

J. STUBBERS.  
OVEN FOR VAPOR OR GAS STOVES.

No. 401,723.

Patented Apr. 16, 1889.

Fig. 1.

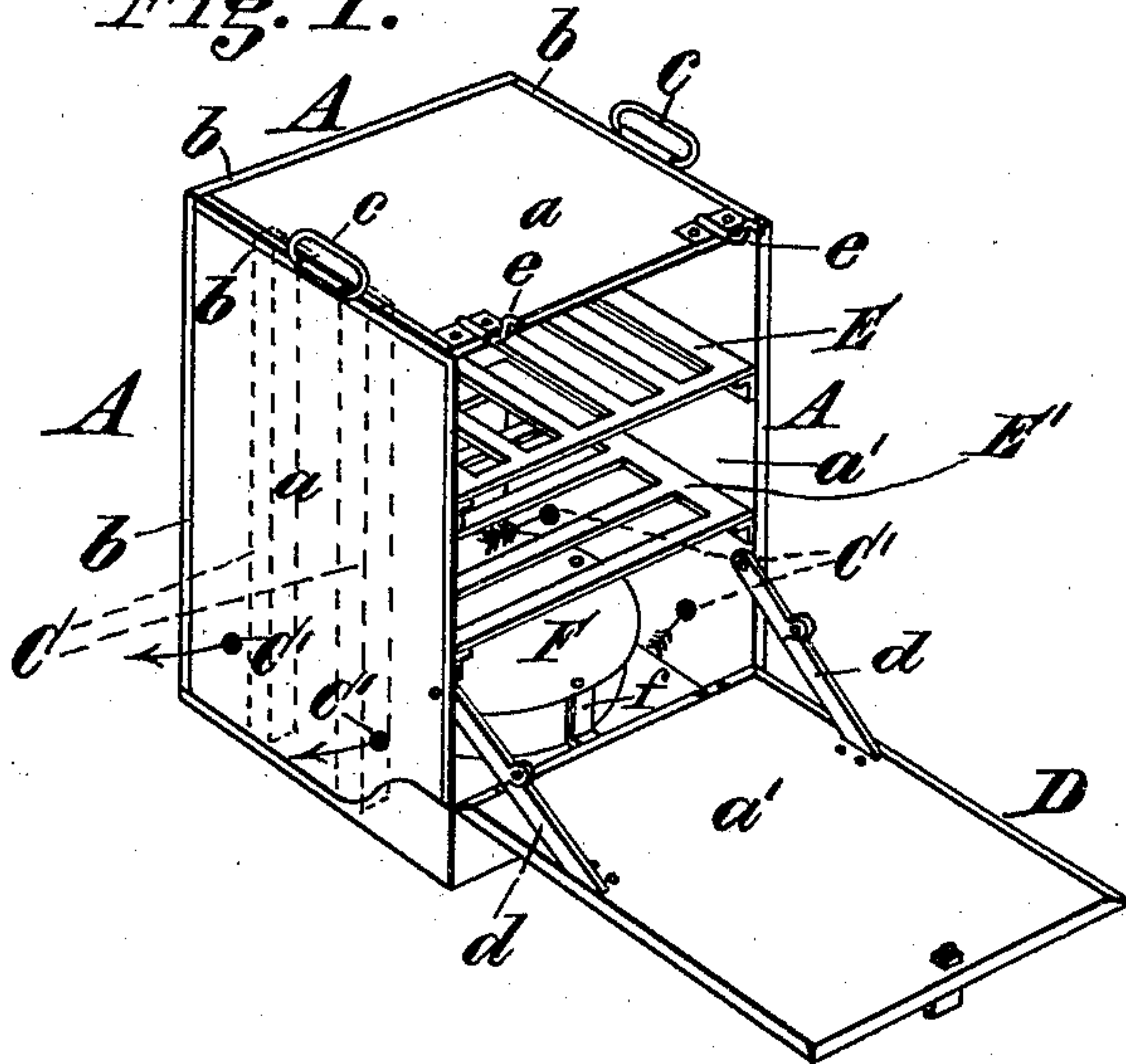


Fig. 2.

