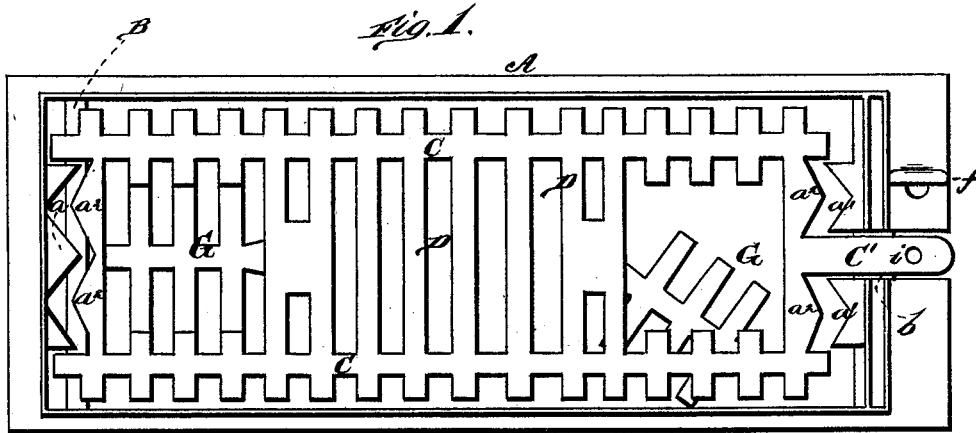


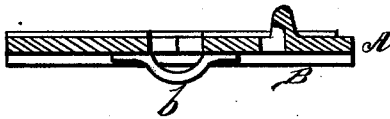
G. DeCELL & A. W. JENNINGS.  
Grate.

No. 200,989.

Patented March 5, 1878.



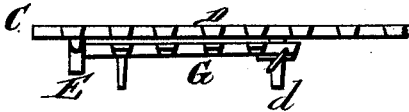
*Fig. 2.*



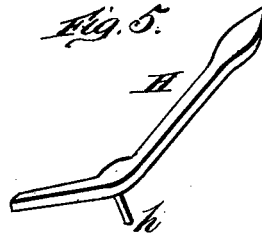
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



WITNESSES

*Robert Everett*  
 *Jas. J. Sheehy*

INVENTORS.

*George De cell.*  
*Amos W. Jennings.*  
*Gilmore, Smith & Co.*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

GEORGE DE CELL AND AMOS W. JENNINGS, OF TROY, NEW YORK.

## IMPROVEMENT IN GRATES.

Specification forming part of Letters Patent No. **200,989**, dated March 5, 1878; application filed December 29, 1877.

*To all whom it may concern:*

Be it known that we, GEORGE DE CELL and AMOS W. JENNINGS, of Troy, in the county of Rensselaer and State of New York, have invented a new and valuable Improvement in Grates; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a front view of our grate. Figs. 2, 3, and 4 are details; and Fig. 5 is a perspective detail thereof.

The nature of our invention consists in the construction and arrangement of a grate for stoves, furnaces, ranges, &c., as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate our invention.

A represents the rectangular frame, made of metal, for supporting the grate. Near the inner end this frame has a cross-bar, B, and V-shaped projections *a*, extending from the rear bar of the grate to and over said cross-bar, at and near the center. At the outer or front end of the frame is a central slot, with a concave cross-piece, *b*, as shown. On each side of this cross-piece are inwardly-projecting teeth *a'* *a'*.

The grate is all cast in one piece, of two parallel longitudinal bars, C C, and a series of cross-bars, D D, connecting and projecting beyond the sides of the side bars.

Near each end of the grate is formed an opening by a discontinuation of one or more bars, D, in the center between the longitudinal bars C. Each of these openings is provided with an auxiliary grate or swing, G, pivoted at its inner end to a stud, *d*, and the

outer end taking into a catch, E, on the under side at the end of the main grate.

At both ends of the grate are teeth or projections *a*<sup>2</sup>, corresponding with the teeth *a'* *a'* of the frame.

At the front end of the grate is a half-round arm, C', which rests in the concave cross-bar *b*, and at the rear end the grate is supported by the bars C C, resting on the cross-bar B. The grate is moved lengthwise back and forth by an elbow-lever, H, having a pin, *h*, at the angle, which is inserted in a hole, *i*, on the arm C', and the short arm of the lever is inserted under a lug, *f*, formed on the front end of the frame A.

The object of the openings in the grate—two or more of which may be made—is to put the clinkers, cinders, &c., down through the grate, instead of dumping the grate to clean it. By this process the fire can be cleaned at any time without putting it out.

What we claim as new, and desire to secure by Letters Patent, is—

1. A grate, C D, provided with two or more openings, formed by a discontinuation of one or more bars of the grate, and having an auxiliary grate or swing, G, for each opening pivoted to the under side of the main grate, for the purposes set forth.

2. The catches E, in combination with the main and auxiliary grates, for the purposes set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

GEORGE DE CELL.  
AMOS W. JENNINGS.

Witnesses:

ISAAC KEITH,  
H. LEACH.