

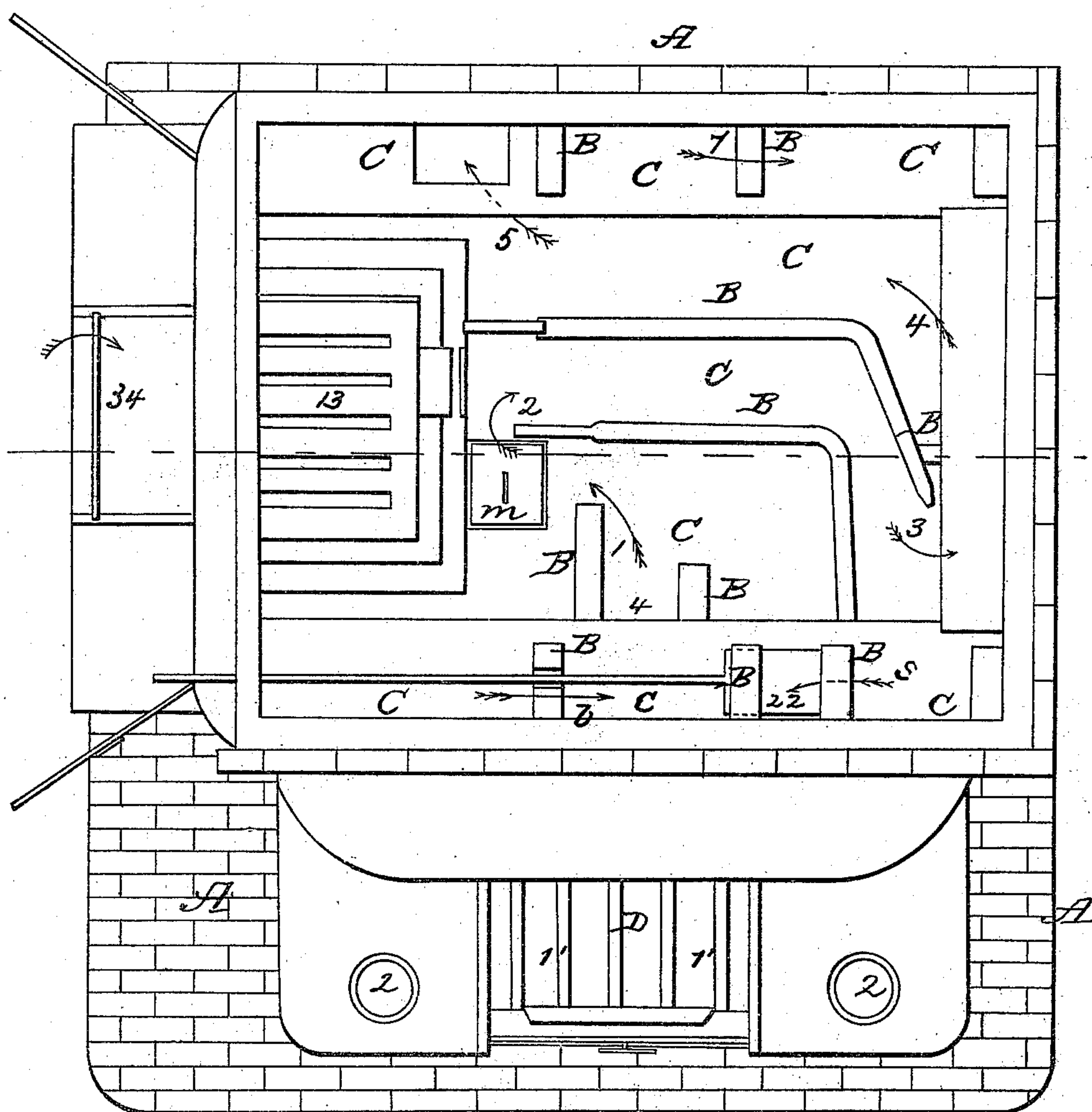
W. PETTET.

Bake Oven.

No. 21,147.

Patented Aug. 10, 1858.

