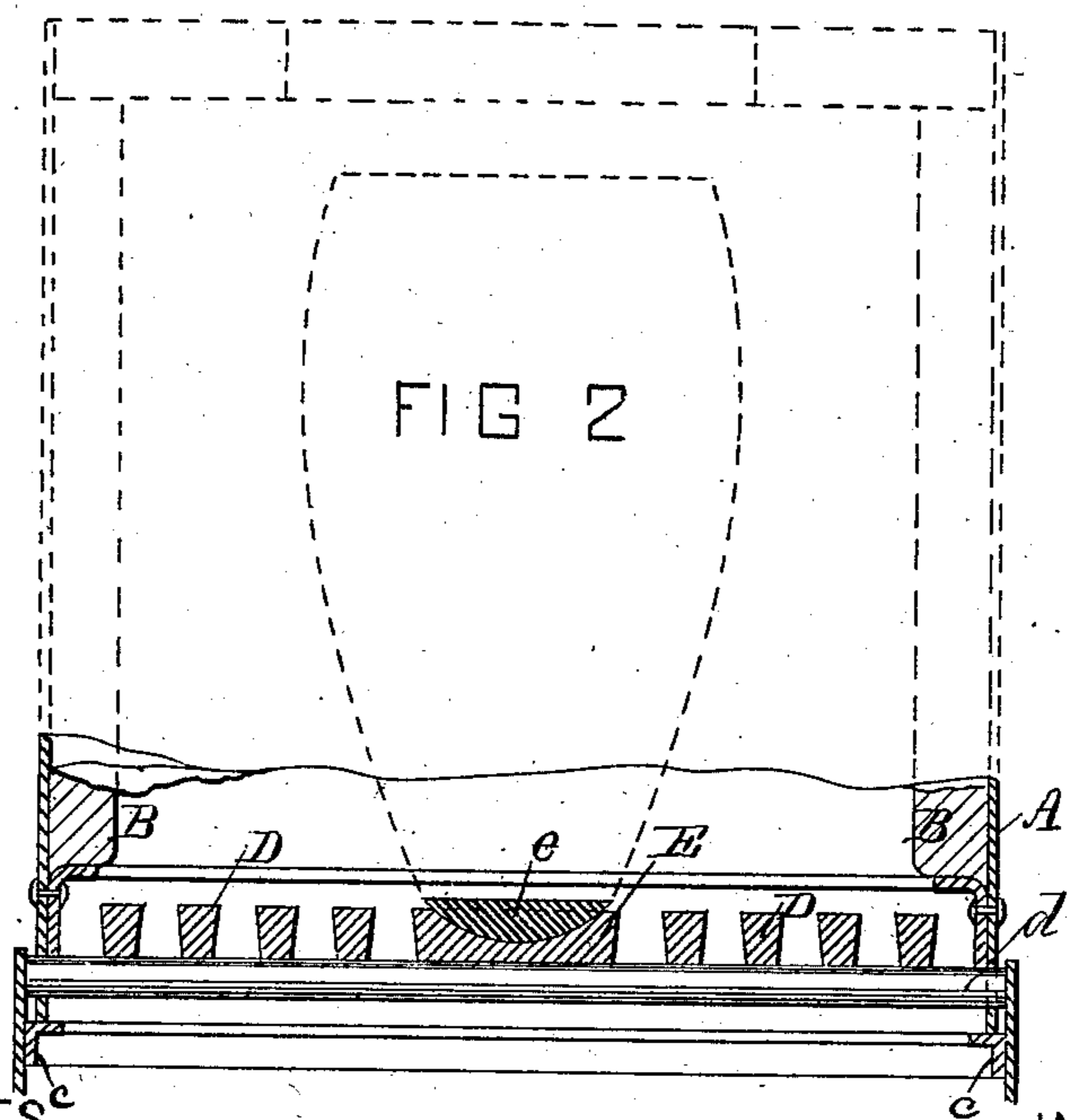
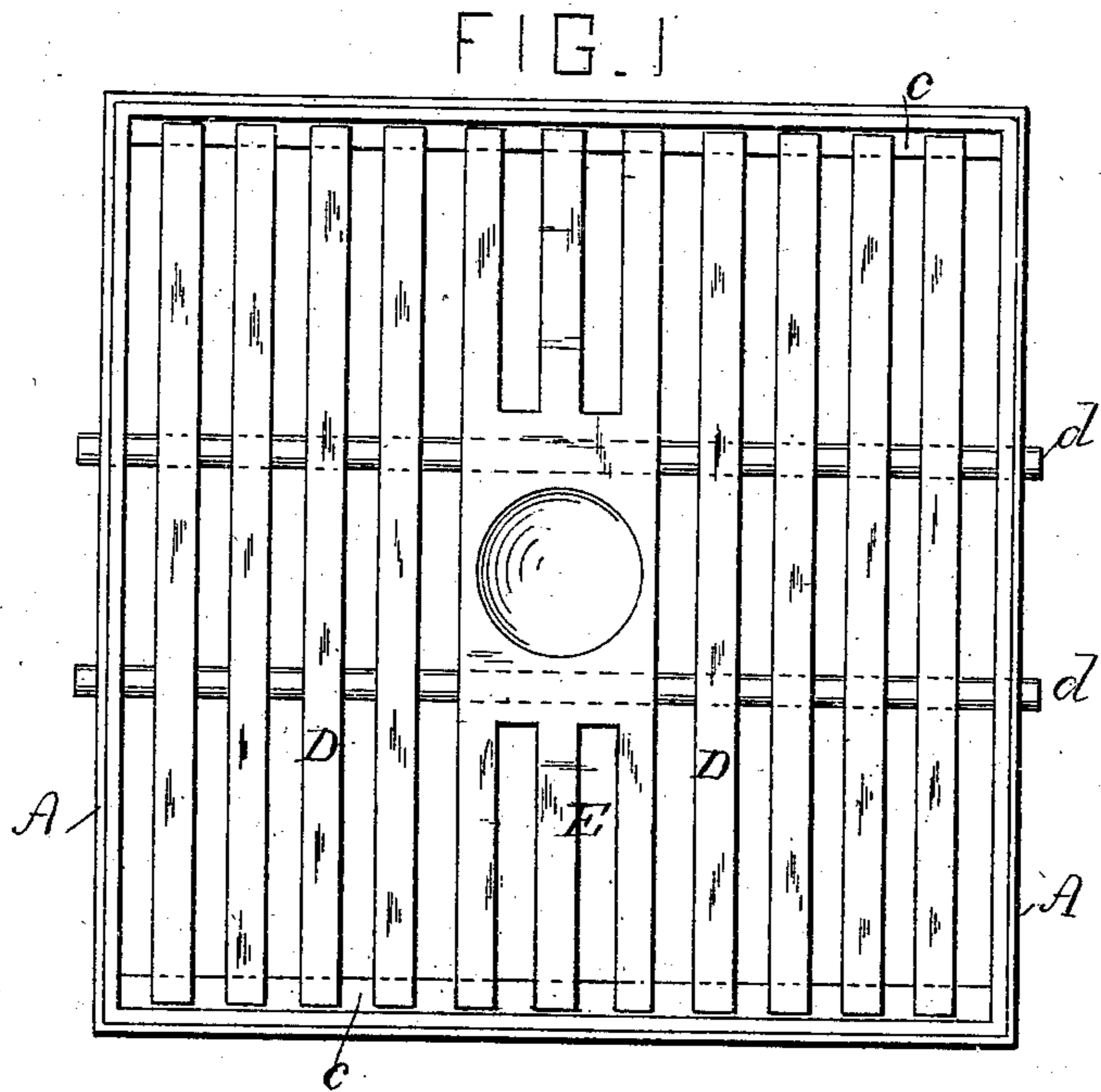


