

(No Model.)

S. J. PLANT.

BRICK KILN.

No. 262,614.

Patented Aug. 15, 1882.

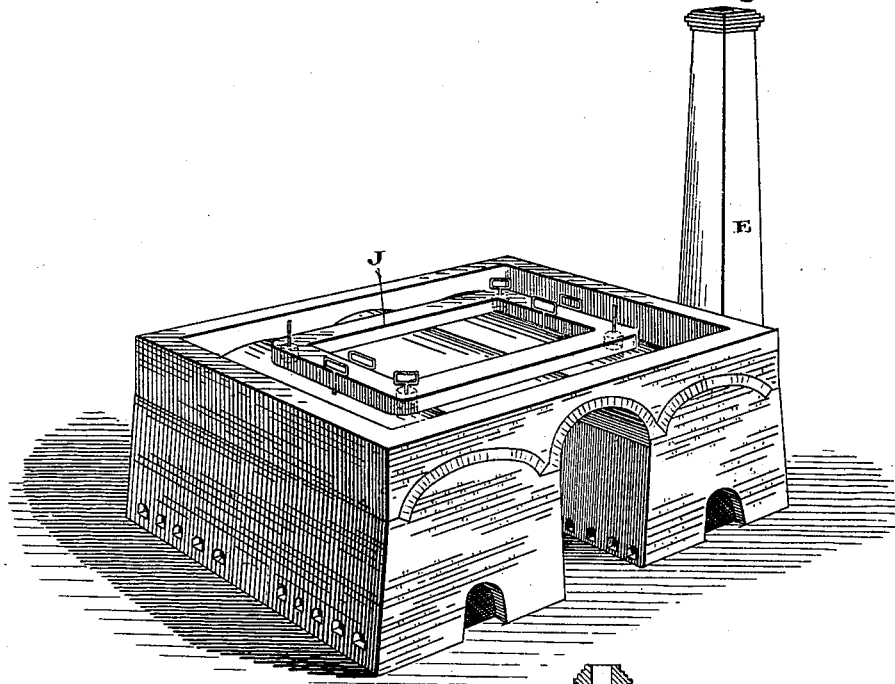


Fig. 1.

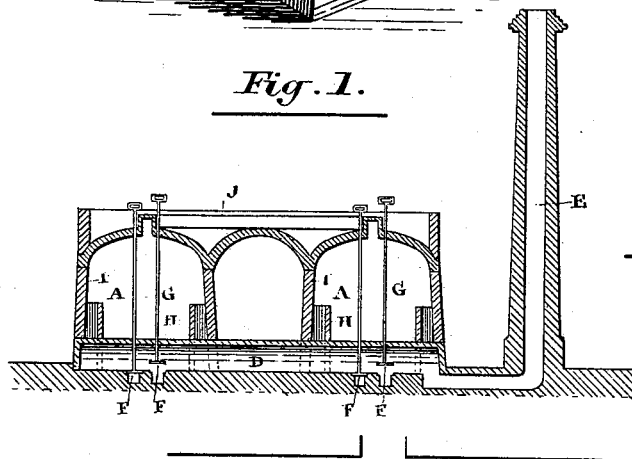
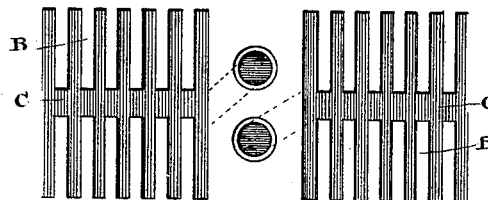


Fig. 2.

Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

STEPHEN JAMES PLANT, OF YORK, ONTARIO, CANADA.

BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 262,614, dated August 15, 1882.

Application filed November 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN JAMES PLANT, of the township of York, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Brick-Kilns, of which the following is a specification.

The object of the invention is to produce a brick-kiln which will bake all the bricks within it to an even hardness, and which will utilize to the fullest extent the heat of the furnace; and it consists in the combination of two or more downdraft-kilns, connected together by flues having regulating-dampers, substantially as hereinafter explained.

In the drawings, Figure 1 is a perspective view of four downdraft-kilns connected together for operating in accordance with my invention. Fig. 2 is a cross-section through *a* *b*, showing the lower connecting-flue. Fig. 3 is a plan of the flues.

A are the kilns, provided with an open brick floor, *B*, having a center flue, *C*, connected with the main flue *D*, which leads to the chimney *E*. The floor of each of the kilns are made alike, the flue *D* being so situated as to be common to them all. The passage-way connecting the center flue, *C*, and main flue *D* is provided with an adjustable damper, *F*, operated by a rod, *G*, extending to the top of the kiln. It is intended that only one kiln at a time should be operated, all the dampers belonging to the other kilns being closed, while the damper connecting the center flue of the kiln in operation may be opened to a greater or less extent, according to the character of the draft required. Each kiln is provided with suitable furnaces, *H*, from which the heat passes up over the dash-walls *I* toward the crown of the kiln, passing down between the bricks, which are held within the kiln, with open spaces between them, and thence through the floor of the kiln to the center flue, *C*, which conducts the caloric into the main flue *D*, the draft being regulated by the damper *F*.

J is the top flue, connecting the kilns together. This flue is provided with a damper situated between it and a hole in the crown of each kiln. This damper is provided with suit-

able handles for adjusting it as required. The object of this flue *J* is to enable the operator to utilize the heat in one kiln after it has performed its work therein for the purpose of heating the next kiln to be used. This arrangement will be found peculiarly adapted for utilizing to the fullest extent the heat produced by the furnace. After the bricks within the first kiln have been burned sufficiently long, the damper *F* should be closed and the damper in its crown, leading into the top flue, *J*, should be opened, as also the damper connecting this flue with the kiln next to be used. The heat will then pass through the first kiln into the next one, and will in a great measure carry away the moisture from the bricks, leaving so much less work to be performed by the furnace of this latter kiln.

With kilns constructed as herein described the bricks baked within them will be evenly hardened, while with the arrangement of flues and dampers, as described, the full benefit from the furnaces will be derived and a consequent saving in cost of fuel.

I am aware that it is not new with me to deflect or direct the heat from one kiln to an adjoining kiln, and such is not sought to be covered in this application.

The flue *J*, common to all the kilns and connecting each with the others and provided with valves, as shown, I deem to be the important feature of this invention.

What I claim as my invention is—

In a brick-kiln, the combination of a series of downdraft-kilns provided with bottom flues, *C*, connecting with the main flue *D*, with the continuous flue *J*, surmounting all the kilns and connecting with the crown of each kiln, both the bottom flues and the continuous flue being provided with regulating valves or dampers, whereby the heat in any one or more of the kilns can be conducted from the dome of the kiln by the continuous flue and then delivered into any one of the other kilns at the dome of the same, substantially as described.

S. JAMES PLANT.

Witnesses:

C. W. BALDWIN,
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