(No Model.)

E. A. KERN.

BRICK.

No. 263,914. Patented Sept. 5, 1882.

Fig. 1.

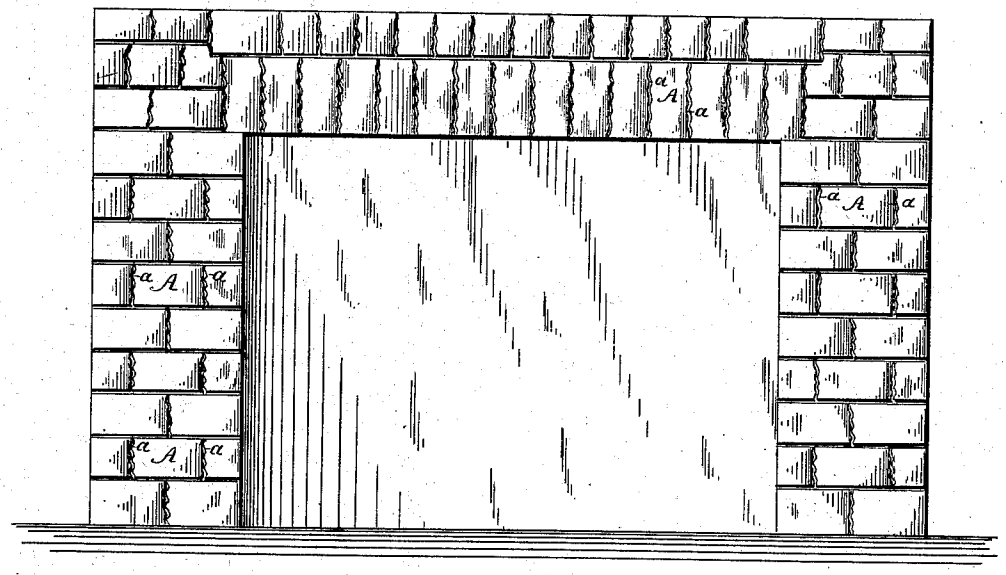
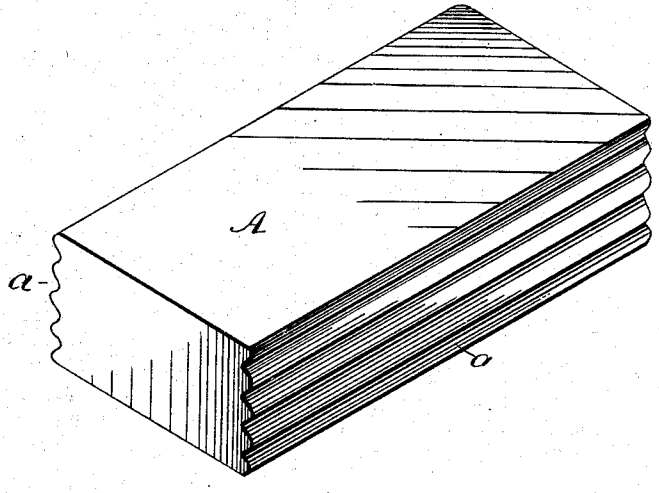


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWIN A. KERN, OF GIRARD, OHIO.

BRICK.

SPECIFICATION forming part of Letters Patent No. 263,914, dated September 5, 1882.

Application filed May 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, E. A. KERN, of Girard, in the county of Trumbull and State of Ohio, have invented a new and useful Improvement in Bricks, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

In furnaces for rolling-mills the action of the heat causes the fire-bricks lining the same to crack into small pieces within a very short time, and as a matter of necessity the pieces of brick drop upon the bars of iron being heated and render them unfit for being rolled. So far as I am aware, nothing has heretofore been provided to remedy this defect in the fire-brick universally employed in rolling-mill furnaces. The disadvantages of the ordinary fire-brick can be avoided only by careful watching and repairing, and as the bricks begin to crack after they have been used two or three weeks it is a source of great trouble to keep the furnace in a proper condition.

My invention consists in providing a fire-brick which will remedy the above-mentioned defects. This brick is made of the form and size usually employed, whereby it may be conveniently handled in being placed in position or removed therefrom, and the brick is provided with a series of small corrugations in its faces, to the end that any small particle of brick which becomes severed from the main part shall be held securely in its place by one or more corrugations to prevent it from falling upon the bars of iron.

I am aware that blocks of artificial stone have been made with corrugations of various kinds for use in building arches and walls, where the object is to bind a heavy mass together. In such cases, where strength is requisite, the corrugations are made few and large with reference to that object. It is understood that there would be nothing patentable in making such a building-stone merely with larger or smaller corrugations; but my fire-brick is not a building-stone, and there are special reasons why the fire-brick should be made with small numerous corrugations, as already explained. The corrugated stone blocks heretofore made could not be used to answer the purpose for which my brick is intended. It would be necessary to manufacture them wholly with reference to a different object, and this would necessitate an important difference in construction, in which each feature would have a special object not thought of or provided for in the former construction.

In the drawings, Figure 1 is a sectional elevation of the walls and roof of a furnace formed of bricks constructed with corrugated faces, according to my invention; and Fig. 2 is an enlarged view of a brick detached.

The rectangular brick A is constructed with small open corrugations *a* in two or more of its faces, so that a number of such bricks may be placed together face to face, with the corrugations of one fitting into those of another. These corrugations may be made angular or curved, and the brick may be corrugated lengthwise or crosswise, as may be desired. With this construction the corrugations, which are to be made numerous, will prevent even a small particle of brick from dropping upon the bars of iron when it becomes detached from the body of the brick by the cracking of the latter, and the lining of a furnace or stack may be repaired at any point without inconvenience.

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

A fire-brick for rolling-mill furnaces, having two or more of its faces provided with numerous small corrugations, whereby any small particle of the brick, when the latter becomes cracked, will be prevented from falling upon the bars of iron, as specified.

EDWIN ADAM KERN.

Witnesses:
BEN. J. EDWARDS,
THEODORE MILLER.