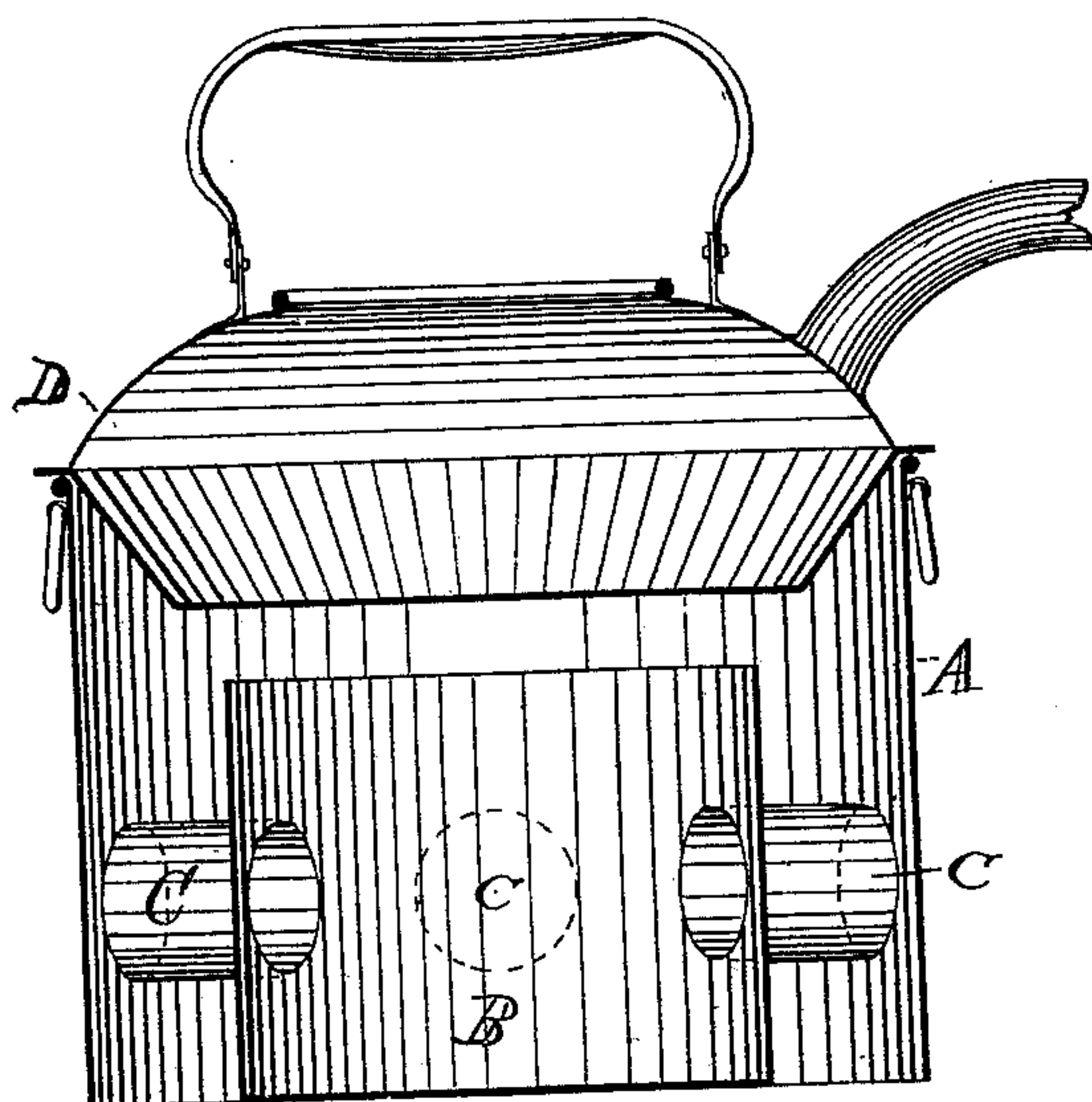


G. F. ROBINSON.  
Summer Furnace.

No. 229,756.

Patented July 6, 1880.



