

F. F. BOUDRYE.
Improvement in Brick Kilns.

No. 124,538.

Patented March 12, 1872.

Fig. No. 1.

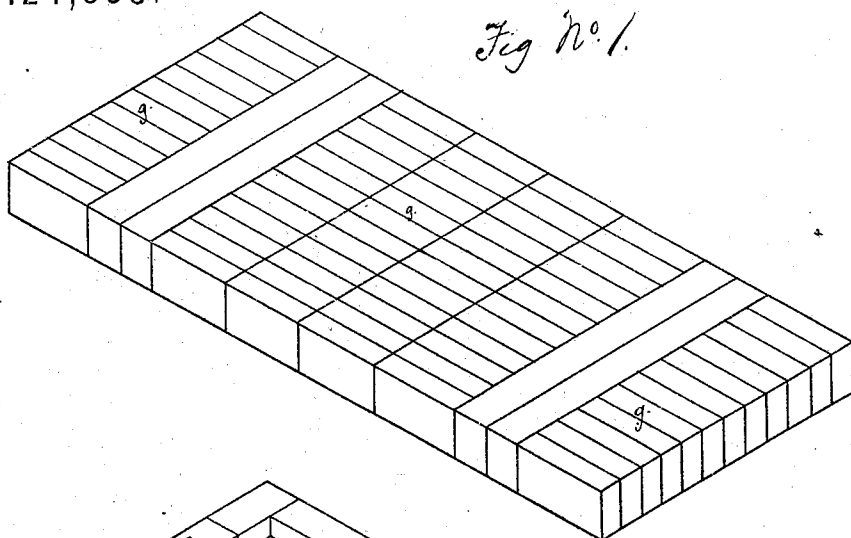
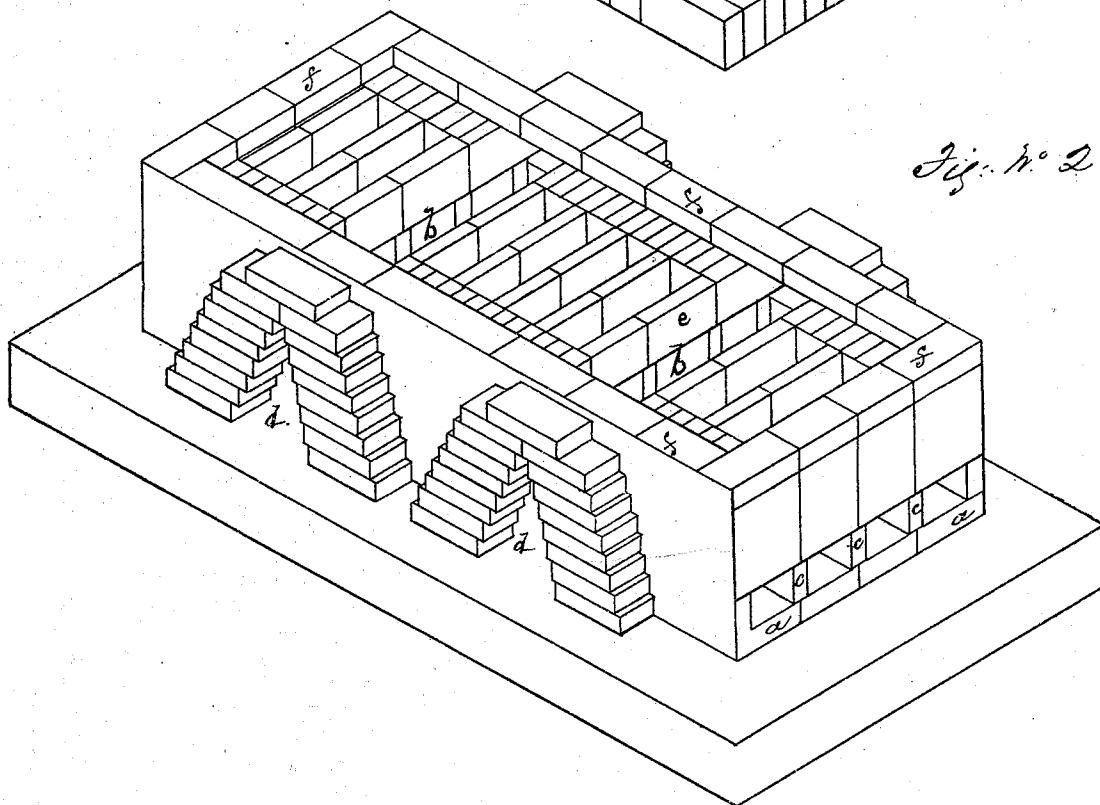


Fig. No. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANCIS FELIX BOUDRYE, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN BRICK-KILNS.

