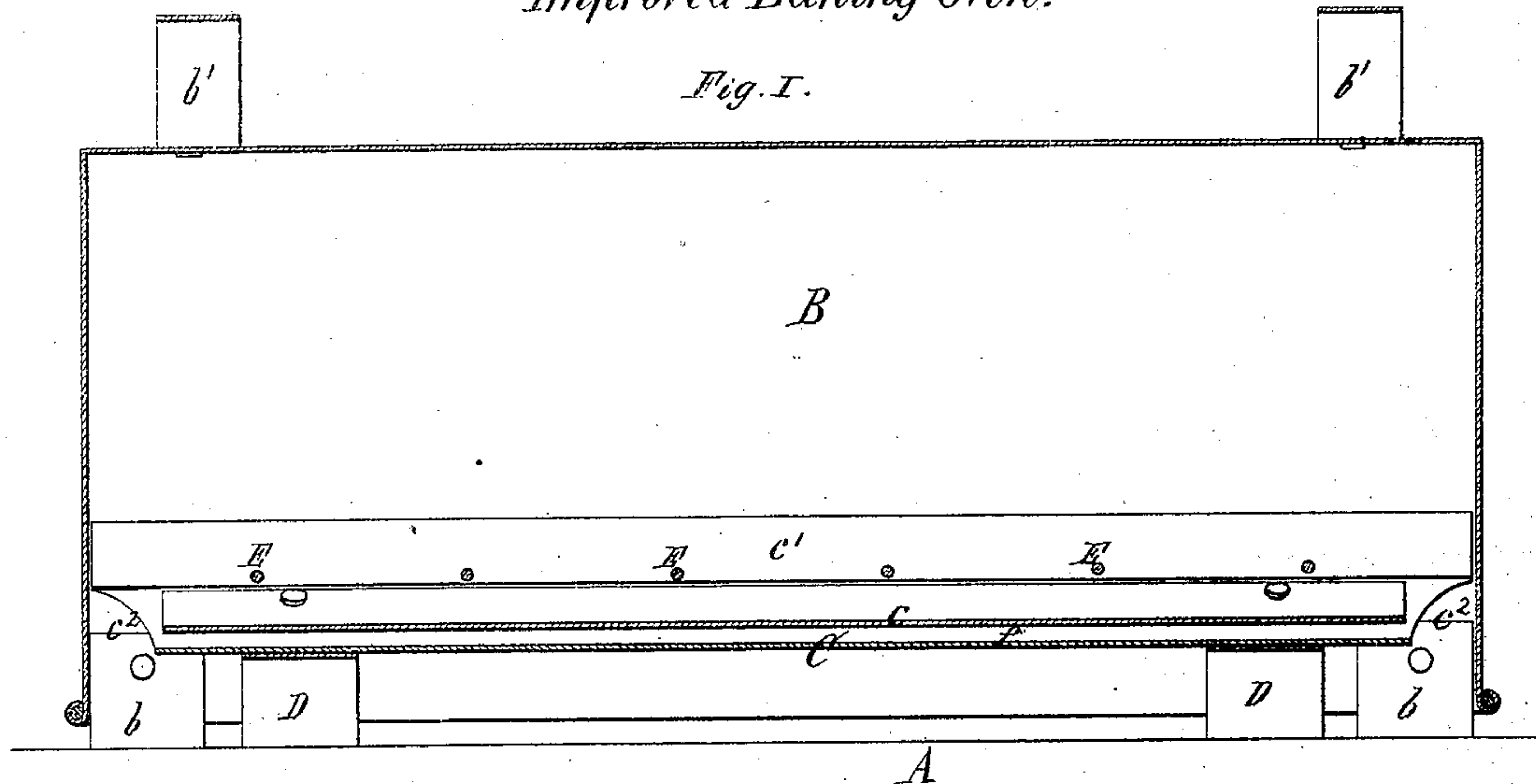


No. 119,680.

