

JOHN EISELE.

Improvement in Brick-Kilns.

No. 126,040.

Patented April 23, 1872.

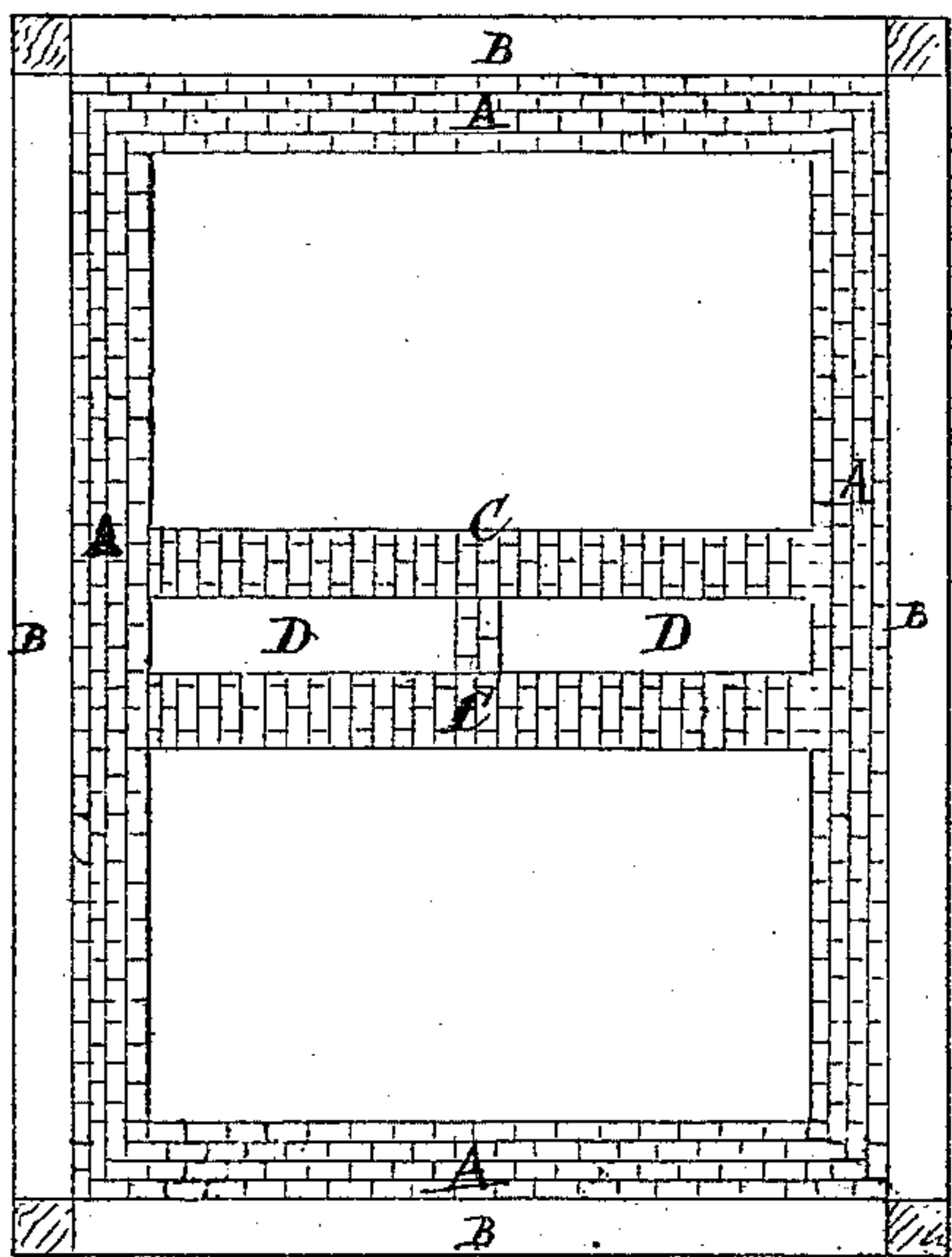
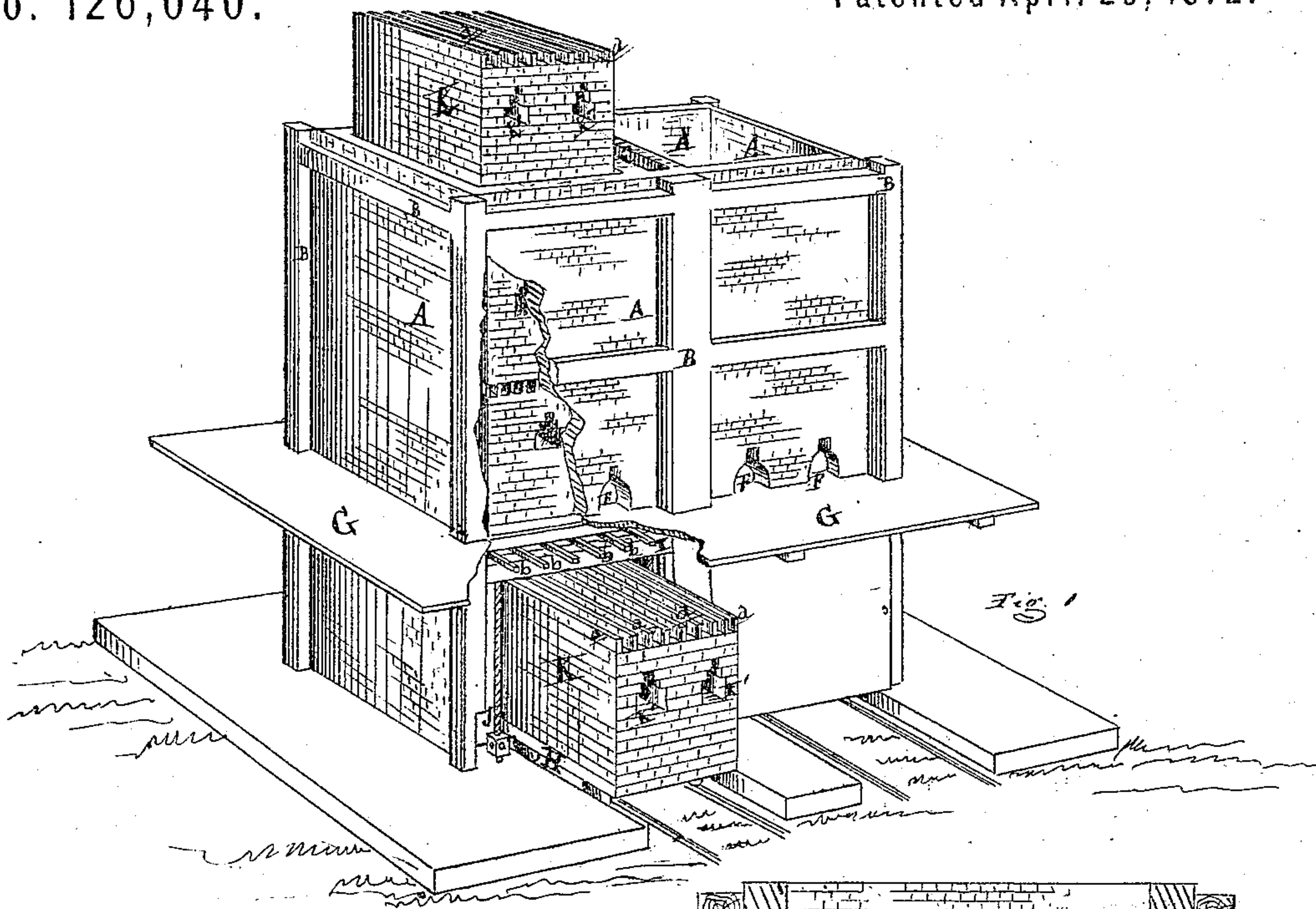


