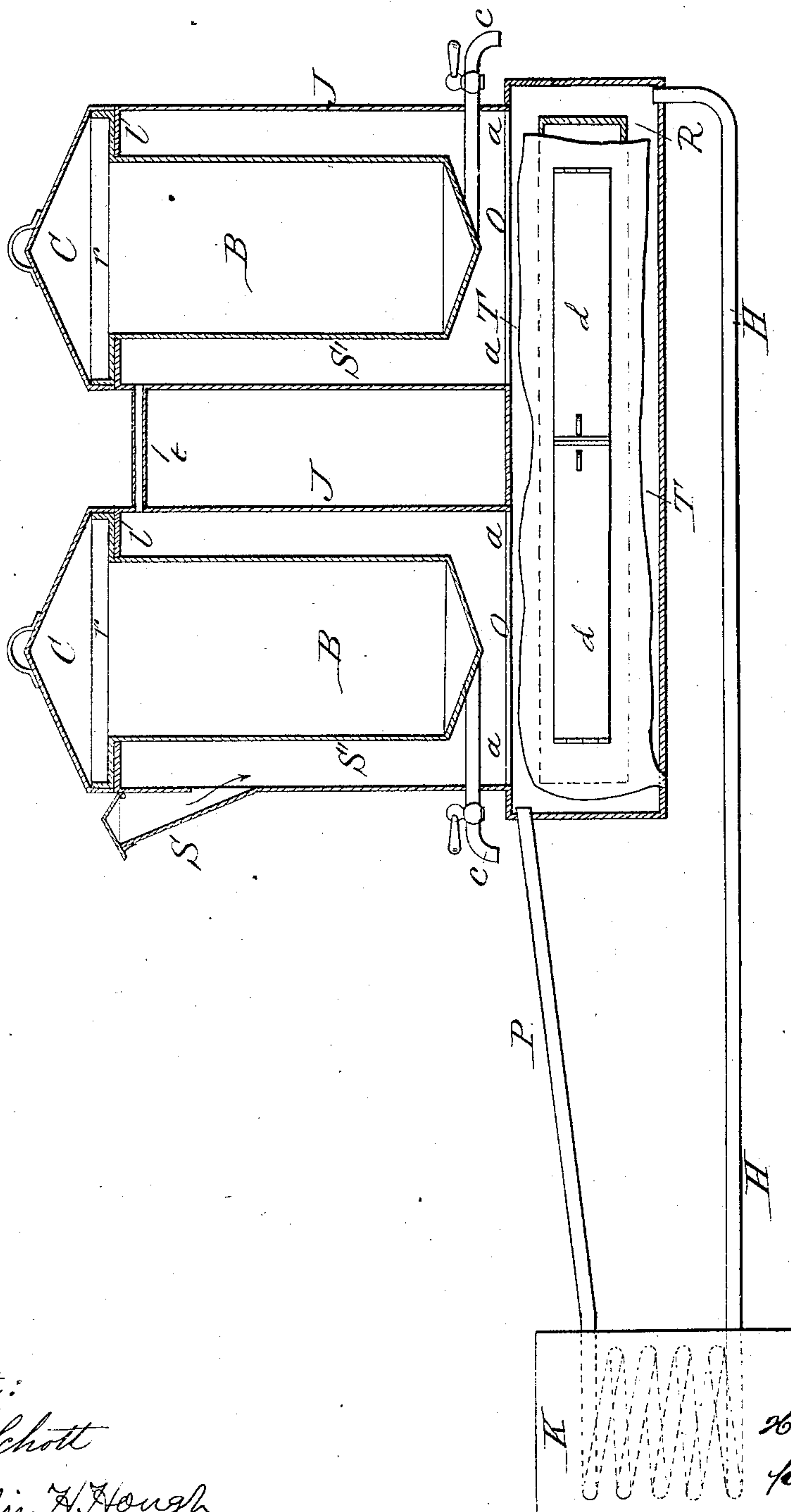


(No Model.)

H. B. CHASE.
HEATER.

No. 314,999.

Patented Apr. 7, 1885.



Attest:

H. H. Schott

Franklin A. Hough

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per H. W. Cragin.
Atty.

UNITED STATES PATENT OFFICE.

HENRY B. CHASE, OF PORTLAND, OREGON.

HEATER.

SPECIFICATION forming part of Letters Patent No. 314,999, dated April 7, 1885.

Application filed May 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. CHASE, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in a Heater for Coffee, Tea, &c., Receptacles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of my invention is to provide improved means for heating receptacles for holding coffee, tea, soup, &c.

