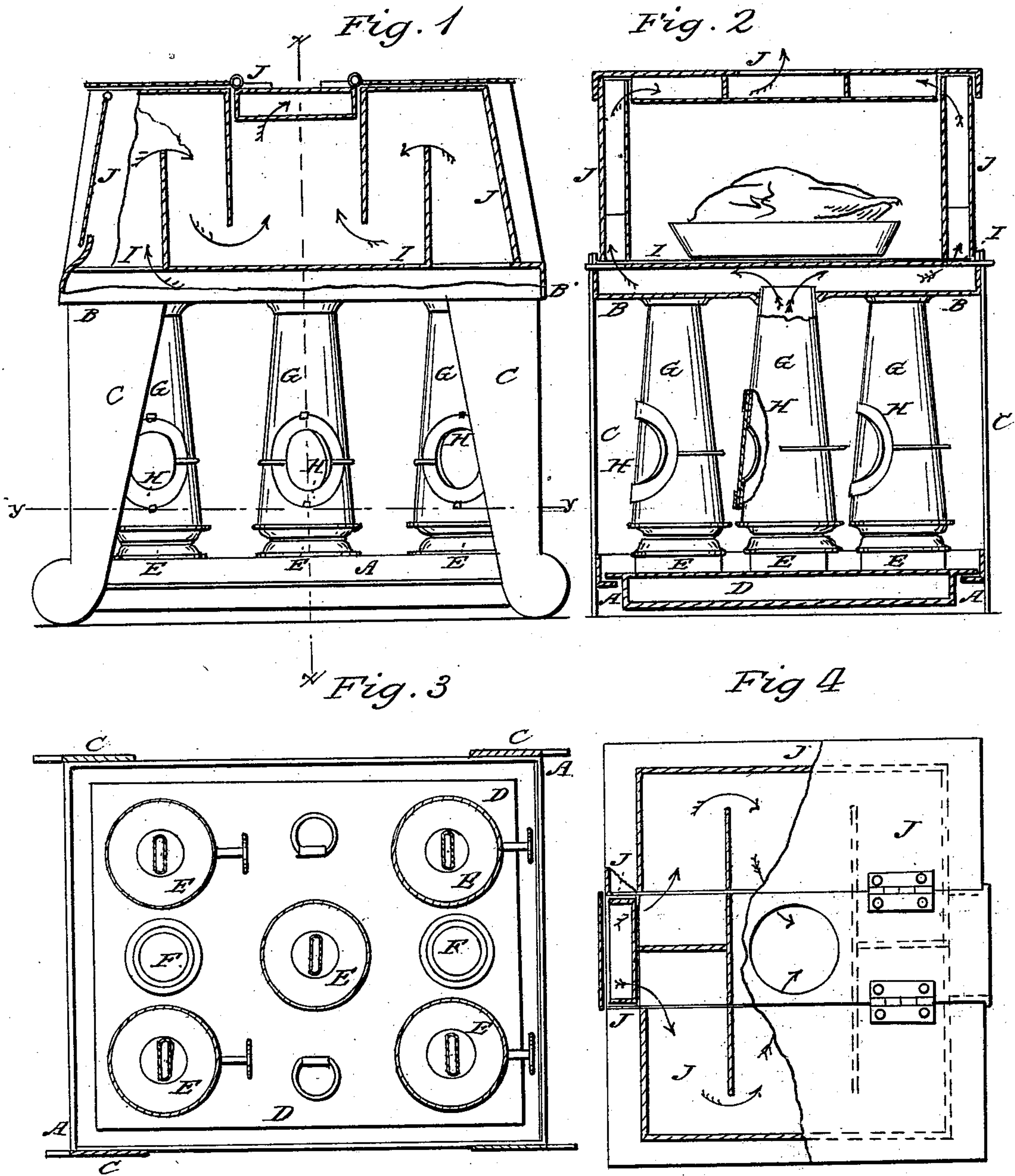


J. BANNIHR.

Lamp Stove.

