

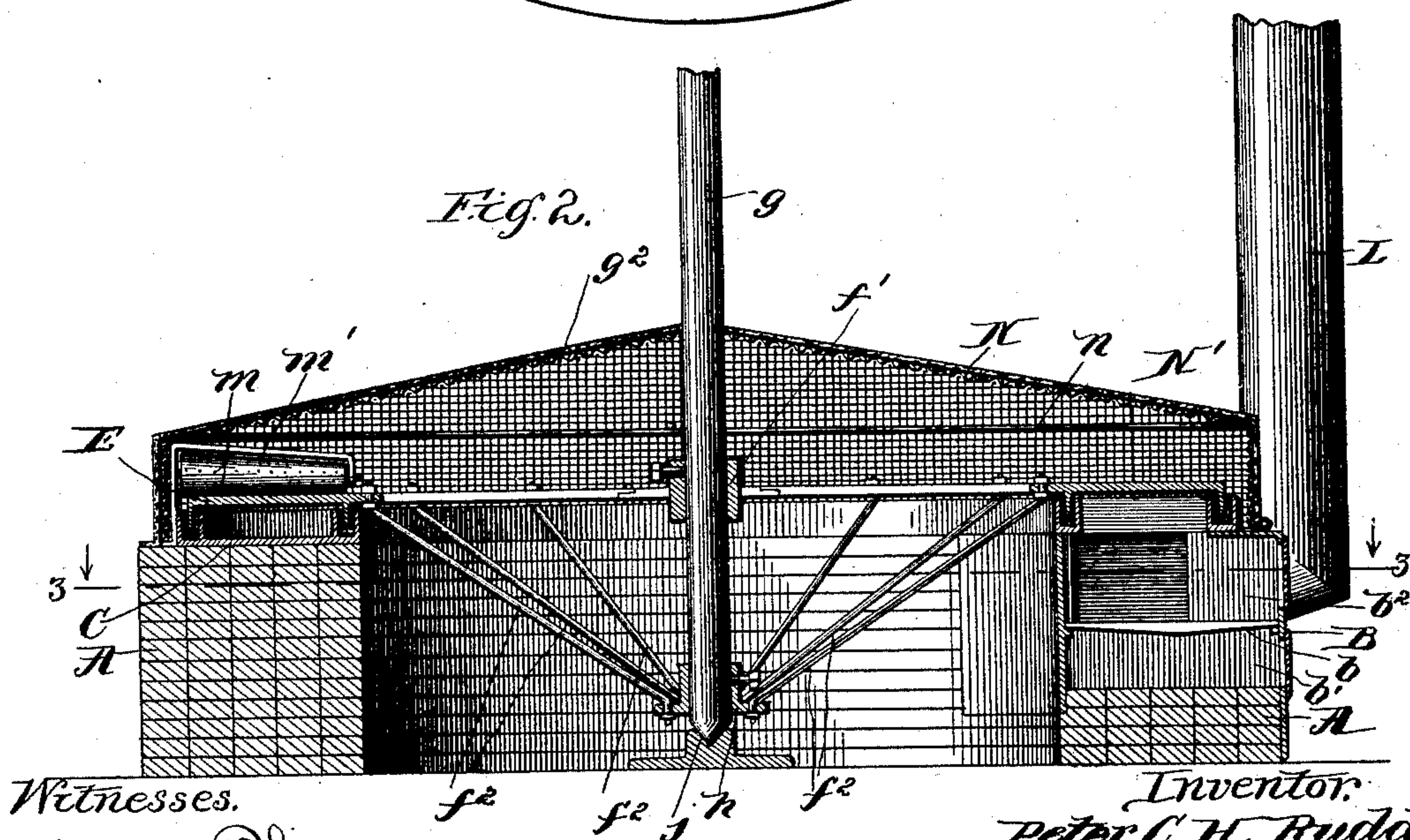
