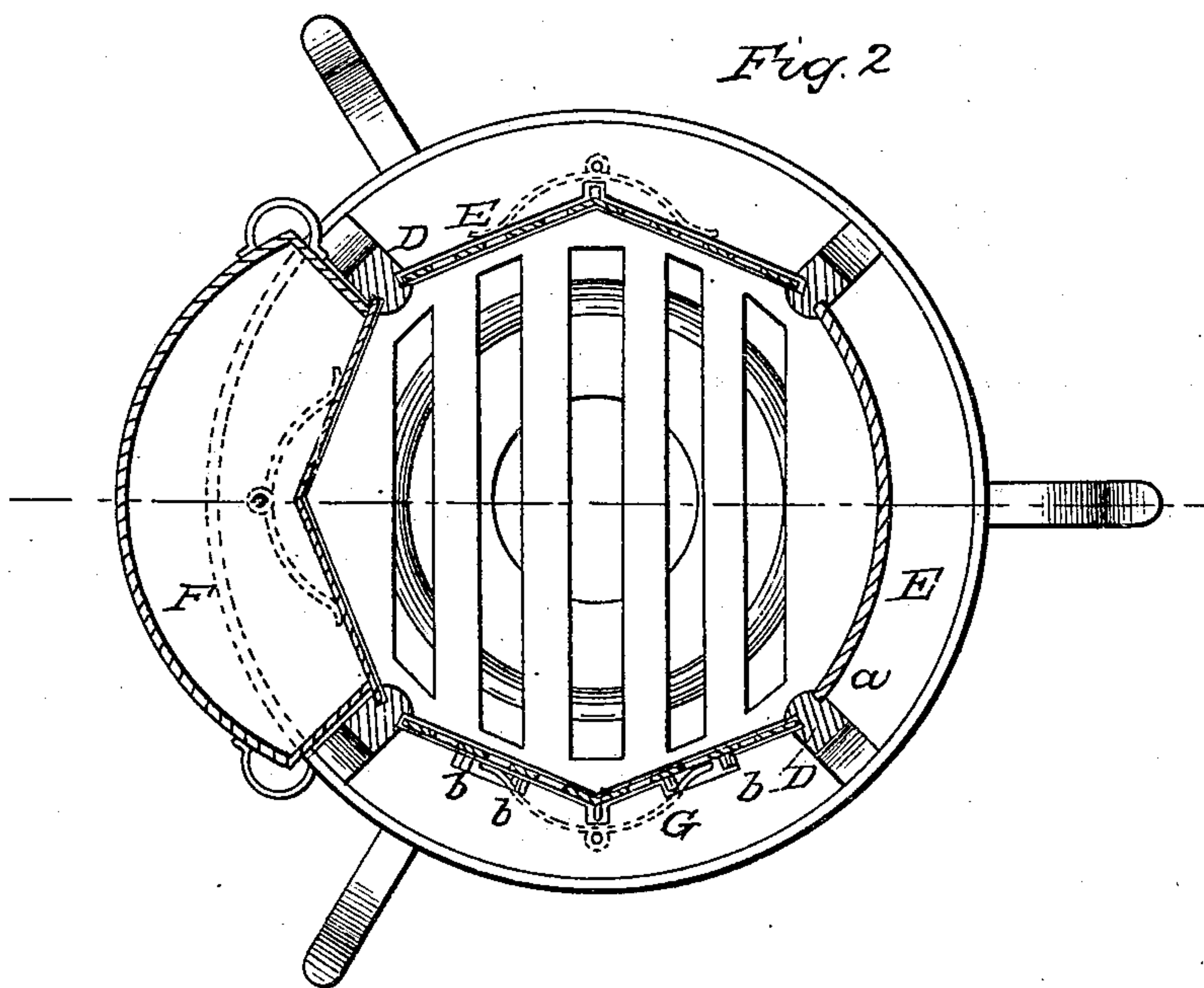