Fig. 1

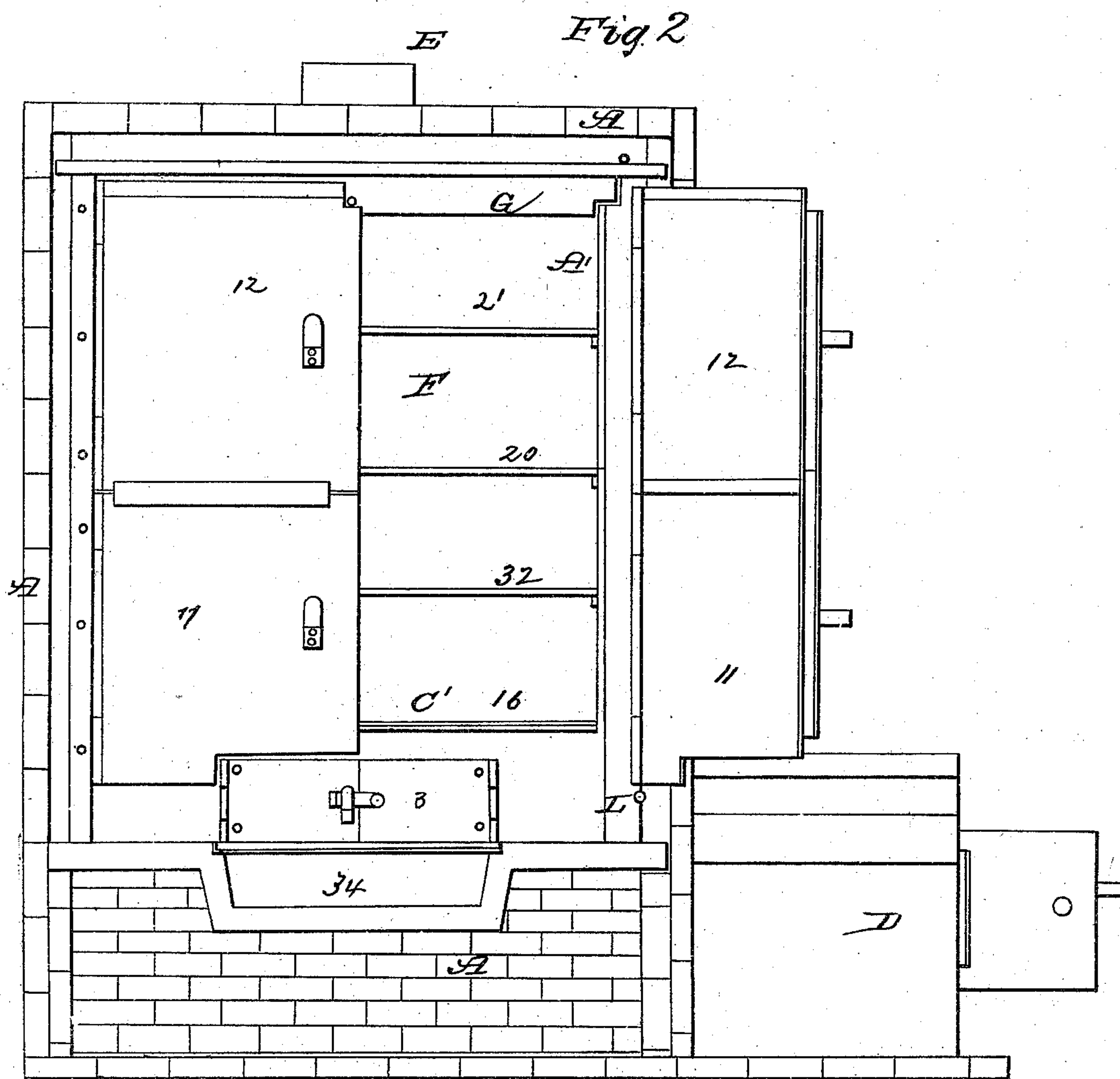


W. PETTET.

Bake Oven.

No. 21,147.

Patented Aug. 10, 1858.



