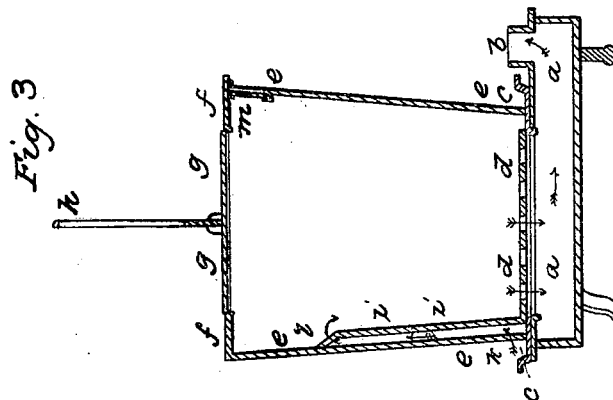
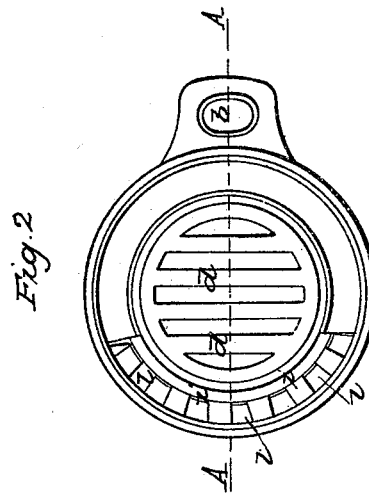
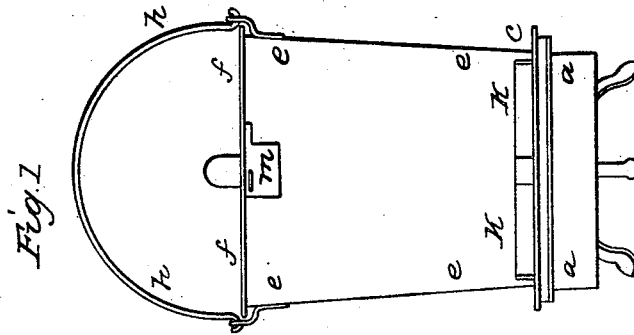


J. P. HAYES.
Portable Furnace.

No. 7,765.

Patented Nov. 5, 1850.



UNITED STATES PATENT OFFICE.

JOHN P. HAYES, OF BOSTON, MASSACHUSETTS.

PORTABLE FURNACE.

Specification of Letters Patent No. 7,765, dated November 5, 1850.

To all whom it may concern:

Be it known that I, JOHN P. HAYES, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Summer-Furnaces, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improved furnace.

Figure 1 is an elevation of the same. Fig. 2 is a top view with the cover removed, and Fig. 3 is a vertical section taken in the plane of the line A, B, Fig. 2.

The object which I had in view in devising my improved summer furnace, was, to provide a heating apparatus which should perform the ordinary culinary operations of boiling, baking, heating flatirons, &c. without heating the apartment in which it is placed, and to this end to have the draft which ignites the coal in the fire pot of the furnace pass in from the exterior of the furnace, and then up on the side of the fire and down through the fuel, into any cooking stove on which it may be placed carrying the smoke with it.

My improved furnace is made of cast iron and is shaped as shown in Figs. 1 and 3, being a little smaller in diameter at the bottom than at the top. It may be set upon an ash pit *a a a* shaped as shown in the drawings, and having a discharging smoke pipe *b*, which may project into a common chimney, in a manner which will be well understood, or, the upper part, independent of the ash pit, may, by means of the rim *c c*, be fitted into any of the boiling spaces of a common cooking stove. A grate *d d* is placed or supported on this rim *c c*, on which grate the fuel is sustained.

The outer periphery *e e, e e* is made of sufficient height to hold a proper quantity of fuel, and is surmounted by a cap plate *f f* having a circular boiling space in the center thereof, which may be closed by the moveable plate *g g* at pleasure.

The whole apparatus may be moved about at pleasure by the ball *h h*, properly connected to the periphery *e e, e e*, as shown in the drawings.

A draft chamber or flue is formed by the semicircular partition *i i*, set a little distance inward from the periphery *e e*, as shown in Fig. 3, into which air is admitted at the bottom of the furnace through the openings at *k, k* in the periphery, and said air descends and escapes into the fire chamber, above the fuel, through the openings *l, l, l*, &c. in the beveled top of said flue or draft chamber, and then descends through said fuel, with the smoke, &c. into the ash pit *a, a, a*, or stove on which the furnace is set. The igniting of the fuel by this process, is sufficient to perform the culinary operations above referred to, and the room in which the furnace is used is not unnecessarily heated.

By inserting a sliding damper at the top of the periphery, as shown at *m*, Fig. 1, the draft to the fuel may be received at the top of the furnace, or when the furnace is set out doors, the smoke will escape through the opening in which this damper operates.

By having the draft air admitted from the outside and at the bottom of the furnace, the said air becomes heated, and produces, as is well known, more perfect combustion of the fuel, while at the same time it assists in heating anything on the top of the furnace.

Having thus described my improved summer furnace, I shall state my claim as follows.

What I claim as my invention and desire to have secured to me by Letters Patent is,

A summer furnace in which the draft is derived to the fire chamber from the exterior of the furnace and at the bottom of the same, and passes first up through a flue chamber (formed between the partition *i i* and the periphery of the furnace as above set forth), and then down through the fuel, all as herein above set forth and for the purpose specified.

JOHN P. HAYES.

Witnesses:

EZRA LINCOLN,
JOSEPH GAVETT.