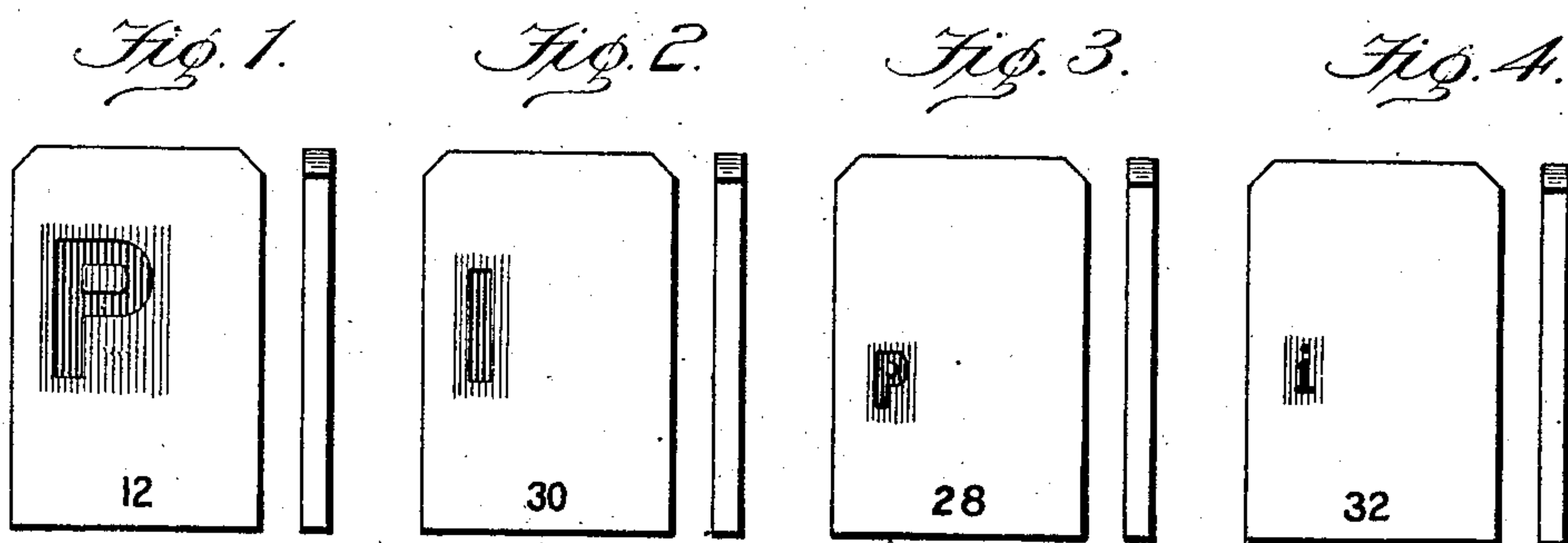


No. 845,684.

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F. H. BROWN, J. E. HANRAHAN & G. A. BOYDEN.  
MATRIX PLATE FOR TYPE CASTING MACHINES.

APPLICATION FILED MAY 17, 1905.



Witnesses

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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, A CORPORATION OF DELAWARE.

## MATRIX-PLATE FOR TYPE-CASTING MACHINES.

No. 845,684.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed May 17, 1905. Serial No. 260,735.

*To all whom it may concern:*

Be it known that we, FRANK H. BROWN and JOHN E. HANRAHAN, of Baltimore city, State of Maryland, and GEORGE A. BOYDEN, of Mount Washington, in the county of Baltimore, State of Maryland, citizens of the United States, have invented certain new and useful Improvements in Matrix-Plates for Type-Casting Machines, of which the following is a specification.

This invention relates to improvements in type-matrices for individual use—that is, one at a time—in a type-machine.

The objects of the invention are to provide matrices which are constructed in such manner as to enable unskilled labor to make the changes in casting different-size type characters.

Another object is to provide matrices having matrix-plates of a common, uniform, or equal size irrespective of the size or style of the character on the plate.

The invention is illustrated in the accompanying drawing, in which—

Figures 1, 2, 3, and 4 illustrate face and edge views of the matrix-plates, each face or casting-surface of which has the same dimension both vertically and horizontally, but containing type characters of different sizes both setwise and bodywise and with the characters so situated in relation to two of the edges of the matrix-plates that any individual matrix-plate can be placed and fixed in exact position in relation to the mold parts, with the result that the type character will be correctly and accurately centered with respect to the mold-cavity without requiring measurement of any kind.

All the matrix-plates are to be of uniform and equal size in length, breadth, and thickness without regard to the size of the character the matrix-plate contains.

It will also be noted that the bottom and one vertical edge of the characters irrespective of size on the several matrix-plates all have a given position with respect to the bottom horizontal edge and one vertical side

edge of the plates. For example, in Figs. 1, 2, and 4 the lowermost edges of the characters are spaced the same distance from the bottom edge of the matrix-plate, while the vertical edges of said characters are all spaced the same distance from the left-hand vertical edges of said plates.

In Fig. 3 the letter illustrated is of a descending character—that is, a letter which when printed projects or descends below the line; but the lower edge of the body of this letter, which is designed to rest on the line, registers with the lower edges of all the other characters.

It will thus be seen that by our invention we provide matrix-plates which shall all be of a uniform size, and we position the characters on said plates at a uniform distance with respect to one horizontal and one vertical edge of said plates, so that when the matrix is placed in a type-mold one adjustment will be sufficient to center the matrix in each case without regard to the size of the character the matrix-plate contains.

By means of this invention numerous changes can be quickly and accurately made in casting type without the necessity of measurement of any kind.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

A font of matrices for casting type, comprising a series of plates—one for each type character of the font—all of said plates being of a uniform and equal size and shape and the type character, irrespective of its size, being situated on each of the plates at the same predetermined measurement from one vertical edge and the bottom edge.

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

FRANK H. BROWN.  
JOHN E. HANRAHAN.  
GEORGE A. BOYDEN.

Witnesses:

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