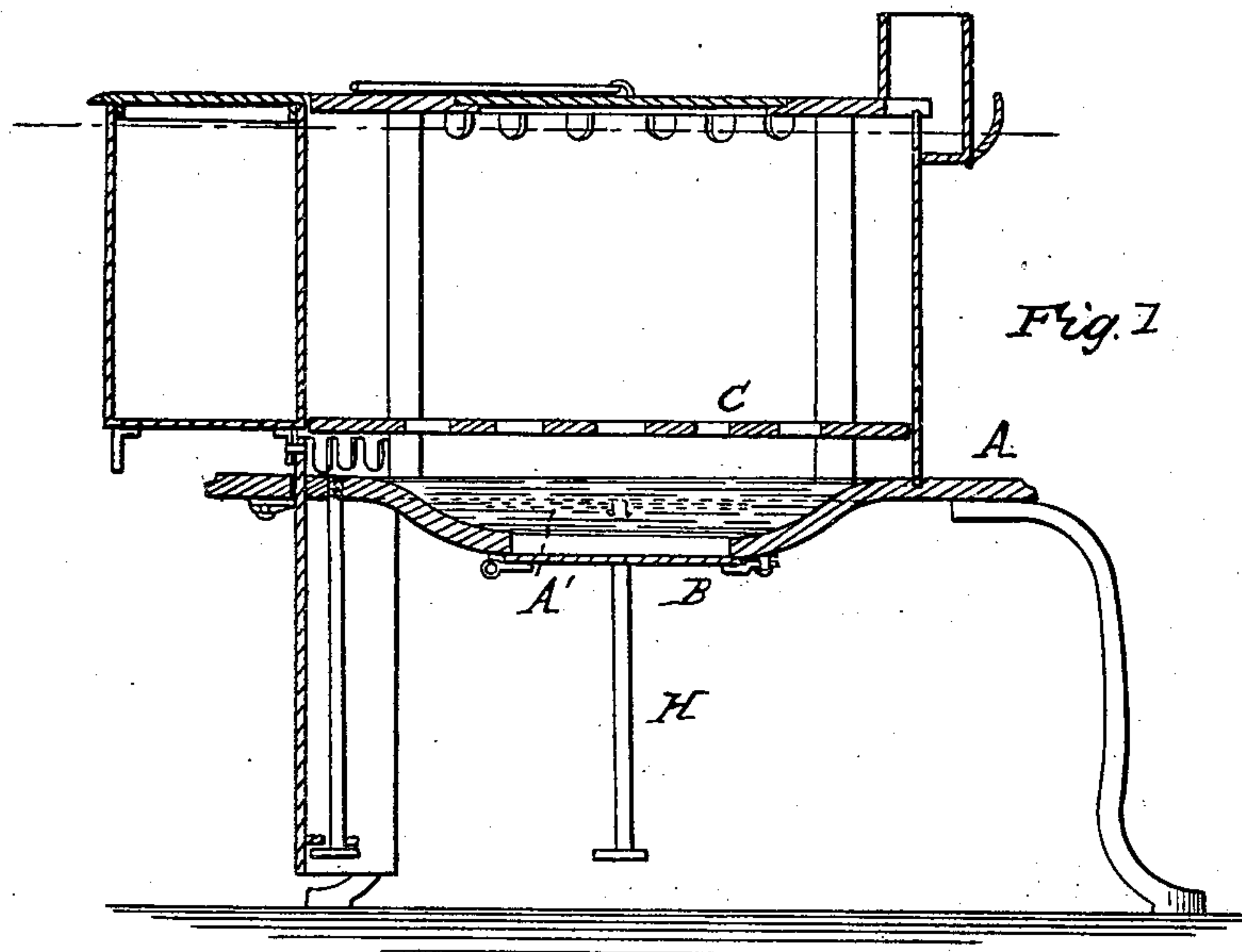


