

(No Model.)

3 Sheets—Sheet 1.

M. M. & F. F. BUSHONG.
BRICK KILN.

No. 562,706.

Patented June 23, 1896.

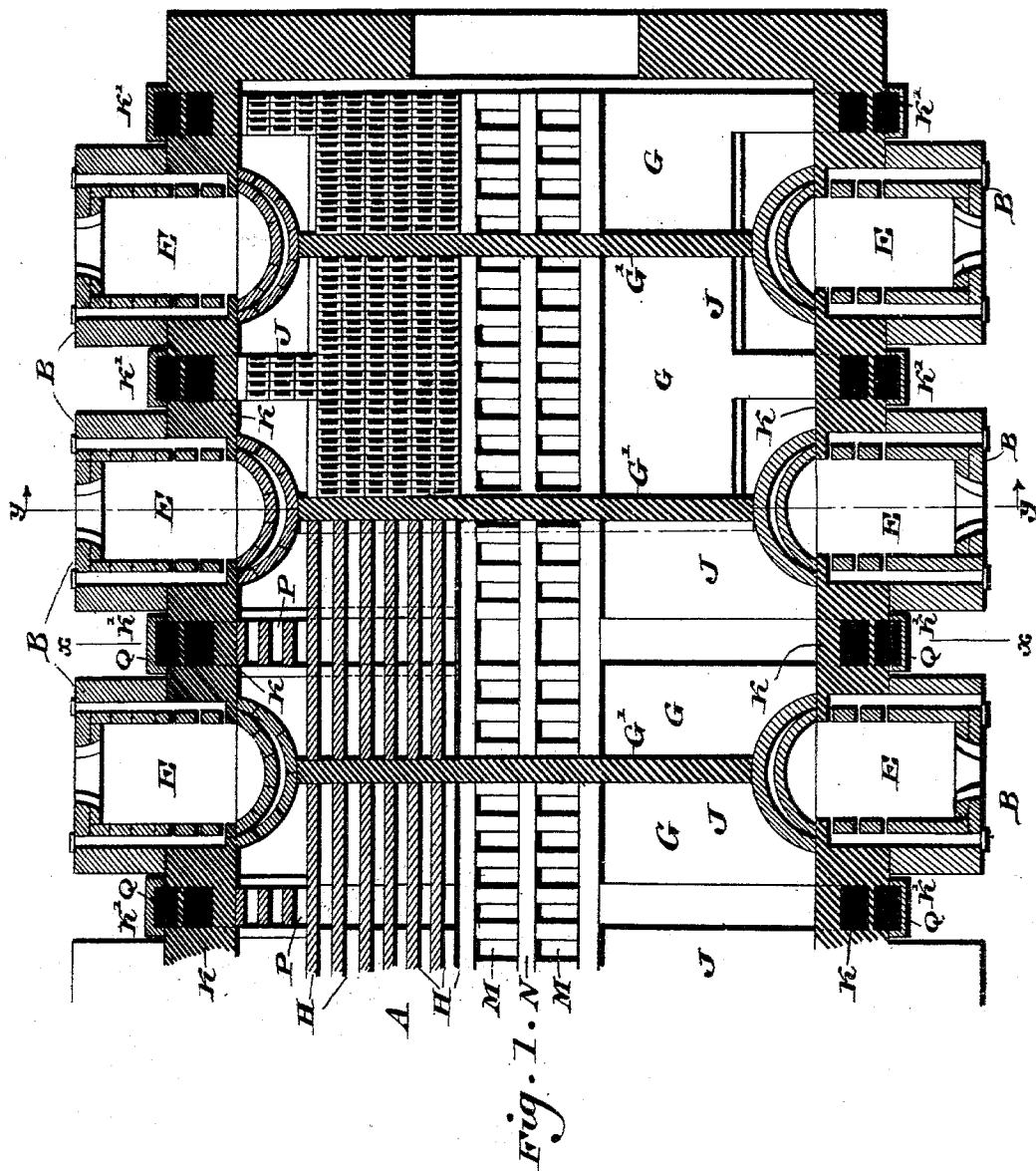


Fig. 1. N.

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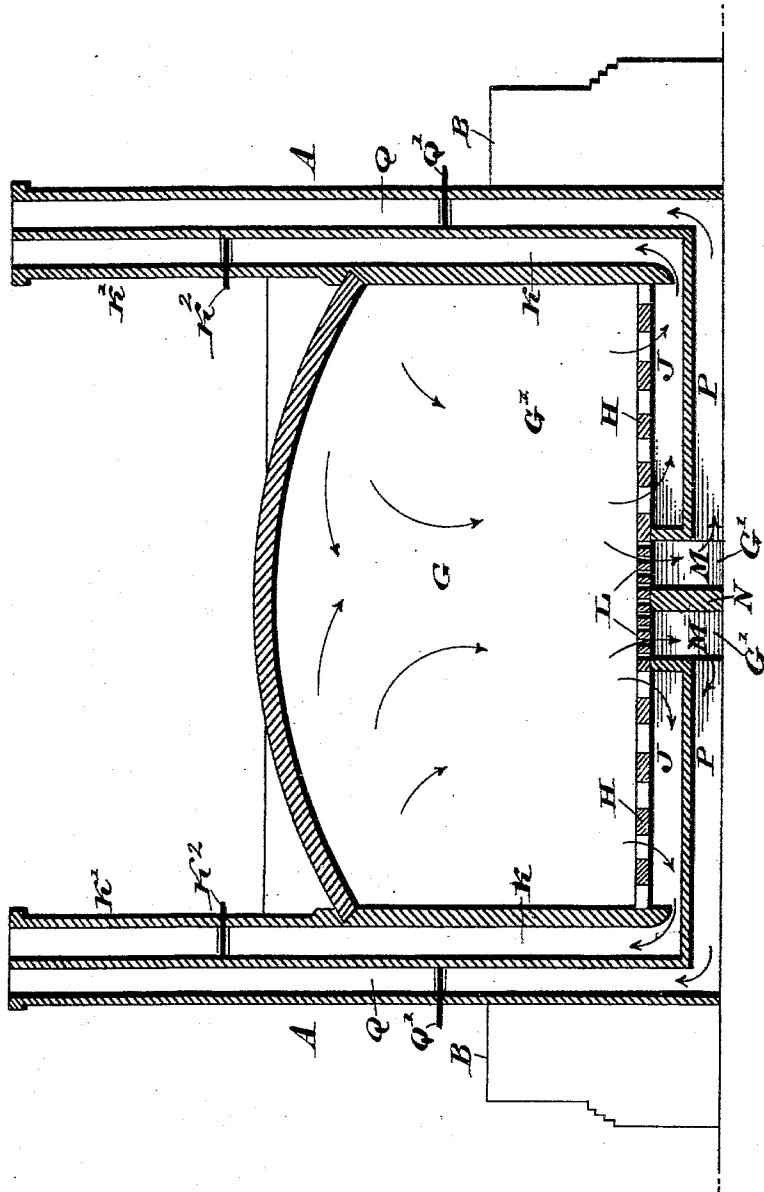
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Fig. 2.



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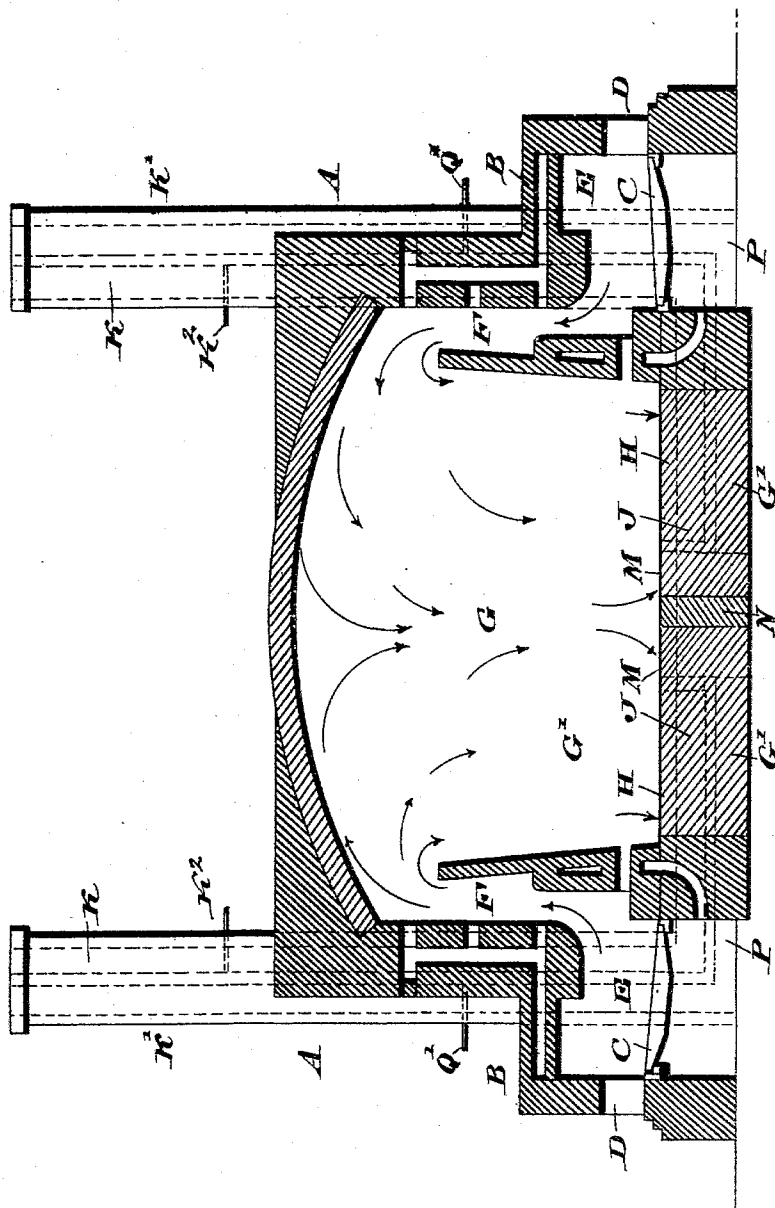
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Fig. 3.



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UNITED STATES PATENT OFFICE.

MILTON M. BUSHONG AND FRANKLIN F. BUSHONG, OF PAWLING, PENN-
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BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 562,706, dated June 23, 1896.

Application filed August 22, 1895. Serial No. 560,102. (No model.)

To all whom it may concern:

Be it known that we, MILTON M. BUSHONG and FRANKLIN F. BUSHONG, citizens of the United States, residing at Pawling, in the county of Chester, State of Pennsylvania, have invented a new and useful Improvement in Brick-Kilns, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention relates to brick-kilns; and it consists of the novel location and arrangement of the draft-passages thereof relative to the internal heating-chamber and the stacks, whereby the draft is equalized throughout every portion of the kiln, and the bricks which are to be baked are uniformly and equably treated by the heat throughout every portion thereof, in whatever position of the kiln they may be placed.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a horizontal sectional view of a brick-kiln embodying my invention, the different portions of said figure being taken on different sections. Fig. 2 represents a vertical section on line *x x*, Fig. 1. Fig. 3 represents a vertical section on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a brick-kiln, the same being composed of the arches B, within which are located the grates C, below the chambers E, access being had to the latter by means of the fire-doors D, the number of which chambers can be varied, and the location and arrangement of the same changed according to requirements.

F designates a passage leading from each of said fire-chambers E to the interior compartment G of the brick-kiln, the lower portion of which is provided with the supports or slabs H, which support the bricks to be baked, and have suitable passages between the same, whereby the heat and products of combustion are permitted to pass from said chamber G into the laterally-extending passages J, and thence through the vertical passages K, out of the stack or chimney K'. Along substantially the central portion of the

base of the kiln are located two channels M 50 M, which are separated by a division-wall N, access being had to said channels by means of the apertured plates L or similar devices, the construction and location of which will be apparent from Figs. 2 and 3. 55

P designates laterally-extending flues or passages, which extend in either direction from said passages M and discharge into the passages Q, which lead up through the stack or chimney K', as is evident. 60

The operation is as follows: The fire having been kindled upon the grates C, the hot gases and products of combustion will pass from the chambers E by means of the passages F, into the compartment G, and by reason of the outlets at H and L, which lead into the passages Q and K of the stack K', respectively, it will be seen that an even and equable draft will be had throughout every portion of the kiln, and the bricks or other articles to be treated or baked will be acted upon to the same degree throughout every portion, since a uniform draft will exist in every portion of the compartment G, thereby effectively preventing an unequal drying or baking of the bricks contained therein, as is the case in the kilns now in use. 70 75

In the preferred embodiment of our invention, it will be seen that the draft-passages J and P of each compartment are separated 80 from the next adjacent ones by means of the dividing-walls G', which extend across the kiln and pass through the passages M, as will be understood from Figs. 1 and 2, thus cutting off the draft from the several compartments G, each of the latter being divided 85 from its neighbor by means of said wall G', which is extended up to substantially the top of the same, suitable valves or gates Q' and K² being employed to control the draft in the passages Q and K, respectively, according to requirements. 90

It will be apparent that, by forming a communication between the central flues or channels M, and the perforated slabs H and the stacks K at regular intervals throughout the length of the furnace, an exceedingly effective draft is attained thereby, and that 95

every portion of the furnace at regular intervals throughout its length has an outlet to the atmosphere—a feature which is of great importance, and which cannot be obtained in furnaces now in use.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a brick-kiln, an interior compartment, fire-chambers therefor, passages leading to said compartment from said fire-chambers, a plurality of longitudinal channels extending throughout the length of the kiln, apertured plates supported over said channels, a series of laterally-extending flues located oppositely to each other, and leading from said channels to stacks on either side of the kiln, perforated base-slabs on either side of said channels, and other laterally-extending flues located oppositely to each other, and in communication with the perforations in said slabs, each of the above flues being arranged at intervals throughout the length of the kiln, and

having suitable outlets leading to the atmosphere.

2. A brick-kiln having an interior compartment, fire-chambers having passages leading thereinto, the longitudinally-extending channels M, M, in the base of said compartment, the dividing-wall N between the same, perforated plates supported above said passages M, the stacks K', the laterally-extending oppositely-located passages P leading thereinto from said channels, the perforated base-slabs H on either side of said passages M, the laterally-extending oppositely-located passages J in communication with the openings in said slabs and leading to said stacks, said passages J and P being arranged at intervals throughout the length of the furnace, substantially as described.

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