

D. ASBURY.
Brick-Kiln.

No. 220,213.

Patented Oct. 7, 1879.

FIG. I.

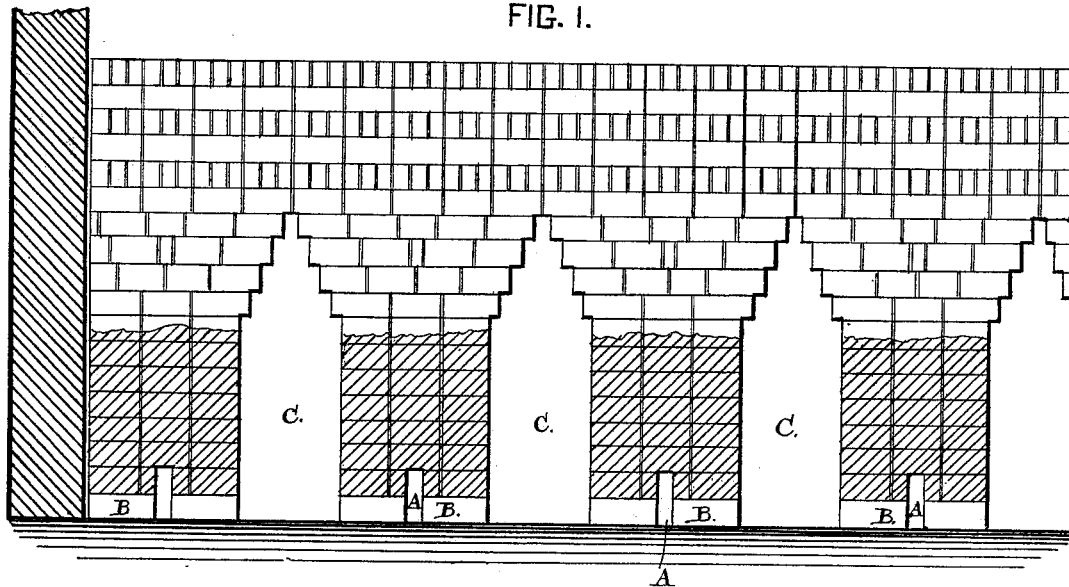
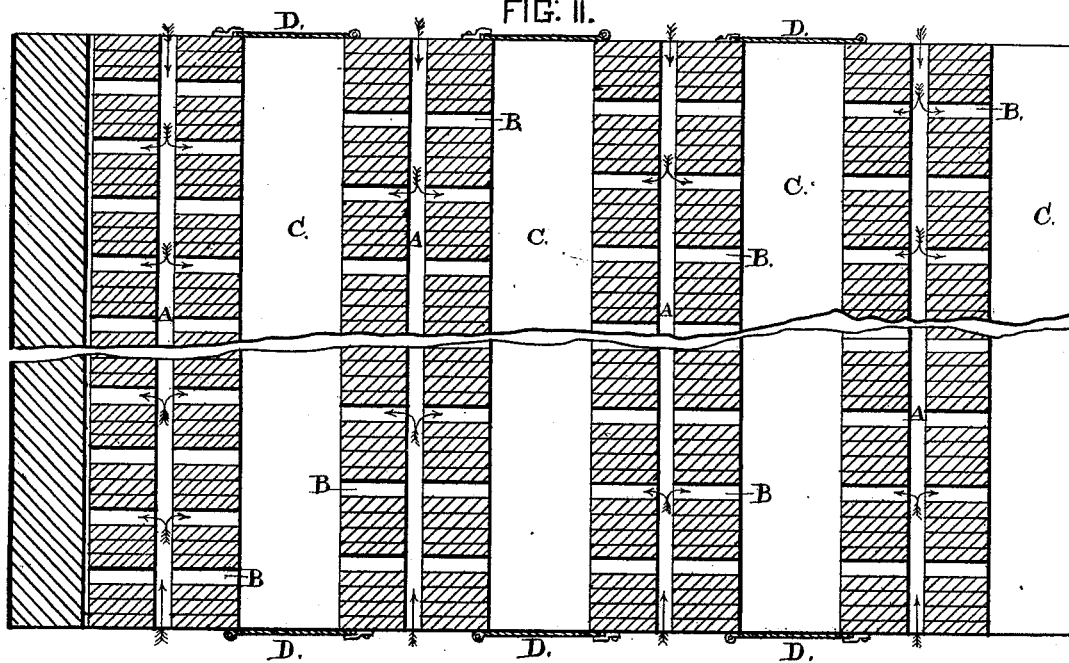


FIG. II.



