H. J. LINGENFELTER.

Portable Furnaces.

No. 145,954. Patented Dec. 30, 1873.

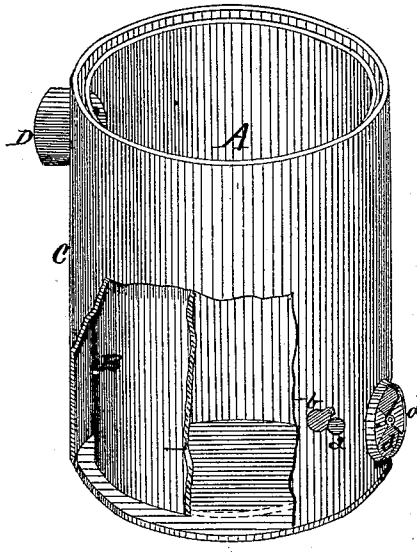

Fig. 1.

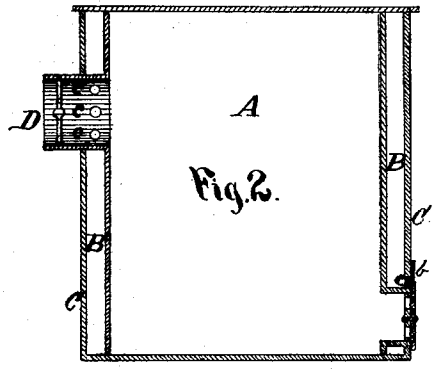

Fig. 2.

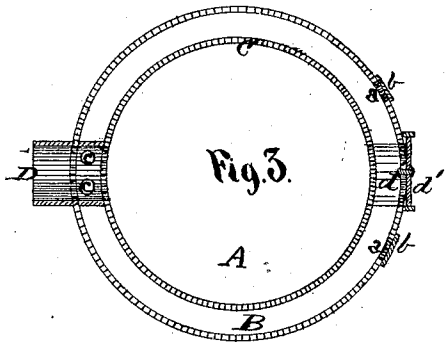

Fig. 3.

Witnesses { Delavan Manning
Geo. A. Thompson,

Henry J. Lingenfelter
per his attorney Alex. Selkirk
Inventor.

UNITED STATES PATENT OFFICE.

HENRY J. LINGENFELTER, OF GLEN, NEW YORK.

IMPROVEMENT IN PORTABLE FURNACES.

Specification forming part of Letters Patent No. **145,954**, dated December 30, 1873; application filed August 26, 1872.

To all whom it may concern:

Be it known that I, HENRY J. LINGENFELTER, of the town of Glen, county of Montgomery, State of New York, have invented a certain article of manufacture, denominated a "Supplementary Furnace;" and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawings, in which—

Figure 1 represents a perspective view of the furnace, with a part broken away, illustrating the improvements in the invention. Fig. 2 is a sectional elevation of the same. Fig. 3 is a vertical view.

My invention relates to a furnace intended to be set on a stove and connect with the smoke-flue of the same, and consists in a furnace so constructed that the fire-pot will be surrounded by an air-space arranged in the sides, provided with inlet-ports and exit-ports, arranged in the smoke-flue in such a manner that the cold air may be admitted within the said air-space, and to have means for escape into the smoke-flue without heating the room or escaping over the fire; the object of this invention being to produce a furnace which can be used to heat vessels without excessively warming the room, and in which shavings, chips, or charcoal, or other suitable fuel, may be used.

To enable others skilled in the art to make and use my invention, I will proceed to describe it in reference to the drawings, and the letters of reference marked thereon, the same letters indicating like parts.

In the drawing, A represents the fire-pot, which may be made of any desirable form, and of either cast or sheet metal, and, if the latter, it is preferred to have the same lined with any suitable material which will prevent its being quickly burned out. B is an air-space, surrounding the whole fire-pot, as shown, which space is formed by the wall of the fire-pot and the jacket C. *a a* are inlet-ports, which are intended to permit the entrance of cool air to the space B, and are provided with dampers *b* to close the same when desired. D is the smoke-flue, communicating with the fire-pot A, and may be provided with a damper. *c c c* are escape-ports made in the smoke-flue D, and communicate with the air-space B, to permit the escape of the air as it is heated without its passing over the fire. *d* is a draft-hole, provided with a damper, *d'*, as shown.

If desired, the said furnace may be constructed of an oblong form, and may be provided with a partition in the fire-box, so as to secure a division of the same, and also be provided with a top, which will have two pot-holes, so as to receive two vessels at the same time.

The manner in which this invention is to be operated is as follows: The apparatus is to be placed on a stove, and the smoke-flue D is to be made to communicate with the smoke-pipe of the stove, in which stove smoke-pipe a proper opening is to be made. The fuel, which may be either chips or other fuel, is placed in the fire-box A, and the dampers opened. After the fire is kindled, the damper *d'* may be partially closed, if desired. The dampers of the inlet-ports *a a* are also opened, and the fresh or cool air will be permitted to constantly enter the air-space B, to escape through the ports *c c* into the smoke-flue D; thence out into the pipe of the stove, and, in so moving, excessive radiation of heat will be prevented.

This invention is simple, and will enable a person to heat any vessel to cook, boil, steam, or warm, without excessively heating the room, and with a small amount of fuel.

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

The portable furnace constructed with double walls, with an annular air-space, B, between, ports *a*, for the admission of air to the said air-space, and ports *c*, located in the exit-flue D, permitting the heated air to escape in the said exit-flue without coming in contact with the fire in the fire-chamber, substantially as and for the purpose set forth.

HENRY J. LINGENFELTER.

Witnesses:

DELAVAN MANNING,

GEO. A. THOMPSON.