(No Model.)

M. SCHÖNDORF & J. PREIB.
GRATE BAR FOR CRUCIBLE FURNACES.

No. 256,507.

Patented Apr. 18, 1882.



WITNESSES
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UNITED STATES PATENT OFFICE.

MICHEL SCHÖNDORF AND JOSEPH PREIB, OF CHICAGO, ILLINOIS.

GRATE-BAR FOR CRUCIBLE-FURNACES.

SPECIFICATION forming part of Letters Patent No. 256,507, dated April 18, 1882.

Application filed March 16, 1881. (No model.)

To all whom it may concern:

Be it known that we, MICHEL SCHÖNDORF, a citizen of France, and JOSEPH PREIB, a citizen of the United States, both residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Grate-Bars for Crucible-Furnaces, of which the following is a specification.

Our invention consists in certain improvements in crucible-supports, as hereinafter described and claimed.

Figure 1 is a plan view of a grate constructed according to our improvements. Fig. 2 shows in vertical section our improved grate with crucible-support as applied to a portable furnace, the crucible being shown in dotted lines as resting upon such support.

A represents a sheet-metal shell, and B the fire-clay lining.

In the lower end of the furnace are placed grate-bars D. These are supported at their ends by angle-bars c, secured to the metal shell, and at their center by cross-bars or pipes d, which pass through the shell. The three central grate-bars are cast together solid at their center to form a support, E, for the crucible F to rest upon. This support E is hollowed out on its upper side and receives a block, e, having its under face of corresponding shape to the shape of the recess in the support E, to adapt it to fit the same and be held securely therein, and of suitable refractory material, upon which the crucible directly rests. This block e, while affording a firm support for the crucible-bottom, also prevents the crucible being burned out at that portion which, without such a support of refractory material, would rest directly upon the highly-heated grate-bars.

The advantage of this construction over furnaces unprovided with a solid bottom support and a block, as e, to preserve the crucible from the destructive action of the highly-heated grate-bars, is great, as crucibles so provided will last longer, and the contents will not be as liable to become injured as where such a support is absent.

We are aware that crucible-supports have already been made of blocks of refractory material; but in all cases of which we are aware said supports have been constructed with flat or plane faces, the lower flat face resting upon the flat upper faces of the grate-bars or on the top of other flat supporting-surfaces. In our construction the central grate-bars are cast solid at their center, and are hollowed out to receive and hold from horizontal displacement, on the movement of the crucible, of the block e on which the crucible rests. Where the crucible rests upon a block which has no socket or recess to fit into, said block will easily become displaced. In our device the block e is always maintained in position, and the bottom of the crucible is consequently always protected from excessive heat.

What we claim as new is—

In a crucible-furnace, the grate-bars D, the central ones being cast together solid at their center and hollowed out on their upper face, and the block e, of refractory material, adapted to rest within the recessed grate-bars and receive the bottom of the crucible, substantially as and for the purpose set forth.

MICHEL SCHÖNDORF.
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Witnesses:

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