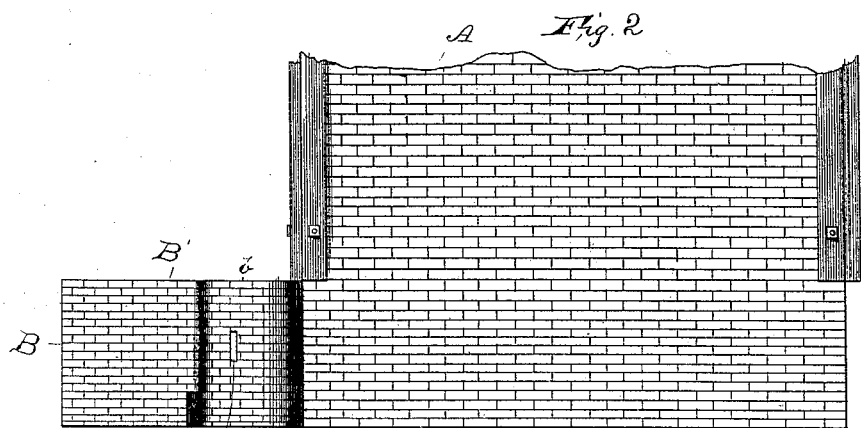
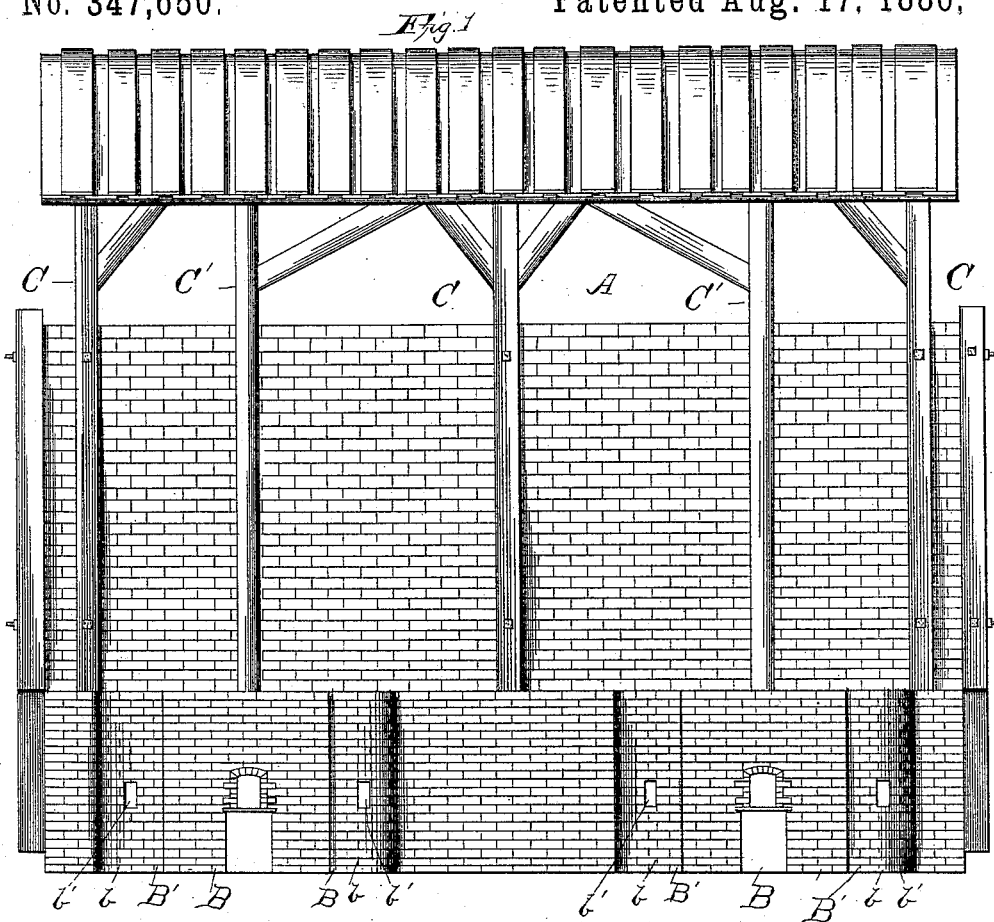


G. W. SHARER.

BRICK KILN.

No. 347,650.

Patented Aug. 17, 1886,



Witnesses
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A. J. Jones.

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Geo. W. Sharer
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3

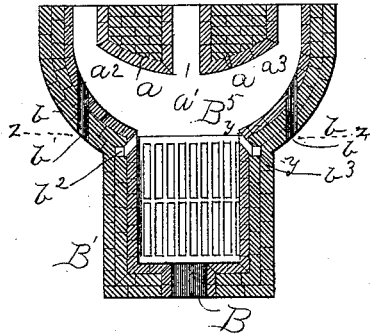


Fig. 4.

