

M. H. ROBERTS.
RANGE OR STOVE-OVEN.

No. 176,063.

Patented April 11, 1876.

FIG. 1

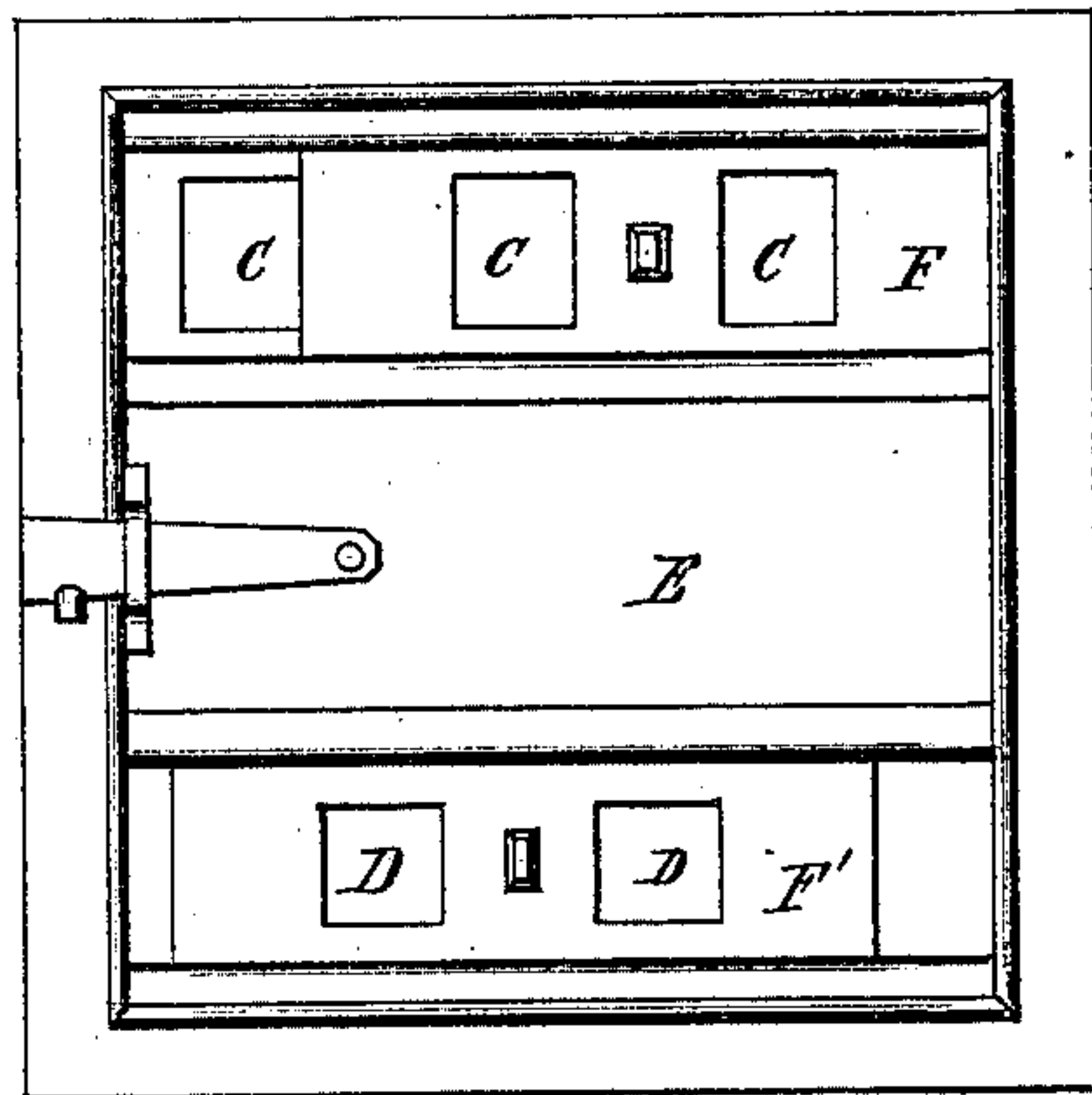


FIG. 2

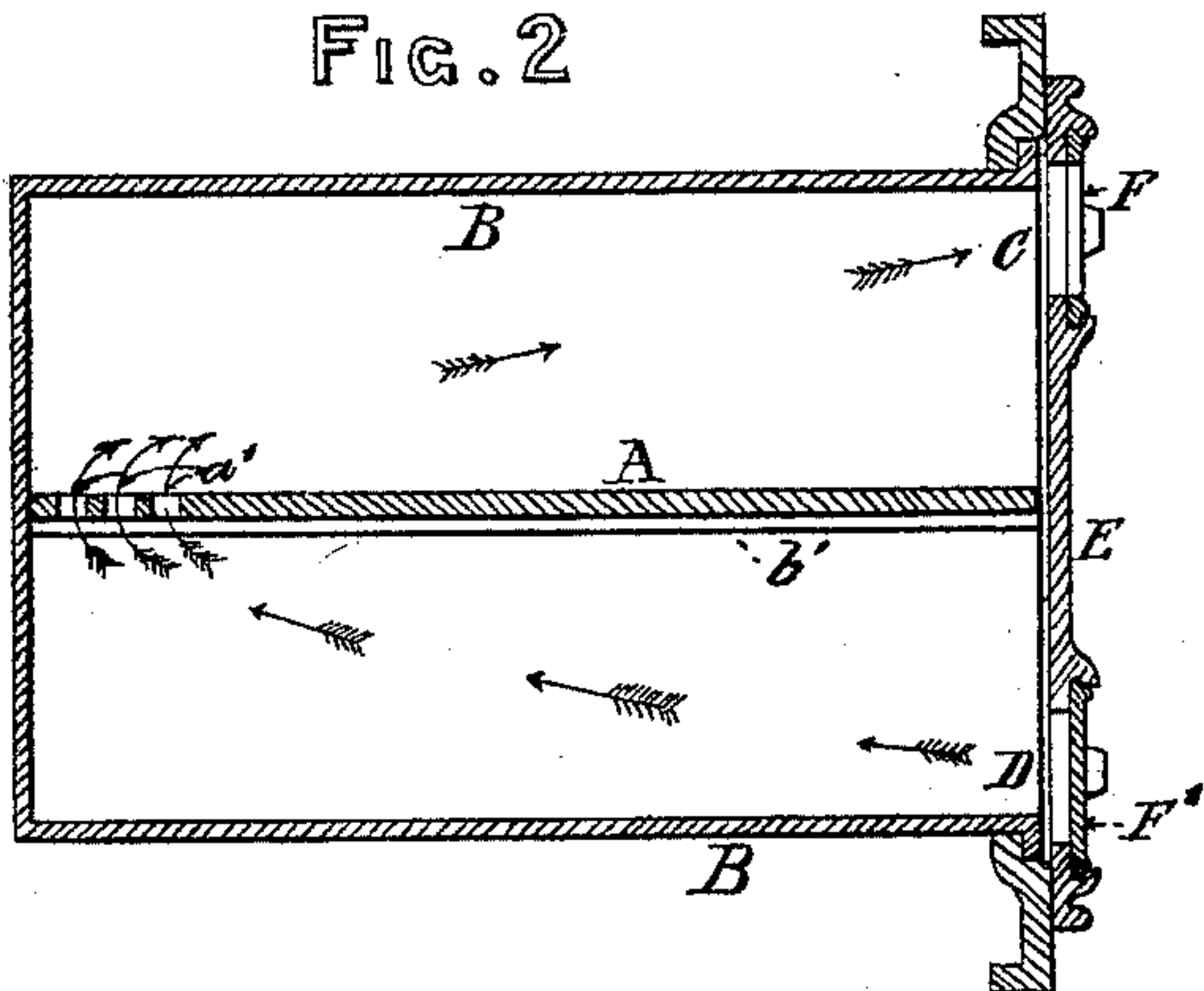


