

(No Model.)

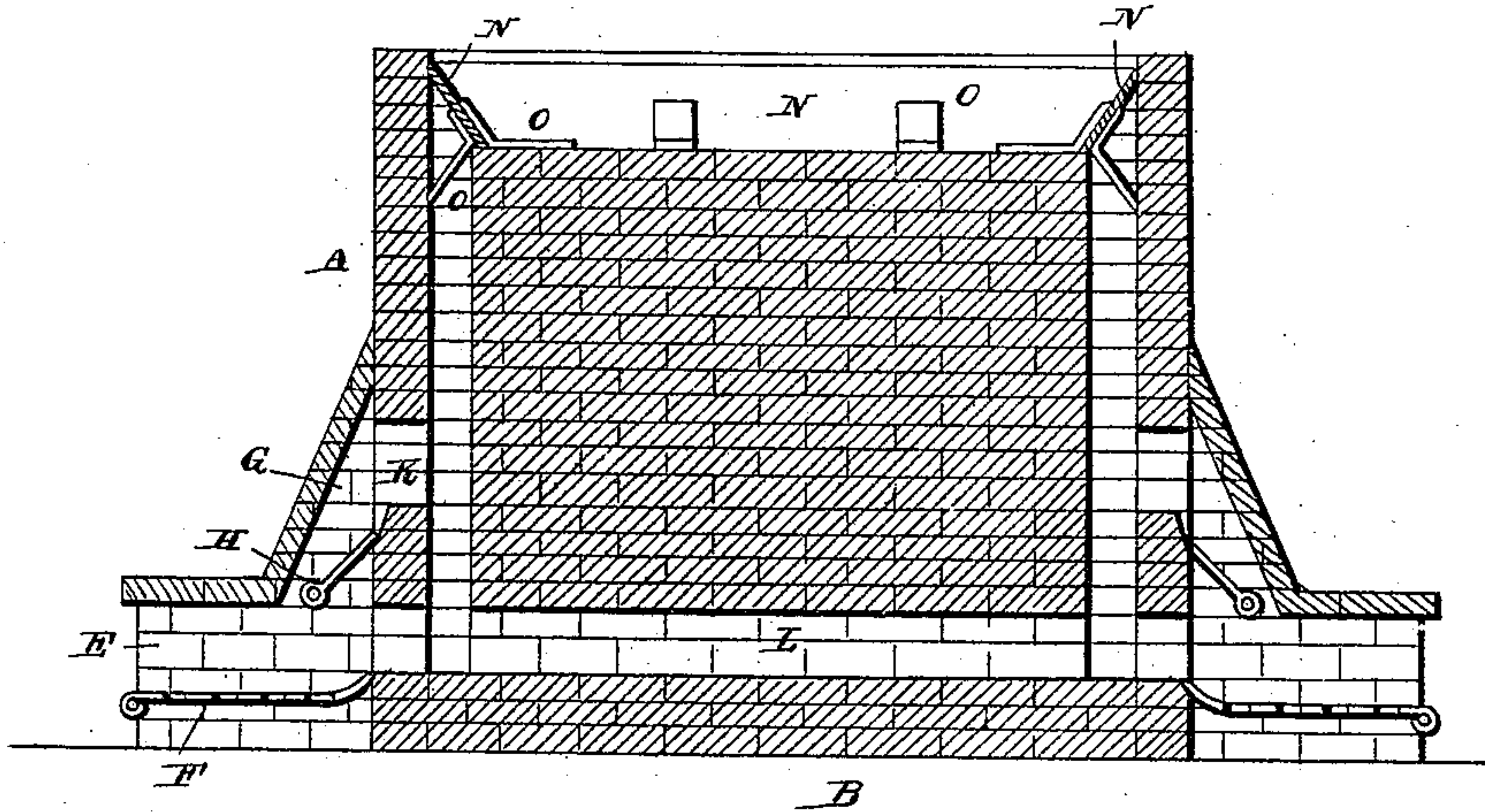
J. S. LESTER.