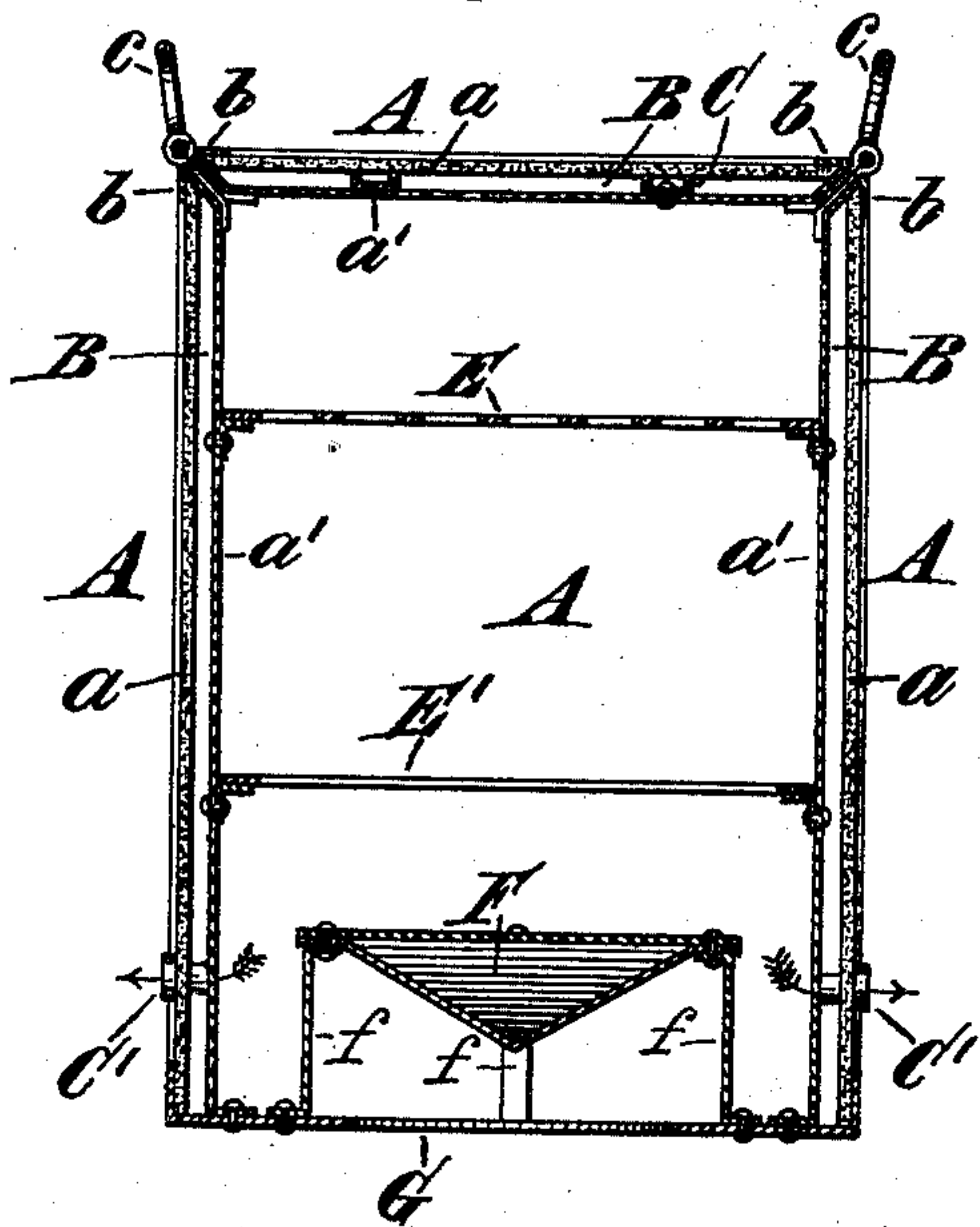
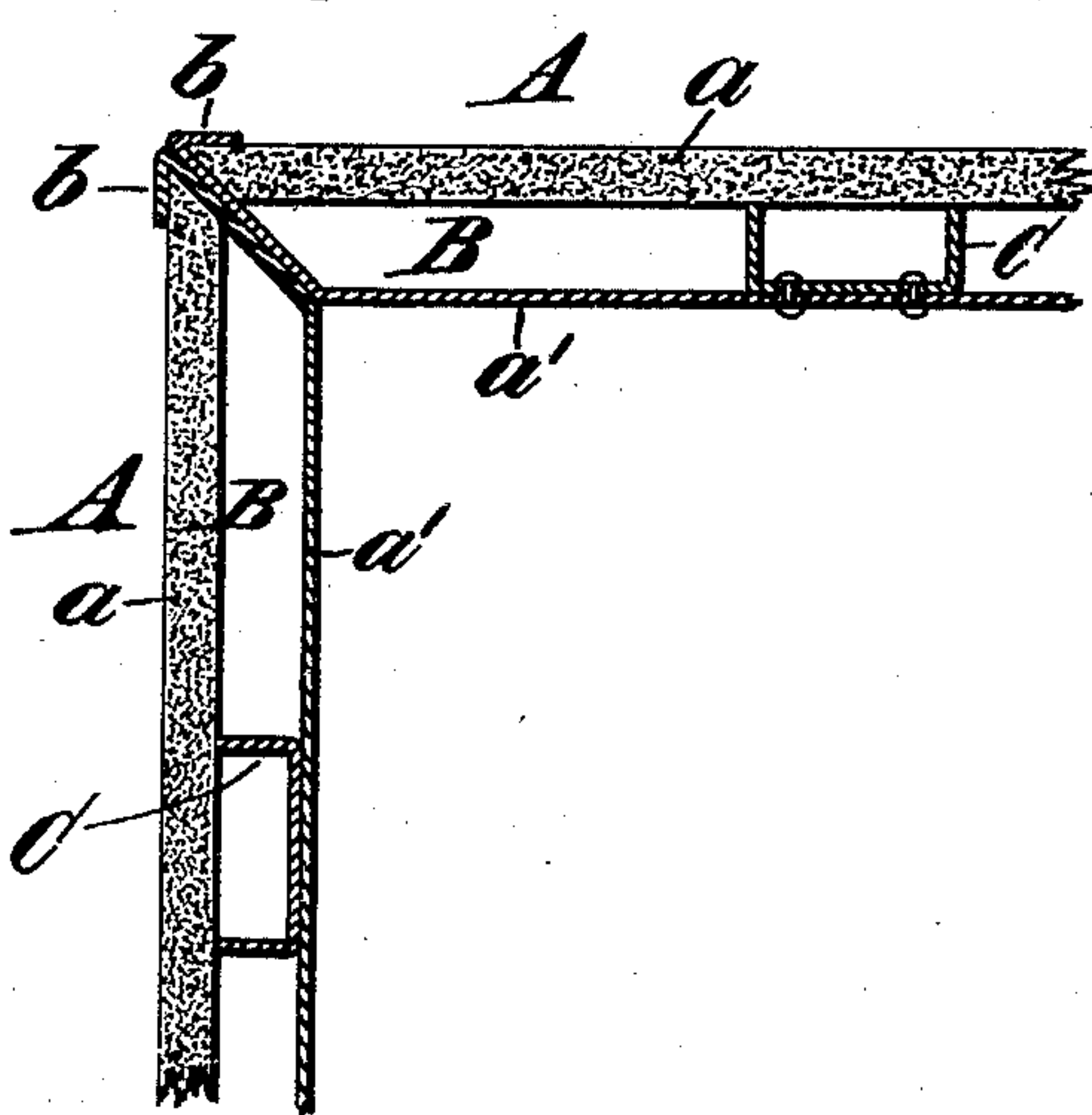