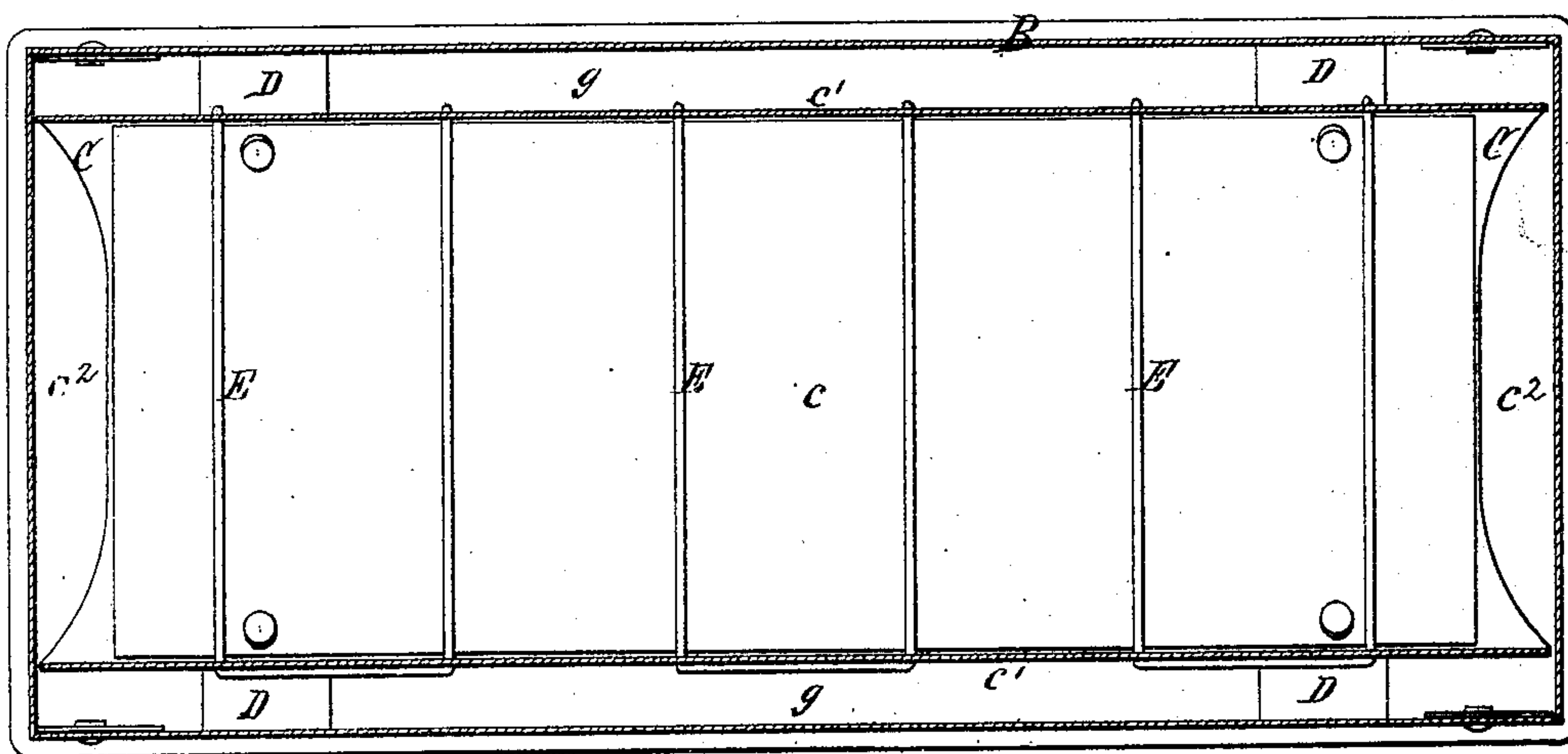
Patented Oct. 3, 1871.