WITNESSES:

Thomas Wood
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INVENTOR:

UNITED STATES PATENT OFFICE.

DANIEL ASBURY, OF CHARLOTTE, NORTH CAROLINA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO EBENEZER NYE HUTCHISON.

IMPROVEMENT IN BRICK-KILNS.

Specification forming part of Letters Patent No. **220,213**, dated October 7, 1879; application filed September 1, 1879.

To all whom it may concern:

Be it known that I, DANIEL ASBURY, of Charlotte, in the county of Mecklenburg and State of North Carolina, have invented a new and useful Improvement in Brick-Kilns, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a view in perspective of my kiln. Fig. 2 is a horizontal section of the same on the line *xx* of Fig. 1.

The object of my invention is to build a brick-kiln which shall be simple in its construction, effective in its operations of burning, and insure a greater saving of time and fuel than has heretofore been done.

My invention consists in arranging the bricks in the side walls or pillars of the fire-arches so as to leave small air spaces or flues leading from the fire-arches into a continuous flue, which extends the entire width of the kiln through the walls or pillars of the arches, so that the products of combustion will receive air-drafts from both sides and throughout the entire length of the fire-arches or furnaces.

In the construction of kilns heretofore the walls, pillars, or benches of the fire-arches or furnaces have been built up solid, and the ends of the arches or furnaces left open, so as to admit the air from the door or end of the furnace over or under or through the fuel. Benches of a permanent character have also been made in brick-kilns of iron, brick, fire-clay, &c., with air spaces or channels entering the furnaces above or below the grates. They have also been made with hollow walls or pillars of the fire-arches, with flues admitting air on a level with the furnace; but said flues have only extended part way through the kiln, and as a consequence the bricks in the center of the kilns are not uniformly or sufficiently burned.

To cheapen and simplify the construction of kilns of this character, and to obviate the defects above named, I build my walls or pillars of the fire-arches of the usual or well-known construction; but instead of making them solid, as has heretofore been done, I leave a small flue or air-space at the bottom, running

the entire length of said walls or pillars, as shown at A.

In building the sides of the walls or pillars I leave out a brick here and there from the bottom course. I may leave out every other brick, or have two, three, or more bricks laid close together in groups, and then an open space, which connects the furnaces or fire-arches with the flues A, thus forming a series of small flues for the admission of air on a level with the bottom of the furnaces or fire-arches.

The small flues are shown at B, and may be arranged so as to enter or open into the fire-arches or furnaces directly opposite to each other, or they may alternate. I prefer, however, the former arrangement, for the reason that the air-currents meeting in the bottom and center of the fire-arches tends to increase the draft, making the combustion more complete, and distributing the calorific currents directly to and around the mass of bricks above.

C are the fire-arches or furnaces, which extend the entire width of the kiln and are closed at both ends by a door, D.

In this kind of construction of a kiln wood is preferred as a fuel, and it is fed in at both ends of the furnace or fire-arch, and pushed toward the center, so that the entire arch is a furnace; and by this means the bricks in the center and sides of the kiln are burned uniformly, the combustion is more complete, and thus a saving of time insured, and, necessarily, a saving of fuel.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the continuous fire-arches or furnaces with the small lateral flues or openings and the continuous flues or air-passages in the pillars or benches, whereby the fuel in the furnaces is supplied with air at numerous points and a more perfect combustion and distribution of the calorific currents is attained.

DANIEL ASBURY.

Witnesses:

GEO. M. LOCKWOOD,
L. W. SINSABAUGH.

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