

A. HALL.
GRATES FOR BRICK-KILNS.

No. 179,914.

Patented July 18, 1876.

fig: 1.

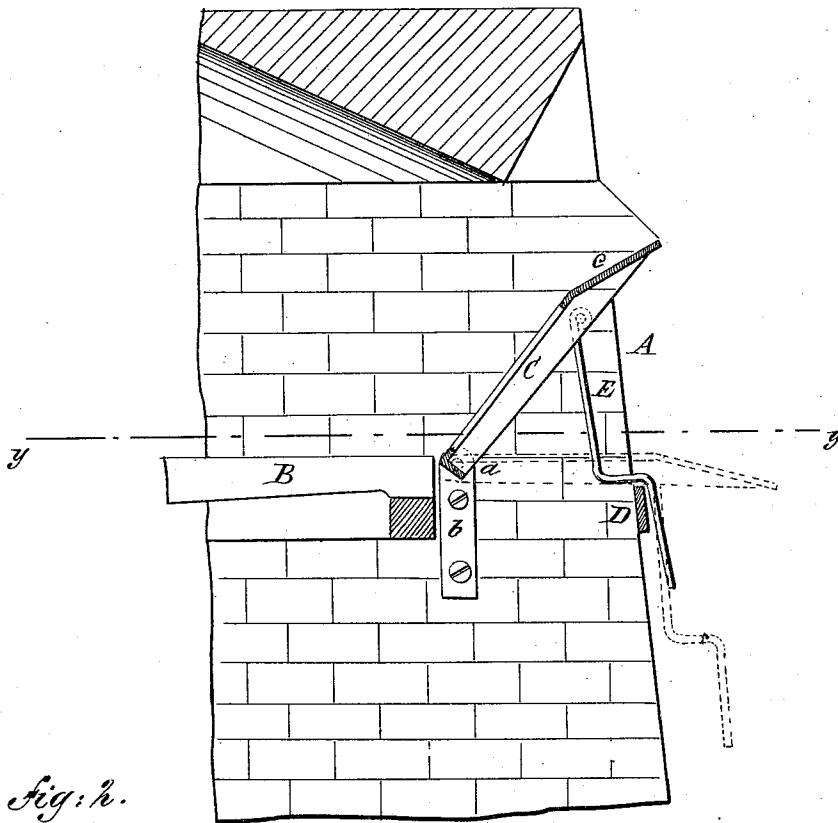
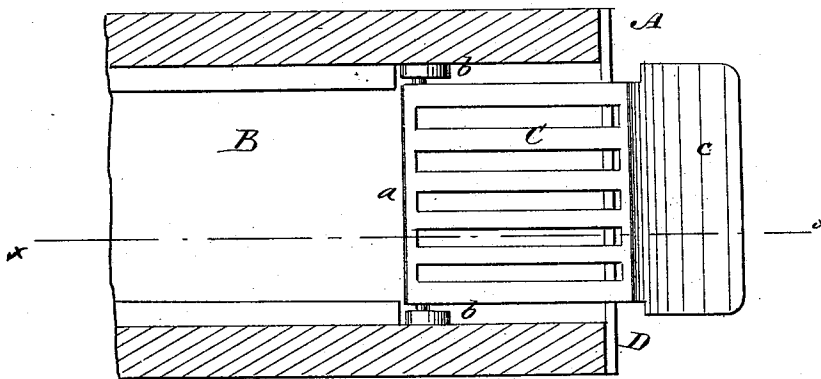


Fig: 2.



WITNESSES:

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ALFRED HALL, OF PERTH AMBOY, NEW JERSEY.

IMPROVEMENT IN GRATES FOR BRICK-KILNS.

Specification forming part of Letters Patent No. **179,914**, dated July 18, 1876; application filed June 20, 1876.

To all whom it may concern:

Be it known that I, ALFRED HALL, of Perth Amboy, in the county of Middlesex and State of New Jersey, have invented a new and Improved Mouth-Grate for Brick-Kilns, of which the following is a specification:

Figure 1 is a vertical section on line *x x* in Fig. 2. Fig. 2 is a section on line *y y* in Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention consists in a hinged front section of a grate, which takes the place of the ordinary dead-plate and door, so arranged as to be capable of being lowered into a horizontal position when the kiln is charged, but may be readily raised into an inclined position, so as to partially close the mouth of the kiln.

A is the mouth of an ordinary brick-kiln, and B are the grates which support the body of the fire. C is a section of grate, which is hinged at *a* to plates *b b*, which are attached to the walls of the kiln. A bar, D, is placed across the mouth of the kiln, which sustains the grate C, when it is let down into a horizontal position. E is a pawl-rod, which hangs loosely from the under side of the grate C, and when the grate is raised this rod engages with the bar D, holding the grate in position. The front end of the grate C terminates in a plate, *c*, for convenience in firing, and also to retain the coals which are at the top of the fire.

When it is desired to charge the fire, the pawl-rod E is tripped, when the grate C falls,

resting on the bar D, as shown in dotted lines in Fig. 1. Coals are introduced, and the grate raised until the pawl-rod engages with the bar D, holding it, as shown in Fig. 1, when the mouth above the grate C is filled with coal, and packed with coal-dust.

The advantage claimed for my invention is, that the fire may be readily cleaned without lowering the grate, thus avoiding the admission of a volume of cold air, also obviating the exposure of the fireman to the intense heat—a thing which is inevitable when doors are used.

Another advantage of great importance is, that the quantity of air admitted to the kiln through and above the grate is such as to permit the kiln to burn evenly from front to rear. I also effect a saving in time and fuel, and produce brick of a uniform color and quality.

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

1. A mouth-grate for brick-kilns, which is hinged at the rear end, the front end of which is capable of being raised from a horizontal position, so as to nearly close the mouth of the kiln, as shown and described.

2. The combination of the grate C, hinge-plates *b b*, bar D, pawl-rod E, and mouth A, substantially as shown and described.

ALFRED HALL.

Witnesses:

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