R. E. DEANE.
Grate.

No. 215,212. Patented May 13, 1879.

FIG. 1.

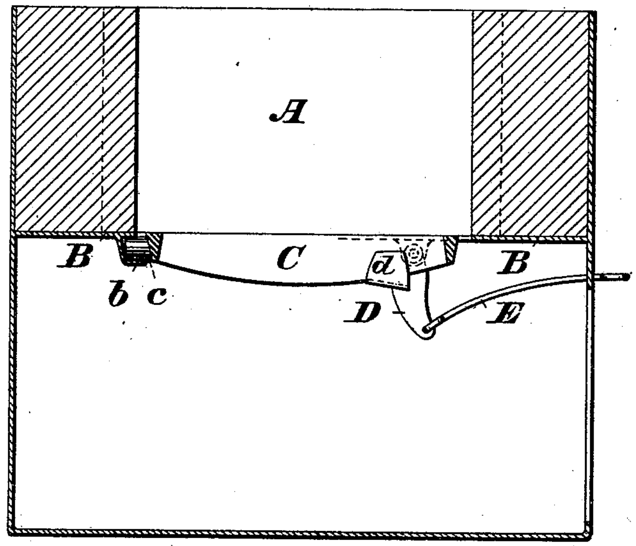


FIG. 3.

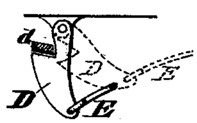
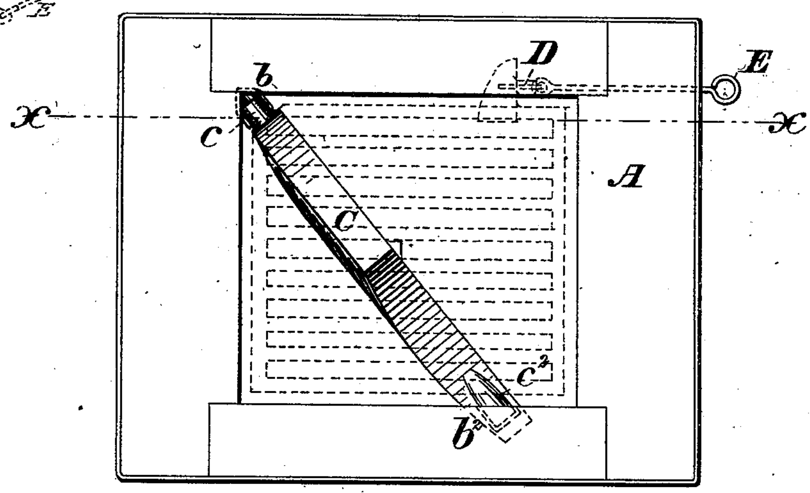


FIG. 2.



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UNITED STATES PATENT OFFICE.

ROYAL E. DEANE, OF NEW YORK, N. Y.

IMPROVEMENT IN GRATES.

Specification forming part of Letters Patent No. **215,212**, dated May 13, 1879; application filed July 3, 1878.

To all whom it may concern:

Be it known that I, ROYAL E. DEANE, of the city, county, and State of New York, have invented, made, and applied to use Improvements in the Construction of Grates; and that the following is a full, clear, and correct description of the same, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a sectional view of my improvement in grates through the line *x x* of Fig. 2. Fig. 2 is a top view of my improvement in grates. Fig. 3 is a detail view of the tripping device for dumping the grate.

In the drawings like parts of the invention are designated by the same letters of reference.

The nature of the present invention consists in improvements in the construction of grates, as more fully hereinafter set forth, which relate more particularly to grates intended for use in cooking-ranges; the object of the invention being the production of a grate so hung in the range or stove in which it may be placed that, when dropped from the horizontal position it occupies when used to support the fuel, it shall occupy a position diagonal to the portion of the range or stove supporting it, and thus more readily free itself from the clinkers and unconsumed portion of the fuel than if hung in the ordinary manner, and, further, that by combining with a grate so constructed a tripping-lever, the operation of dumping and freeing the grate can be expeditiously performed.

Grates as at present made are hung from the front, rear, or sides of the portion of the range supporting them, and the tendency of the unconsumed fuel or clinkers is to a certain extent to prevent the grate from being expeditiously and thoroughly relieved from it or them, engaging, as they necessarily do, with the fire-linings.

To overcome this disadvantage, and to facilitate the emptying of the contents of the grate, may be said to be the main object of the invention.

To enable those skilled in the arts to make and use my invention, I will describe the same.

A shows the range to which my improved grate has been applied, and B shows the portion of the range for supporting the same in the horizontal position. At one corner of the same is placed a pocket, *b*, and diagonally, or nearly so, to this pocket is placed a second pocket, b^2, intended to receive the journals $c\ c^2$, for supporting the grate C.

C shows the grate, made in the usual manner, and provided at the corners with journals $c\ c^2$, projecting diagonally to the grate, as shown. From the under side of the grate, and projecting beyond the same, is also placed a dog, *d*, engaging with the swiveled plate of metal D, having a portion of its surface cut away, to the lower portion of which is attached one end of the tripping-lever E.

E shows a tripping-lever passed through an opening in the range A, the forward end of which is attached to the plate of metal D at its lower portion, while its opposite end is provided with a handle, by which the lever may be manipulated.

Such being the construction, the operation will be easily understood. The grate, having the journals $c\ c^2$ placed relatively to it as shown, is placed in the portion, B, of the range A intended to receive it, the journals resting in the pockets $b\ b^2$, and the dog *d* upon the swiveled plate D, to which is attached one end of the tripping-lever E.

When necessary to dump or clean the grate, the lever is, through the handle, drawn out, by which the swiveled plate D is drawn away from under the dog *d*, and the grate falls, from the fact of its being hung as shown, into a position diagonal to the portion of the range or stove supporting it. After it has been relieved from the unconsumed fuel and ashes which are deposited in the space below the grate, the grate may be returned to the horizontal position by pressing upon the upper side of the grate and tipping it into position, or in any convenient manner. As the grate is raised the dog *d* upon the same, secured as shown, passes by and forces out the plate D, and, after the shoe has passed the same, the plate falls into its former position, supporting the grate.

The advantages arising from a grate hung as shown are, that the grate will, when necessary to dump or clean it, relieve itself more

rapidly and thoroughly of its contents, and that the parts of the range immediately surrounding the grate are less apt to be clogged up with cinders, ashes, and unconsumed fuel than if the modes of hanging grates now in vogue were resorted to.

While I have shown the journal c^2 placed nearly diagonal to the journal c, I have chosen this position for the journal c^2 as preferable.

I am well aware that the journal c^2 may be placed in the corner of the grate, so as to be exactly diagonal to the journal c, without changing the nature of the invention or the object sought to be accomplished, that the grate when dumped shall be diagonal, or nearly so, to the portion of the range supporting it.

Having now set forth my invention, what I claim as new is—

1. A grate, C, for ranges or stoves, provided with the journals c and c^2, placed obliquely to the line of the grate-bars, substantially as and for the purposes set forth.

2. In combination with a grate, C, provided with the journals c and c^2, placed obliquely, as described, the dog d, swiveled plate D, and tripping-lever E, constructed and operating substantially as and for the purposes specified.

ROYAL E. DEANE.

In presence of—
A. SIDNEY DOANE,
P. J. KEATING.