FIG. 3

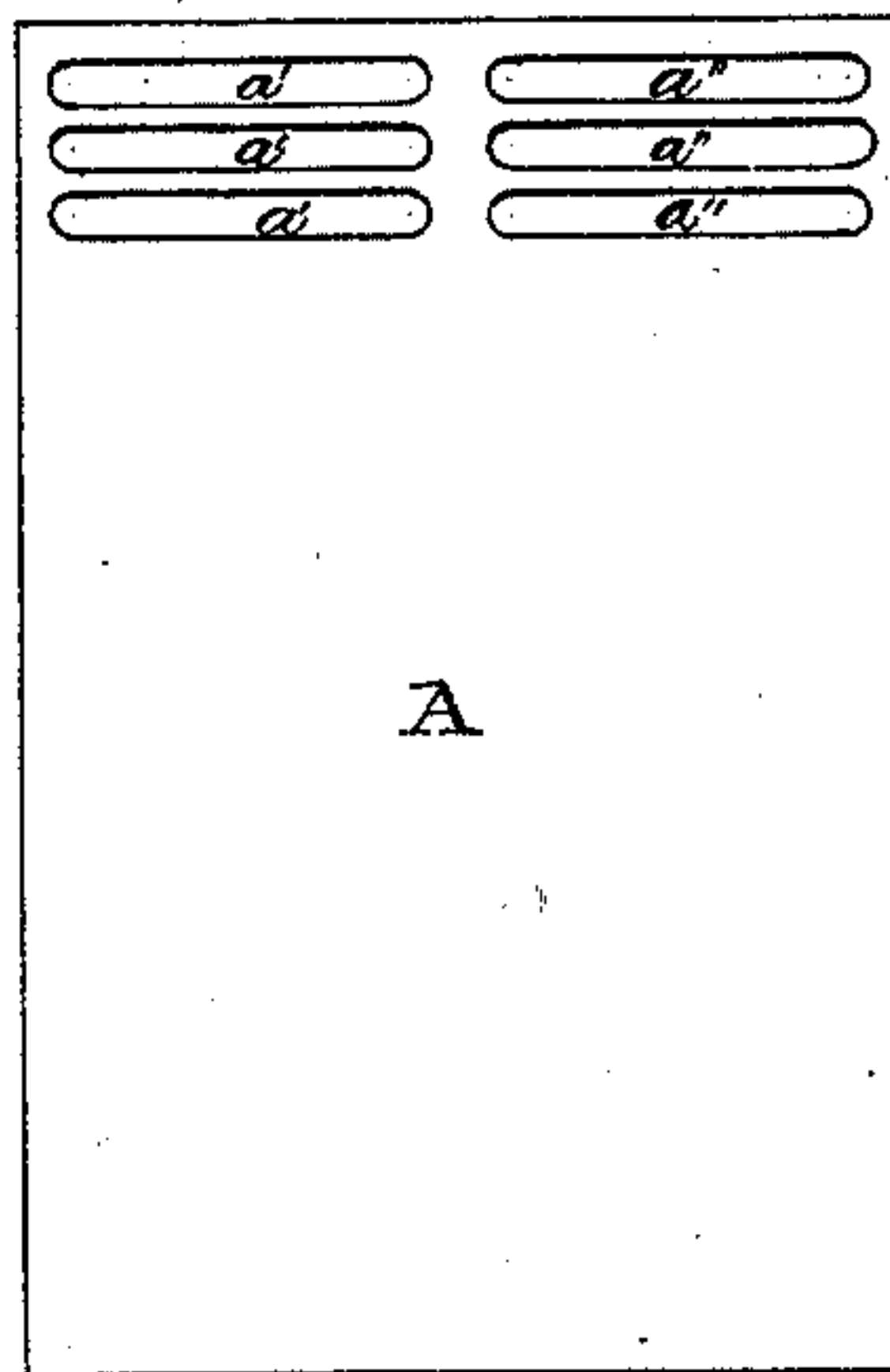
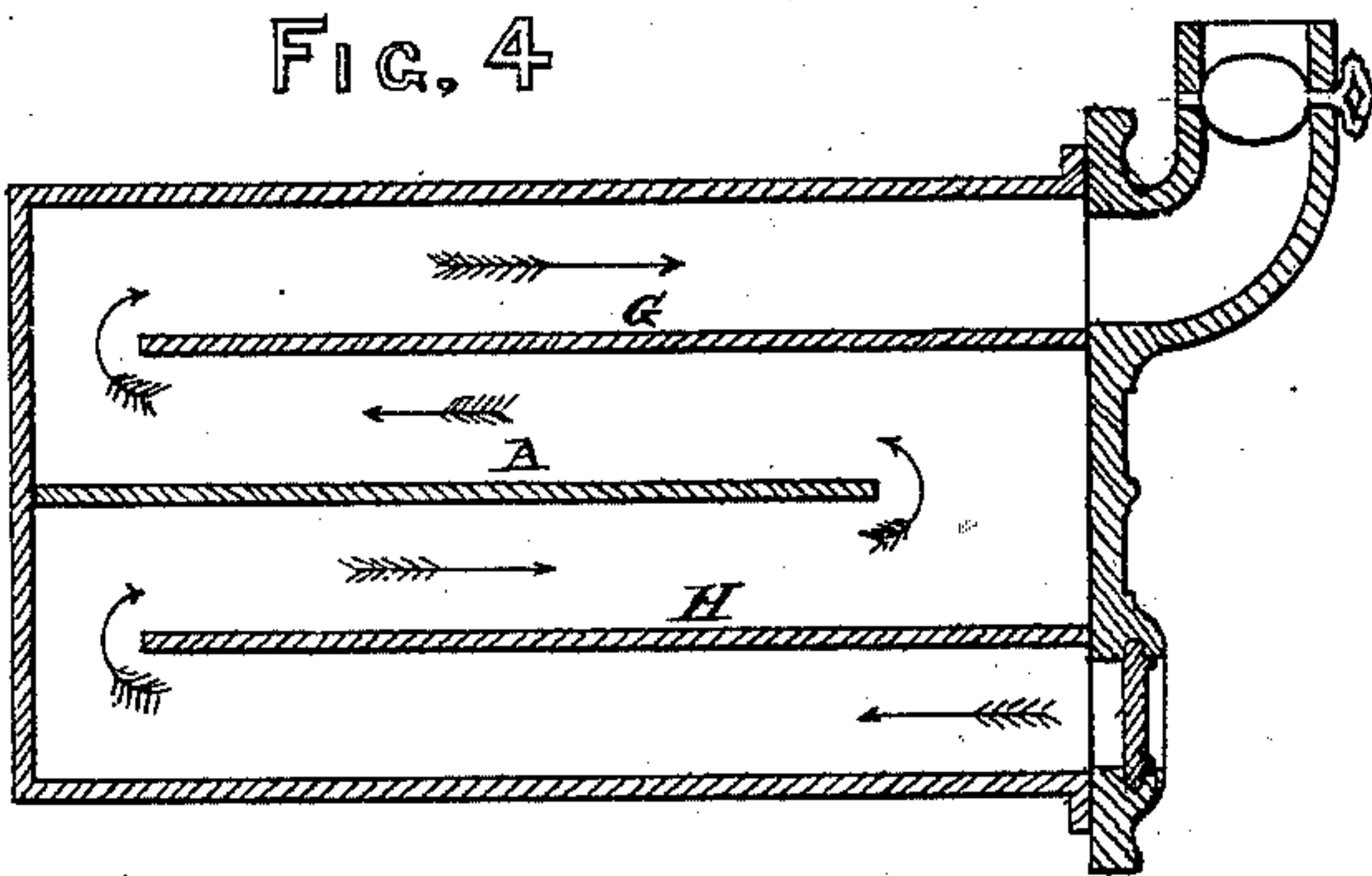