Specification forming part of Letters Patent No. 124,538, dated March 12, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, FRANCIS FELIX BOUDRYE, of the city and county of San Francisco, State of California, have invented an Improved Brick-Kiln; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to improvements in the construction of kilns for burning bricks; and its object is to provide such an arrangement of the brick that they can be burned with great uniformity, and at a much less expense than by the usual way.

In the general construction of brick-kilns the bricks adjacent to the eyes or fire-places in the kiln become melted and run together from the intensity of the heat required to properly bake the bricks in a more distant part of the kiln, thus creating a loss of bricks, and at the same time requiring more fuel than is necessary when the kiln is properly constructed.

My invention consists in remedying these difficulties by a novel arrangement of the lower part of the kiln, by which the fire is allowed to penetrate through every part and bake the bricks uniformly.

In order to explain my invention so that others will be able to understand its construction and operation, reference is had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a view of the upper continuous course of bricks. Fig. 2 shows the construction of the lower part of the kiln.

I commence my kiln upon a suitable foundation by laying a course of bricks, *a*, leaving spaces *b b* at intervals for the purpose herein-after mentioned. I then run a number of longitudinal courses or partitions, *c*, by placing a single row of bricks upon their edges, each two rows being almost the length of a brick apart, and at the same time build up the wall or outer casing, leaving fire-places *d d* oppo-

site the spaces *b b* upon each side. Then I proceed by placing transversely across the kiln upon the courses *c*, other rows or courses *e*, by placing each brick so that its opposite ends will rest upon the bricks of the longitudinal courses *c*, each two rows being separated, as described, for the courses *c*, also carrying up the outer wall. As many of these courses are placed across one another as will be required by the size of the kiln to be burned, after which I build a ledge, *f*, upon the outer wall of the kiln and to the height of one or more brick. At this point in the construction of the kiln I fill the spaces between the courses *c c* and *e e* with coal, coke, or other fuel, and also the entire space above the courses *e*, so that it should be level with the outer ledge *f*. I then begin by placing the bricks in a continuous course, as shown at *g*, so that the course will rest upon the ledge *f*, around its outer edge and upon the coal in the space inclosed by the ledge. The next and all succeeding layers or courses are also continuous in the same manner, fine coal, such as is known as coal-screenings, being placed between each layer, so as to fill all of the interstices of the kiln.

In order to burn the bricks it will now only be necessary to kindle the fuel through the fire-places *d d*. The fire will then burn without attention until all of the coal is consumed.

As the fuel in the lower part of the kiln is burned out the course *g*, which rests upon the coal, will fall in, allowing the upper courses to settle, until the arching of the bricks prevents them from collapsing further, thus confining the heat, exposing unbaked places, and allowing the fire to pass up to the screenings between the upper layers.

By this means I do not apply the heat required to bake the entire kiln in one place continuously, but I construct the kiln so that a free draft will be obtained and carry the fire throughout the kiln, and by providing freely for the draft I am enabled to burn fuel of an inferior quality.

By the collapsing of the upper portion of the kiln I insure the perfect baking of every part of the bricks, as the consequent disarrange-

ment of the courses exposes that portion of the bricks which the fire could not reach beforehand.

I am aware that coal, coke, and other fuel has been heretofore placed between the courses of bricks for the purpose of conveying the heat to the different portions of the kiln; but

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

The arrangement of the lower portion of the kiln, consisting of the longitudinal courses *c*,

transverse courses *e*, surrounding ledge *f*, fire-places *d*, and the continuous courses *g*, substantially as and for the purpose above described.

In witness whereof I hereunto set my hand and seal.

FRANCIS FELIX BOUDRYE. [L. S.]

Witnesses:

W. F. BINGHAM,

J. L. BOONE.