Dec. 18, 1923.

1,478,309

F. H. WAITE

BAFFLE BRICK

Filed July 8, 1921

2 Sheets-Sheet 1

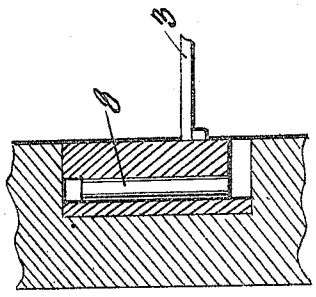


Fig. 2.

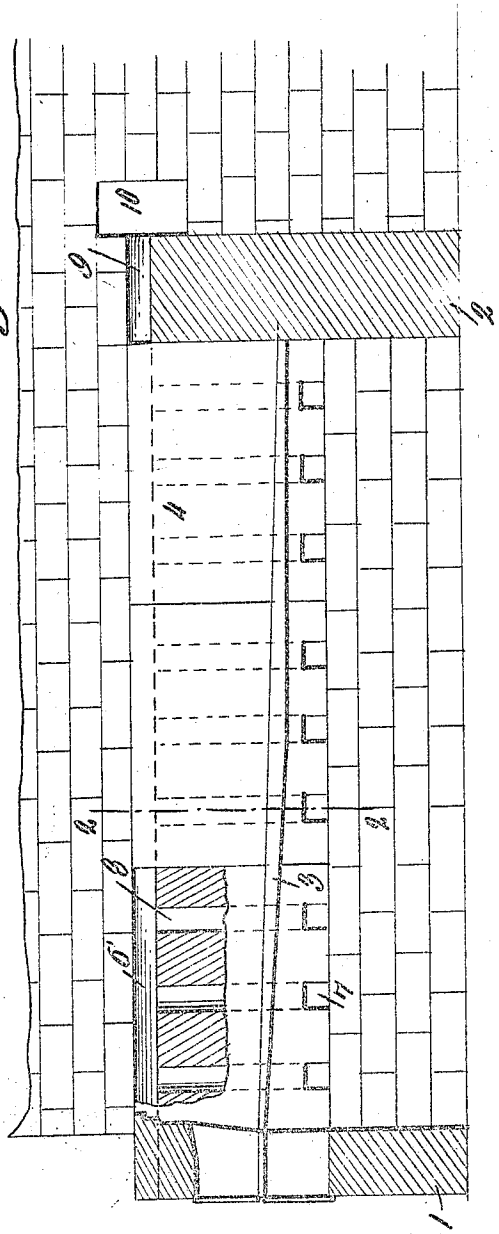


Fig. 1.

WITNESSES

Guy M. Spring

Chas. A. Wells

FRANK H. WAITE INVENTOR.

BY

Richard B. Owen

ATTORNEY.

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Fig. 3.

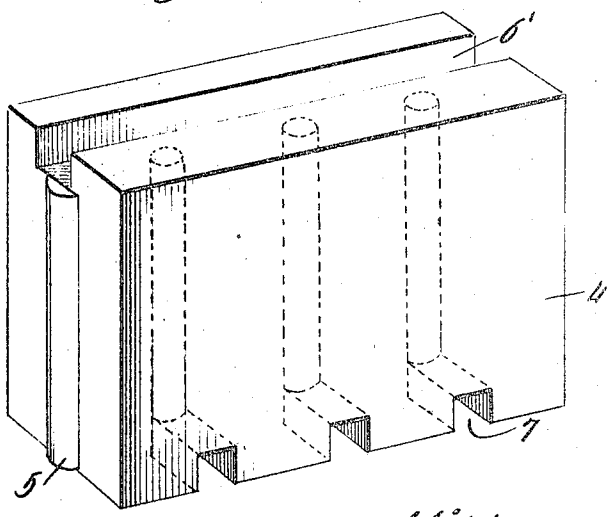


Fig. 4.

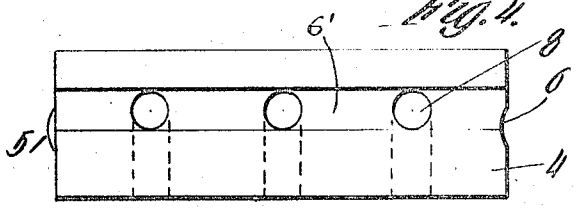
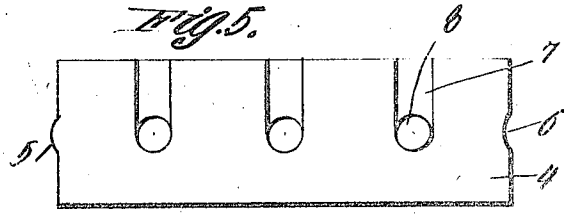


Fig. 5.