W. PETTET.

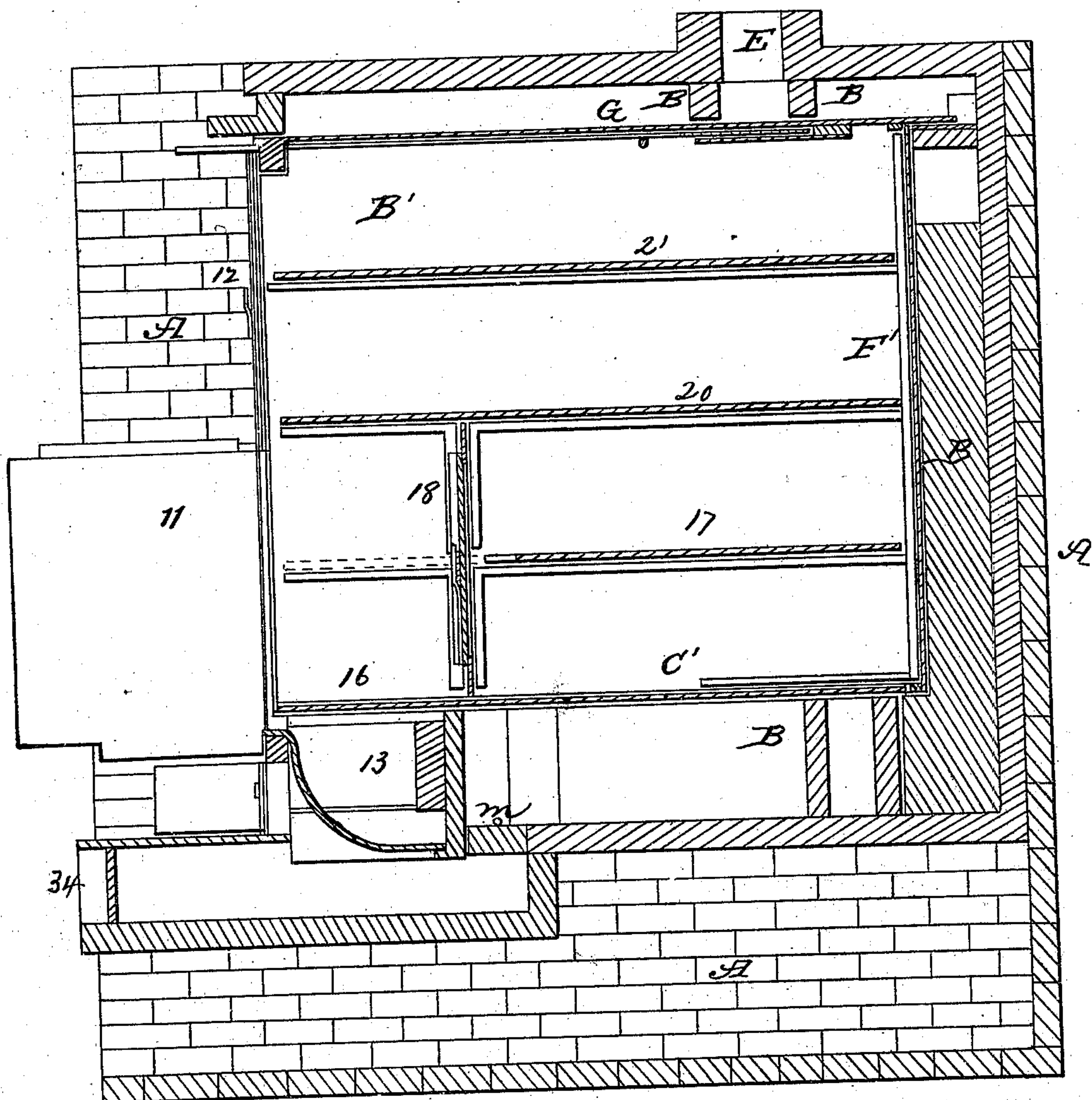
3 Sheets—Sheet 3.

Bake Oven.

No. 21,147.

Patented Aug. 10, 1858.

Fig. 3





# UNITED STATES PATENT OFFICE.

W. PETTET, OF NEW YORK, N. Y.

## BAKE-OVEN.

Specification of Letters Patent No. 21,147, dated August 10, 1858.

*To all whom it may concern:*

Be it known that I, WILLIAM PETTET, of the city of New York, in the State of New York, have invented a new and useful Improvement in Bake-Ovens, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings through letters of reference marked thereon, forming part of this specification, in which—

Figure 1 represents a plan or top view, with the cover of the oven and all the shelves and lining removed, also the cover of the side furnace withdrawn. Fig. 2 represents a front elevation of the oven with the doors on one side left open, and one door of the side furnace open, the shelves in the oven being arranged for winter use, when the fire is to be made in the side furnace. Fig. 3 represents a section taken on the line *x x* on Figs. 1 and 2 showing the shelving and inner doors of the oven as arranged for summer use.

The same letters of reference occurring on the several figures indicate corresponding parts.

