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MASTER BLOCK FOR PRODUCING MATRICES.

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Fig. 1.

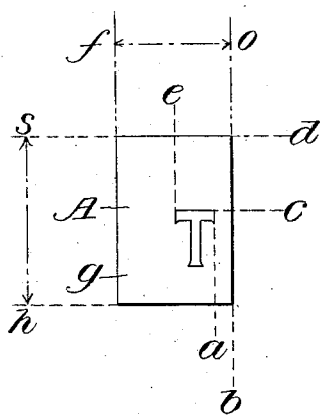


Fig. 2.

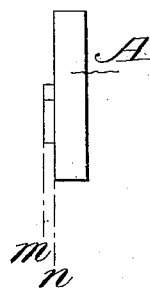


Fig. 3.

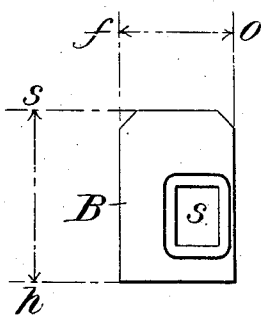
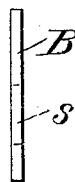


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK H. BROWN AND JOHN E. HANRAHAN, OF BALTIMORE, AND GEORGE A. BOYDEN, OF MOUNT WASHINGTON, MARYLAND, ASSIGNORS TO NATIONAL COMPOSITE TYPE COMPANY, OF BALTIMORE, MARYLAND, A CORPORATION OF DELAWARE.

MASTER-BLOCK FOR PRODUCING MATRICES.

No. 854,458.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, FRANK H. BROWN and JOHN E. HANRAHAN, of Baltimore city, and GEORGE A. BOYDEN, of Mount Washington, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Master-Blocks for Producing Matrices; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to matrix making, the object of which is to provide a master block having guiding or positioning surfaces relatively located in reference to the type character on the master block, whereby in producing matrices the matrix plates can be quickly and accurately positioned on the master block so that the type character will be properly located with reference to the matrix plate, and also the type character will be properly positioned on the type body when producing type.

With the introduction of the "sorts machine for casting type," invented by these same inventors, the art of producing type at the present time is being revolutionized, for the reason that instead of making type under the present foundry practice, with skilled labor, and then distributing the type throughout the country for printers to use, the printers are now producing type in their offices with unskilled labor. This results in a great saving of time and money and affords convenience in procuring immediately type and sorts when needed. This innovation necessitated the creation of various systems and inventions, not only with relation to the type casting machine proper, but also to mold, mold making, matrices and matrix making, and to one of these systems the present invention relates.

In the accompanying drawing:—Figure 1 illustrates a front view of the master block, containing a type character, with certain fixed dimensions between the guiding or positioning surfaces and the character located. Fig. 2 is a side view of Fig. 1, showing the type character projecting from one of the said surfaces. Fig. 3 is a front view of a matrix plate of such dimensions as will coincide with

said surfaces on the master block, and contains a hole in which the type character enters when the two are placed together ready for deposition. Fig. 4 is a side view of Fig. 3.

Heretofore quite a complicated and expensive process has been used in approximately locating the matrix plates with the type character previous to deposition, requiring a great deal of time of skilled labor and then only an approximate positioning between the character and the matrix obtained.

The present invention provides a master block A, having permanent and fixed guiding or positioning surfaces whose dimensions $h-s$ and $f-o$ coincide with similar dimensions of matrix plate B, with the type character located on the master block in a given and fixed position relative to the said guiding surfaces, that is, between a and b , c and d , e and f and g and h . By this system of permanent guiding or positioning surfaces with the type character relatively located there- to, it is necessary only to place the matrix plate shown in Fig. 3 in a position to coincide with the surfaces $h-s$ and $f-o$, which correctly locate the type character on the master block in the proper position in the hole a of the matrix plate, to reproduce the type character by deposition in the correct position it bears to like guiding surfaces of the matrix plate. When the master block A and the matrix plate B are thus positioned by the said surfaces the two are secured together and are then ready for the process involved in deposition.

In Fig. 2 is shown the type character projecting from the face of the master block A. The distance of this projection from the face of the block m and n forms the depth of the character in the matrix and the "drive" of the character on the type made therefrom. This "drive" measurement is of the greatest importance, because on it the evenness of the height of the type when assembled depends. Heretofore this has been accomplished in an uncertain manner by various means which to a greater or less extent are unreliable, requiring the finishing down of the face of the matrix to produce a conformity of said "drive." However, with master blocks having type characters permanently attached

thereto, or integral therewith, and all projecting a fixed and predetermined distance from the guiding surface, the depth of the character in the matrix plate is absolutely assured, said characters being correct and alike in all matrices. By the use of this system of guiding or positioning surfaces matrices are produced accurately, rapidly and cheaply and of a uniform character, whereby any matrix of a font, or series of fonts, irrespective of size or kind of type, can be cast with the same mold mechanism, giving type of uniformity and accuracy without requiring skilled labor or uncertain adjustment of parts in producing same.

Having described our invention, what we claim and desire to secure under United States Letters Patent is:—

1. A master block for producing matrices comprising a block provided with a type character and having guiding or positioning surfaces, said character being separated from said guiding or positioning surfaces by uniform predetermined distances irrespective of the size or style of said character.

2. A master block for producing matrices comprising a block provided with a type character on its face, said block being provided with guiding or positioning surfaces, said character being separated from said guiding or positioning surfaces by uniform predetermined distances irrespective of the size or style of said character.

3. A master block for producing matrices comprising a block provided with a type character on its face, said block being provided with guiding or positioning surfaces, said character being separated from said guiding or positioning surfaces by fixed predetermined distances $a-b$, $c-d$, irrespective of the size or style of said character.

4. A master block having a guiding surface n , containing a character with a raised surface m , with a fixed and predetermined distance between surfaces m and n .

5. A master block for producing matrices comprising a block provided with guiding or positioning surfaces which intersect, and a character on said block, said character having intersecting boundary lines located at fixed and predetermined distances from said intersecting guiding or positioning surfaces irrespective of the size or style of said character.

6. A master block for producing matrices comprising a block provided with guiding or positioning surfaces arranged at right angles, and a character on said block, said character having boundary lines also arranged at right angles and located at fixed and predetermined distances from the corresponding guiding or positioning surfaces irrespective of the size or style of the character.

7. A master block provided with gaging surfaces, and a type character located in permanent relation to said gaging surfaces irrespective of the size or style of said character, in combination with a matrix plate provided with similar gaging surfaces, and also with an opening so positioned relative to said gaging surfaces, that the same will fit over the type character of said block when the gaging surfaces of the block and plate are placed in alinement.

In testimony whereof, we have signed this specification in the presence of two subscribing witnesses.

FRANK H. BROWN.
JOHN E. HANRAHAN.
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Witnesses:

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