

C. MUEHLEISEN.
MATRIX OR TYPE DIE FOR USE IN TYPOGRAPHICAL COMPOSING MACHINES.
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1,057,445.

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Fig. 1.

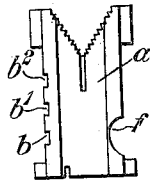


Fig. 2.

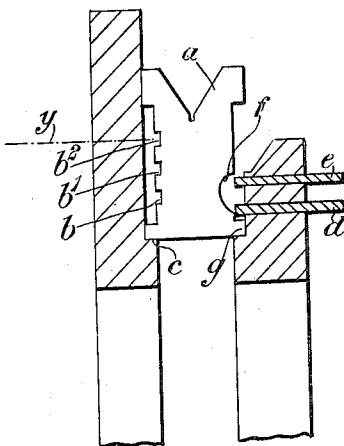


Fig. 3.

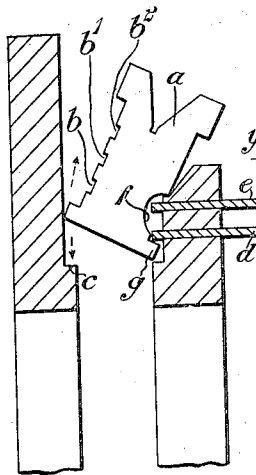
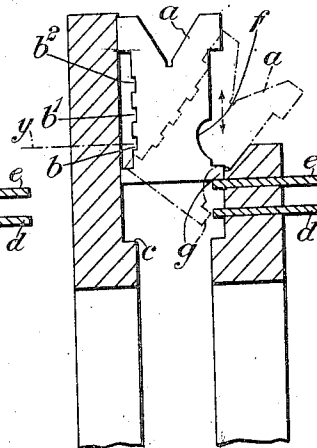


Fig. 4.



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MATRIX OR TYPE-DIE FOR USE IN TYPOGRAPHICAL COMPOSING-MACHINES.

1,057,445.

Specification of Letters Patent.

Patented Apr. 1, 1913.

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To all whom it may concern:

Be it known that I, CARL MUEHLEISEN, a citizen of the United States of America, residing at 88 Chausseestrasse, Berlin, N. 4, in the Empire of Germany, have invented new and useful Improvements in Matrices or Type-Dies for Use in Typographical Composing-Machines, of which the following is a specification.

This invention relates to matrices or type dies for use in typographical composing machines such as those known commercially under the trade mark "Linotype," and particularly those matrices or type dies which have both normal and variant faces and are adapted to be assembled in as many different levels as there are different faces.

So far as the present invention is concerned a matrix is considered to be the equivalent of a type die, and that being the case, to avoid unnecessary reiteration, the word "matrix" or "matrices" as hereinafter employed is intended to apply to either or both of such devices.

When the operator composes matrices such as those above particularized, for forming what is known as a mixed line, that is to say, a line partly of one face and partly of another, it often happens that he omits to make the necessary adjustment for securing that result at the point of assembly, and consequently he has, afterward, to raise or lower some of the matrices by hand, to bring them to the desired level in the assembler. In the case of double character matrices, which are assembled at only two different levels, the aforesaid manual change of level presents no appreciable difficulty, because the matrices can be tilted forward without moving the upper front supporting ledge, until their front bottom lugs clear the said ledge, at which juncture they can be easily raised to bring those lugs on to the said ledge or lowered to bring the said lugs on to the lower front supporting ledge according to whether the alteration is to bring the variant or the normal faces into the assembling or casting line. In cases however in which the matrices are provided with more than two faces and the assembler is provided with supporting ledges at a corresponding number of different levels, it is almost, if not quite, impossible, under existing circumstances, to manually transfer matrices from say the upper-

most ledge to the lowermost one without first withdrawing at least the said uppermost ledge and thereby entirely disarranging the composed line by allowing any matrices which may have been assembled on that ledge to fall on to a lower one.

