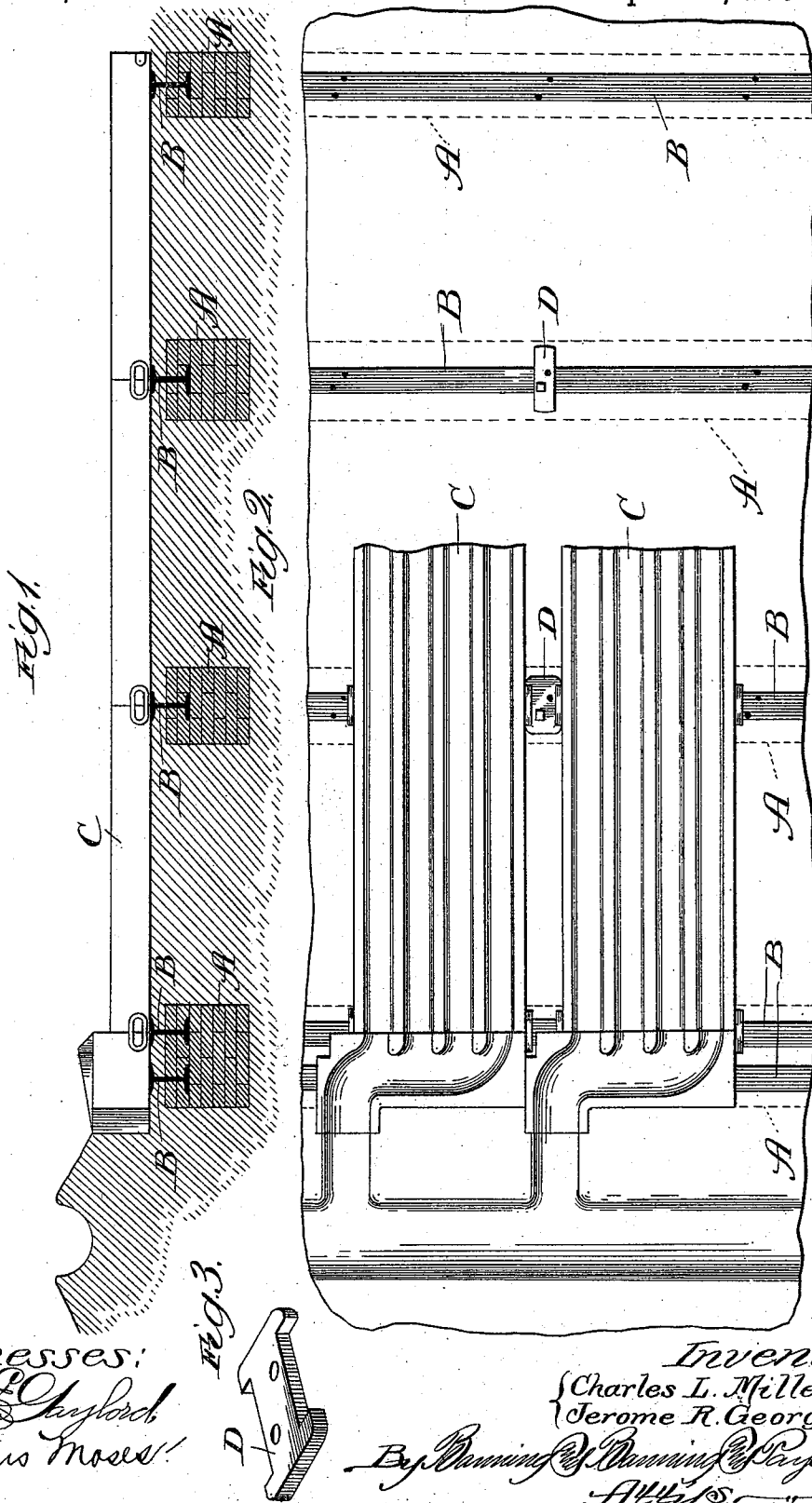


(No Model.)

C. L. MILLER & J. R. GEORGE.
FOUNDATION FOR MOLDS.

No. 518,418.

