(No Model.)

C. E. COATS.

TEA KETTLE.

No. 400,635. Patented Apr. 2, 1889.

Fig. 1.

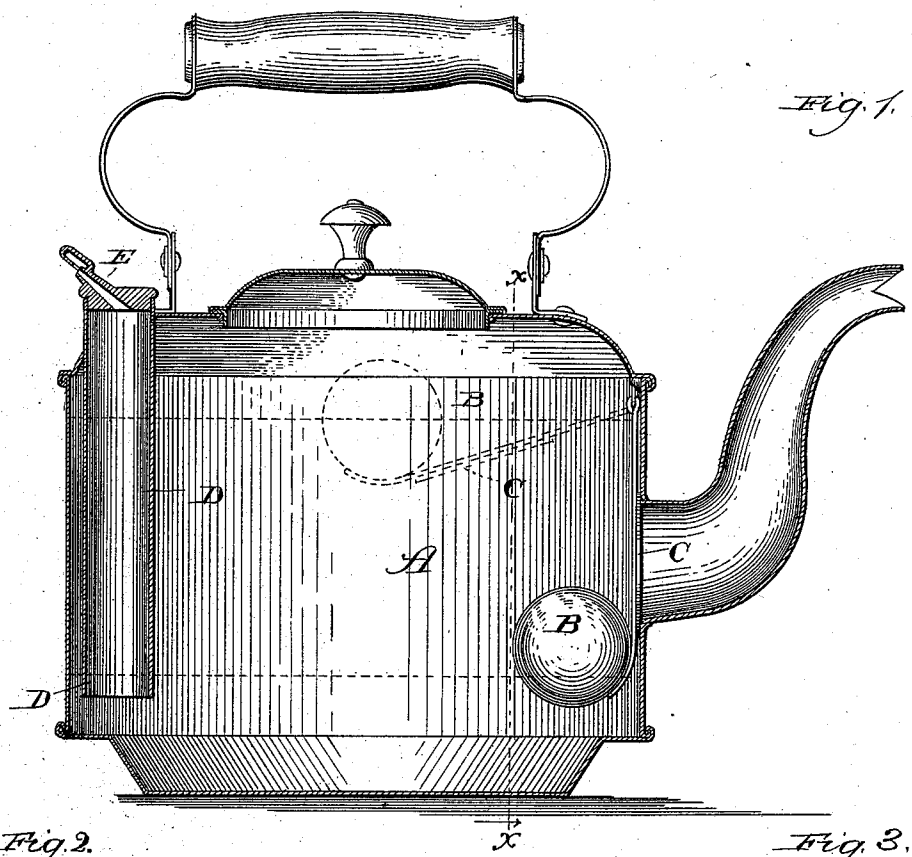


Fig. 2.

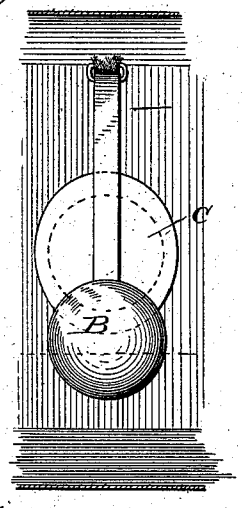
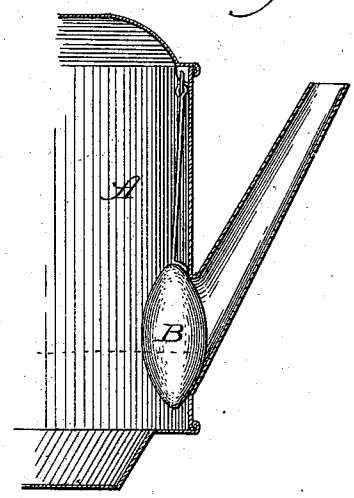


Fig. 3.



Witnesses:
Chas. E. Gaylord.
Chas. E. Foster.

Inventor
Charles E. Coats,
By Banning & Banning
Attys.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES E. COATS, OF CHICAGO, ILLINOIS.