FIG. 4



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UNITED STATES PATENT OFFICE.

MATTHEW H. ROBERTS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN RANGE OR STOVE OVENS.

Specification forming part of Letters Patent No. **176,063**, dated April 11, 1876; application filed August 2, 1875.

To all whom it may concern:

Be it known that I, MATTHEW H. ROBERTS, of 1210 Market street, Philadelphia, Pennsylvania, have invented certain Improvements in Range and Stove Ovens, of which the following is a specification:

The object of my invention is to increase the heating-surface of range and stove ovens with the view of economizing fuel.

My invention consists in dividing the oven-space into two communicating compartments by a removable plate of sheet or cast iron arranged in the oven horizontally, said plate being made shorter than the corresponding section of the oven, or being perforated or slotted at one end, the oven-door being constructed with two sliding registers, one of which is located above, the other below, said plate.

The effect of this construction is to create a current of air from the room through the lower compartment, and over said plate through the upper compartment, of the oven, and thence on into the room in which the range or stove is situated.

In the drawings, Figure 1 is an elevation of the oven-door, showing the position of the registers. Fig. 2 is a longitudinal vertical section through the oven-door, showing the position of the plate which divides the oven-space. Fig. 3 is a plan of said plate. Fig. 4 is a modification of my invention, showing three plates dividing the oven-space into four compartments, the upper register being constructed in the form of a pipe and damper.

A is the plate or shelf, made with slots *a'* *a''* at its back end. It rests in guides *b'*, and is removable at pleasure. B is the oven, which is placed in its usual position in a kitchen range or stove, and heated from the exterior by the flame and hot gases from the fire which circulate around it. C and D are the upper and lower registers in the oven-door E. F F' are the register-slides.

When the heat given out by the range or stove is not sufficient the registers C and D are opened for the admission of the air of the room. The air enters the lower compartment through the lower register D, passes back under the plate A, up through the opening or openings at the rear end of this plate into the upper compartment, and out through the upper register F into the atmosphere of the room.

A modification of my invention is shown in Fig. 4, where I provide three or more plates or shelves, opening back and front alternately, as shown, the object of using the increased number of partition-plates being to cause the air to come into contact with a larger area of radiating-surface, and thus increase its temperature; but I prefer the use of a single partition-plate, because this construction secures the increased heating of the air, and at the same time permits the use of the plate as a shelf upon which cooking can be carried on. In this figure is shown an elbow-pipe provided with a damper, and with a register (not shown) placed below said damper. By this means the current of air from the upper compartment of the oven can be directed either into the room where the stove or range is situated or into another room, at pleasure.

The pipe and damper, and register in the pipe below the damper, (respectively shown in Fig. 4, and last described,) may occupy the place of register C in Fig. 2.

I claim—

An externally-heated oven for cooking purposes, in combination with partition-plate A, door E, and registers F F' above and below the said plate, to warm the air of a room by circulating it through the oven, substantially as set forth.

MATTHEW H. ROBERTS.

Witnesses:

JOHN F. GRANT,

PARK MCFARLAND, Jr.