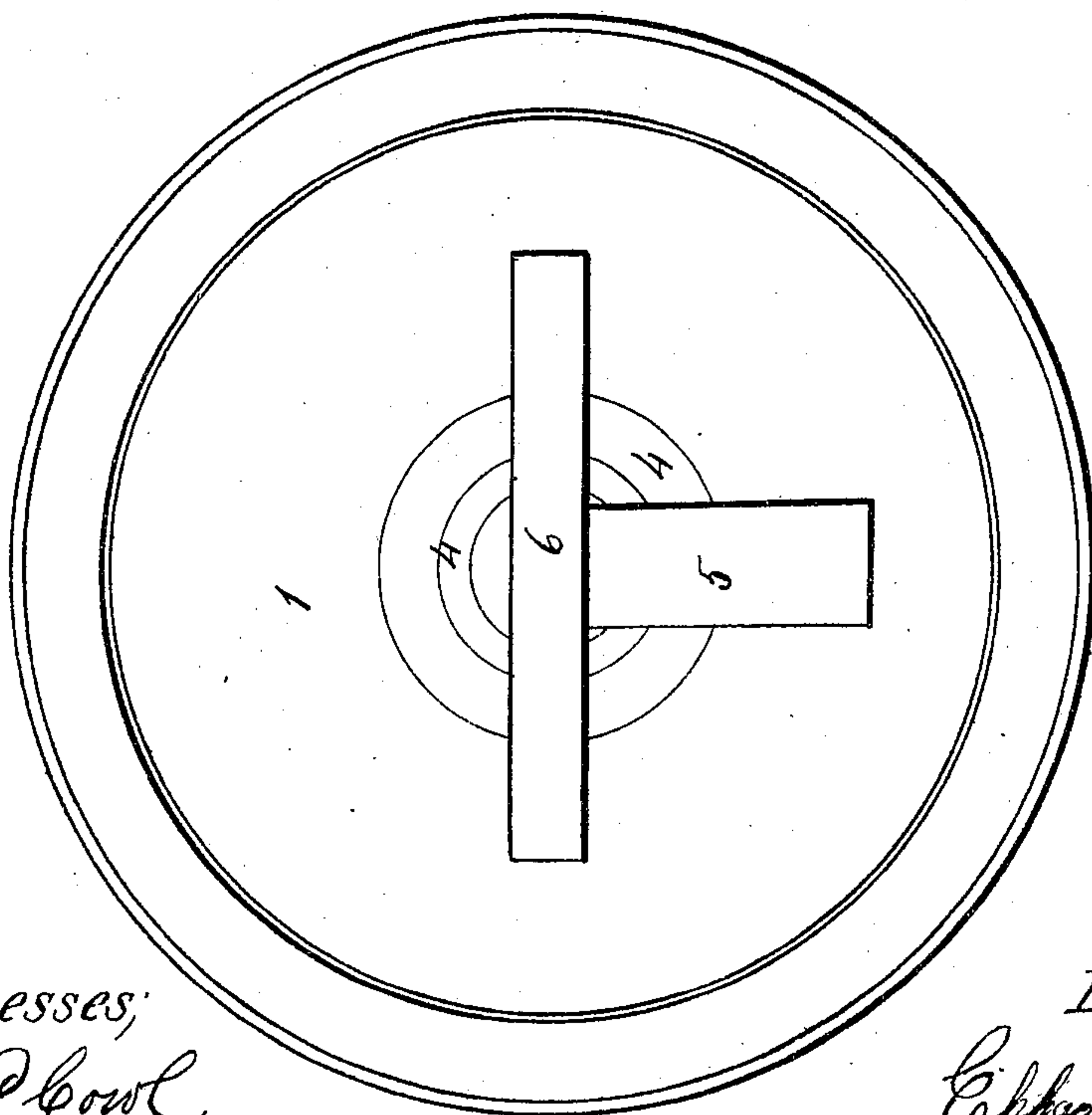