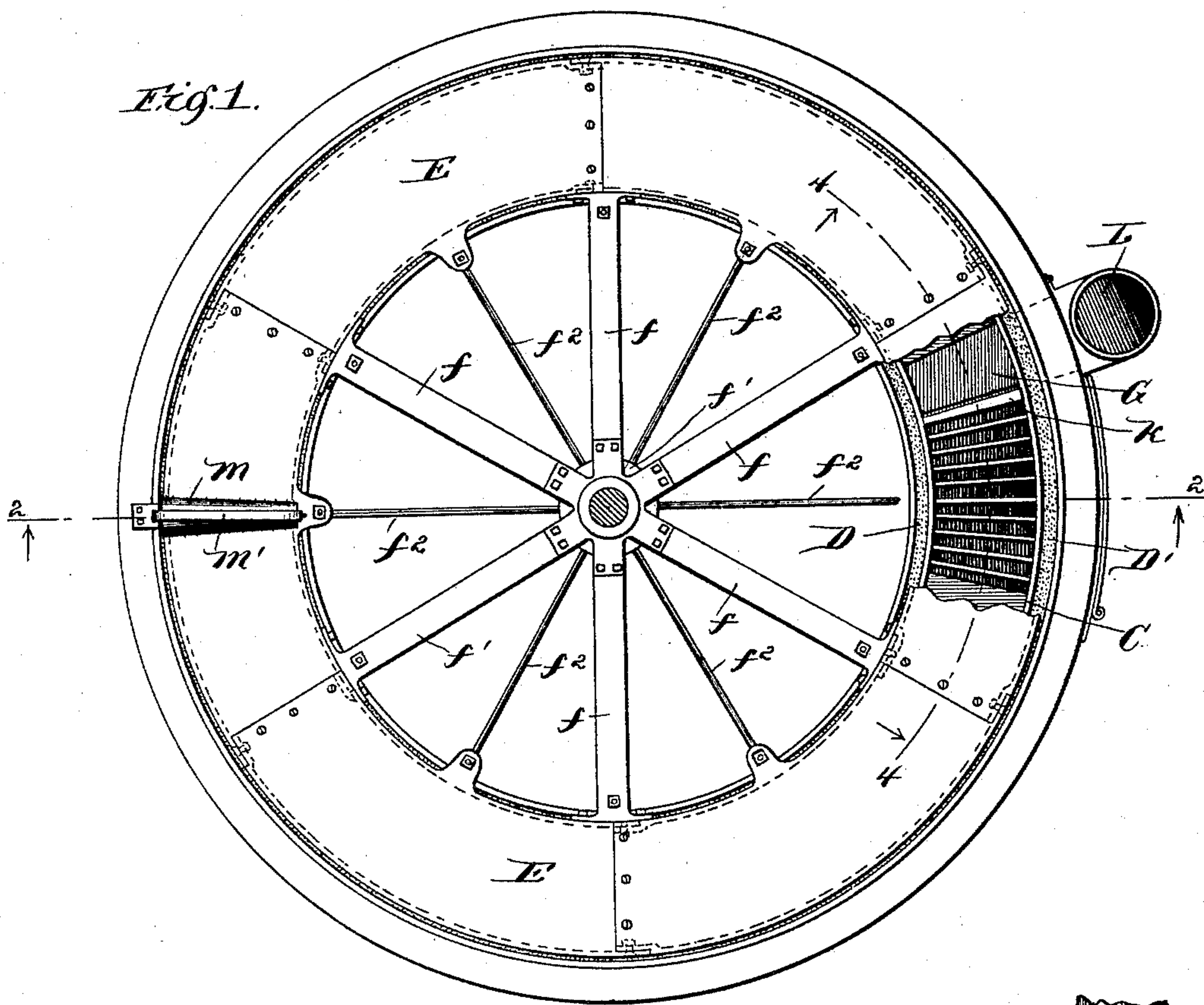
(No Model.)

