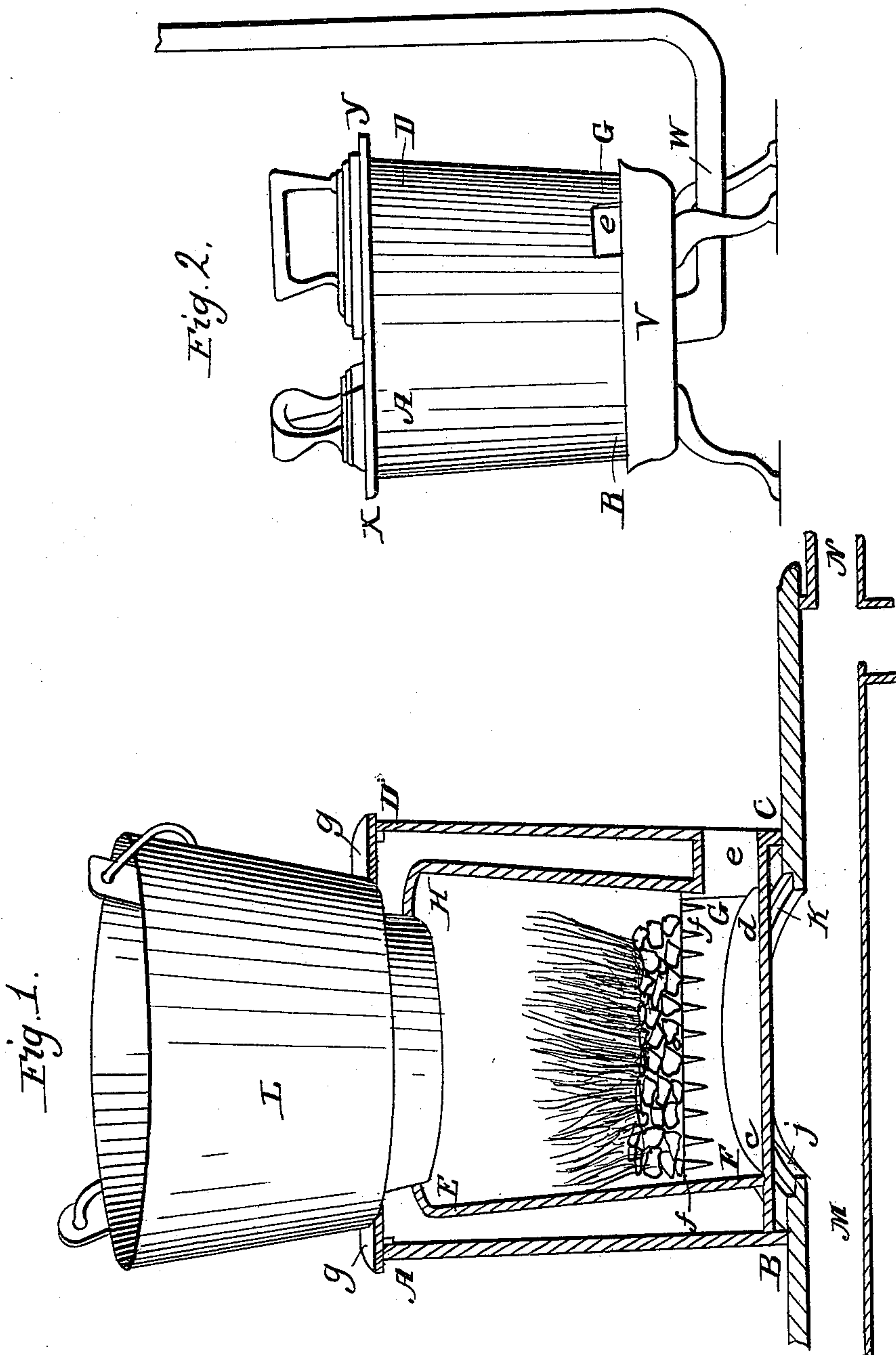


M. F. POTTER.  
Portable Furnace.

No. 7,039.

Patented Jan'y 22, 1850.



# UNITED STATES PATENT OFFICE.

M. F. POTTER, OF CHARLEMONT, MASSACHUSETTS.

## PORTABLE FURNACE.

Specification forming part of Letters Patent No. 7,039, dated January 22, 1850; Reissued October 22, 1850, No. 181.

*To all whom it may concern:*

Be it known that I, MERRITT F. POTTER, of Charlemont, Franklin county, Massachusetts, have invented a new and Improved Portable Furnace for Culinary Purposes, which I call "Potter's Diving-Flue Portable Furnace," of which the following specification and drawings, forming part of the same, are a full and accurate description.

Figure 1 representing a perspective view of one half of the furnace—the hither half being cut off by a vertical section through its center, in order to show its interior. The furnace is standing over one of the pot holes of a cooking stove a section of whose upper flue is represented by M N. Fig. 2 representing the furnace standing on a bottom vessel, when used separately from a cooking stove. The same letters in both figures referring to same parts.

The furnace consists of a cylindrical metal pot A B C D, in external form like the ordinary portable furnace but without a bottom. In the inside of this, and concentric with it, is placed a second vessel E, F, G, H, nearly similar in form but tapering a little from the top to the bottom. This inner vessel is not as deep as the outer one, and is so placed that its upper edge shall be a small space below that of the outer vessel, the bottoms of both being nearly on a level with each other—the inner pot being supported by cross bars at the bottom (of which two *a* and *b* are represented) or in any other convenient way. The inner pot is also less in diameter, than the inner diameter of the outer pot, so as to leave a small space at the top of the inner pot all around betwixt the vessels; by which arrangement it will be seen, that from the shapes of the two vessels, the space between the two will increase toward their bottoms. This space I call the diving flue.

The inner pot has a close bottom *c*, *d*, above which is placed a coal grate *f*, *f*, and from the space between the bottom and the grate, a small air flue, *e*, passes out through the side of the outer pot.

On the top of the outer vessel there is to be placed a flat metal ring *g*, *g*, whose inner opening corresponds in size, with the openings generally made in cooking stoves to receive the sunken bottoms of culinary vessels, and is to be used in that way. This ring is to be changed for a flat plate, as shown in Fig. 2, whenever flat irons are to be heated, or any other sort of work makes it convenient. When a large bottomed kettle, a frying pan or anything of that kind is to be used the ring and cover, may both be laid aside.

The principal intention of this furnace being for use in connection with the ordinary cooking stove whenever it is required for use, it is to be placed over one of the pot holes of a stove as shown by J, K, Fig. 1 fire is kindled with coal upon the grate *e*, *f*, and either a cooking vessel or boiler I put in place upon the top of the plate X, Y, Fig. 2 put over the top. The heat and smoke will pass under the vessel or plate, turn over the top E H pass diving down between the furnace pots, and so off by the flue M, N of the stove into the chimney. The precaution is to be taken to close the registers at the hearth of the stove, before using this furnace.

If it be desired to use the furnace without recourse to a stove, then I use a bottom vessel V standing upon legs, and having from its lower surface a flue W passing into the chimney, or with a pipe or flue turning upward at right angles to produce a sufficient draft.

I claim—

The mode herein described of constructing my portable furnace—viz with a diving flue, open at the bottom so as to adapt it readily for use to the boiler holes of cooking stoves, in the manner above specified.

MERRITT F. POTTER.

Witnesses:

P. H. WATSON,  
E. S. RENWICKE.