TEA-KETTLE.

SPECIFICATION forming part of Letters Patent No. 400,635, dated April 2, 1889.

Application filed February 21, 1888. Serial No. 264,769. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. COATS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Tea-Kettles, of which the following is a specification.

The object of my invention is to construct a tea-kettle into which the water may be introduced at any time without danger of burning the hands, and which shall also be provided with an automatic signal to indicate when the water is getting low; and the invention consists in the features and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical sectional view of a tea-kettle having a bent spout containing my improvements; Fig. 2, a vertical sectional view taken in line *x x* of Fig. 1; and Fig. 3, a vertical sectional view of a part of a tea-kettle having a straight spout, particularly intended to show a slight modification in construction or operation of the float.

A is the tea-kettle; B, the float inside the kettle; C, a flat piece on the hanger above the float-ball; D, the water-inlet tube, and E the whistle.

My improved tea-kettle is provided with a tube extending down from the top any distance desired, but preferably to a point near the bottom, through which it may be filled with water. This tube may be placed at any convenient point; but I prefer to place it just behind the handle and at the side of the kettle farthest from the spout. The upper end of this tube may be closed in any suitable manner; but I prefer to close it by a lid or cap provided with a whistle.

Inside of the kettle, at any convenient point above the spout-opening, but preferably at or near the top of the kettle, I hinge or otherwise loosely fasten a device which I call a "float." This float consists, essentially, of a suitable ball, oval-shaped or otherwise, made of zinc or other light material, so as to be of less specific gravity, and therefore capable of floating on the water, this ball being secured to the lower end of the hanger, which is fastened above the spout-opening.

When used in a tea-kettle having a bent spout, or a spout extending out from a point a considerable distance above the bottom, it will generally be found advisable to secure a suitable flat piece to the hanger above the float-ball, and in such position that when the float is down the flat piece will fit over and close the spout-opening; but when the float is used in a tea-kettle having a straight spout, or a spout extending out from a point near the bottom, this flat piece may be dispensed with, and the float-ball itself allowed to fit over and close the spout-opening when the water gets low.

In operation, the water being poured in, the float rises to the top, as shown in dotted lines, Fig. 1, and this of course leaves the spout open. As the water gets low, however, the float gradually resumes its normal position and, when the water has receded sufficiently, rests against the side of the kettle and closes its spout-opening.

In kettles having spouts extending out from a point some distance above the bottom the flat piece above the float is preferably employed to close the spout-opening; but when the spout extends out from a point near the bottom of the kettle the float-ball itself is preferably employed for this purpose. However, the spout-opening may be closed by the float in any way found convenient, and this, too, with or without the flat piece or other additional features. The water in the kettle having now receded to a point below the lower end of the water-inlet tube, the closing of the spout-opening immediately causes the whistle at the upper end of such tube to blow or make a noise, so as to indicate that the water is getting low in the kettle. This spout being opened, the kettle may be refilled without removing its lid or otherwise exposing the hand of the operator to the danger of being burned by steam blowing out, as is now often the case.

It will of course be understood that various changes may be made without departing from the spirit of my invention. For instance, the float, whistle, and water-inlet tube may be made in different ways, and the covering for the tube may be in the form of a lid, cap, or otherwise, as found most convenient, or any other suitable form of signal or alarm may be used in place of the whistle. This being the case, I of course do not wish to be

understood as limiting myself to special features or details of construction; but

I claim—

1. In a tea-kettle, a hanger provided with a float which closes the spout-opening, and a steam-exit tube extending downward near one side of the kettle, and an alarm to indicate when the water has receded to a predetermined point, substantially as described.

2. In a tea-kettle, a hanger provided with a float which closes the spout-opening, a steam-exit tube extending downward near one side of the kettle to a point below the spout-opening, and a signaling device to indicate when the water has receded to a certain predetermined point, substantially as described.

CHARLES E. COATS.

Witnesses:

EPHRAIM BANNING,

G. P. LINDSLEY.