2 Sheets—Sheet 1.

P. C. H. RUDD.  
ROTARY OVEN.

No. 485,300.

Patented Nov. 1, 1892.



Witnesses.

*Wm. M. Rheem.*  
*John J. Fort.*

Inventor.  
*Peter C. H. Rudd.*

By *June 604* atty.



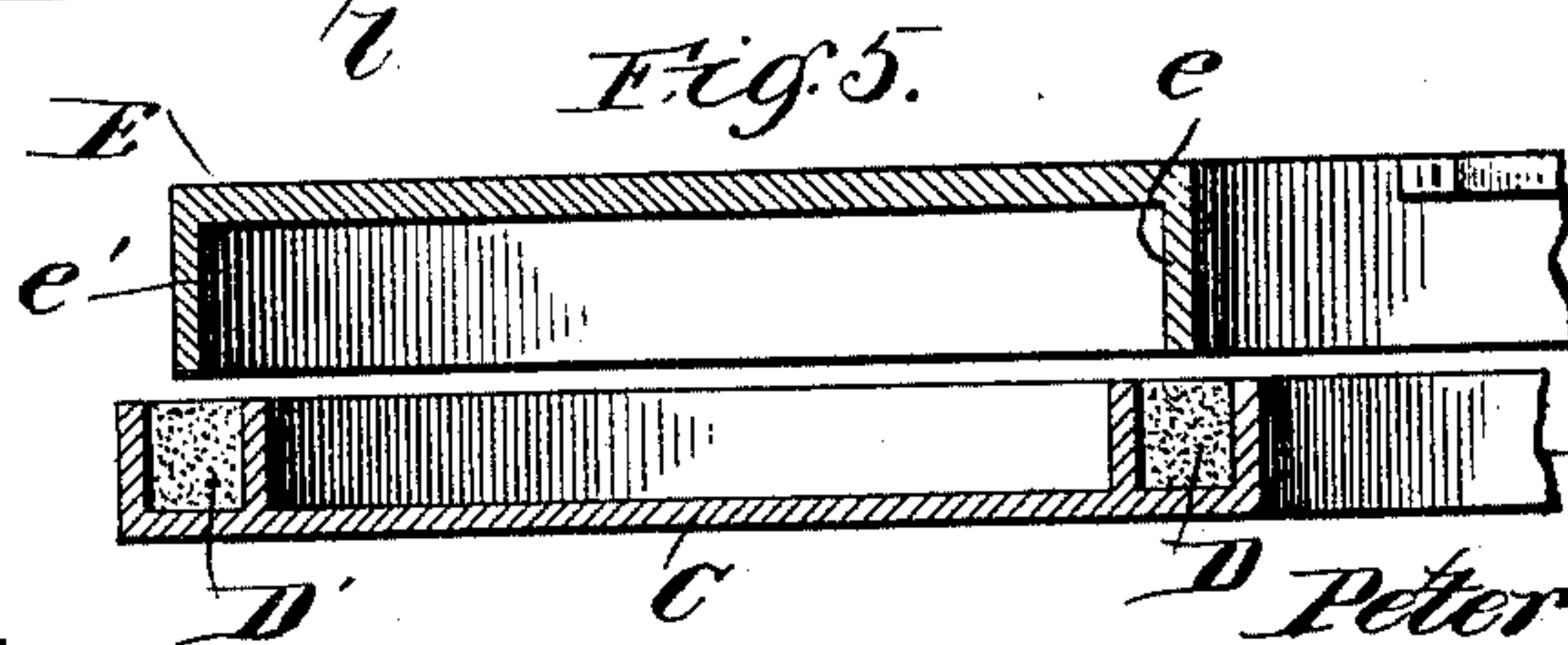
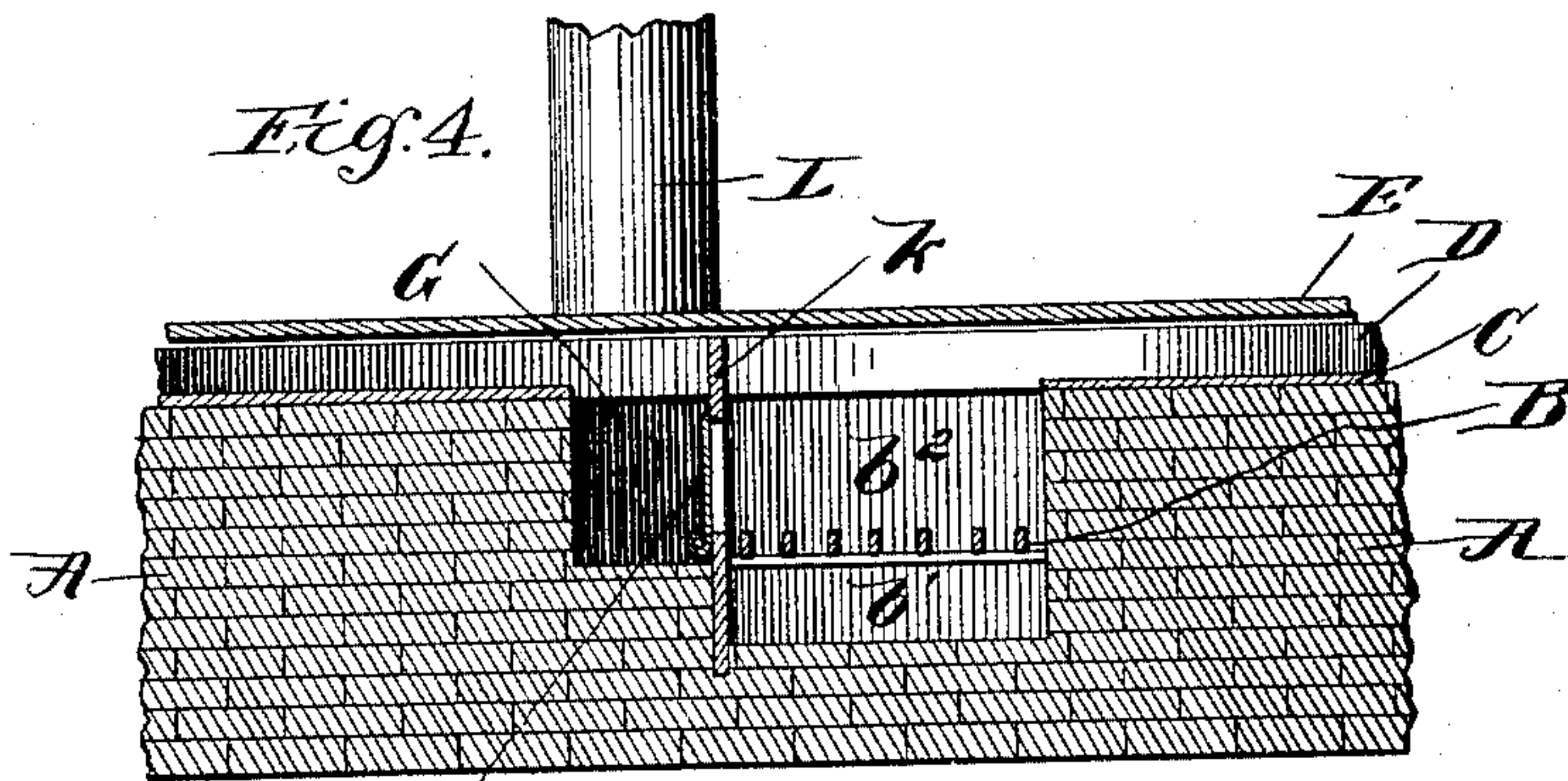
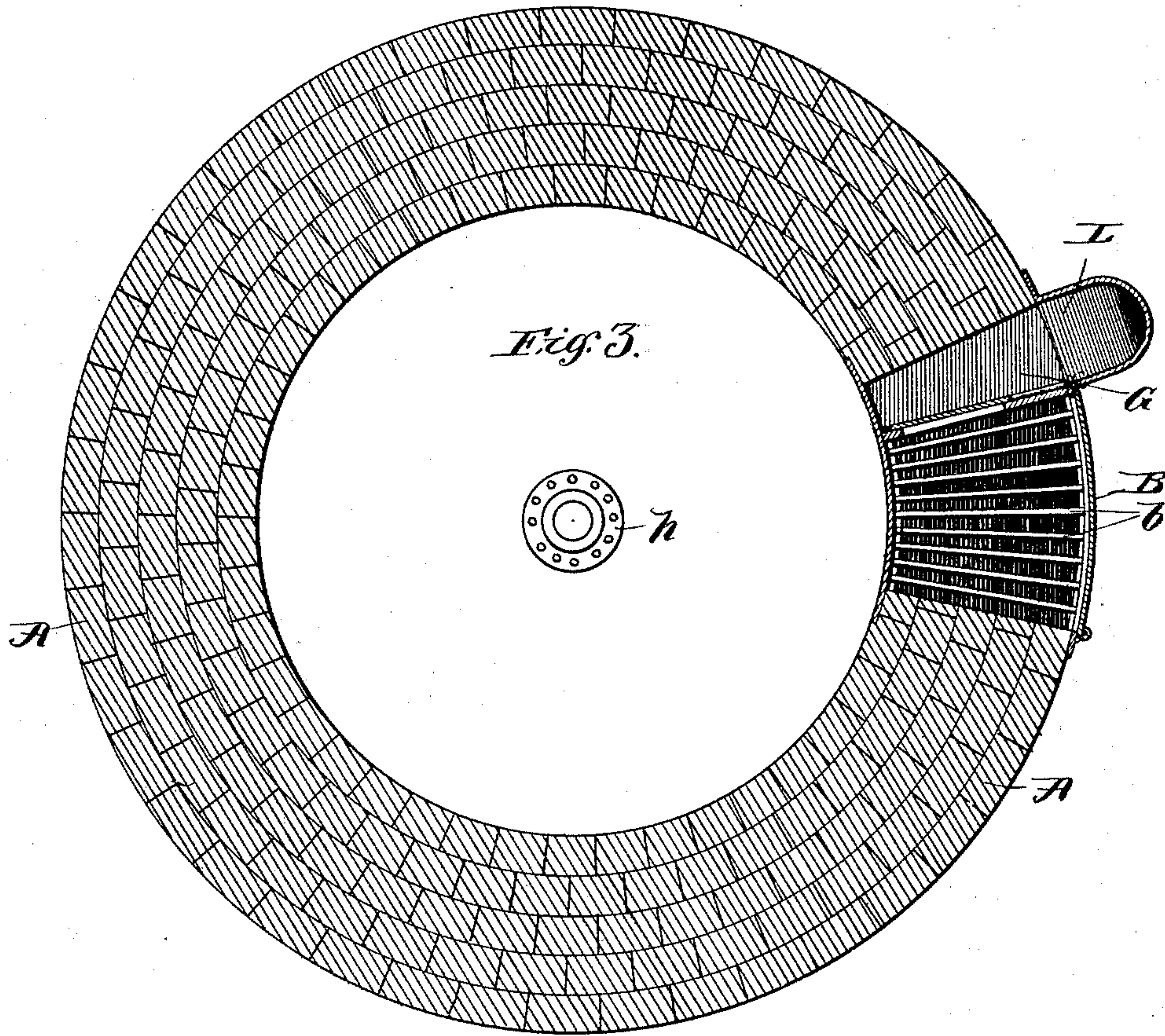
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By June Cox Atty.



