

(No Model.)

W. H. WICKERS.
BRICK KILN.

No. 347,907.

Patented Aug. 24, 1886.

Fig. 1.

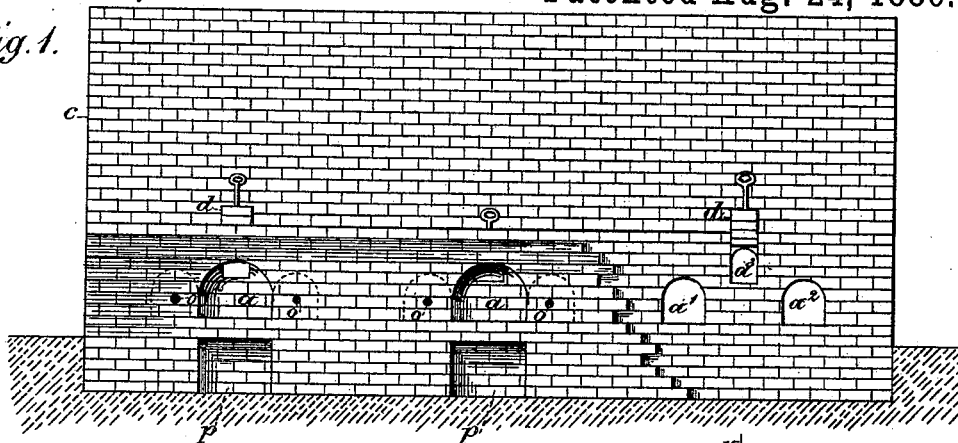


Fig. 2.

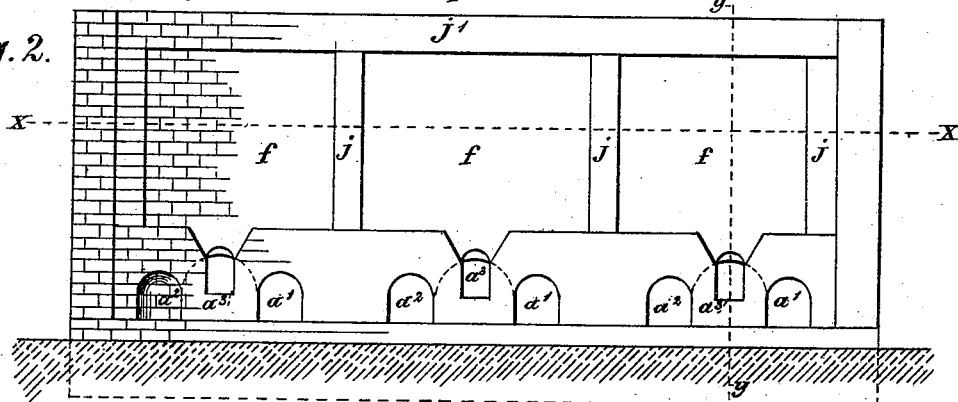


Fig. 3.

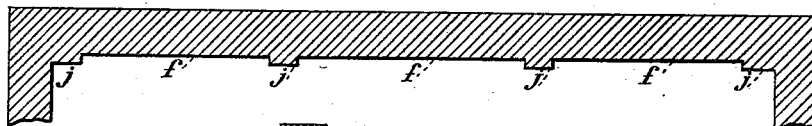
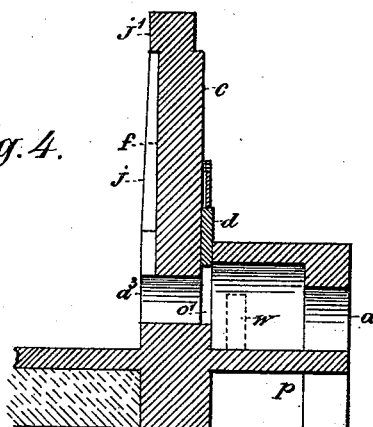


Fig. 4.



WITNESSES.

Lustav Bohn.
Charles M. Tyler

INVENTOR.

Wm. H. Wickers.

By C. F. Jacobs
att'y.

UNITED STATES PATENT OFFICE.

WILLIAM H. WICKERS, OF MOUNT COMFORT, INDIANA.

BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 347,907, dated August 24, 1886.

