

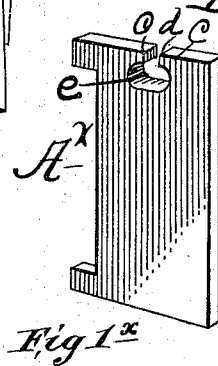
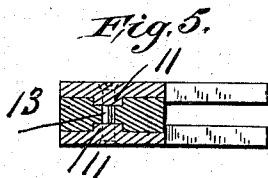
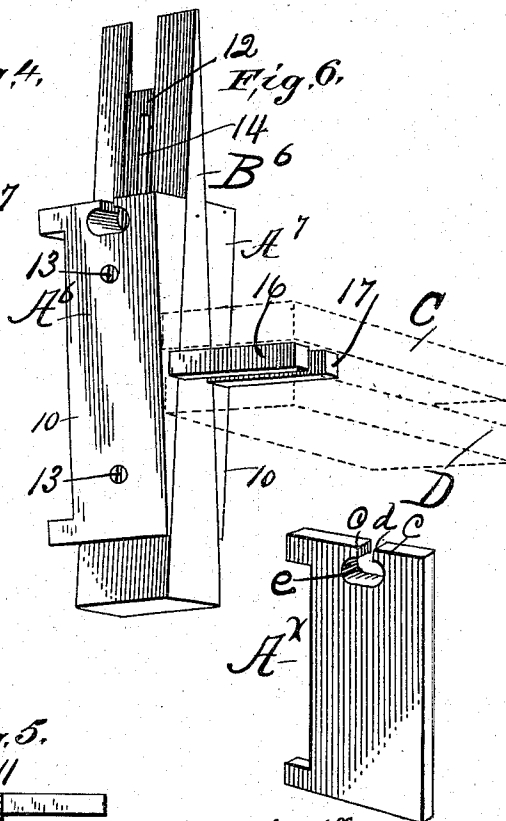
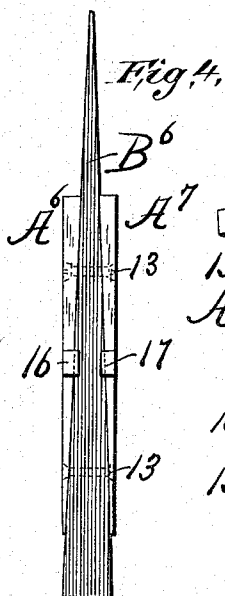
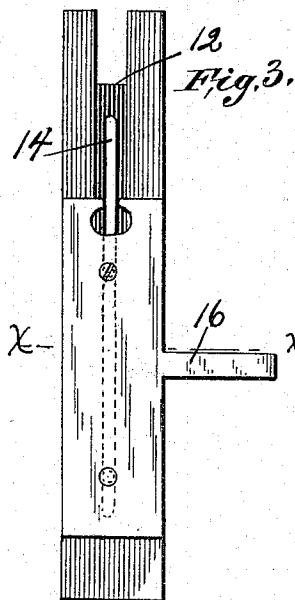
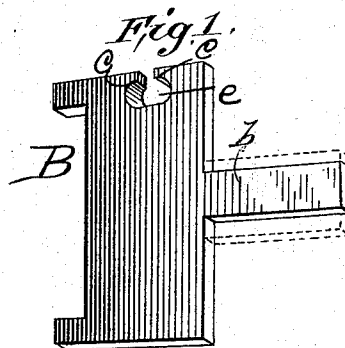
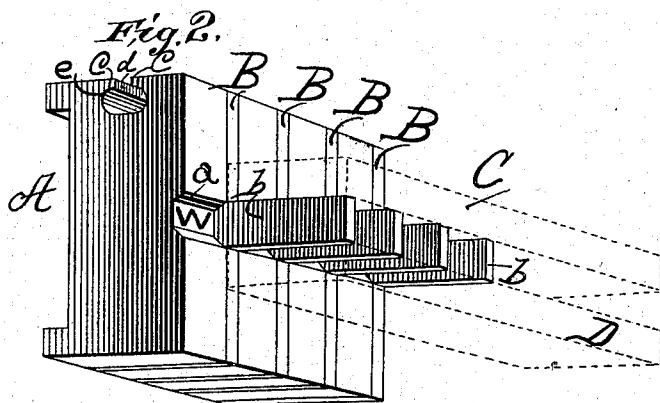
(No Model.)

2 Sheets—Sheet 1.

W. BERRI.
DEVICE FOR CASTING TYPE.

No. 558,145.

Patented Apr. 14, 1896.