# UNITED STATES PATENT OFFICE.

PETER C. H. RUDD, OF CHICAGO, ILLINOIS.

## ROTARY OVEN.

SPECIFICATION forming part of Letters Patent No. 485,300, dated November 1, 1892.

Application filed July 6, 1891. Serial No. 398,447. (No model.)

*To all whom it may concern:*

Be it known that I, PETER C. H. RUDD, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Rotary Oven, of which the following is a specification.

My invention relates to improvements in rotary ovens; and the objects of my invention are, first, to provide a circular rotary plate having a substantially-air-tight passage-way for the passage of the heat and products of combustion from the furnace beneath the whole circuit of the under surface of said plate to the smoke-stack; second, to provide a means for pricking or perforating the dough to be baked as the said upper plate rotates. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a top view of my said rotating oven with the roof or cover thereof removed and the upper plate partially broken away, showing the lower plate, furnace, and passage beneath the whole circuit of the under surface of the upper circular plate to the smoke-stack. Fig. 2 is a vertical section of my oven on the line 2 2, Fig. 1. Fig. 3 is a horizontal section of my device on the line 3 3, Fig. 2. Fig. 4 is a circular section on the circular line 4 4, Fig. 1. Fig. 5 is a sectional view of the upper circular plate and lower plate or frame, showing the flanges on the upper plate and grooves or troughs on the lower plate or frame.

Similar letters refer to similar parts throughout the several views.

A A is a solid circular base of brick or other suitable material.

B is the furnace having grate *b*, ash-pit *b'*, and fire-box *b*<sup>2</sup>.