Application filed May 5, 1886. Serial No. 201,135. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WICKERS, a resident of Mount Comfort, Hancock county, Indiana, have made certain new and useful Improvements in Brick-Kilns, a description of which is set forth in the following specification, reference being made to the accompanying drawings, in the several figures of which like letters represent like parts.

My invention relates to improvements in the construction of kilns for burning brick and other material made of clay, and will be understood from the following description.

In the drawings, Figure 1 represents a front view, a portion of the fire-chambers and ash-pits torn away, showing the openings in the rear of the wall. Fig. 2 is a rear view of the same. Fig. 3 is a horizontal section on the line *x x*, Fig. 2. Fig. 4 is a section on the line *y y*, Fig. 2.

In detail, *c* is the front portion of the kiln, commonly called a "clamp," the rear being built precisely like it, and between these two sides or clamps the new brick is laid in arches to be burned. The wall of the clamp, as will be seen from Fig. 1, extends some distance below the surface of the ground, in order to provide ash-pits *p*.

a are the openings to the furnaces or fire-chambers, and each one of these chambers has three openings through the wall of the clamp, *a'*, *a''*, and *a'''*. (Shown in the right-hand portion of Fig. 1.) The openings *a'* and *a''* are built in arches in the usual manner, and run entirely under and through the kiln of new-made brick when made up. Between these openings is a third and smaller opening, *a'''*, which is not continued under the kiln of brick, but only through the wall of the clamp, and this wall is constructed in the manner shown in Fig. 3, with recesses, forming, as it were, flues *f*. When the newly-made brick are laid up against them, the brick only rest against the jambs *j*, thus leaving a narrow space between the brick and the recesses or flues *f*. The object of this construction is to provide between the line of brick and the wall of the clamp a series of thin narrow flues, which are directly connected with the openings *a'''*, so that heat passing from the combustion-chamber through the openings *a'''* may pass up through the narrow flues *f*

along in front of the brick adjoining each clamp-wall, and will more uniformly burn and harden the brick at those points. In the common kiln the brick at these points on both sides adjoining the clamp, especially at the tops and corners, are burned very little, and in some instances are burned so little as to be almost worthless; hence I provide these additional flues leading from the fire-chambers, so that heat passing up through the flues along the newly-made brick when it reaches the top of the clamp will pass along under the top and through the rest of the brick, finding its way readily in either direction. I also provide dampers *d* for closing the openings *a'''*, these dampers having handles which extend above the opening on the front side of the clamp, so as to be readily seized by the hand of the operator. The openings *a* are intended to be provided with doors, so that they may be closed, when desired. It will be observed that each of the front openings, *a*, serve for the three rear openings—the two ordinary ones, *a'* *a''*, and a third and smaller opening, *a'''*. If desired, when coal is used, a bridge-wall, which is shown in dotted lines in Fig. 4, may be run transversely across each one of the fire-chambers, about half or little more than half its height, in order to prevent the entrance of cold air directly through the arches to the bricks beyond; but when wood is used this wall is perhaps not so convenient. The dampers *d* slide in openings *o'*, and when it is desired to cut off heat from the openings *a'''* the damper is let down, closing such openings.

In Fig. 1 are seen small holes *o* on either side of the openings *a*, which are peep-holes, which are intended to be used for examining the interior of the fire-chamber.

I am aware of the devices shown in the patents to Brown and Brown, March 21, and August 29, 1882, to Bronkar, May 23, 1876, and Suris, May 14, 1878, and do not claim the construction therein shown.

What I claim, and desire to secure by Letters Patent, is the following:

1. A brick-kiln, *c*, whose side walls are constructed on the inside with recesses *f* and the jambs *j*, having also secondary flues *a'''*, leading from the combustion-chamber of the furnace through the walls *c*, to connect with the flues

f, and the dampers *d*, for closing such auxiliary flues, all combined substantially as described.

5 2. A brick-kiln whose inside walls are constructed with a recess, *f*, between jambs *j*, the auxiliary flue *a*², provided with the closing-damper *d*, leading to the combustion-chamber of the furnace *a*, which is also connected with

the main draft-flues *a*' and *a*², all combined substantially as described. 10

In witness whereof I have hereunto set my hand this 1st day of May, 1886.

WILLIAM H. WICKERS.

Witnesses:

C. P. JACOBS,

HATTIE MURRY.