Fig. 3.



ATTEST

J. H. Charles Smith.  
John Adam

INVENTOR

Joseph Stubbers,  
by John E. Jones,  
his Attorney.

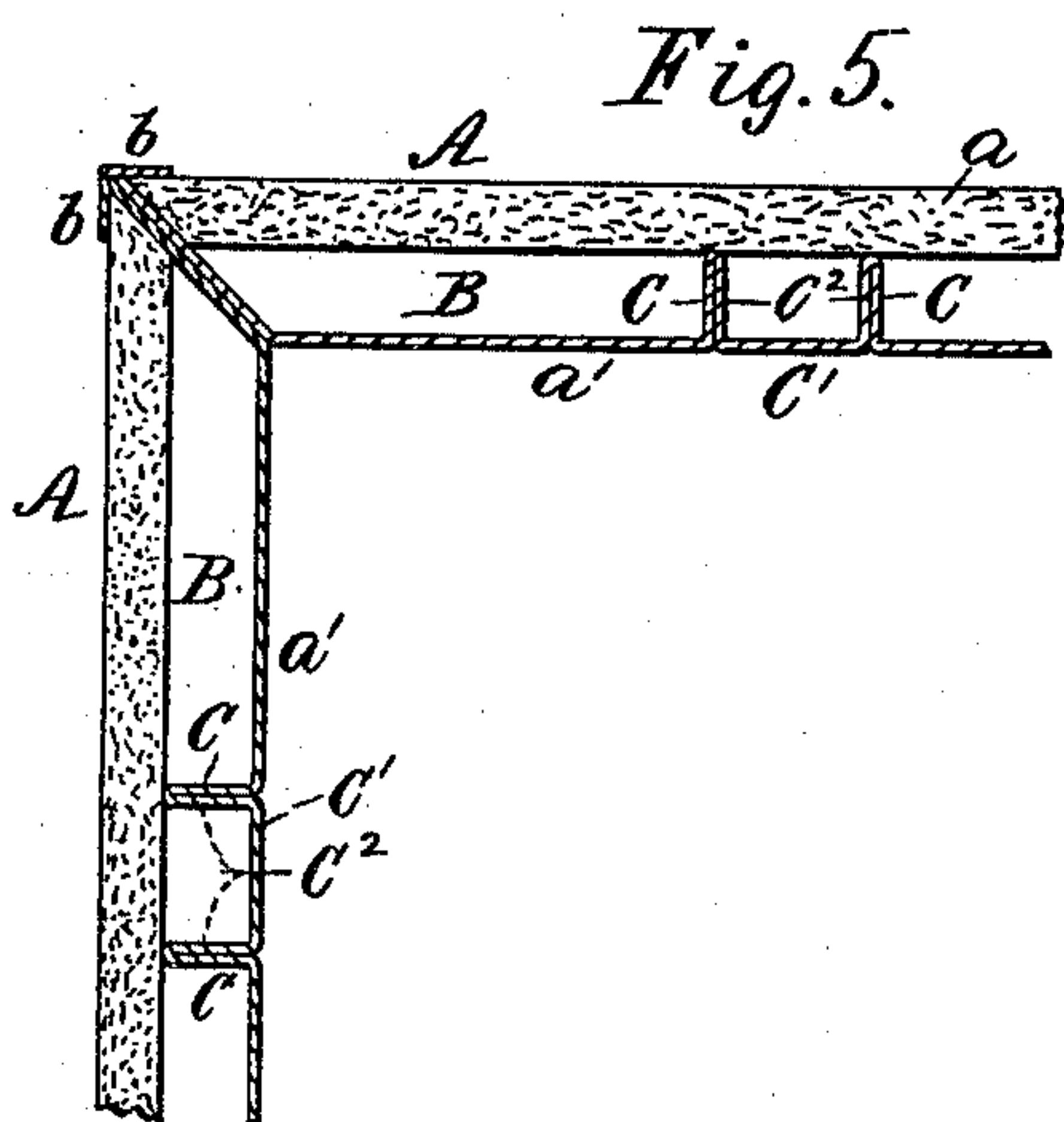
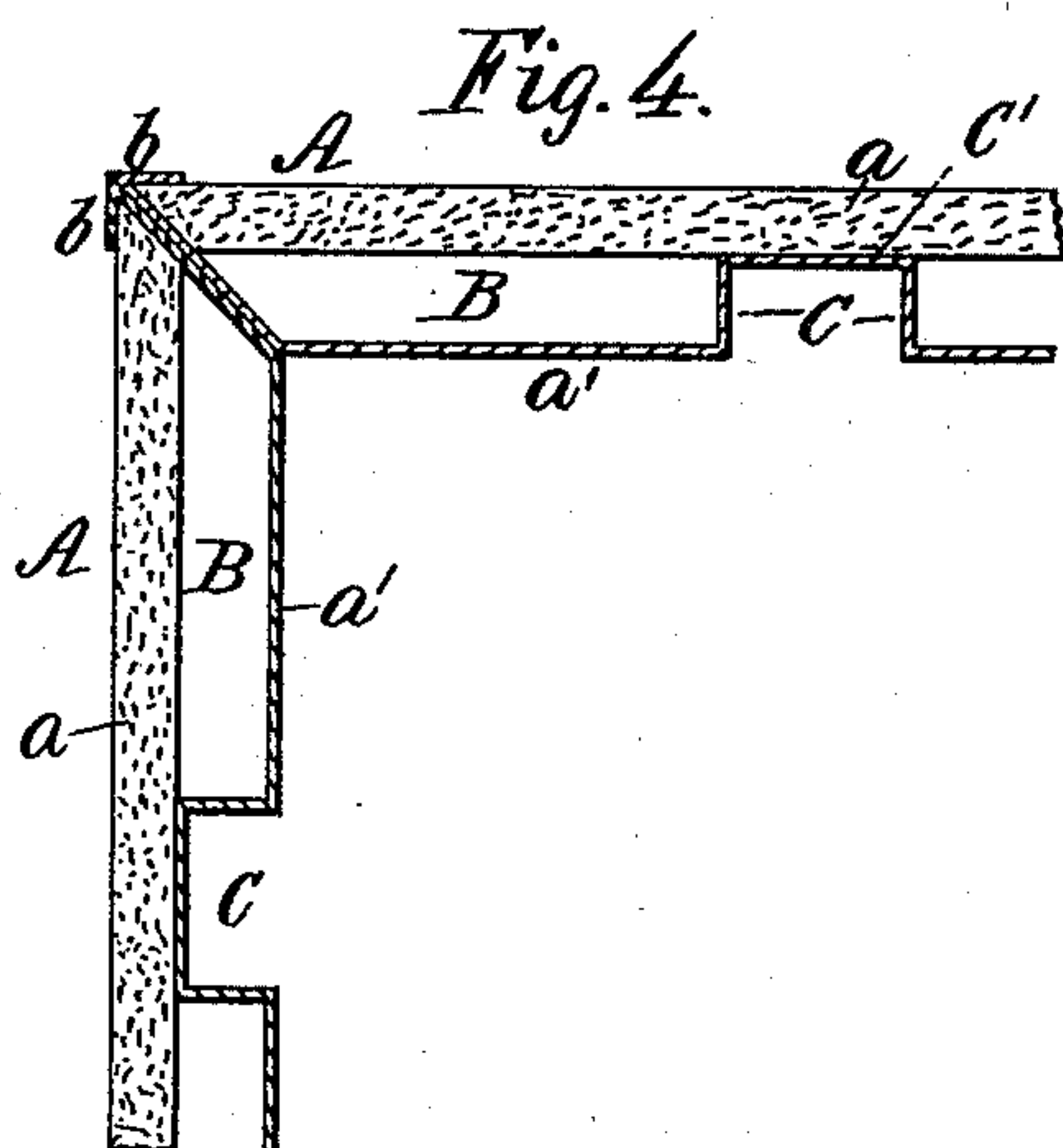
(No Model.)

