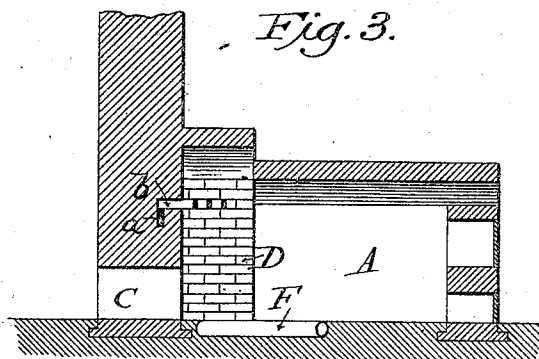
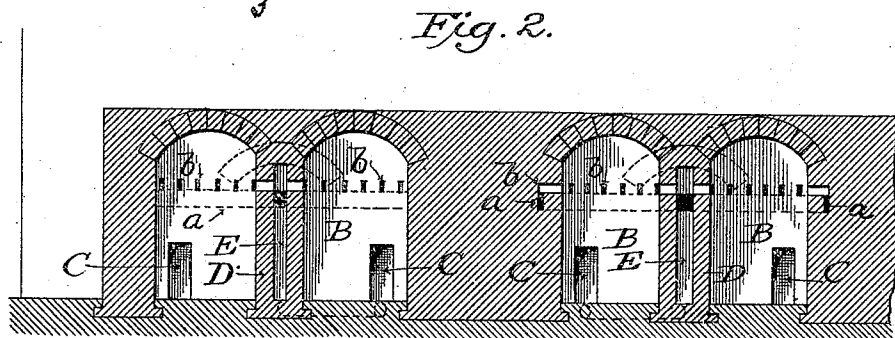
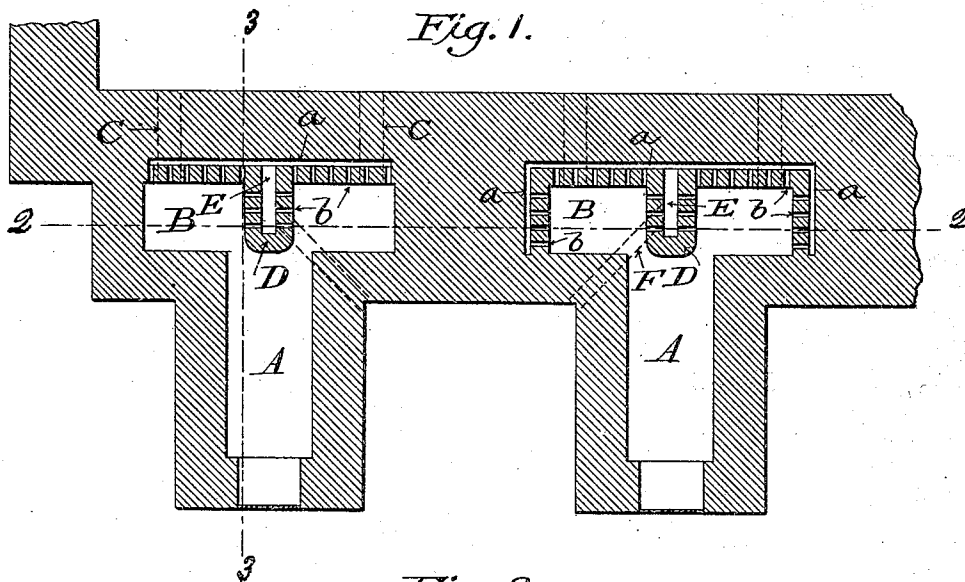


(No Model.)

I. C. WHEELER.
BRICK KILN FURNACE.

No. 501,980.

Patented July 25, 1893.



Witnesses
Horace A. Dodge.
James F. Duhamel

Isaac C. Wheeler
Inventor:
by Dodge & Sons
Attys.

UNITED STATES PATENT OFFICE.

ISAAC C. WHEELER, OF CARTHAGE, MISSOURI.

BRICK-KILN FURNACE.

SPECIFICATION forming part of Letters Patent No. 501,980, dated July 25, 1893.