WITNESSES:

C. W. Benjamine
H. V. Brown

INVENTOR

William Berri

BY

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his ATTORNEY

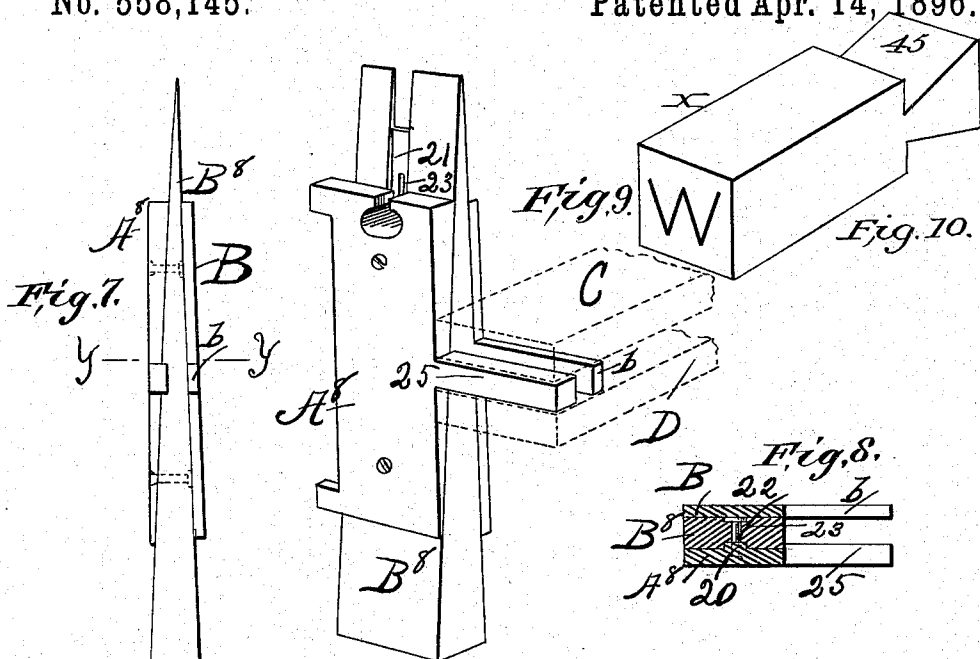
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2 Sheets—Sheet 2.

W. BERRI.
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ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM BERRI, OF BROOKLYN, NEW YORK.

DEVICE FOR CASTING TYPE.

SPECIFICATION forming part of Letters Patent No. 558,145, dated April 14, 1896.

Application filed December 13, 1894. Serial No. 531,653. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BERRI, a citizen of the United States, and a resident of the city of Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Devices for Casting Type, of which the following is a specification.

This invention relates to improvements in molds and the mold-line consisting of such molds for casting type.

Especially the invention relates to a mold-line composed of individual independent separate molds, each mold being adapted to the casting of individual letters, characters, words, or spaces, and said molds already arranged in the order which said type are to assume in the printed form with the proper spaces for justification interspersed in the line, the line being thereby justified and ready for printing from.

I believe this invention is the first which has ever rendered it possible to cast a line of individual type already arranged with the spaces in the order of the words and letters in the line of the printed form, and it possesses great advantages over the manner of casting a solid-line slug, as in other type-casting machines, for, on the one hand, whereas in making corrections in the solid-line slug it is necessary to discard that particular slug in which the mistake occurred and to reset the matrices and cast a new slug, with the possibility of another error occurring, in my manner of proceeding the erroneous type can be individually removed and a new and correct type inserted, just as in hand type-setting, without affecting the line as a whole.

This invention, while obtaining the speed of type-setting possessed by the machines over hand-setting, also retains the advantages of correction which hand-setting possesses over machine-setting.

The invention is operated by the agency of individual molds, each of which is adapted to the casting of the individual slug or body of a type or space, and these molds are arranged in a mold-line in the order which the type and spaces will finally assume in the line of the printed form. I prefer to form the molds of matrix-bars, which carry the type-matrix, and of wall-plates so constructed

that being placed at the sides of the matrix-bars they will form the sides of the molds, the tops and bottoms thereof being formed of plates which are held hard down in position during the operation of casting. That portion of the wall-plates which forms the sides of the molds is made so that different widths can be provided at will, thereby producing any width of shoulder or "leads" or no leads, at will; also, I combine with the matrix-bars and wall-plates aforesaid "mold-openers," whereby the width of the cast spaces may be governed at will. I do not, however, in this application claim specifically the form of mold shown, and which I prefer to use, said mold being the subject of another application, filed October 24, 1895, Serial No. 566,723.

