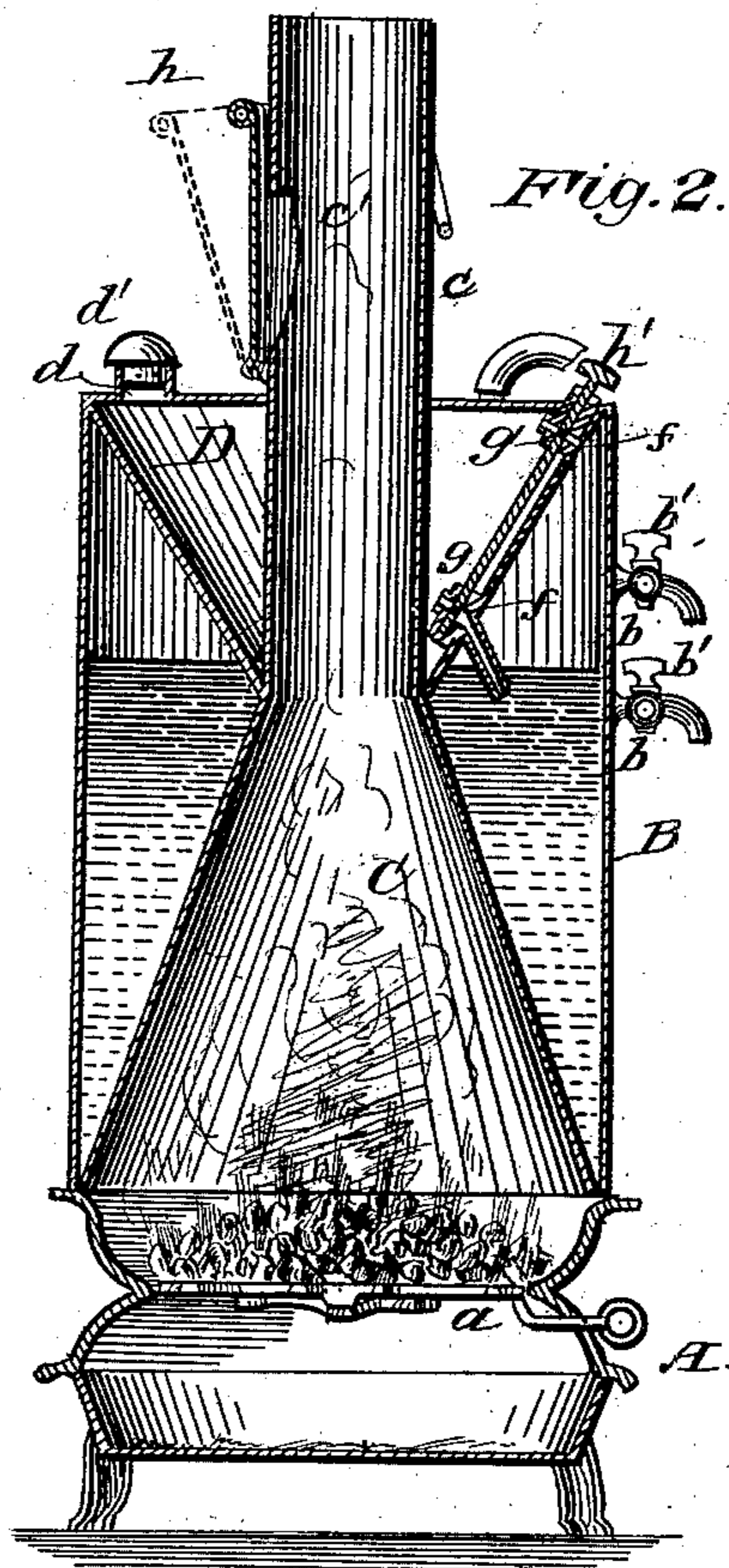