Fig. 2

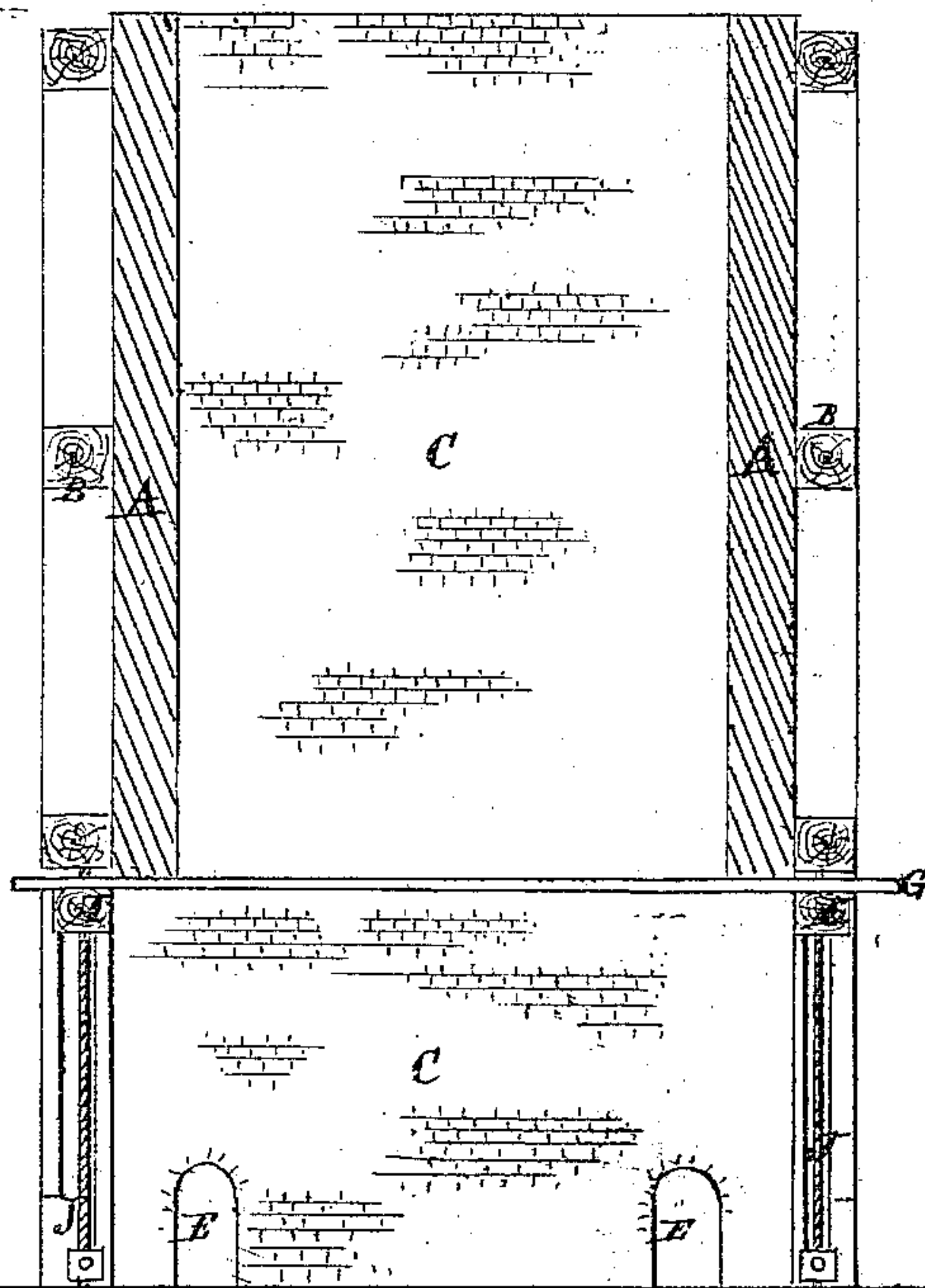


Fig. 3

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JOHN EISELE, OF ANN ARBOR, MICHIGAN.

IMPROVEMENT IN BRICK-KILNS.

Specification forming part of Letters Patent No. 126,040, dated April 23, 1872.

To whom it may concern:

Be it known that I, JOHN EISELE, of Ann Arbor, in the county of Washtenaw and State of Michigan, have invented a new and useful Improvement in Perpetual-Burning Brick-Kilns; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my kiln, with a portion of the front wall broken away. Fig. 2 is a top plan of the kiln; and Fig. 3 is an elevation of the division-wall of a cooling-chamber, with the truck run out.