Patented Apr. 17, 1894.



Witnesses:
Edw. P. Chubb
Julius Moses

Fig. 3.
D

Inventor,
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UNITED STATES PATENT OFFICE.

CHARLES L. MILLER AND JEROME R. GEORGE, OF CHICAGO, ILLINOIS.

FOUNDATION FOR MOLDS.

SPECIFICATION forming part of Letters Patent No. 518,418, dated April 17, 1894.

Application filed September 19, 1893. Serial No. 485,902. (No model.)

To all whom it may concern:

Be it known that we, CHARLES L. MILLER and JEROME R. GEORGE, of Chicago, Illinois, have invented a new and useful Improvement in Foundations for Molds, of which the following is a specification.

The object of our invention, which is an improvement upon the one described in our application filed December 31, 1892, Serial No. 456,922, is to provide a firm foundation for the molds or "chills" used in blast furnace cast-houses; and the invention consists in the features and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a cross sectional elevation of our improved mold in position; Fig. 2 a plan view of a portion of the foundation, showing the mold broken; and Fig. 3 a perspective view of a block or clamp for retaining the mold in position on the foundation.

A is the foundation; B I-beams embedded in the foundation and extending up therefrom; C a mold resting on the I-beams; and D blocks or clamps for retaining the mold in position on the I-beams.

In the process of casting metal as now conducted, the ordinary bed of a cast-house is used as a foundation for the molds. This bed being generally formed of sand, clay or similar material, it is very difficult to retain the molds in position, owing to their tendency to "creep" or move about, which tendency is increased by their own expansion or contraction. The object of our invention is to overcome this difficulty, and to provide a firm foundation for the molds on which their movements can be readily controlled.

Our improved foundation, which covers substantially the entire cast-house floor, preferably consists of brick-work, in the form of walls or piers, two or three feet high, and extending at right angles to the direction of the molds. There may be as many of these walls or piers as desired, or the entire floor space may be covered with a bed of concrete or masonry.

As shown in Fig. 1, we have placed one pier under each joint between the sections forming the mold. The line of the foundation has

a gradual incline away from the blast furnace, so that the last mold—the one farthest from the furnace—will be the lowest in the series. This incline may be regular and continuous, or in the form of steps, as desired, the only requirement in this respect being that the relative position of the molds shall be such as to permit the molten material to readily flow into all of them.

When the foundation is constructed in the form shown, an I-beam is embedded in each of the piers and extends upwardly a few inches therefrom, the distance between the top of the foundation and the upper flanges of the I-beam being open or filled with sand or other loose material, as desired. The upper flanges of the I-beams are perforated, and a suitable block or distance piece, similarly perforated, is bolted or pinned thereto. This block may be in the form of a clamp, in which case it may be secured to the I-beam by a wedge, screw, or otherwise, the perforating and bolting being then unnecessary. These blocks or clamps being placed at the sides of the molds, respectively, hold them in position laterally, and thus prevent sidewise movement. Notwithstanding this, however, the molds are free to move lengthwise, as may be required by expansion and contraction or otherwise.

Although we have shown I-beams embedded in the piers, we contemplate the use of other forms of metallic supports for the molds, as, for instance, rails, channel-irons, cast-plates, &c. Nor do we intend to limit ourselves to the use of I-beams or supports on each of the piers, it being our intention to use them on such as may be desired and omit them from others. We have particularly found that good results may be obtained by using them on the middle piers and omitting them from the end piers, in such case the latter piers being built up high enough to support the molds; and, generally, we do not intend to limit ourselves to minor features or details of construction.

We claim—

1. In a blast-furnace cast-house, a foundation for molds comprising masonry, metallic supports extending upward from the masonry,

molds placed on the supports and blocks or clamps secured to the supports for holding the molds in position laterally, substantially as described.

- 5 2. In a blast-furnace cast-house, a foundation for molds comprising walls or piers of brick-work, **I**-beams embedded in the brick-work and extending up therefrom, and blocks

or clamps secured to the **I**-beams for holding the molds in position laterally, substantially as described. 10

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