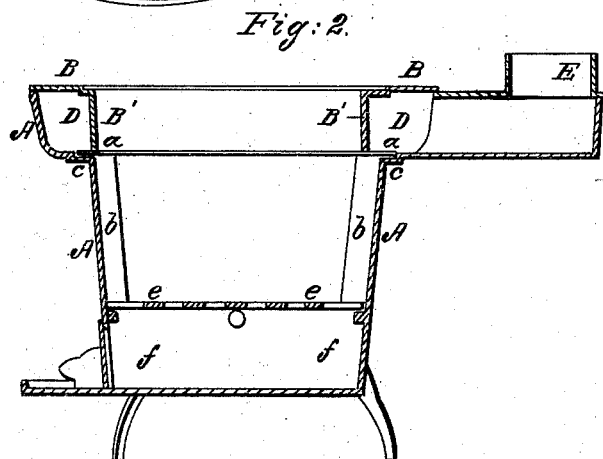


Portable Furnace.

Patented March 16, 1844.



UNITED STATES PATENT OFFICE.

GEORGE E. WARING, OF STAMFORD, CONNECTICUT.

IMPROVEMENT IN PORTABLE FURNACES.

Specification forming part of Letters Patent No. 3,491, dated March 16, 1844.

To all whom it may concern:

Be it known that I, GEORGE E. WARING, of Stamford, in the county of Fairfield and State of Connecticut, have made a new and useful Improvement in the Manner of Constructing the Ordinary Portable Furnace; and I do hereby declare that the following is a full and exact description thereof.

My portable furnace I make of cast-iron, and in its general construction it resembles such as have been heretofore made.

My improvement consists in the combining with the body of the furnace either a rotating or a stationary rim so formed as, in conjunction with the shape given to the upper edge of the body of the furnace, to constitute a flue-space, the opening into which is through what I call the "collar part of the rim." Although this rim may be made stationary, I prefer in all cases to make it rotate, and shall describe it as being capable of doing so. By means of this device the heated air from the burning fuel is made to pass around the above-named flue-space before it is conducted off, and the heat is thereby much economized.

In the accompanying drawings, Figure 1 is a perspective representation of my furnace, and Fig. 2 a vertical section thereof through its middle.

A is the body or shell of the furnace, which at its upper edge is curved out all around it, as shown at A'. Upon this upper edge rests the revolving rim B B, of which the collar B' B' constitutes a part. B'' is a handle by which this rim may be conveniently turned round, so as to bring the opening through the collar into the desired position.

C is the opening through collar part B' of the rotating rim into the flue-space D D.

In the position in which the opening C is represented the action of this portable furnace would be the same with those in common use, the opening being directly opposite

the flue leading to the exit-pipe E. When the fire is first lighted, the opening should be placed in this position in order to establish a direct draught; but when the ignition is complete the rotating rim is to be turned round so that the opening may occupy the front part of the furnace. When this has been done and the top of the furnace is covered either by a lid, such as is shown at F in Fig. 3, or by a boiler or other cooking utensil, a draft will be established all around the top of it through the flue-space D D. This arrangement of the flue in the manner described renders this much more effective than any other portable furnace that resembles it in its general construction. Flat-irons when placed on the rim and on the lid F are rapidly heated, and its adaptation to cooking utensils will be apparent. The lower edge of the collar B' rests upon a flat ring *a a*, which may be attached to the body of the furnace by rivets passing through it and through the offset *c c*. *b b* represents a lining to the furnace, which is confined in place by the rim *a a*. *e e* are the grate-bars, and *f f* the ash-pit.

Having thus fully described the nature of my improvement in the ordinary portable furnace, what I claim therein as new, and desire to secure by Letters Patent, is—

The forming of a flue-space around its upper edge, in the manner shown at D D, said flue-space being formed by a projection from the body of the furnace in conjunction with the rim B, or in any other manner that is substantially the same, and whether the rim B be made to rotate in the manner described, or whether it be permanently fixed with the opening C toward the front of the furnace.

GEO. E. WARING.

Witnesses:

THOS. P. JONES,
WM. H. BISHOP.