The object of the present invention is so to construct the matrices, whether provided with two or more formative cavities, as to enable the aforesaid manual transference to be readily effected without disturbing the parts of the line not to be affected by such transfer, and to that end it consists principally in providing each of the matrices with a recess in the edge opposite to that bearing the character faces, to allow the said matrix to be canted over on the lug below such recess, sufficiently to enable that lug to clear the supporting ledge above or below it and without withdrawing any of the upper supporting ledges.

The invention will be best understood by reference to the accompanying drawings in which it is shown in connection with a triple character matrix; this, however is given merely as a convenient example and it is to be understood that the said invention is equally applicable to matrices having two or other plurality of characters.

In the said drawing:—Figure 1 is a side view of the said three-character matrix constructed according to this invention, and Figs. 2, 3 and 4 are views showing the said matrix in three respectively different positions in the assembler or assembler elevator, Fig. 2 showing it in its lowest position, Fig. 3 showing it as when being transferred from a higher to a lower position or vice versa, and Fig. 4 showing it in full lines in its highest position and in dot-and-dash lines as when being transferred from the lowest to a higher position or vice versa.

The matrix *a* has three formative cavities *b*, *b*¹, *b*², all presenting say the same character in respectively different faces, such for example as Roman, black letter, and italic. According to whether the face *b*, *b*¹ or *b*² is to be presented to the mold slot (the dot-and-dash line *y* represents the relative height of the center line of the said slot) so must the matrices be assembled on the lowest supporting ledge *c*, the movable rail or ledge *d* or the uppermost movable rail or ledge *e*, the matrices being automatically directed on to these respective ledges by means

of a switch device which constitutes no part of the present invention. The ledges *d* and *e* are movable forwardly from the positions in which they are shown in the drawings; the means for so moving them are not represented in the drawings as they constitute no part of this invention; any of the means now well known in the art may be used for the purpose.

Each matrix according to the present invention is provided with a recess *f* in its front edge that is to say the edge opposite that containing the formative cavities *b*, *b*¹, *b*², this recess being of any such size and shape (not necessarily those shown in the drawings) which will admit of the said matrix being tilted sufficiently to allow the front bottom lug *g* thereof, to be moved up or down past the back of the rails *d* and *e* while the latter are still in their respective rearmost positions.

Assume now that of a line of matrices assembled on the fixed ledges *c*—and consequently in position to present their faces *b*² in casting position—some of them should have been assembled on say the rail *e* so that their faces *b* would be presented in casting position. To rectify this error the operator first opens the well-known pivoted assembler gate and then tilts forward the matrices required to be re-erected, on their bottom lugs *g* as shown in Fig. 3, until, as shown in dotted lines in Fig. 4, the said lugs are free to be raised past the ledges *d* and *e* (the recesses *f* meanwhile fitting over the ledges *d* and *e* as shown in those figures) whereupon the operator raises the said mat-

rices and deposits them on the ledge *e* as shown in full lines in Fig. 4. When, on the contrary, matrices have to be lowered from say the ledge *e* to the ledge *c*, the operator carries out the said operation in practically the reverse order of that just described.

Having described my invention, what I claim and desire to secure by Letters Patent is:—

1. In a typographical composing machine, the combination of the assembler formed with an opening to receive the matrices and provided with a device projecting thereinto and into close proximity to the edges of the matrices, with the matrices formed with ears and edges between said ears and also with recesses in their said edges to receive the projecting device when the matrices are tilted over or toward it and thus to facilitate the longitudinal adjustment of the matrices.

2. In a typographical composing machine, the combination with means adapted to receive a matrix and to permit its tilting therein, and a matrix supporting device located in said means, of a matrix formed with ears and an edge between said ears, and also with a recess in said edge to receive the supporting device when the matrix is tilted over or toward it.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

CARL MUEHLEISEN.

Witnesses:

WOLDEMAR HAUPT,
ARTHUR SCHROEDER.