Like letters indicate like parts in each figure.

The nature of this invention relates to the construction of a brick-kiln in which the burning of the brick proceeds continuously, the bricks molded each day being burned in a block by themselves, while their waste heat is utilized in drying and partially burning those subsequently molded and placed in the kiln on top of them. The invention consists in the peculiar construction of a permanent kiln with one or more burning-chambers having hollow division-walls between them, in which hollow walls sand can be burned for sanding the molds and green brick; and in the improved construction and arrangement of its several operative parts, all as is more fully hereinafter set forth.

In the drawing, A represents the front side and rear walls of a rectangular brick-kiln, preferably constructed of well-burned brick, and about sixteen inches in thickness. The whole should be properly braced and stayed in a stout wooden frame-work, B. The kiln is divided from front to rear by a double wall, C, in which are formed two chambers, D, having openings E at the bottom, closed by proper doors. F are fire-doors on the front and back faces of the kiln, around which extends a platform, G. That part of the kiln below the platform I call the cooling-chambers, and above it the burning-chambers, although the kiln is open from top to bottom. The cooling-chambers have their front and rear walls cut away, and are provided with suitable doors for closing them. A suitable track or tram-way ex-

tends through the bottom of the cooling-chambers, and on each track is a truck, H, whose platform has nearly the area of each chamber. I is a beam, whose ends are engaged with slides or guides in the vertical portions of the frame-work B, forming the jambs of the door-ways of the cooling-chambers. J are jack-screws at either side of the door-ways, threaded in said beams. Similar beams and screws are in like manner arranged at the rear end of the kiln.

I will now describe the construction of a "block" from each day's product of molded bricks. In starting a new kiln, however, I prefer to use for the lower blocks burned bricks laid up in the same manner—that is to say, set six high on the platform of a truck, and on edge, with the usual interstices between them, and then finish up six high, but leaving the arches K' in them, as shown, extending through from front to rear of the block K so constructed, which is sixteen bricks long, covering the platform of the truck. On top of the block a course of bricks, *a*, is edged up, leaving a space between each row from front to rear; these bricks breaking joints with the top-course bricks. The truck with its block is now run into the cooling-chamber, and two similar blocks built upon it, the arches of the middle one coming abreast of the fire-doors F of the kiln-walls. The fires are now started in the arches, and the burning of the upper portions of the fired block, and the lower portion of the one above it, proceeds in the usual manner. The ascending waste heat, permeating the mass above, first drives off its water-smoke, and then dries it. When the fired block is sufficiently burned I cease firing, and over the beams I, which should be now at the top of the screws, I insert heavy bars *b* of iron, passing them between the rows *a* of the lower block, and coming out over the beam at the rear side of the kiln. (I would here state that the bottom rows of bricks in each block should be so laid that the bricks will bear on these bars, and not their joints.) I then raise up the superincumbent blocks a little, open the doors or remove them from the cooling-chambers, run out the truck with the lower block, run in another truck, and then lower the mass until it rests upon the truck; remove the bars and close up the cooling-chambers. The arches

of the upper block will now be abreast of the fire-doors, when firing again proceeds. During the time of burning the burned block is cooling off in the chamber below. Before the first block is removed, however, another block should be built upon the mass in the kiln. In this way I continue the process, removing each day a block of burned brick, and adding a day's product of green brick to the kiln-chambers, utilizing heat which would otherwise be wasted, and saving proportionately in fuel.

The drying and burning of sand for sanding the molds and green brick is a considerable item of expense in the yard. By filling the spaces or chambers D of the hollow walls with sand a constant supply may be had, drawing off through the doors E as required.

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

1. The kiln A, provided with the sand-chambers D D and the openings E E, constructed and arranged substantially as described and shown, for the purposes set forth.

2. The combination of the kiln A, provided with the sand-chamber D, and the burning-chambers described and shown, provided with the screws J, beams I, bars b, track described and shown, and the platform G, all constructed, arranged, and operated substantially as described and shown, and for the purposes set forth.

Witnesses:

JOHN EISELE.

FREDERICK EBERTS,
M. STEWART.