2 Sheets—Sheet 2.

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Witnesses:  
*Arthur J. Smith*  
*B. Donaldson.*

Inventor  
*Joseph Stubbers,*  
by *John E. Jones,*  
Attorney.



# UNITED STATES PATENT OFFICE.

JOSEPH STUBBERS, OF CINCINNATI, OHIO.

## OVEN FOR VAPOR OR GAS STOVES.

SPECIFICATION forming part of Letters Patent No. 401,723, dated April 16, 1889.

Application filed November 4, 1887. Serial No. 254,274. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH STUBBERS, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Ovens for Vapor or Gas Stoves, of which the following is specification.

My invention relates to an improved oven for use in connection with vapor or gas stoves; and it consists in an oven having an oven-wall composed of two sheets—one of asbestos or other similar non-conductor on the outside, and the other of metal on the inside, the latter being turned or flared outwardly at any suitable angle at its respective ends and sides to form a frame for receiving the said sheet of asbestos, and then a part of said flared edges lapped over the edges of said asbestos sheeting to hold it in place, and at the same time constitute a substantial seam or binding on the various corners of the oven when all the walls thereof are set in place.

Other features of my invention will be fully set forth in the following description of the accompanying drawings, in which—

Figure 1 is a perspective view of my improved oven, showing the drop-door thereof open; Fig. 2, a central sectional elevation of the oven, looking toward the rear thereof; and Fig. 3, an enlarged (full size) horizontal section of one of the corners or joints of the oven. Figs. 4 and 5, Sheet 2, illustrate modes of forming out of and integral with the inner metal wall of the oven the brace preferably employed between the said inner and outer walls.

A represents the several walls of the oven, being the side, rear, front, and top ones thereof. Each of said walls is double, being composed of two sheets, the outer one, *a*, of asbestos or other suitable non-conducting material, and the inner one, *a'*, of metal. The metal sheets *a'* are turned or flared outwardly at their respective ends and sides, preferably at an angle of forty-five degrees, or approximately so, as shown, and thereby form frames to receive the asbestos sheets *a*, their edges *b* being turned down upon the said sheets *a* to form corner bindings or seams to hold the sheets *a* firmly in place. Sheets

*a* are thus set in their sheet-metal frames *a'* at a suitable distance away from the bodies or flat portions thereof, as clearly shown in Figs. 2 and 3, and thereby an air-space, B, is provided in each of the aforesaid walls of the oven, which effectually obviates any radiation or escape of the heat.