BRICK KILN.

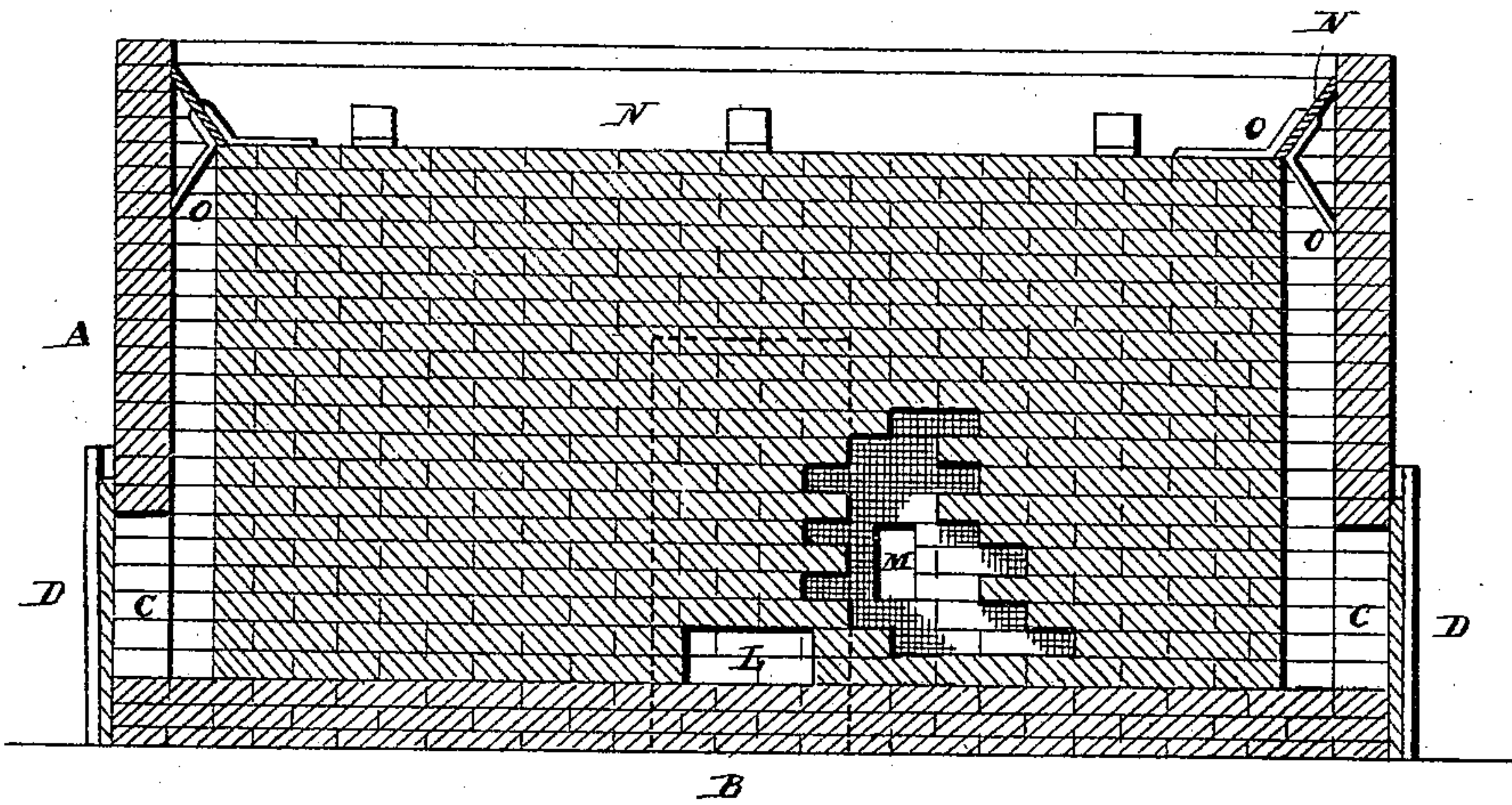
No. 297,423.

