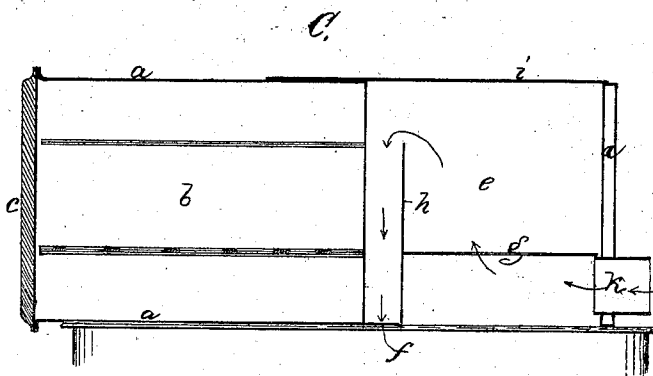
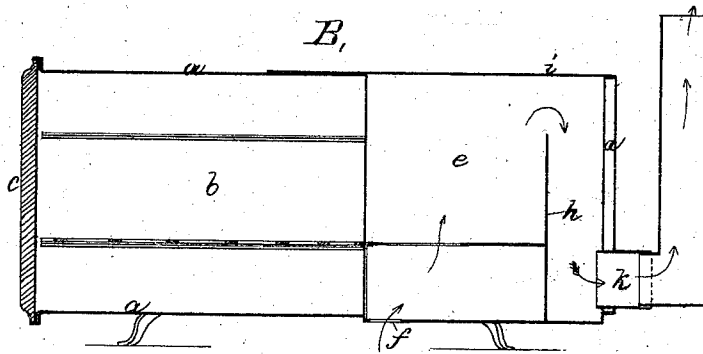
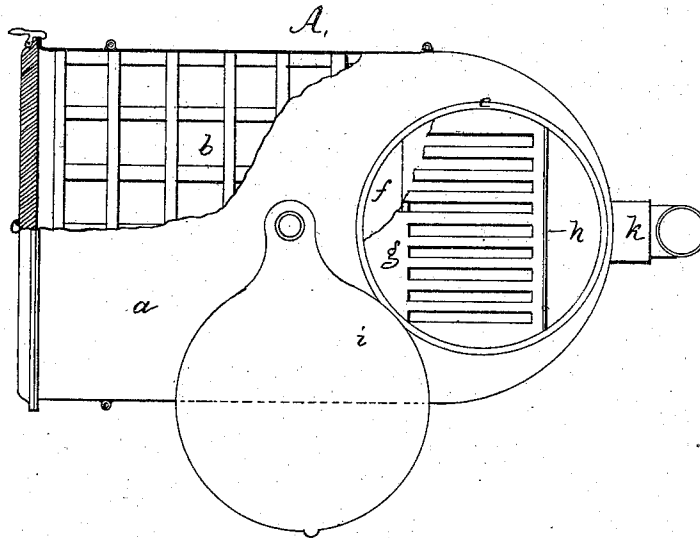


N. E. CHASE.
Portable Stoves.

No. 137,594.

Patented April 8, 1873.



Witnesses.
P. B. Kidder
L. H. Latimer.

Inventor
Nathaniel E. Chase
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Crowley & Gould

UNITED STATES PATENT OFFICE.

NATHANIEL E. CHASE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN PORTABLE STOVES.

Specification forming part of Letters Patent No. **137,594**, dated April 8, 1873; application filed July 24, 1872.

To all whom it may concern:

Be it known that I, NATHANIEL E. CHASE, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Portable Stove; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to the construction of a summer stove, to be used interchangeably, either in connection with an ordinary cook-stove or as an independent apparatus. In my invention I make, of sheet metal, a long oven or chamber, having one end of semi-cylindrical form, with a vertical fire-pot cylinder extending through it, this cylinder having a bottom, closed except at its front portion, at which portion is a flue-passage, opening into the front part of the fire-pot cylinder. In the fire-pot is a grate, supported upon suitable stops, and having at one side a vertical plate that forms a partition in the fire-pot, the grate and partition being changeable as to position with reference to the flue-opening at the front of the fire-pot, or to another flue-opening from the rear side of the fire-pot cylinder.

The stove is for use either in connection with a common cooking-stove or as an out-of-doors or camp stove, and in the first case the grate and partition are so placed that the partition forms a vertical and downward flue at the front of the fire-pot, the air entering the rear flue under the grate, passing through the fuel, and escaping with the smoke and other volatile products of combustion over the top of the movable partition, down through the flue out of the bottom of the fire-pot into and through the stove. As a camp-stove the grate and partition are turned so as to carry the partition to the front part of the fire-pot, forming a front and downward flue, in which case the air entering the bottom of the fire-pot (the stove being placed on legs) passes through the fuel, and with the smoke, &c., passes over the partition, down the flue formed by it, out through the rear flue.

It is in the construction of the stove, with the fire-pot located in one end of the oven, and with a fire-pot having the peculiar arrange-

ment of the grate, flue-partition, and flue-openings, that my invention consists.

The drawing represents a stove embodying the invention.

A shows a sectional plan of the stove; C, a vertical section, the stove being upon the top plate of an ordinary cooking-stove; B, a similar section, the stove standing upon suitable feet.

a denotes a sheet-metal box, which forms an oven-chamber, *b*, having at its front end a door, *c*, suitable shelves being placed in the oven, if desirable. The front end of the box is of semi-cylindrical shape, and extending through it is a vertical fire-pot cylinder, *e*. The bottom of this cylinder is closed, except under the front part of the cylinder, at which part is a narrow flue or draft opening, *f*. In the fire-pot is a grate, *g*, which may be supported wholly upon stops, or may be fixed to a vertical flue-plate or partition, *h*, the grate stopping at the partition. The bottom of the partition rests upon the bottom plate of the fire-pot, and the top is at a short distance below the top of the stove, leaving a flue-space between the top of the partition and the cover *i* when the cover is closed. The partition is movable, and is placed in the position shown at C, or in the position shown at A and B, accordingly as the stove is wanted for use upon another stove, or out of doors. At the end of the stove is a flue or draft-pipe, *k*, leading from or into the fire-pot.

When the stove is upon a cooking-stove, the air enters the pipe *k* into the space under the grate, then passes up through the grate and fire-pot, over the partition, down the partition-flue, through the opening *f*, into the stove-flue, in the direction shown by the arrows at C.

When the partition is placed as seen at B, the air enters the bottom opening *f*, passes through the grate up through the fire-pot, over the partition, down the rear partition-flue, out through the flue-pipe *k*, as seen by the arrows.

By this means a very simple and effective summer stove or oven is made, for use either with another stove or as an out-door stove.

By constructing the oven with the semi-cylindrical end and the fire-pot extending directly through this end part, a very powerful ar-

range is obtained for heating the oven, the fire-pot cylinder radiating heat from all sides directly into the oven-space.

I claim—

The portable stove, constructed as described, adapted to be used either with the outer air entering the flue *k*, and making its exit at *f*, as shown in Fig. C; or by reversing the grate and its partition, adapted to be used with the air entering at *f*, and making its exit through

the flue *k*, the cylinder *c* having no passages communicating with the oven-chamber *a*, but such chamber extending around the cylinder *c* and being heated from the entire periphery of the same.

N. E. CHASE.

Witnesses:

FRANCIS GOULD,
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