It is obvious that the sheets *a'* could be bent at a right angle, or a different angle to that shown and just described, as angular bracing-strips C are introduced in the air-space between the sheets *a* and *a'* of each wall to form backing-stops to maintain the asbestos sheets *a* against compression and consequent loosening and release from their binding-seams. Strips C are shown in dotted lines in Fig. 1 and in cross-section in Figs. 2 and 3, part of them being shown riveted in place, which is the preferred manner of securing them against shifting or displacement.

It is also quite obvious that the metal sheets *a'* could be so bent or stamped as to form bracing-stops within themselves. Two modes of thus bending or stamping the metal sheets *a'* to form braces are shown in Figs. 4 and 5. In Fig. 4 the sheet metal is bent outward, forming the flanges C and the connecting end piece, C'. In Fig. 5 the sheet metal is bent outward and then folded back, thus forming the flanges C and return-flanges C<sup>2</sup> and connecting-piece C'.

Flues or vents C' are made in the side walls of the oven, preferably near their lower ends, to permit the accumulating moisture from things being baked or cooked and burned air at the bottom of the oven to pass off and escape. The vents C' being composed of short tubes or thimbles crossing or spanning the air-spaces B in the oven-walls and passing through both walls *a* and *a'*, no heat can possibly escape through them from said air-spaces, and the oven when once properly heated can be very easily kept so at a very slight expense and low degree of heat from the burner.

*c c* are the oven-handles.

D represents a drop-door hinged at the lower end of the front of the oven and suspended by means of the two-part jointed stays *d d*. *e e* are latches for fastening the door D when closed. This door D constitutes



the front wall, hereinbefore specifically described. Should the door be varied in size, its construction will be the same—that is to say, the flared ends of the metal of the door  
5 will be lapped over the edges of the adjacent asbestos sheet.

E E' are the ordinary grated or open shelves for holding the baking-pans.

F represents a flame-deflector or hood  
10 mounted on legs *f* in the bottom of the oven.

G is a central opening in the bottom plate of the oven, adapted to receive the vapor or gas burner, as customary.

In the operation of my oven, with its asbestos facing and air-spaces, it will be seen that  
15 the heat will be kept or held within it free from external radiation, thereby making it effective at a very low degree of heat from the burner and materially reducing the amount  
20 and expense of fuel used. Excessive unnecessary heat in warm weather is also very materially modified thereby, as is obvious.

I claim—

1. In a bake-oven for vapor or gas stoves,  
25 the walls A, each composed of two sheets, one of asbestos or other suitable non-conducting material on the outside, and the other of metal on the inside, the latter being turned or flared outwardly at its ends and sides to form a frame  
30 for receiving the said sheet of asbestos, and then a part of said flared ends and sides lapped over the edges of said asbestos sheeting to hold it in position and at the same time furnish a protecting seam or binding on the corners of the oven, substantially as herein set  
35 forth.

2. In a bake-oven for vapor or gas stoves, the walls A, each composed of two sheets, one of asbestos or other suitable non-conducting  
40 material on the outside, and the other of metal

on the inside, the latter being turned or flared outwardly on the ends of the sides next the door, and the ends of the door being likewise turned or flared outwardly, the flared ends being lapped over the edge of the adjacent  
45 asbestos sheeting, substantially as and for the purposes specified.

3. In a bake-oven, an exterior wall of asbestos or other non-conducting substance and an inner wall of sheet metal, these two walls in-  
50 closing an air-space between them, the edges of the inner metal wall crossing the air-space and lapping around the outer edges of the outer wall, substantially as and for the purposes specified.

4. In a bake-oven, an exterior wall of asbestos or other non-conducting substance and an inner wall of sheet metal, these two walls in-  
55 closing an air-space between them, the edges of the inner metal wall crossing the air-space and lapping around the outer edges of the outer wall, and braces or stops for holding apart the central portions of the said outer and inner walls, substantially as and for the purposes specified.

5. In a bake-oven, the door composed of two sheets, one of asbestos or other suitable non-conducting material on the outside, and the other of metal on the inside, an air-space be-  
60 ing present between the outside and inside sheets, the ends of said metal sheet lapping over the edges of the adjacent asbestos sheet, substantially as and for the purposes specified.

In testimony of which invention I have here-  
75 unto set my hand.

JOSEPH STUBBERS.

Witnesses:

JOHN E. JONES,  
JOHN ADAM.