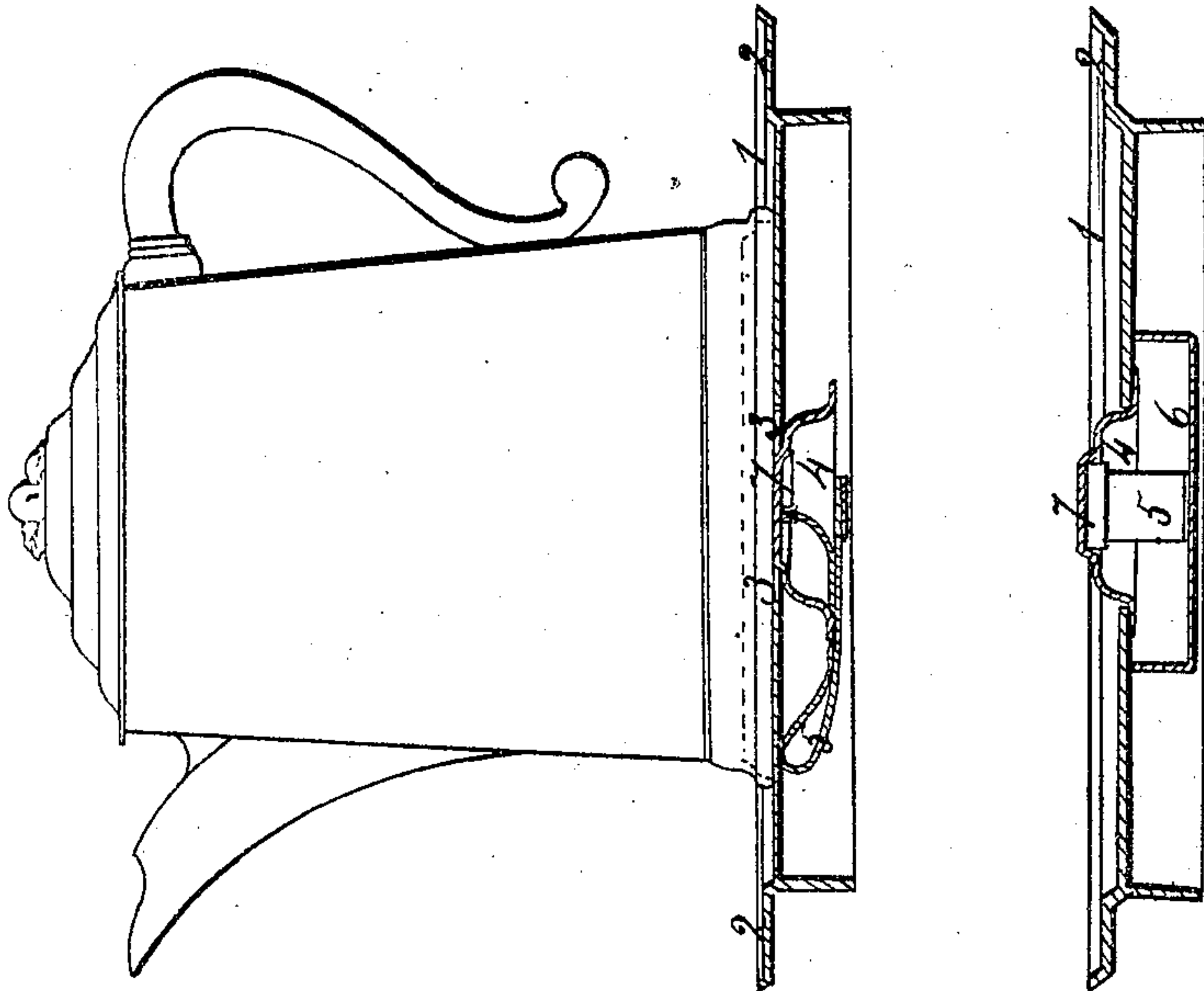