No. 96,539.

Patented Nov. 9, 1869.



Witnesses:  
Chas. Nida  
Wm. Dean Overell

Inventor:  
John Bannhr  
PER Munn & Co  
attorneys



# United States Patent Office.

JOHN BANNIHR, OF HEMPSTEAD, NEW YORK.

Letters Patent No. 96,539, dated November 9, 1869.

## GAS-HEATER.

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, JOHN BANNIHR, of Hempstead, in the county of Queens, and State of New York, have invented a new and useful Improvement in Portable Stove; and I do hereby declare that the following is a 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 drawing, forming part of this specification.

Figure 1 is a side view of my improved stove, part of the side plate being broken away, to show the construction.

Figure 2 is a vertical cross-section of the same, taken through the line *x x*, fig. 1.

Figure 3 is a horizontal section of the same, taken through the line *y y*, fig. 1, the chimneys being removed.

Figure 4 is a top view of the same, part being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish a simple, convenient, effective, and inexpensive portable cooking-apparatus, which may be used in the house or out of doors, as may be desired or convenient.

A is the lower frame; B is the upper frame; and C are the posts or standards, by which the frames A and B are connected to each other.

D is a shallow box, fitting into the frame A, and provided with five, more or less, burners E, and with one or more openings, closed with screw-caps F, for convenience in pouring in a supply of oil or other burning-liquid.

When the stove is to be used with gas, the box D may be replaced by or may contain a coil of gas-pipe, provided with a suitable number of burners.

G are the chimneys of the burners E, which are made of metal, and the upper ends of which enter holes in the bottom plate of the frame B.

The chimneys G have each a hole formed through its side, of such a size as to allow the wick to be trimmed and lighted through it.

These holes are closed by shutters H, fitting closely to the chimneys G, and formed of plates of isinglass set in metallic frames.

The shutters H may be made to slide up and down upon the chimneys G, as shown in the drawings, or they may be hinged to said chimneys, and secured with latches or spring-catches, as may be desired or convenient.

I is a plate, placed in the frame B, a little above the bottom plate of said frame.

The plate I has four holes or openings formed in

it, two in each of its side edges, near the corners, as shown in figs. 1 and 2, for the escape of the heated air and gases from the space below the plate I.

J is the casing or oven, within and upon which the cooking is done.

The side walls of the casing J are made double, as shown in figs. 1 and 2; the space between said double walls being converted into a zigzag flue by partitions extending alternately from the bottom of said space nearly to its top, and from its top nearly to its bottom, as shown in fig. 1.

The top of the casing or oven J is made with double walls, the space between said double walls being converted into a zigzag flue by partitions, as shown in fig. 4, so as to guide the heated air and gases over the top of the oven before allowing them to escape through the egress-opening at the centre of said top, as shown in fig. 4.

The entire top may be stationary, or its end parts may be hinged to the middle part, in the manner of lids, as shown in figs. 1 and 4, for convenience in obtaining access to the interior of said oven or casing.

If desired, the middle part only of the top of the casing J may be made with double walls, the heated air and gases being allowed to pass directly to the egress-opening.

The top of the casing J may, if desired, be made with boiler-holes and covers, in the manner of the top of an ordinary stove.

The ends of the casing or oven J are made in the form of doors, and may be hinged or pivoted at their top, bottom, or side edges, as may be desired or convenient.

When the stove is to be used out of doors, it should have another plate between the burners E and the box D, and from this plate to the frame B, it should be encased upon three sides, to protect the lights from the wind, while keeping the oil-box or reservoir D perfectly cool.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

A portable stove, combining the metallic chimney G, with holes in their sides, and isinglass shutters, the double-walled oven J, and framework A B, oil-reservoir D, and burners E, each of said essential elements being constructed and arranged, with respect to the others, in the manner described.

JOHN BANNIHR.

Witnesses :

JAMES L. BROWN,  
J. W. C. GOULD: