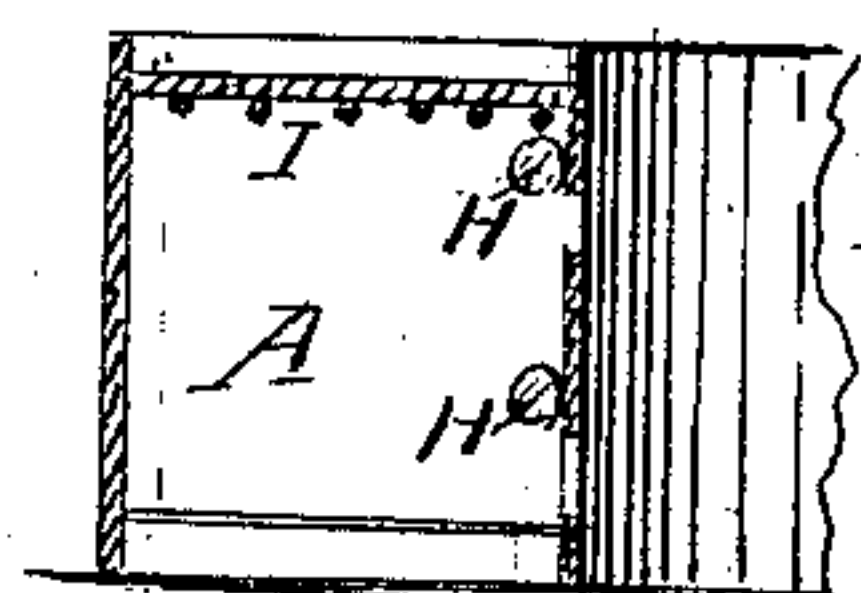
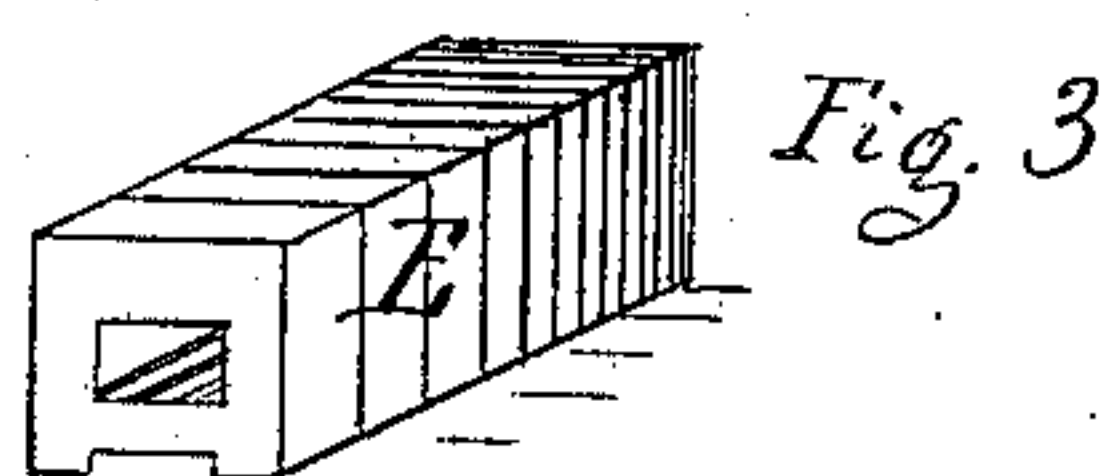
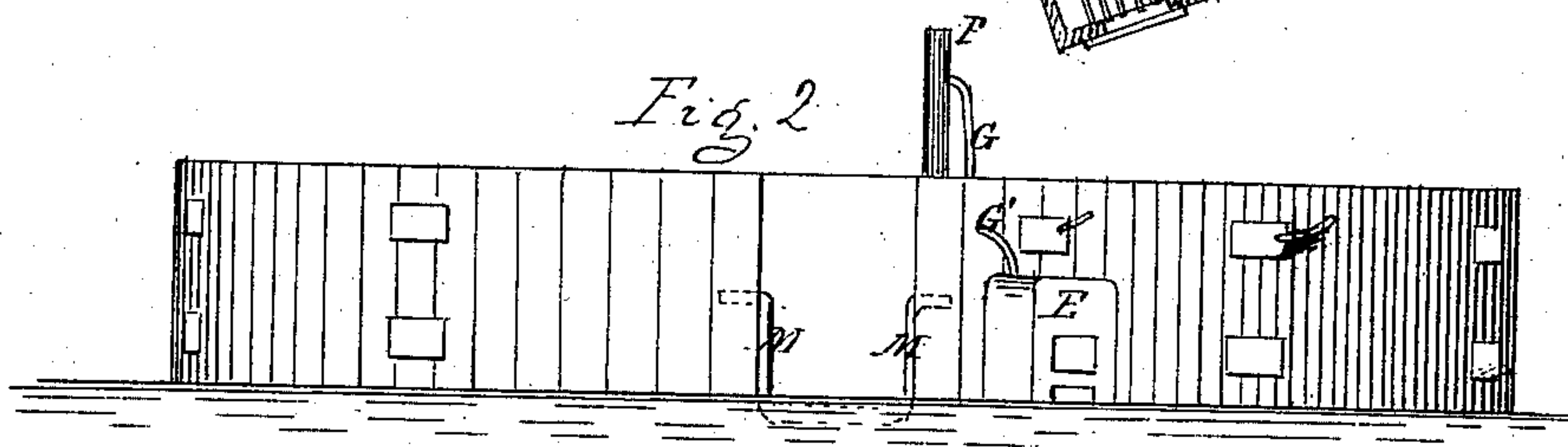
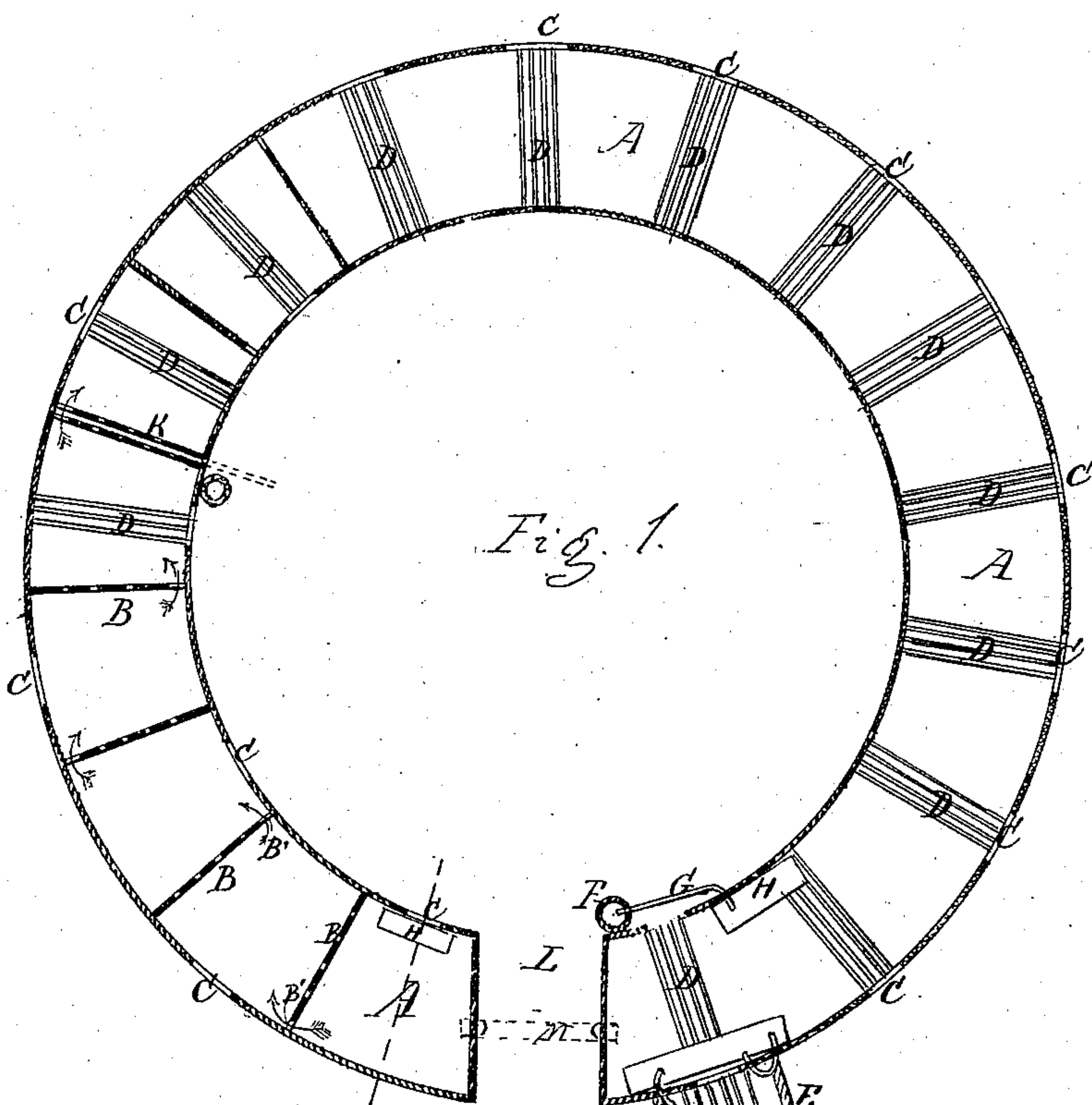


S. M. HAMILTON.

Brick Kiln.

No. 99,887.

Patented Feb. 15, 1870.



Attest
A. E. J. Eils
C. H. Clauson

Fig. 4.
S. M. Hamilton
Inventor
D. B. Hollway &
his atty.

United States Patent Office.

SILAS M. HAMILTON, OF BALTIMORE, MARYLAND.

Letters Patent No. 99,887, dated February 15, 1870.

IMPROVEMENT IN BRICK-KILNS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SILAS M. HAMILTON, of the city and county of Baltimore, and State of Maryland, have invented certain Improvements in Brick-Kilns; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings making part of this specification, in which—

Figure 1 is a horizontal section;

Figure 2 is a side elevation;

Figure 3 is a perspective view of a movable furnace; and

Figure 4 is a vertical section on line *x x*, fig. 1.

The same letters are used in all the figures to indicate identical parts.

My invention relates to what are known as continuous kilns, where the bricks in a series of compartments are successively fired, the work of burning, placing, and removing the burned bricks going on continuously; and consists in improvements in the details of construction and arrangement to be hereinafter set forth.

In the annexed drawings I have shown a series of kilns or compartments arranged in the form of a circle. The compartments are marked A, and they are separated by walls of brick, marked B. These walls are shown on one-half of fig. 1 as they would be built if permanently built into the kiln. They may be laid up from green bricks, or the bricks may be so piled as to form blocks of bricks, arranged with the necessary arches and interstitial spaces for the free circulation of the draft.

The walls B, in case the furnaces C are built alternately at opposite ends of the consecutive kilns, would have spaces, B', alternately at the ends of the compartment farthest from the furnace, through which the draft would pass into the next kiln in the consecutive series. These, with proper openings through the partition walls, would effect a uniform draft through the bricks in the kiln.

The fires are to be built on the grate-bars D, with doors at one or both ends of the grates, or in a movable furnace, E, placed outside of the kiln, and which may be removed from one compartment to another.

The chimney is shown at F, and there should be a chimney for about each third compartment, and they should have dampers, so that the draft may be regulated. They may be permanent, or may be portable, and carried from one subdivision to another.

A jet of steam introduced into the chimney through the pipe G may be used to cause a suction to draw off the water-smoke, and increase the draft; and the pipes G' may be used to pass a jet of steam into the furnace, or into arches leading out of the furnaces.

In covering the kilns, flues running in the direction

of the length of the kilns, as shown at I in fig. 4, should be formed to secure a free circulation through the upper parts of the kilns; and in order that the burning of the bricks and the driving off of the water-smoke may be regulated, I propose to build double walls, K, which may be closed by a sliding door to completely cut off the connection between different parts of the kiln.

A space must be left in the kiln at L to give access to the center of the kiln, and the compartments on each side of the opening L be connected by an underground flue, M, of capacity sufficient to permit a free passage of the draft from one end of the kiln to the other.

The force of this draft may be increased by driving jets of steam into the flue M in the direction of the draft.

The furnaces may be built in one or two tiers. In the latter case the arches will be built in laying the green bricks.

Instead of having permanent walls at K, to separate the kiln by a slide, openings may be left in the external walls for a door to be slid between the piles of green bricks as placed in the kiln, and subdivide it at that point where chimneys would be placed to carry off the water-smoke.

I have indicated at H boilers which may be built into the walls, or they may be separate from the kilns, with independent furnaces, if preferred.

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

1. Providing a series of kilns, set in a circle around an interior space, accessible by a passage or break between any two of said kilns, with fire-doors at both the outer and inner sides of the kilns, as herein shown and described.

2. Providing a progressive kiln, substantially such as herein described, with sliding partitions, to form, when desired, separate chambers, and also with steam-draft jets in the chimneys, when said parts are arranged substantially as herein shown and described.

3. In combination with a kiln, a movable furnace, placed outside of the walls, and capable of being moved from one compartment to another, substantially as set forth.

4. In combination with a circular kiln, having an opening, L, the flue M, for connecting the ends of the kiln, substantially as set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

S. M. HAMILTON.

Witnesses:

B. EDW. J. EILS.

A. RUPPERT.