Upon the circular base A A is placed a circular plate C, having at its outer and inner edges circular grooves or troughs D and D', formed by upright double flanges on said plate, which troughs contain sand or other suitable material. Instead of this under plate C may be used, for purposes of economy, a metallic framework supporting said troughs, closely fitted to the base A by means of mortar and cement. An upper circular plate E E is placed above the lower plate or framework C. Said upper plate E E may be of one piece of metal or of several pieces riv-

eted together and have at each of its edges a single flange *e* and *e'*, fitting into the troughs or grooves D and D'. The troughs or grooves D and D' being filled with sand, the flanges *e* and *e'* form in said groove a substantially-air-tight closure, making a passage-way substantially air-tight beneath the whole circuit of the upper plate. This upper plate E E is connected by the arms or braces *f* to a collar *f'*. Said collar fits closely to and rotates with a vertical shaft G, to which said collar is fastened by means of a set-screw *g*<sup>2</sup> or in any other suitable manner. Diagonal braces *f*<sup>2</sup> extend from a lower collar *h*, which collar embraces said upright shaft G, and is also rigidly attached to said shaft by a set-screw or other suitable means to the inside edge of said circular plate. Said diagonal braces are riveted to lugs on said plate. Said vertical shaft may be pointed at its lower extremity to facilitate its rotation on the base *j*. This upright shaft may be rotated by hand or by steam power in any suitable manner, and when rotated the upper plate E E will be rotated with it. Between the fire-box of the furnace and the aperture G, communicating with the smoke-stack, is a wall or partition *k*, which is of sufficient height to fit closely against the lower side of the upper plate E E. This wall *k* prevents the heat and gases from the furnace from passing into the aperture G directly from the furnace, and the heat and gases are therefore compelled, in order to reach the vent G, to pass the whole circuit beneath the plate E E. A valve or door *l*, pivoted at its lower extremity, opens and closes a passage-way between the furnace and the aperture G.

L is a smoke-stack communicating at its lower extremity with the aperture G. A tapering roller is removably pivoted at each end in the stationary bent arm *m'* and has on it projections or prickers to perforate or prick the dough as it is baked in said oven. Said circular plates may, if desired, be covered by a removable wire-gauze covering N, which wire-gauze covering is also covered by an asbestos roofing material for the retention of the heat. In said wire roofing or covering is a door N', pivoted at its lower end, which may be opened to afford communication with the interior of said covering. Said



wire-gauze covering and roofing are supported by any sort of proper framework braced by a rod *n* and may be entirely removed, if desired.

5 In operation, fire being kindled in the fire-box of the furnace, the door *l* may be opened for the purpose of giving a greater direct draft for the starting of said fire; but after said fire is thoroughly started the said door *l*  
 10 is closed, and the heat and gases of combustion are then compelled to pass through the passage-way formed between the upper and lower plates *C* and *E E* until they reach the aperture *G*, when they pass out through the  
 15 smoke-stack. The upper plate is caused to rotate by the rotation of the vertical shaft *G*. All parts of the upper plate *E E* are thus compelled to pass over the furnace and are thoroughly heated in this manner. The heat  
 20 from the furnace passing through said passage-way between the upper and lower plates, throughout their whole circuit, keeps all parts of the upper plate warm during its rotation. The dough or material to be baked is placed  
 25 upon this upper plate *E E*, and is thus thoroughly heated and baked. The roller *m*, coming in contact with the dough, is rotated by the motion of the plate *E E* and pricks or perforates the dough, thus permitting the vapor  
 30 which generates in the dough when being baked to escape, and prevents the formation of bubbles and blisters thereon.

Having thus described my invention, what

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

1. In a rotary oven, the combination, with a rotary plate or platform provided with depending sealing-flanges and grooves or troughs beneath said plate or platform, into which said flanges extend, of a furnace or fire-box located at one side of the said rotary plate or platform, a draft-flue or vent adjacent to said furnace or fire-box, and a circular flue beneath said rotary plate or platform extending from said furnace or fire-box to said draft-flue or vent, whereby the products of combustion will be confined in place and will be caused to travel entirely around beneath said rotary plate or platform.

2. The combination, with the circular rotary plate or platform *E*, having the depending flanges *e e'*, of the stationary circular plate *C*, having the circular grooves or troughs *D D'*, into which said flanges extend and which are adapted to hold a sealing material, as sand, to confine the heat in the circular flue or passage between said plates.

3. In a rotary oven, a rotating roller supported above a revolving plate for the purpose of pricking or perforating the dough or other substance thereon, substantially as described.

PETER C. H. RUDD.

Witnesses:

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