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*Fig. 1.*



*Fig. 2.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES S. LESTER, OF ATLANTA, GEORGIA.

## BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 297,423, dated April 22, 1884.

Application filed March 17, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES S. LESTER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Brick-Kilns, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

10 Figure 1 represents a vertical section through the kiln and the furnaces; and Fig. 2 represents a vertical section through the kiln at right angles to that in Fig. 1, and having a portion of the brick removed to show one of the "peep-holes."

15 My invention relates to brick-drying kilns, and has for its object to provide a permanent and durable kiln with convenient means of ingress and egress, to provide a means whereby the heat may be regulated in its direction and intensity at different points, and also to provide a means whereby the escape of heat through openings around the green brick left by the shrinkage of the same may be prevented. All these points are necessary for the perfect burning of the brick, and will be more fully set forth in the following description.

20 A represents the walls of the kiln, and B the base or floor. In or through the ends of the kiln are the openings C, closed by the doors D. These openings are for the purpose of allowing the brick to be placed inside the kiln for burning, and to remove them afterward without destroying the walls. The doors close the orifice when the operation of burning is going on, thus preventing the escape of heat, the space between the door and the green brick being filled with sand, ashes, or other similar material.

25 E represents furnaces ranged on either or both sides of the kiln. Although but one is shown on each side in the drawings, more may be used, the number varying with the size of the kiln. These furnaces are furnished with grates F, turned upward at their inner ends, and so placed as to bring the fire on a level with the floor of the kiln. Underneath the grate is an ash-pit, as shown. These furnaces have an upward extension, G, which contains a damper, H, for the purpose hereinafter described. The

furnace communicates with the inside of the kiln through the opening or flue I, and the extension through the opening K.

L represents one of the "eyes" of the kiln, 55 to which the furnaces communicate, and through which the heat passes to the brick.

M represents a "peep-hole" placed to one side of each furnace and through the wall of the kiln, so that the condition of the brick 60 may be from time to time ascertained. As the green brick are dried, they shrink away from the walls of the kiln and also settle. This leaves a space through which heat would rapidly escape, and so mar or even destroy the effectiveness of the operation of burning the brick. The ordinary expedient has been to stop the cracks with mud; but this is inconvenient, and also will crack, which, of course, is troublesome and annoying. 70

N represents strips of material suitable for the purpose, placed entirely around the upper edge of the pile of green brick. This, by automatically closing all the orifices, obviates the objections enumerated above. These strips 75 may be of any suitable length or width, and are supported by braces O, one passing over the top of the brick and the other into the space between the kiln-wall and the pile of green brick, as shown. Where the strips meet 80 at the corners they are beveled, so as to fit neatly. It will readily be seen that whatever the shrinkage may be these strips will effectually close the intervening space. It often happens that the brick immediately surrounding the eye will dry more quickly than those farther removed, and the consequence is that they burn before the drying of the others is completed. By "opening" the damper H this trouble is overcome, as the heat, or at least a portion of it, will rise in the extension 90 G, and by passing through the opening K come in contact with the brick, and so dry them as quickly as those around the eye. Of course, it will be understood that the brick 95 are so piled as to allow the heat to pass between and around them.

Having described my invention, what I claim is—

1. In a brick-kiln, the herein-described furnace, provided with a grate having an upward turn at its inner end, and an extension or hood 100

having in it a damper, both the furnace and the extension communicating with the inside of the kiln through suitable openings in the wall of same, and being arranged to operate  
5 as and for the purpose set forth.

2. In a brick-kiln provided with furnaces of the construction described, the automatically-adjustable plates or strips beveled and supported by braces, as described, and oper-  
10 ating to close the space between the kiln-wall

and brick-pile, thus preventing the escape of heat from the furnace through the said opening, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES S. LESTER.

Witnesses:

RALPH ROSENBAUM,  
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