WITNESSES

Guy McSpring

FRANK H. WAITE INVENTOR.

BY

Richard B. Owen

ATTORNEY.

Patented Dec. 18, 1923.

1,478,309

UNITED STATES PATENT OFFICE.

FRANK H. WAITE, OF LONG ISLAND CITY, NEW YORK.

BAFFLE BRICK.

Application filed July 8, 1921. Serial No. 483,220.

To all whom it may concern:

Be it known that I, FRANK H. WAITE, a citizen of the United States, residing at Long Island City, in the county of Queens and State of New York, have invented certain new and useful Improvements in a Baffle Brick, of which the following is a specification.

This invention relates to furnace construction and more particularly to the bricks used in conjunction therewith whereby a circulation of air may be passed through the bricks so as to prevent clinkers becoming stuck to the brick as is now commonly the case. It often happens in removing clinkers from furnaces that they become so hardened to the bricks thereof that it is quite a common occurrence to break the bricks in an endeavor to separate the clinkers therefrom. I have found by the use of the bricks about to be described that this can be easily overcome by passing a circulation of air through the bricks and keeping them at a comparatively low temperature so as to prevent their burning.

In the drawing:—

Figure 1 is a sectional view taken longitudinally through a furnace showing my improved bricks in position,

Figure 2 is a section taken on the line 2—2 of Figure 1,

Figure 3 is a perspective view of one of the bricks,

Figure 4 is a top plan view thereof, and

Figure 5 is a bottom plan view thereof.

Referring to the drawing in detail it will be seen that the furnace illustrated in Figure 1 consists of the usual bottom and top having the end walls 1 and 2, the latter of which is usually called a bridge wall. A grate 3 is shown extending longitudinally of the furnace intermediate its top and bottom walls as is usually the case so as to form the box and the ash pit. My improved bricks 4 form the side walls of the furnace. By referring especially to Figures 3 to 5 inclusive it will be seen that each brick 4 consists of a body having a rib 5 at one end and a groove 6 at its other end so that the bricks may be interlocked as is usually the case. No novelty is claimed for this feature of the bricks but of course some such locking means is very desirable. A longitudinally extending channel 6′ is provided in the top edge of each brick while a plurality of transversely extending channels 7 are provided in the bottom edge of each brick. The channel 6′ extends from end to end of the brick whereas the transverse channel 7 extends from one side of the brick and terminates a distance from the other side as is shown clearly in Figure 5. The transverse channels 7 are in communication with the longitudinally extending channel 6′ by means of a plurality of conduits 8 as is shown to advantage in Figure 2. There may be any preferred number of the channels 7 and conduits 8 and of course the same number of conduits 8 will be provided as there are channels 7 and their number will necessarily vary in accordance with the size of the bricks which it is desired to construct.

These bricks 4 are arranged as shown in Figure 1 and form the side walls of the furnace. They are situated so that the transverse channels 7 are positioned below the grate 3 and the channels 6′ are in alignment with each other and form a continuous channel which communicates with a channel 9 provided in the bridge wall 2 and in communication with any suitable outlet 10. Thus there will be a continuous current of air passing from the ash pit of the furnace through the transverse channel 7, conduits 8, channel 6′, channel 9, and finally to the outlet 10. This current of air will sufficiently cool the bricks so as to prevent them from becoming burnt and thus it will not be possible for clinkers to stick or otherwise fasten themselves to the side walls of the furnace as is now commonly the case.

Obviously, the invention is not limited and restricted to the precise and exact details of construction as illustrated and described, because it is susceptible of a variety of embodiments, and many minor mechanical changes may be made in such preferred incorporation of the invention without departing from the substance or essence of the invention and without the sacrifice of any of its substantial benefits and advantages.

Having thus described my invention what I claim as new is:—

1. In a device of the class described, a brick comprising a rectangular body having a longitudinally extending channel in one longitudinal face thereof and a transverse channel in its opposite face, and an internal conduit connecting said channels.

2. In a device of the class described, a

baffle brick comprising a rectangualr body portion having a longitudinally extending channel formed in one face thereof extending from one end thereof to the other, a plurality of transversely extending channels in the opposite face thereof extending from one edge of the body to a point short of the opposite edge of the body, and a plurality of internal spaced conduits connecting the transverse channels with the longitudinal channels.

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

FRANK H. WAITE.

Witnesses:
GEORGE W. DAVEY,
JACOB FAVOR.