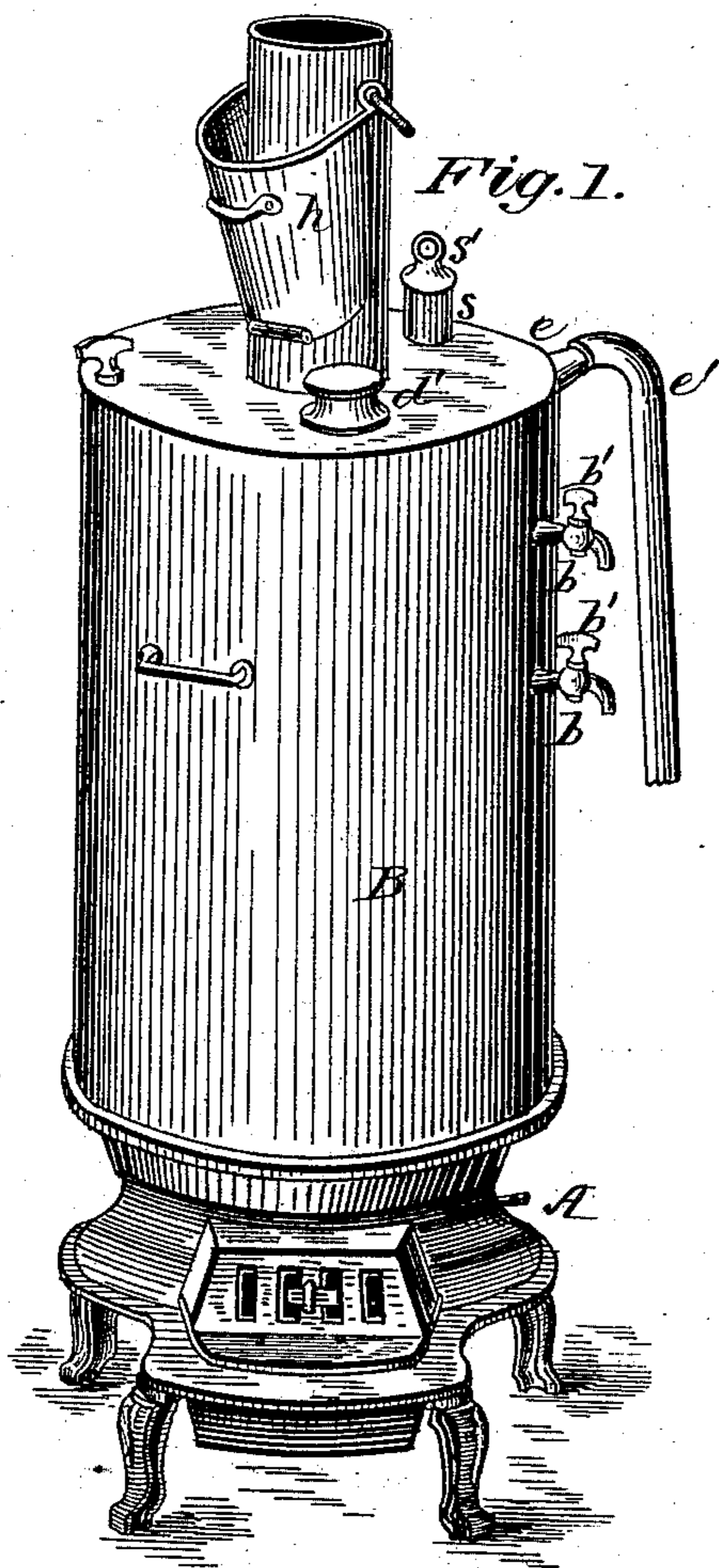