The subject of this present application is the mold-line, constructed of any suitable individual molds arranged in the order to be assumed by the type in the form.

Referring to the drawings which accompany the specification to aid in explaining it, Figure 1 is an elevation of a blank for forming a division-wall between the matrices for individual type. The blanks, together with the matrices, form the molds for individual types and are organized into a mold-line, as indicated. Fig. 1^x is a perspective view of a plain bar for use in forming a space-mold. Fig. 2 is a perspective view of a mold-line made up of matrices, wall-blanks, and top and bottom plates. Fig. 3 is a side elevation of a space-mold opener by which the width of the space can be varied as needed for justification. Fig. 4 is a front elevation. Fig. 5 is a horizontal section on the line *xx* of Fig. 3, and Fig. 6 is a perspective view of the space-mold. Fig. 7 is a front elevation. Fig. 8 is a cross-section on the line *yy* of Fig. 7 of a modified mold-opener, and Fig. 9 is a perspective view of a space-mold formed with the same. Fig. 10 is a perspective view of a type-slug provided with a shank to facilitate a removal from the mold.

Referring to Figs. 1 and 2, A is a matrix-bar, *a* being the chamber containing the letter or character, as "W." B is a wall-plate; *b*, a finger projecting therefrom at right angles. The matrix-bars and wall-plates are provided with suitable devices for assembling and distributing the same—as, for example, the tal-

ons *c c*, slot *d*, and chamber *e*. In assembling the mold-line said matrix-bars and wall-plates will be arranged alternately and in the order the individual words, letters, or characters are to assume in the printed form. The tops and bottoms of the molds are formed of plates C D, which are held down hard on the edges of the fingers *b* by appropriate devices during casting. When an individual space is to be cast, the mold will be formed with a bar A^x, Fig. 1^x, in all respects resembling the bar A, except that it has no chamber and no character-matrix. The sides of the space-mold will be formed by the fingers of wall-plates, and the tops and bottoms of such mold will be formed by plates C D. Thus the mold-line will consist of individual molds adapted to cast individual words, letters, or characters and spaces, and arranged in the order which said words, letters, or characters and spaces are to assume in the printed form.

Different wall-plates B will have the fingers *b* of different widths, as indicated by the dotted lines in Fig. 1, and thus the molds can be arranged so as to cast "leaded" or "double-leaded" matter, or matter without leads, at will. Said molds are also made adjustable as to the spaces, in the manner hereinafter described.

Fig. 4 shows a mold adjustable as to spaces. A⁶ A⁷ B⁶ are respectively two short and one long wedges, the faces 10 10 of the wedges A⁶ A⁷ being parallel. Said wedges are movably secured together in any suitable manner, as by the guides 11, working in the slots 12, and the pins 13, headed in the wedges A⁶ A⁶ and working in the slot 14 in the wedge B⁶. Fingers 16 17 project perpendicularly from the wedges A⁶ A⁶, the inner faces of said fingers overlapping the wedge B⁶, as seen in Figs. 4 and 5. Evidently according to the position of the wedge B⁶ will the width of the space be greater or less, and the top and bottom of the mold being formed with plates C D, as described, individual spaces will be cast of any width at will.

It will be clear from the description of Figs. 1 and 2 that the adjustable space-mold will be assembled in the mold-line wherever desired, and thus the mold-line will consist of individual words, letters, and characters and spaces, already assembled in the order the same are to assume in the printed form and spaced ready for justification, the operator opening or closing any mold-space at will by the aforesaid mold-openers, as described.

Figs. 7, 8, and 9 show the adjustable space-mold formed with a wall-blank and a modified two-part wedge or mold-opener. B is the wall-plate with finger *b*, as hereinbefore described. A⁸ B⁸ are the two parts of the wedge secured together in any suitable manner—as, for example, by the rib 20, working in the groove 21, and the pin 22, headed in wedge A⁸ and sliding through a slot 23 in wedge B⁸. 25 is a finger on the wedge A⁸, with its inner face overlapping the wedge B⁸. C and D are respectively the top and bottom plates, as before.

Evidently the mold is the equivalent, both in construction and use, of that shown in Figs. 3 to 6 for producing individual spaces of variable widths in a mold-line.

Now, having described my improvements, I claim as my invention—

A mold-line adapted to cast at a single operation a type-line made up of individually-separated letters words and characters, and consisting of a plurality of individual independent molds provided with closed walls and already arranged in the order finally to be assumed by said individual letters, words and characters in a type-form, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 8th day of December, 1894.

WILLIAM BERRI.

Witnesses:

WM. H. AITKEN,
ABBAN RUCKMICH.