The nature of my invention consists in so arranging and constructing an oven that it may be heated by an exterior furnace that will also heat the apartment in which it is placed, or by one arranged in such a manner that its heat will be almost imperceptible in the room, a result much to be desired in the summer season; secondly in so arranging and constructing the lining of the oven that it may be entirely removed to give free access to the flues in every part for the purpose of cleaning to insure the perfect circulation of the heat from the furnace.

To enable others to erect and use my oven arrangement, I will now proceed to describe its construction and operation.

(A) represents the brickwork or masonry surrounding the oven, on the interior of which are a series of partitions (B) which when the lining is all in place form the flues (*c*); to one side of the brickwork is a furnace (D) projecting into the room which is so constructed that it may be used for burning coal with the grate bars (1') in place, or for wood by removing them; in the top of this furnace are holes (2) on which to boil pots, &c.; that part immediately over the fire is made to slide back for the purpose of putting on fuel. The heat from this fur-

nace passes the flue (4) in which is a damper to regulate it, (or close it up entirely when the summer arrangement is intended to be used as will be hereinafter described;) the heat passes through the flues in the direction indicated by the arrows, commencing with the arrow (No. 1) when the fire is made in the side furnace (D) and with that (No. 2) when in the other furnace; at (No. 3) it ascends a flue at the rear end of the oven and descends to (No. 4), whence it passes along the bottom and at (No. 5) ascends a side flue, crosses the top and descends the other side of the oven; at (No. 6) it enters the bottom of the next flue, rises, recrosses the top of the oven, and descends the opposite side to (No. 7), where it passes into the bottom of the next flue and again rises, passing over the top, descends to (No. 8), where it rises, passing the damper (22); and escape into the chimney at the opening (E) on the top of the oven.

The interior or lining of the oven is formed of a series of cast iron plates (A', B', F, C', G,) having ribs and flanges so arranged that they fit together and support each other in their places without the use of screws and are to be put up in the order of the letters above designating them and taken down in reverse order—i. e. beginning with the letter (G)—for the purpose of cleaning the flues, which can be done with but little trouble. The shelves (32, 20, 21) in the oven also slide in and out on ledges on the side plates and are made somewhat shorter than the oven to allow a free circulation of air through all its compartments.

The top plate or roof (G) of the oven has a damper (H) at or near its center to allow the escape of hot air should the oven become over heated.

The front of the oven is closed with two pairs of doors (11, 12) so that any portion of it may be accessible without opening the entire front.

To prepare the oven for summer use the damper (L) at the back of the furnace (D) and all its openings must be closed, the lower doors (11) of the oven opened and the shelf (32) withdrawn and a shorter one (17) inserted in its place when the temporary door frame and doors (18) are set in their place as represented in Fig. 3, through which access is had to the lower part of the oven and through the upper doors (12) to



the upper part. The fire is then made in the furnace (13), which is also fitted with a sliding top (16), in which are boiling holes similar to the furnace (D). The front plate (34) of the ash pit is made to withdraw to facilitate the removal of the ashes; and in the flue under the oven is a valve or trap (m) to sweep the soot and ashes through into the ash pit.

10 In this arrangement when the lower outside doors (11) of the oven are closed the entire furnace is within the inclosure of the oven so that all its heat is absorbed there and is not felt in the room.

15 In order to remove the interior of the oven for the purpose of cleaning the flues remove the plates in the following order: first the upper plate (G), by drawing it out at the front, then the shelves one by one, commencing at the top, next the bottom, then the back, and lastly the sides of the oven, when all the flues will be open to view and accessible for cleaning. The plates must be returned to their places after cleaning, in the reverse order.

25 The advantages of this arrangement it is

presumed are too obvious to need any comment here.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is— 30

1. The arrangement and construction of an oven with two furnaces the one being located on the exterior and the other on the interior of the oven each communicating with the same series of flues so that either one may be used at pleasure whereby the heat may be retained within the oven or diffused through the apartment substantially as set forth. 35 40

2. I claim, so constructing the interior of the above described oven and its flues that the entire lining may be removed for the purpose of clearing the flues, and replaced substantially as described. 45

In testimony whereof I have hereunto set my hand this twenty-eighth day of May, 1858, before two subscribing witnesses.

WM. PETTET.

Witnesses:

ELIJAH SMACK,  
THOMAS E. JAYNE.