W. COLLINGS.
Feed-Steamer.

No. 222,016.

Patented Nov. 25, 1879.



Witnesses
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WILLIAM COLLINGS, OF AFTON, IOWA.

IMPROVEMENT IN FEED-STEAMERS.

Specification forming part of Letters Patent No. **222,016**, dated November 25, 1879; application filed August 30, 1879.

To all whom it may concern:

Be it known that I, WILLIAM COLLINGS, of Afton, in the county of Union and State of Iowa, have invented certain new and useful Improvements in Feed-Steaming; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being made to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a side view of my improved feed-steamer; Fig. 2, a vertical section of the same.

This invention relates to certain new and useful improvements in the class of steamers especially designed for cooking feed; and the invention consists in the novel construction and combination of parts, all as will be hereinafter fully described, and specifically pointed out in the claims.

To enable others skilled in the art to make and use my invention, I will now proceed to describe the exact manner in which it is carried out.

In the drawings, A represents a cast-iron base, provided with the usual grate *a*, and forming the furnace for heating, as well as supporting, the vertical cylindrical boiler B, and C represents a funnel or cone-shaped chamber arranged inside of the boiler over the furnace, said chamber being provided with a vertical combustion and feed pipe, *c*, passing centrally up through a cone-shaped water-tank, D, arranged inside of the boiler above the chamber C, and in which water is heated for subsequently supplying the boiler B.

The combustion-pipe *c* is provided with a side opening, *c'*, closed by a hinged curved cap, *h*, which, when open, forms a chute for feeding the fuel through said opening *c'* into the pipe *c*, from which it is delivered to the furnace below.

The boiler is provided with upper and lower water-gages, *b b*, controlled by stop-cocks *b' b'* in the usual manner; and also a pipe, *s*, provided with a safety-valve, *s'*.

The upper cone-shaped tank, D, in which water is heated for supplying the boiler B, is provided with an opening, *d*, for supplying cold water thereto, and which is closed by a screw-cap, *d'*.

A pipe, *e*, controlled by a faucet to which the pipe *e'* is connected, conveys the steam from the boiler to the receptacle containing the feed to be cooked.

f f' represent two openings forming communications between the tank D and boiler, and which are simultaneously closed or opened by a double faucet, *g g'*, or its equivalent operated from outside of the steamer by a handle, *h'*, the faucet *g'* near the top of the tank D, permitting the steam passing from the boiler to the tank, while the boiler is being supplied with water from the faucet *g*, near the bottom of the tank, thus equalizing the steam-pressure without stopping the cooking of the feed, or losing or wasting the head of steam.

It will be necessary to leave the screw-cap *d'* off during the heating of the water, and only put on when feeding water to the boiler, or when the faucets *g g'* are open.

It will be observed that both the conical chamber C and pipe *c* form the heating-surface for the boiler and water-tank D, the water in said tank being also kept hot, by the heat from the boiler surrounding it, and, consequently, all the heating-surface for said boiler and tank is protected by water; or the boiler can be supplied with water without stopping the cooking of the feed, or lessening the head of steam, and the steam-pressure equalized through the medium of the double faucet.

I am aware that vertical conical fire and smoke flues extending up through a boiler and a water-supply tank, for the purpose of heating the water, are old, and such I do not desire to claim, broadly, as my invention; but,

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

1. In a feed-steamer, the combination, with the boiler B, conical or funnel-shaped chamber C, and vertical combustion and feed pipe *c*, of the conical water-tank D, arranged inside of the boiler over the chamber C, and through which the pipe *c* passes, substantially in the manner herein shown and described.

2. The combination, with the boiler B, of the cone-shaped water-tank D, arranged therein, and through which the combustion-pipe *c* passes for heating the water therein,

and provided with openings f, f' near the top and bottom communicating with the boiler, and the double stop-cock or faucet g, g' for simultaneously opening or closing said openings, substantially as and for the purpose herein shown and described.

3. The combination, with the funnel or cone-shaped chamber C, arranged over the furnace, of the vertical combustion and feed pipe c ,

provided with the side opening c' , and the hinged cap and chute h , adapted to fit closely and partially around said pipe for closing the opening therein, substantially as and for the purpose herein shown and described.

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Witnesses:

A. DICKINSON,
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