*Abner Willson's  
Improved Baking Oven.*

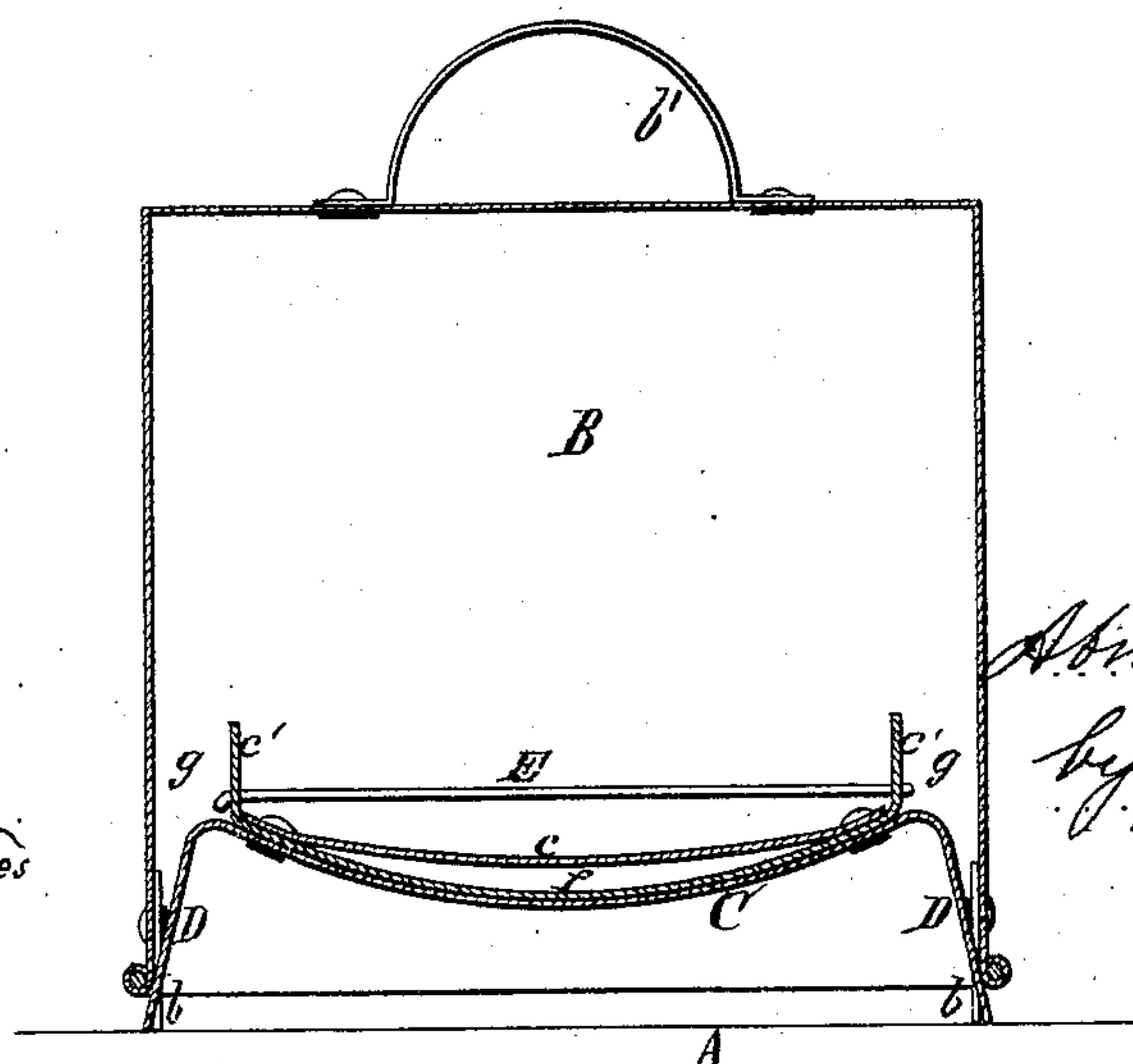
*Fig. I.*



*Fig. II.*



*Fig. III.*



Amos Smith  
Jno. J. Conner  
Witnesses

Abner Willson  
Inventor:  
by Jay Kyatt  
Atty.

# UNITED STATES PATENT OFFICE.

ABNER WILLSON, OF BUFFALO, NEW YORK.

## IMPROVEMENT IN OVENS.

Specification forming part of Letters Patent No. 119,680, dated October 3, 1871.