Witnesses  
*Wm. H. Diddell*  
*H. B. Hurd*

*G. F. Robinson*, Inventor

By *Geo. S. Tracy & Co.* Attorneys.

# UNITED STATES PATENT OFFICE.

GEORGE F. ROBINSON, OF TORONTO, ONTARIO, CANADA.

## SUMMER-FURNACE.

SPECIFICATION forming part of Letters Patent No. 229,756, dated July 6, 1880.

Application filed December 24, 1879.

*To all whom it may concern:*

Be it known that I, G. F. ROBINSON, of Toronto, in the Province of Ontario and Dominion of Canada, have invented a new and useful Improvement in Summer-Kettles; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to certain improvements in portable furnaces or heating devices for boiling water, cooking, &c., the whole of which is placed over the end of a stove-pipe communicating with a chimney, or upon one of the stove-holes in an ordinary kitchen stove or range from which the lid has been removed. Either wood, charcoal, or oil may be used as fuel with equally good results; and the invention therein consists in the peculiar construction, arrangement, and combination of the various operative parts of my device, all as more fully hereinafter described.

In order that persons skilled in the art may know how to make and use my improved heating device, I will now proceed to fully describe the same, reference being had to the accompanying drawing, in which similar letters refer to similar parts.

The drawing is a sectional view of my device, in which—

A is the body or outer frame. This frame is cylindrical in shape and open at both ends.

B is the fire-box, which is also cylindrical in shape, and has its lower end, which is closed so as to form a box, open at the top, in the same plane with that of the outer frame, A. In this inner box or cylinder is placed the fuel to be burned.

C C C are draft-flues, through which air passes into the fire-box, carrying the smoke and flame up over the top of the fire-box and down between it and the inner wall of outer cylinder or frame into the stove hole or pipe upon which it is placed.

D is a shallow kettle to contain water to be boiled, which sits upon the frame or body A, as shown, the water being heated by the flames passing underneath the kettle in their course from the fire-box to the stove hole or pipe.

The fire-box B has its upper end depressed

below that of the frame A, so as to allow the free passage of the smoke and flames over its top to the place of exit when the device is being used.

The draft-flues C C C enter the inner cylinder or fire-box through its sides a little distance above its bottom and at equal distance from each other, so that the air, as it is drawn in through the flues, forces the flames up and toward the center of the bottom of kettle D in a gradual and uniform manner, against which they impinge, and then pass off through the proper exit. These flues, besides producing a gradual and uniform current of air, also serve to sustain the fire-box and outer frame in their relative position as they pass through the wall of each in their respective directions, and are firmly soldered at their inner and outer ends, respectively, to the walls of the outer and inner cylinder.

The great advantage of this device is, that by the arrangement of the flues, as shown, a more even and regular draft of air is obtained than would be the case if there were only a draft-flue on one side of the fire-box, the flames being continually forced against the center of the bottom of the kettle, thus heating its contents in the quickest possible manner.

Another advantage of this device is, that a small fire sufficient for the purpose desired may be made in a few moments, the concentration of the fire under the vessel to be heated and the readiness with which it is started obviating the necessity of keeping a fire in the stove at all times and economizing greatly in fuel.

The simplicity of the device is another of its advantages, rendering its cost scarcely more than an ordinary kettle or similar vessel.

I am aware that a combination furnace has been patented consisting of a cylinder open at both ends, adapted, by being open at the top, to receive a culinary or other vessel, and having a flue extending from an opening in its side to an opening near the bottom of a fire pot of a slightly and downwardly tapering form suspended within the cylinder, the top of the fire-pot, which is open, having an outwardly-projecting perforated collar wide enough to reach the inner surface of the inclosing-cylinder.



der, and I do not claim anything therein described and shown; but

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

- 5 A heating device wherein are combined an outer cylinder, open at each end, an inner cylinder with its top depressed and its bottom closed, as described, and draft-flues firmly connecting the cylinders, through whose sides they

pass, and entering the inner cylinders at equal distances from each other, substantially as and for the purpose set forth.

This specification signed and witnessed this 31st day of July, 1879.

GEO. F. ROBINSON.

Witnesses:

JNO. THOMPSON, Jr.,  
THOMAS F. GIBSON.