The nature of my invention consists in combining such receptacles with an inclosing water-jacket placed entirely above, but opening freely into, a subjacent water-table which contains both circulating water and a plate, &c., warming-oven, and is connected by egress and ingress pipes with a heating-coil located in a stove or range, said coil being independent of water-main pressure, and not interfering with the regular coil for kitchen purposes. The placing of the said water-jackets above the table obviously allows the former to be quickly heated by a small quantity of water, and permits the use of a comparatively shallow table.

In the drawing, the figure is a vertical section back of the front of the tank, showing the heater and inclosed receptacles in connection with a heating-coil.

Like letters refer to like parts.

B B represent the receptacles for coffee, tea, soup, &c. These may be made of suitable metal or earthenware. They are provided with a faucet, *c*, for drawing off the liquid for use, and at the top have a flange, *r*, which rests upon the circular ledge *l* of the water-jackets J J for support.

CC are ordinary tight covers coming down around the flange *r*.

One, or both, of said jackets, is provided with a spout, *s*, for introducing the water, and *s'* represents the space for circulation about the receptacles. The water-jackets are shown as integral with the subjacent tank T, but may be separate, if desired. The opening O between

them is of the same diameter as the jacket, but this may be arranged as judgment dictates, and the jackets, tank, and plate-oven may be made of tin, copper, or any suitable material.

By placing the jackets entirely above the water-table the sides and bottoms of the inclosed receptacles get the benefit of the first heat and at all times of the hottest water. The opening into the table being large, the circulation will be rapid, and the space between the jacket and receptacles being quite small, the contained water soon becomes hot with a small amount of fuel or coil surface. Besides, this arrangement adds to the convenience and appearance and does not interfere with the table.

The plate-oven R is provided by making the tank T in two sections, as shown. It has ordinary doors, *d d*, and supporting-legs may be placed under it, if thought best; but, if properly constructed, they will not be required. There should, however, be ample space about the oven for water-circulation.

From the bottom of the tank T a cold-water pipe, H, extends to the lower part of the heating-coil K. The return or hot-water pipe is represented by P, and it enters the tank near the top, close to one of the openings Q.

It will be seen that the table is free from any internal pipe-coil, and is adapted to contain both the warming-oven and a quite large body of circulating water. By having a considerable amount of water in the table there will be a better effect and a longer retention of heat than if the coil communicated directly with the jackets, especially when the fire dies down.

The heating-coil K is intended to be shown as arranged at the end of the stove, but it may be placed near the fire-box of a range. It is intended to be independent of water-pressure in the main; hence there is no need of such connection nor of interfering with the usual coil for heating water for kitchen uses. It may be, in other words, a separate coil inserted near one holding water under pressure, the circulation depending on the height of the water-column above the water tank or table. In use, the water is poured in at the spout S until the coil, tank, and water-jackets are full. The water then circulates from the heating-coil to the tank and jacket-

spaces, and back. An advantage over steam is gained in keeping up an even heat of high degree during the day, and the heat lasts for a long time after the fire dies out. Another
 5 advantage is in dispensing with a separate boiler for steam, and the coil may be small, readily applied to existing stoves or ranges, so as not to interfere with the usual coil for kitchen uses.

10 The arrangement of devices, as shown, is especially adapted for hotels and restaurants, and is of great utility where there is no water-main pressure, though it can be used where there is. Several receptacles for coffee, tea,
 15 soup, &c., may be attached to one water-table, and at the same time plates, &c., may be kept hot in the oven R. The coffee, &c., may be drawn from the faucets, or removed from the top of the receptacles B.

20 The water-circulation has been found entirely satisfactory, and to get this quickly and provide an exit for air the pipe *t* is placed between the jacket-spaces.

I am aware that receptacles for making coffee have been arranged to depend within a
 25 hot-water table, and that a series of shallow connected water-pans have been arranged on the top of a carving-table and heated by a coil independent of water-main pressure connecting directly with them; and I am also
 30 aware that a water-table and a contained oven is not new; but I am not aware that the wa-

ter-jackets have been before placed entirely above the water-table, or used at all with a table like mine; nor do I know of a combina- 35 tion, as a whole, like the one shown by me.

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

1. The water-jackets J, located above the 40 water-table, combined with the receptacles B, the said water-table T open under the jackets, and having ingress and egress pipes, and means within the stove or range independent of water-main pressure for heating the circu- 45 lating water, as set forth.

2. The water-jackets J, located above the water-table, and having the spout S, and a connecting-pipe between them near the top, combined with the receptacle B, the water- 50 table T, having the openings O, and pipes P and H, and the heating-coil K, as set forth.

3. The plate, coffee, &c., heater consisting of the water-table T, having the oven R, open- 55 ings O, and pipes H and P, the coil K, and the jackets J, and inclosed receptacles B, located above the water-table, all combined substantially as set forth.

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

HENRY B. CHASE.

Witnesses:

H. W. NILES,

B. E. LIPPINCOTT.