D. P. GUISE.

Brick-Kiln.

No. 161,027. Patented March 23, 1875.

Fig. 1.

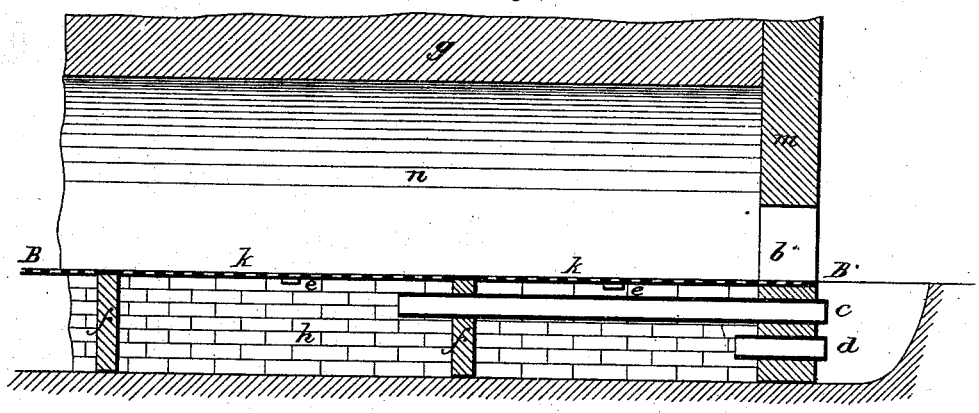


Fig. 2.

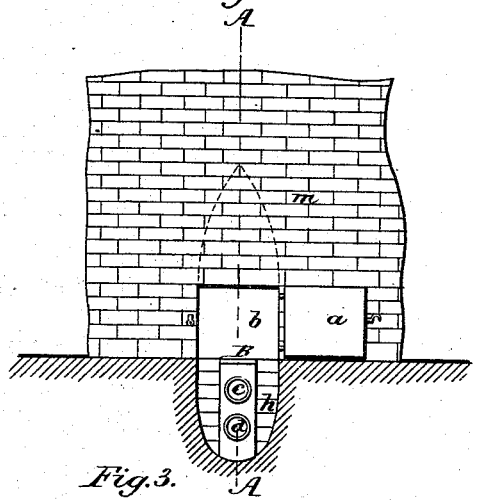


Fig. 3.

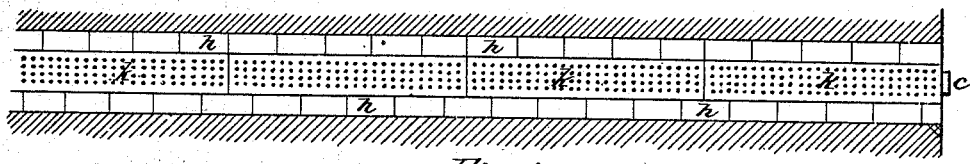
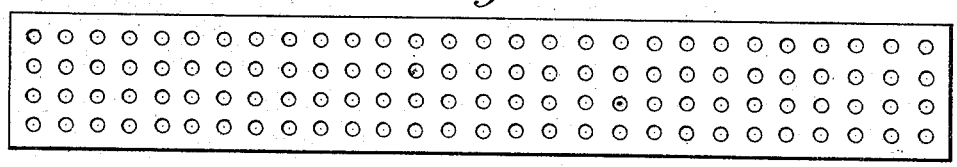


Fig. 4.



Witnesses.

Wm. C. Doane.

John B. Otto.

Inventor.

David P. Guise.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

DAVID P. GUISE, OF WILLIAMSPORT, PENNSYLVANIA.

IMPROVEMENT IN BRICK-KILNS.

Specification forming part of Letters Patent No. **161,027**, dated March 23, 1875; application filed November 30, 1874.

To all whom it may concern:

Be it known that I, DAVID P. GUISE, of the city of Williamsport, Lycoming county, and State of Pennsylvania, have invented certain Improvements in the Means and Method of Burning Brick, of which the following is a specification:

The nature and object of my invention are to construct a brick-kiln or furnace in such a way that it shall possess the following advantages not heretofore known or used by those who manufacture brick, viz: By my furnace a saving of about two-fifths of the fuel is made, and a given amount of brick can be produced by one-half the labor, and in one-half the time, required by the ordinary methods; and, finally, I so construct my kiln or furnace that I can prevent the contact of all the cold air with the brick while heated, and in this way prevent their cracking, and save a large per cent., which would otherwise be of no use.

Figure 1 shows an elevation of a section. Fig. 2 is a front view of an arch. Fig. 3 is a plan of a section at B. Fig. 4 is a view of my perforated plate.

Fig. 1, letters *g*, *m*, and *n* show the arch of a brick-kiln constructed in the usual way, having an opening at *b*. *k k k k* show my perforated plates, resting upon a permanent wall beneath the surface of the ground to the depth of about eighteen or twenty inches, as circumstances may demand. This walled trench, which is covered by perforated plates *k k k k*, as mentioned, is divided into four sections or chambers by partition-walls *f f*, for the purposes of regulating the draft at any portion of the kiln when required. *c d* are pipes of about three inches diameter, one of which, *c*, passes through one chamber in its whole length, and furnishes a draft to the adjoining chamber, and pipe *d* only extends a few inches within the first chamber, giving draft for this one only.

It will be seen that by my method I can regulate at pleasure the intensity of the heat at any required point in the kiln by closing, or partly closing, any pipe, giving draft to any chamber over which, without my method, the brick might become fused into a complete mass.

It will be seen at once that in this way brick can be burned with the doors of the arch closed, for the draft is furnished below instead of at the arch-holes, as is usually done, and thus exclude the cold air from constant contact with the brick, and accordingly the temperature of the entire kiln is kept more uniform, and the brick must be of the same quality in the mass.

I claim as my invention—

The combination and arrangement of the perforated plates *k k k k*, sections *h h*, and tubes *c d*, as described and shown, for the uses and purposes set forth.

DAVID P. GUISE.

Witnesses:

WM. C. DOANE,

JOHN B. OTTO.