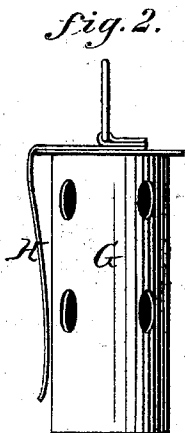
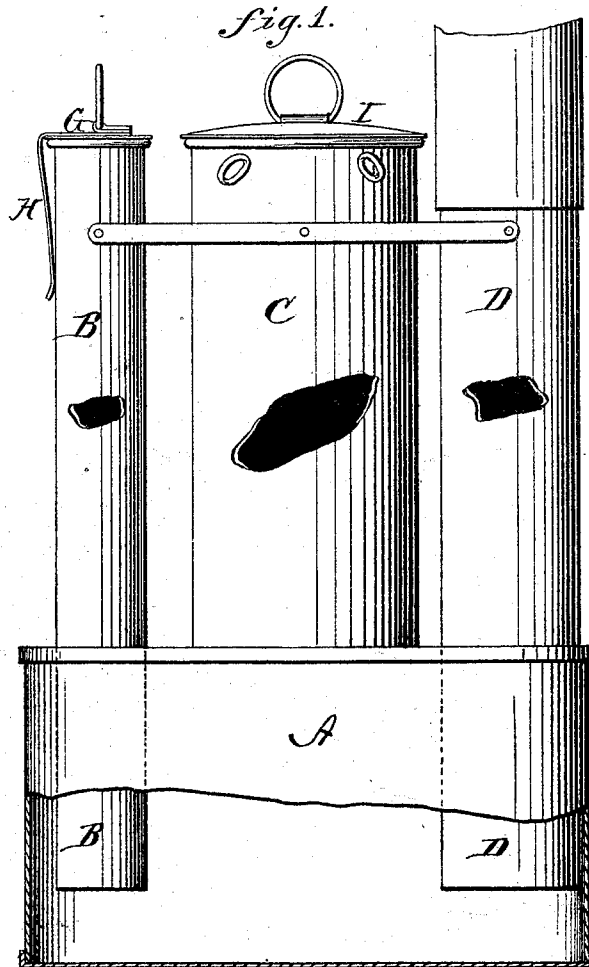


T. M. CARROLL.
Water-Heating Apparatus.

No. 144,060.

Patented Oct. 28, 1873.



Witnesses
John A. Ellis
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UNITED STATES PATENT OFFICE.

THOMAS M. CARROLL, OF INDEPENDENCE, IOWA.

IMPROVEMENT IN WATER-HEATING APPARATUS.

Specification forming part of Letters Patent No. **144,060**, dated October 28, 1873; application filed July 10, 1873.

To all whom it may concern:

Be it known that I, T. M. CARROLL, of Independence, in the county of Buchanan and State of Iowa, have invented certain new and useful Improvements in Water-Heating Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of an apparatus designed for farmers' use to boil large quantities of water at one time and to cook food for stock, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now describe its construction, referring to the annexed drawing, in which—

Figure 1 is a side elevation, partly in section, of a device embodying my invention, and Fig. 2 is a side elevation of a draft-regulator.

A represents the fire-box, made in oval or any other suitable form, closed on all sides, and provided with upright tubes or pipes—B for draft, C for fuel, and D for smoke. These tubes or pipes communicate directly with the fire-box A, and are placed directly over the same to economize the space, so that a boiler in which the device may be used, need only to be large enough to admit the fire-box; to also admit the tubes or pipes, as they are all embraced inside of the outer dimensions of the fire-box; and, as the fire-box is closed and the

tubes or pipes connected to the top of the same, there is no danger of water leaking in upon the fire when the device is used.

Any convenient regulator may be used in the pipe B, but I prefer the use of the one represented, consisting of the perforated pipe G with spring H, by which, in connection with the cover I on pipe C, the draft may be regulated.

The pipes B and D extend down into the fire-box, just below the center of the same, in order that the draft may communicate with the bottom of the fire material, while the fuel-pipe C does not extend below the top of the fire-box. When a fire is once kindled in the box A, and the cover I and regulator G closed, the fire may be kept up for about twelve hours without replenishing.

This heating apparatus being placed on suitable supports in the bottom of a barrel or other vessel, a large quantity of water will readily be boiled in a short time.

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

The fire-box A, smoke-pipe D, fuel-pipe C, and draft-pipe B provided with a regulator, the said pipes being connected directly to the top of the fire-box, all constructed and arranged as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOMAS M. CARROLL.

Witnesses:

CHARLES SCHWARTZ,
DANIEL SMYSER.