

(No Model.)

E. A. HENKLE & J. C. FOWLER.

APPARATUS FOR THE MANUFACTURE OF CURVED LINOTYPE BARS.

No. 446,738.

Patented Feb. 17, 1891.

Fig. 1.

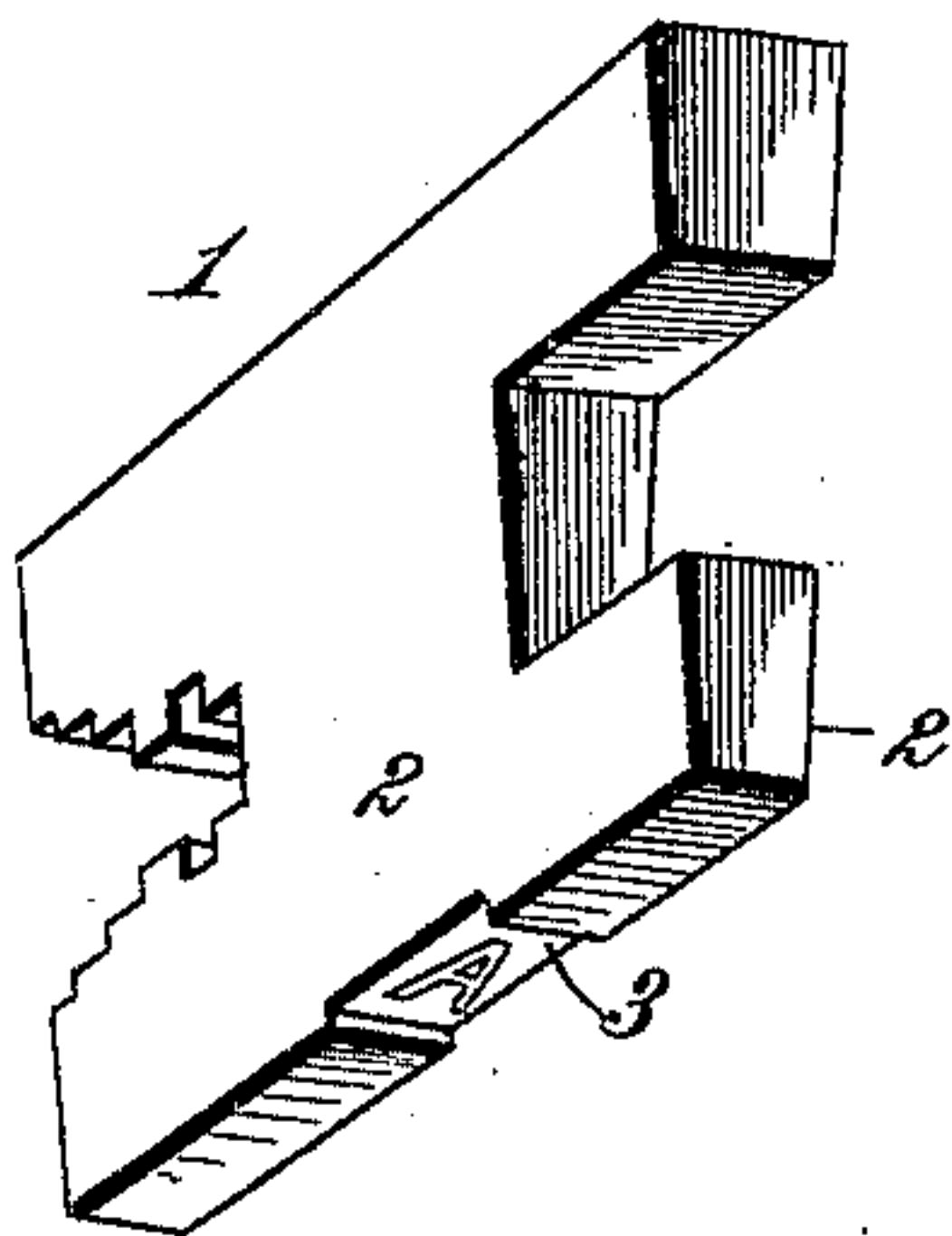
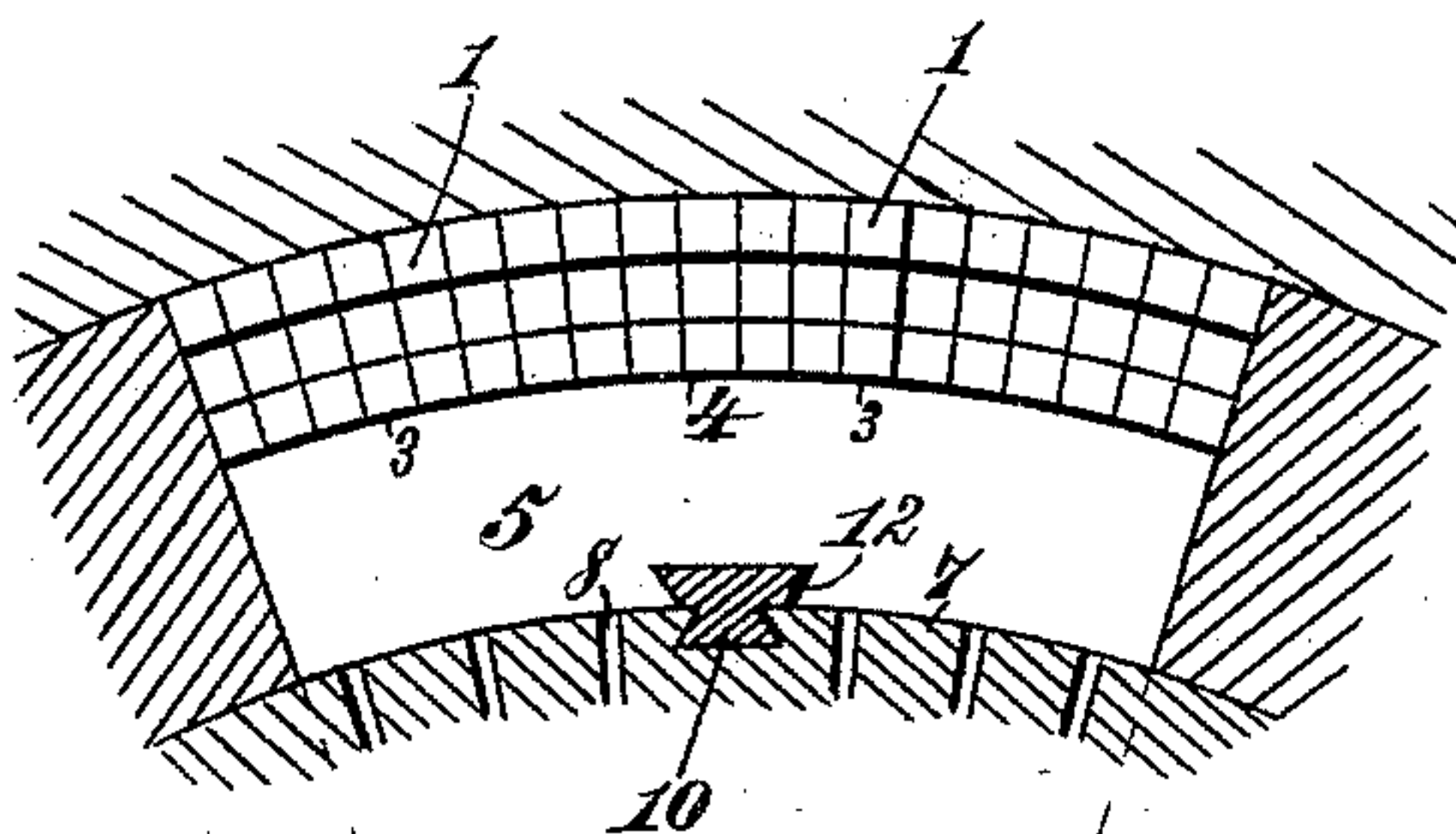


Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD A. HENKLE AND JOSEPH C. FOWLER, OF WASHINGTON, DISTRICT
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APPARATUS FOR THE MANUFACTURE OF CURVED LINOTYPE-BARS.

SPECIFICATION forming part of Letters Patent No. 446,738, dated February 17, 1891.

Application filed April 15, 1890. Serial No. 348,018. (No model.)

To all whom it may concern:

Be it known that we, EDWARD A. HENKLE and JOSEPH C. FOWLER, citizens of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in an Apparatus for the Manufacture of Curved Linotype-Bars, of which the following is a specification.

Our invention relates to the construction of a curved type-bar or line of type cast in a single piece and having the type-faces upon the convex face or edge of said bar and reading longitudinally thereof.

It is the purpose of our invention to provide a novel and simple apparatus for casting type-bars of this character, for which we have this day filed a separate application for patent.

Our invention consists to this end in the novel apparatus fully set forth in the following specification, and definitely pointed out in the claims annexed thereto.

To enable others skilled in the art to make and use our said invention, we will proceed to describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of one of the matrices used in the formation of a portion of the type-bar. Fig. 2 is a sectional view of a series of matrices arranged in position to form one wall of a casting-chamber within which the type-bar is formed.

In the said drawings, the reference-numeral 1 denotes a matrix-block possessing in certain respects the characteristic features whereby the block is selected, ejected, and arranged in series with other blocks upon the general plan pursued in the formation of the straight linotype-bars already in use. In our invention, however, we form these bars with sides 2, which are diverged or beveled at an angle coinciding with the angle of radiation of the cylinder upon which the type-bars when cast are to be mounted. For example, in Fig. 2 we have illustrated a series of these blocks constructed in the manner specified and locked up within a casting-chamber, the type impressions being formed upon the narrower edges 3 of said blocks, as shown in Fig. 1. The beveling or diverging faces of the blocks

being all of the same angularity, the series of blocks or matrices form when assembled in a series a curve 4, as shown in Fig. 2, the type impressions being formed, as already stated, upon the narrower edges of the blocks, which when arranged in proper order form the concave wall of the casting-chamber 5, the end walls thereof being formed upon the radial lines struck from a common center 6. The shorter wall of said chamber is formed by a diaphragm 7, concentric with the matrices 3 and through which the molten type-metal is projected by way of apertures 8 in the usual manner. We thus are able to produce a type-block or line of type cast in a single piece corresponding in form with the shape of the casting-chamber 5, the type-faces being upon the convex face of said type-block and reading in the direction of its length.

Referring now to our concurrent application, in which we have shown one means for connecting said type-blocks to a chase or type-cylinder, said means consisting of one or more dovetailed notches formed in the concave edge of the type block or bar, we provide the diaphragm 7 with one or more removable pattern-blocks having a dovetailed rib 10, by which they are detachably connected with a channel in the said diaphragm, the pattern consisting of a dovetailed tenon 12, lying in the casting-chamber 5 at any suitable point or points, whereby dovetailed transverse channels or notches are formed in the concave edges of the type-bar or line of type to enable them to engage with a correspondingly-formed rib or tongue on the type-cylinder or on the curved chase carried thereby. This pattern 9, as already stated, is removable in order to facilitate the removal of the type-bar or line of type when the latter is cast.

What we claim is—

1. In an apparatus for the manufacture of a curved linotype-bar or line of type, a casting-chamber having concentric or curved parallel walls for forming the outer face and inner or seating edge of the type-bar, the outer or concave wall of said chamber consisting of a series of matrix-blocks having opposite contacting faces which diverge in lines radiating from the center of the concentric

walls, the type-matrices being formed upon the narrower edges of said blocks, substantially as described.

2. In an apparatus for the manufacture of
5 a curved type-bar or line of type, a casting-chamber having concentric walls, the outer or concave wall forming the convex face of the type-bar being composed of a series of matrix-blocks 1, having diverging sides 2,
10 and type-matrices 3, the end walls of said chamber being formed in lines radiating from the center on which the concentric walls are formed, substantially as described.

3. In an apparatus for the manufacture of
15 a curved type-bar or line of type, the combination, with a series of matrix-blocks 1, having contacting faces 2, diverging in lines radiating from a common center and provided with type-matrices upon their narrower edges,
20 of a curved convex wall concentric with the face formed by the series of matrix-blocks and provided with openings for the entrance of the melted type-metal, substantially as described.

4. In an apparatus for the manufacture of 25
a curved type-bar or line of type, the combination, with a series of matrix-blocks 1, having contacting faces 2, diverging in lines drawn from a common center, the type-matrices being formed upon the narrower edges 30
of said blocks, of a concentric convex wall having openings for the molten type-metal and one or more pattern-blocks having dovetailed ribs lying in transverse grooves in the convex wall and provided with dovetailed 35
tenons projecting above the wall, and two end walls coinciding with lines drawn from the common center, substantially as described.

In testimony whereof we have affixed our signatures in presence of two witnesses.

EDWARD A. HENKLE.

JOS. C. FOWLER.

Witnesses to the signature of E. A. Henkle:

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