

(No Model.)

T. & J. D. TULLY.
GRATE FOR BRICK KILNS.

No. 301,410.

Patented July 1, 1884.

Fig 1

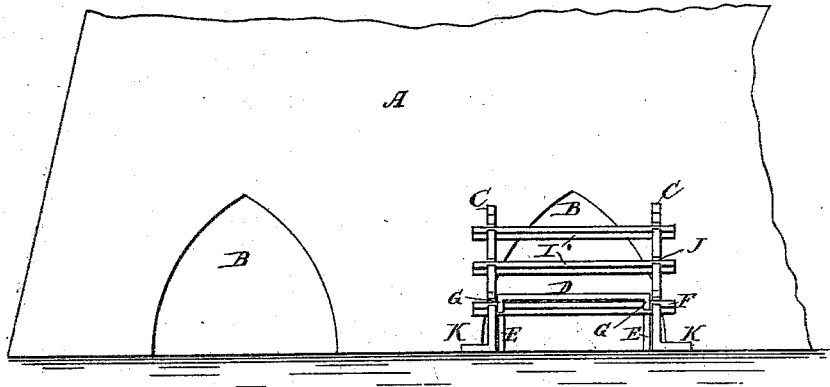


Fig 2

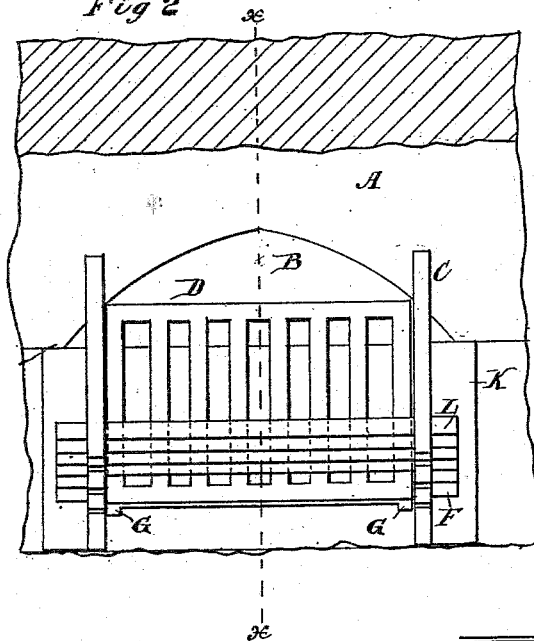
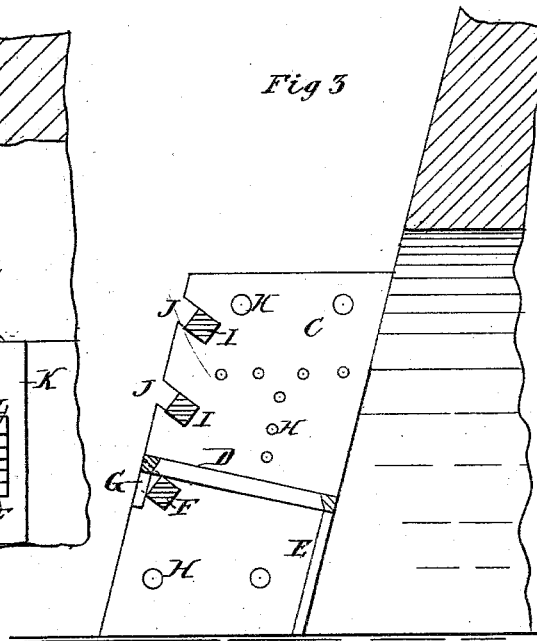


Fig 3



Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS TULLY AND JOHN D. TULLY, OF CHICAGO, ILLINOIS.

GRATE FOR BRICK-KILNS.

SPECIFICATION forming part of Letters Patent No. 301,410, dated July 1, 1884.

Application filed March 4, 1882. (No model.)

To all whom it may concern:

Be it known that we, THOMAS TULLY and JOHN D. TULLY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grates for Brick-Kilns, fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a front elevation of our improved grate as applied to brick-kilns; Fig. 2, a top or plan view of the same; and Fig. 3, a vertical section taken on the line *x x*, Fig. 2.

The object of our invention is to enable us to burn coal as a fuel in making brick. In many localities wood is very expensive, and it is found to be much more economical to burn coal, or part coal and part wood, in the manufacture of brick.

Our invention consists in the combination of the side pieces and grate, and also in the combination of the special devices hereinafter specified.

We have found it quite troublesome and expensive to burn coal in brick-kilns by putting the coal directly into the arch even when considerable wood is used in connection with the coal. Our apparatus is applied to the front of the arch of a brick-kiln, and is intended to hold the coal so that it will become ignited, and the burning coal and heat will pass into the arch, the coal be entirely consumed, and all the heat thoroughly utilized in burning the brick.

In the accompanying drawings, A represents an ordinary brick-kiln, which is built up in the usual manner with arches B.

C are two iron side pieces or plates made to fit closely against the brick-kiln at the side of the arches B.

D is the grate supported on standards E on one side and on a cross-bar, F, which extends across between the side pieces, C, and is supported by them at a level higher than the tops of the standards E, so that the grate slopes downward toward the arch.

G G are projecting pieces, which are firmly secured to the grate D, and extend down over the piece F.

H are holes through the side pieces, C, to admit air to the coal.

I are fender-bars extending across between the side pieces, C, over the front of the grate D. They rest on the slots J, made in the side plates, C, and serve the purpose of keeping the coal on the grate. We preferably make base-plates or flanges K to the side plates, C, so that they will stand more firmly in place. The coal becomes thoroughly ignited on the grate-bars D, and where wood is used the live coal, when raked, falls off the back side of the grate into the arch. We find that we are able to rake the coal upon the grate, and also rake it under the grate in the arch, so as to keep a mass of live coal not only on the grate but in the arch. We are not only able to burn fuel economically, but save labor and time in tending the fire.

Our apparatus is so constructed that wood can be inserted in the arch by simply removing the fenders I, so that we can burn wood and coal at the same time; or we can readily remove the apparatus and burn only wood. All the parts of the apparatus are so composed that they will not burn out, but can be used continuously for a long period without material injury.

Having thus described the construction and operation of our invention, what we desire to secure by Letters Patent, is—

1. The combination of the kiln A, downwardly and backwardly sloping grate D, arranged in front of the arch of the kiln, and means for supporting the grate in that position, substantially as and for the purpose described.

2. In combination with a brick-kiln, the grate D, arranged on suitable supports in front of the arch of the kiln, and the fender-bars I, detachably arranged on suitable supports at the front of the grate, substantially as and for the purpose described.

3. The combination of the grate D with the supporting side pieces, C, provided with the draft-holes H; substantially as and for the purpose described.

THOMAS TULLY.
JOHN D. TULLY.

Witnesses:

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