*To all whom it may concern:*

Be it known that I, ABNER WILLSON, of the city of Buffalo, in the county of Erie and State of New York, have invented certain Improvements in Baking-Ovens, of which the following is a specification:

My improvements relate to the construction of a portable or removable oven, designed to sit on the top plate of a stove while in use, and which consists generally of a rack and a shield-plate supported above the top plate of the stove, in connection with an inclosing tin case that serves to retain therein the heat which radiates upward from the stove, all as hereinafter fully described.

In the accompanying drawing, Figure I is a longitudinal vertical section of my improved oven; Fig. II, a horizontal section through the case or cover, showing a plan of the rack and shield-plate underneath; and Fig. III, a transverse section thereof.

Like letters of reference designate like parts in each of the figures.

A represents a portion of the top plate of a stove; B, the cover or case of the oven, made of tin, which is supported from contact with the stove by short legs *b* of sheet-iron riveted to the case. It is also provided with loops *b'* *b'* at its top, by which it is handled. C is a shield-plate supported above the top plate of a stove by legs D D. E E are cross-wires, the ends of which are secured in upwardly-turned flanges *c'* *c'* of the shield-plate. Two of these wires are represented in the drawing formed together by bending a piece of wire in the form of a staple and inserting it through the flanges *c'*, as shown in Fig. II.

These cross-wires form the rack in which the articles to be baked are supported. *c* is a secondary shield-plate arranged above the plate C so as to leave an air-space, *f*, between them. These shield-plates C *c* are preferably made concavo-convex for the purpose presently to be explained. To insure the proper arrangement of the inclosing-case B over the rack E the legs D D are made to diverge or incline outward toward their lower ends so as to form a guide for the sides of the case in arranging the latter, the lower edges of which are designed to rest in contact with the base of the legs, while the ends of

the shield-plate C at its corners fit against the ends of the cover. The divergence of the legs D D leave a space, *g*, between the shield-plate and inclosing-case B on each side for the passage upward of the heat into the upper portion of the case. The shield-plate at each end is formed with a recess, *c'*, for a similar passage of the heat at the ends of the case.

In using my improved oven the shield and rack C E are set upon the top plate of the stove, the articles to be baked placed upon the rack, and the cover or case B arranged over the same. The heat which radiates upward from the stove-plate A strikes the convex shield-plate C and is by it deflected laterally and upward into the upper portion of the oven. This plate C forms a shield to protect the articles on the rack from the excessive heat to which they would otherwise be subjected, while the auxiliary plate *c*, with the intervening air and non-conducting space *f*, affords much greater and adequate protection, and thereby equalizes the temperature above and below the rack E, and for which purpose the single plate C would be inadequate. The shield-plates C and *c* may be made flat and horizontal, but in such case the heat radiating upward would be deflected directly downward against the top plate of the stove instead of laterally and upwardly, as when made convex on its under surface, as represented in the drawing, which insures a much higher temperature at the top of the oven. If required at any time an additional shield-plate may be arranged above the plate *c*. The legs *b* of the case not only protect the tin at its lower edge, but also furnish an escape at the bottom for the steam which is generated within the oven during the baking process.

I claim as my invention—

1. The combination and arrangement, in a baking-oven, of the shield-plate C, legs D D, and rack E E, as hereinbefore set forth.

2. The arrangement, with the shield C, legs D D, and rack E E, of the secondary shield *c*, arranged so as to leave an air-space, *f*, between them, as hereinbefore set forth.

3. The combination, with the radiating-plate A, rack E E, and shield C, of the tin cover or inclosing-case B, as hereinbefore set forth.

4. The shield-plate C when made convex on its



under surface, and arranged over a radiating-plate A and within a case, B, of a baking-oven, as hereinbefore set forth.

5. The tin case B and legs *b b*, combined and arranged with heating-plate A, as hereinbefore set forth.

6. The construction and arrangement of the legs D and recesses *c<sup>2</sup>* with the case B and shield

and rack C E so as to facilitate the proper adjustment of the inclosing case and leave space for the ascent of the heat, as hereinbefore set forth.

ABNER WILLSON.

Witnesses:

SAMUEL SMITH,

JNO. J. BONNER.