Application filed January 13, 1893. Serial No. 458,240. (No model.)

To all whom it may concern:

Be it known that I, ISAAC C. WHEELER, a citizen of the United States, residing at Carthage, in the county of Jasper and State of Missouri, have invented certain new and useful Improvements in Kilns, of which the following is a specification.

My invention relates to kilns for burning bricks or similar articles, and is designed as an improvement upon that described in Letters Patent No. 337,696, granted to R. B. Morrison March 9, 1886.

In the drawings: Figure 1 is a horizontal sectional view through the front part of the kiln; Fig. 2 a vertical sectional view on the line 2—2 of Fig. 1; and Fig. 3 a vertical sectional view on the line 3—3 of Fig. 1.

A A indicate the fire chambers or furnaces,—of which there may be any desired number,—which project forwardly from the front wall of the kiln. At the inner end of each fire chamber is a combustion chamber B which extends laterally with reference to the fire chamber, as shown in Figs. 1 and 2, while from the rear side of said chamber B, extend two eyes C C. These eyes C C as shown in Fig. 1 are at the corners of the chamber B, or at least out of line with the fire chamber A so as to cause the products of combustion to take a circuitous path. The rear wall of chamber B is hollow or provided with an air flue or passage *a*, shown in Figs. 2 and 3, from which extends a series of openings *b* which are adapted to discharge air into the interior of said chamber; said flue or passage *a* and its openings *b* being located above the eyes C as shown in Figs. 2 and 3 but extending from end to end of the chamber B.

Projecting forwardly from the rear wall of chamber B, into the mouth of the fire chamber A,—or to a point about on line with the front wall of chamber B,—is an upright hollow block D containing a chamber E which is closed at top and bottom and at its front or outer end, but which communicates at its rear with the flue or passage *a* formed in the rear wall of chamber B.

F indicates a pipe extending from the outside of the kiln to the chamber E and adapt-

ed to supply the latter with air. The products of combustion pass through the narrow openings between the block D and the side walls of the chamber A, and highly heat the said block. The air that is supplied to the interior of block D also becomes highly heated and passes from the chamber E into the flue or passage *a* from whence it issues into the chamber B through the openings *b* distributed throughout the rear wall of said chamber B. The air issuing from these openings mingles with the products of combustion, and together they pass through the eyes C C into the interior of the kiln.

The furnace herein shown is designed for burning soft coal without grate-bars; but the latter may be used if desired.

By making the block and the rear wall of the combustion chamber hollow, they are prevented from burning out or being melted down as is liable to occur when an intense heat, such as is sometimes employed, is used.

If desired, the side walls of the hollow block D may be provided with a series of lateral outlets or openings *b* through which the air heated within the block, may escape into the combustion chamber B. Indeed, these openings *b* may be formed in any or all of the walls of the chamber B, according to the requirements in each case.

Having thus described my invention, what I claim is—

1. In a kiln, the combination with the furnace chamber; of a combustion chamber at the inner end thereof; a hollow closed block extending forwardly from the rear wall of the combustion chamber to the mouth of the fire chamber but set away from the sides of the latter; and eyes opening from the combustion chamber into the kiln.

2. In a kiln, the combination with the furnace chamber; of a combustion chamber at the inner end thereof; a hollow block extending forwardly from the rear wall of the combustion chamber as described and containing an air-chamber; a flue or passage *a* formed in the rear wall of the combustion chamber and provided with openings; means for supplying air to the interior of the hollow block, and

from the latter to the flue *a*; and eyes opening from the combustion chamber into the kiln.

3. In a kiln, the combination with the furnace chamber; of a combustion chamber at the inner end thereof; a hollow block extending forwardly from the rear wall of the combustion chamber; eyes opening from the combustion chamber into the kiln; a flue or passage *a* formed in the walls of the combustion

chamber and hollow block and provided with discharge openings *b*; and means for supplying air to the hollow block.

In witness whereof I hereunto set my hand in the presence of two witnesses.

ISAAC C. WHEELER.

Witnesses:

D. A. HARRISON,
J. W. PENTZER.