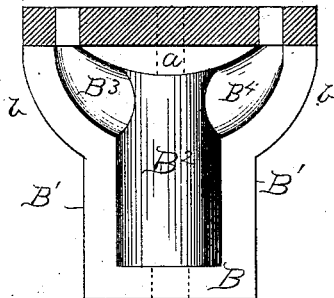


Fig. 5

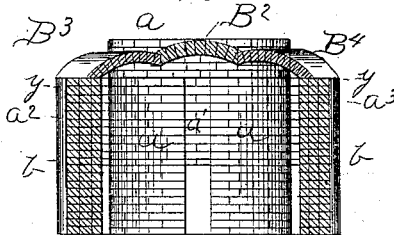
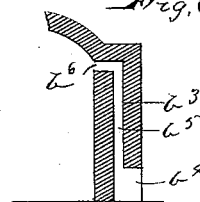


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE W. SHARER, OF TERRE HAUTE, INDIANA.

BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 347,650, dated August 17, 1886.

Application filed February 24, 1886. Serial No. 193,051. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SHARER, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Brick-Kilns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of brick-kilns known as the "Wingard system."

The object of my invention is to improve that construction; and to that end the nature of my invention consists of constructions and combinations, all as will hereinafter be described in the specification, and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 represents a front elevation of the kiln; Fig. 2, a side elevation with upper part of kiln broken away; Fig. 3, a horizontal section of the furnace, taken on line *yy*, Fig. 5; Fig. 4, a top plan of the furnace; Fig. 5, a vertical section taken on line *zz*, Fig. 3; Fig. 6, a section on line *ss*, Fig. 3.

The kiln A is the same as those commonly used, except at the points where the furnaces are attached, and at those points is formed an abutment, *a*, having an eye, *a'*, and forming one of the sides of the eyes *a²* and *a³*. The eye *a'* is placed at the center of the rear of the furnace, and the abutment is inclined rearwardly from the eyes, so that the flame striking against it will be equally divided among the eyes. The rear ends, *b*, of the side walls, *B'*, of the furnace B are inclined in the same manner as the abutment, to form the side or outer walls of the eyes *a²* and *a³*. In these ends *b* are the sight-holes *b'*. At the angle formed by the junction of each of the parts *B'* and *b* are air-supplying passages *b²* and *b³*, each having an inlet-opening, *b⁴*, a vertical passage, *b⁵*, and an exit-opening, *b⁶*, which projects air across the furnace to the eyes *a²* and *a³*—that is to say, the passage *b²* projects air in the furnace in the direction of eye *a³*, and the passage *b³* projects air in the direction of eye *a²*. If it be desired to project more of the products of combustion into one eye—say eye *a²*—than in the other—say eye *a³*—then the passage *b²* is closed. This closure will cause the air passing through passage *b³* to deflect the products of combustion into eye *a²*. The main or top arch, *B²*, of the furnace is sprung

from the walls *B'*, and its rear end rests upon the abutment *a*, which projects at the side slightly above the arch, as shown in Figs. 4 and 5. The side arches, *B³* and *B⁴*, for the eyes *a²* and *a³*, are sprung from the curved part *b* of the wall to the curved part of the abutment *a*, so that when placed together the three arches will support each other and make a stronger top or arch for the furnace than has heretofore been made. A distributing-vault, *B⁵*, is also formed in the back part of the furnace by the arches, the parts *b*, and the front wall of the kiln, so that the products of combustion can be evenly distributed to the eyes. The passages *b²* and *b³* are formed in the forward part of this vault, and the air passing upwardly through them is heated by the products of combustion before passing into the upper part of the vault.

As before stated, the top of the abutment projects above the arches, so that an intermediate post, *C'*, can be placed thereon to assist posts *C* in supporting the roof. This could not be done heretofore, because the posts marked *C'* would rest upon the arch, which would not be strong enough to support the post and superincumbent roof.

I am aware that a furnace provided with a rear wall which rests against the wall of the kiln and having a concave face presented to the furnace, and eyes in said rear wall, is old, and therefore make no claim to that form.

My device is provided with an abutment resting against the rear wall of the furnace, and presents a convex face to the furnace, for the purposes hereinbefore set forth.

What I claim as new is—

1. In a brick-kiln, the combination, with the front wall having the abutment with convex face fronting the furnace, of eyes *a'*, *a²*, and *a³*, and the furnace, substantially as described.

2. In a brick-kiln, the combination, with the front wall having the abutment *a*, and eyes *a'*, *a²*, and *a³*, of the furnace having its side wall curved at the rear ends, and the side arches springing from the curved ends and abutment, and the rear ends resting upon the main arch, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEO. W. SHARER.

Witnesses:

GEO. R. BYINGTON,
M. F. HALLECK.