E. K. DEAN.

Coffee Pot.

No. 102,507.

Patented May 3, 1870.



Witnesses;
D. P. Howl
Frank Hamilton

Inventor;
Ephraim H. Dean
By Crosby, Halsted & Gould Attorneys

United States Patent Office.

EPHRAIM K. DEAN, OF BANGOR, MAINE, ASSIGNOR TO WILLIAM C. LOVERING, OF TAUNTON, MASSACHUSETTS.

Letters Patent No. 102,507, dated May 3, 1870.

COVER FOR KETTLES AND OTHER VESSELS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, EPHRAIM K. DEAN, of Bangor, in the State of Maine, have invented an Improvement in Covers for Pots, Kettles, and Vessels used for Culinary and other Purposes; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it,

Figure 1 representing the under side of my improved cover;

Figure 2, a cross-section through the spring-valve and spring; and

Figure 3, a cross-section at right angles to fig. 2.

Heretofore, pots, &c., in which water is boiled for any purpose over a fire or stove, have generally been furnished with covers, cast or otherwise, made somewhat convex or conical on their upper surface, and without openings therein, except, perhaps, a minute vent-hole. Such covers, by reason of their form, would not admit of placing upon them any other article or vessel to be heated. Latterly, however, many covers have been made with flat tops, and these would permit the placing thereon of other vessels, dishes, plates, &c., provided the covers were not furnished with handles which would prevent it.

Now, it is very desirable, especially where a stove or range is small and space must be economized, both to utilize the heat, which would be more or less lost, and to heat at the same time more vessels and their contents than the area of the stove alone would permit.

To accomplish this is the object of my invention, which consists, as shown in the drawings accompanying this specification, of a cover arranged to fit in any ordinary way within the top opening of the vessel to which it belongs, the top 1 of the cover being flat enough to serve as a horizontal support for anything placed thereon; and it may be entirely flat or level across its top face, or preferably dished somewhat, as shown, so as to have the portion 2 nearer its edge slightly elevated above the rest, for a purpose hereinafter more particularly stated.

At its center a circular portion is cut out, as seen at 3, to receive a self-closing spring valve, 4. This valve is made of larger diameter than the central opening, and is placed beneath the cover, against which it is pressed upward by a bent or other spring, 5, to which it is connected, and which rests upon a cross-piece or bridge or support, 6, secured to the under side of the cover.

The valve is formed with a bulge or swell, 7, substantially as shown, (or a knob or button would serve the same purpose,) the object of which is that its up-

permost point shall be somewhat higher when the valve is closed than the highest part of the cover.

It will now be seen that when a pot having such a cover upon it is boiling, and it is required quickly to heat or to steep the contents of another vessel, as, for instance, a tea or coffee-pot, the act of depositing such last-named vessel upon the cover will, by the weight of the same, force and hold downward the valve against the pressure of the spring and the steam, thus opening the valve and allowing the steam to rise through the same and come in direct contact with the bottom of the upper vessel.

It will be further seen that when the bottom of the plate or vessel to be heated is of diameter sufficient to rest upon the elevated part 2, the action of the steam is not confined to a small space equal only to the size of the central opening, but, on the contrary, the depression, in connection with the flat bottom of the vessel or plate, forms a steam-chamber of a diameter equal to that of the depression, and hence the action of the heat is immediate and over nearly the whole superficies of such vessel or plate.

Where, however, as in most teapots, there is a cavity in the bottom, such cavity of itself, as shown by dotted lines in fig. 2, forms a steam-chamber.

When the article is removed from the cover, the valve automatically closes and remains so.

It is evident that different forms of valves may be used, and that springs may be applied to the valve in any well-known manner, and that the form of the opening in the cover may be varied, as also its position, and that the concave or depression may be larger or smaller, or deeper or shallower than shown, or may in certain cases be dispensed with altogether. Such changes would not depart from the spirit of my invention.

Where the vessel to be placed upon the cover has a somewhat convex bottom, as in some classes, which stand upon feet, it is evident that the bulge of the valve need not necessarily rise higher than the rest of the cover.

I make no claim to any thing, combination, or arrangement of parts as described or represented in the patent No. 98,509, dated January 4, 1870, and granted to William C. Lovering.

What I claim as new, and desire to secure by Letters Patent, is—

A cover for pots, kettles, and similar articles, provided with an automatically closing spring valve, substantially as shown and described.

Witnesses:

EPHRAIM K. DEAN.

PHILIP COOMBS,

FRED. H. COOMBS.