O. B. HALE.
Portable Cooking Stove.

No. 81,163.

Patented Aug. 18, 1868.



WITNESSES
W. C. Ash Kettle
J. A. Morgan

INVENTOR
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per Munn & Co.
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United States Patent Office.

OLIVER B. HALE, OF MALONE, NEW YORK.

Letters Patent No. 81,163, dated August 18, 1868.

IMPROVEMENT IN PORTABLE COOKING-STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, OLIVER B. HALE, of Malone, in the county of Franklin, and State of New York, have invented a new and useful Improvement in Portable Stoves; and I do hereby declare that the following is full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a central sectional elevation, and

Figure 2 represents a horizontal section on the line *x x* of fig. 1.

Similar letters of reference indicate like parts.

My invention relates to improvements in portable cooking-stoves, the object of which is to provide a more economical and convenient stove than those now in use.

It consists of a circular or any other conveniently-shaped bed-plate, supported properly upon legs, provided with a suitable central depression for an ash-chamber, having a door opening downward. From the said upper face rise vertically four or any other suitable number of brackets, supporting a top plate, which is provided with a central hole for kettles, and which, when not in use, is covered in the ordinary manner with a round cover. At a short distance above the bed-plate a fire-grate is supported.

The said brackets are also provided with vertical grooves on their sides, and the sides of the stove are divided into sections, which are made to slide vertically in the said grooves from the top downward, through slots provided for them through the bottom plate, whereby communication may be opened through the sides of the stove, with the fire at any desired place.

The cooking-vessels may be arranged to be suspended at the sides of the stove, when the said side plates are shoved down, thereby bringing the sides of the said vessels toward the stove directly in contact with the fire.

A represents the bed-plate, provided with a central depression or ash-receptacle, A', and a swinging bottom, B.

C represents the grate.

D represents the vertical brackets rising up from the bed-plate at suitable intervals, around the circumference of the same. These brackets are provided with vertical grooves, *a*, which sustain the side sections E, and which are arranged to slide them from the top downward through slots in the bed-plate, corresponding in shape to the cross-section of the said side sections, which may be curved, straight, or of any desired angle to suit the desired form of the stove.

F represents a boiler whose back is formed like one of the side sections of the stove, and is adapted to take the place of the latter. Said back is formed with side flanges adapted to enter the vertical grooves in the uprights D. To apply or attach the boiler to the stove, it is set upon the top of one of the side sections, and forced down, thus displacing the said section, and presenting the inner face of the said boiler directly in contact with the fire, when it is desired to heat the contents of it, or be raised above the fire when the same is not to be heated. The said boiler may have a lug projecting downward from the bottom, provided with a hole, and suitably arranged to hook over a pin in the upper edge of the said section, for the purpose of effecting the movement of the two parts in unison.

The said movable side sections of the stove are provided with springs G, under the bed-plate, arranged to bear upon the same with sufficient friction to hold the sections at any desired position.

The upper ends of the sectional plates are perforated with openings to allow the air to pass in over the fire when they are shoved up, and nothing is to be heated; but when they are shoved down, with a vessel above them, the side of which is brought into contact with the coals of the fire, the draught through these holes will lead through the lower portion of the fire.

H represents rods suspended from the bottom of the stove to limit the downward movement of the sections, and to serve as guides for the lower ends of the sections.

The upper ends of the sections may be provided with pins or hooks, *b*, for suspending a griddle or toasting-apparatus over the top of the fire, by drawing the section down far enough from the top to insert the same below it.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. A portable stove, whose sides are composed entirely of distinct sections, *E*, fitted to slide in vertical grooves, formed in the opposite sides of posts *D*, substantially as herein shown and described, for the purpose specified.

2. A stove provided with the vertical grooved ways or guides *D*, and with boilers or vessels *F*, arranged to slide in the said ways, to be brought into or moved out of contact with the fire, substantially as and for the purpose described.

3. The combination, with the sections *E*, of the springs *G* and guide-rods *H*, substantially as and for the purpose described.

4. The sections *E*, provided with the pins or hooks *b*, for suspending a boiler or other similar apparatus over the fire, substantially as and for the purpose described.

5. Perforating the sections *E* at or near their upper edges, so that when said sections are shoved down for the attachment of a cooking-vessel, the draughts of air will be directed through the fire, or above the fire, when the sections are fully up to their places, substantially as herein described and represented.

6. The combination, with a stove, arranged as described, of the ash-door *B*, substantially as and for the purpose described.

The above specification of my invention signed by me, this 13th day of March, 1868.

O. B. HALE.

Witnesses:

J. J. SEAVER,

R. S. BELL.