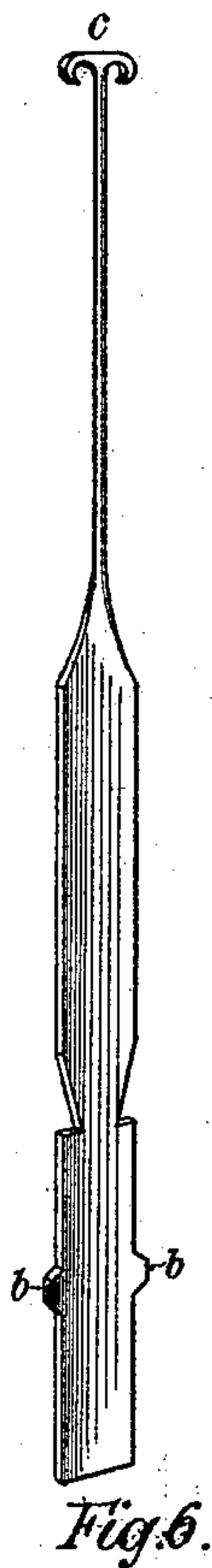
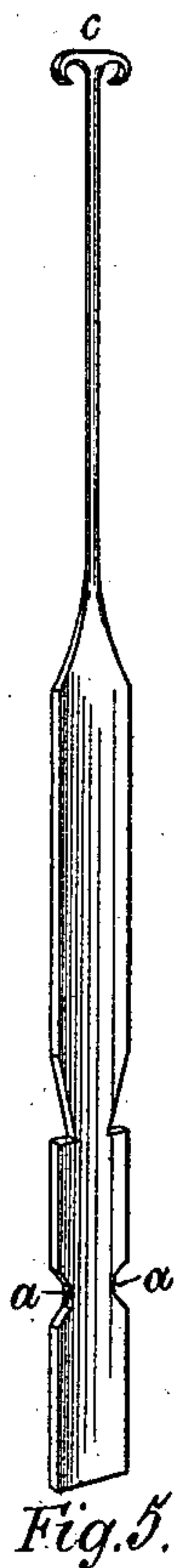
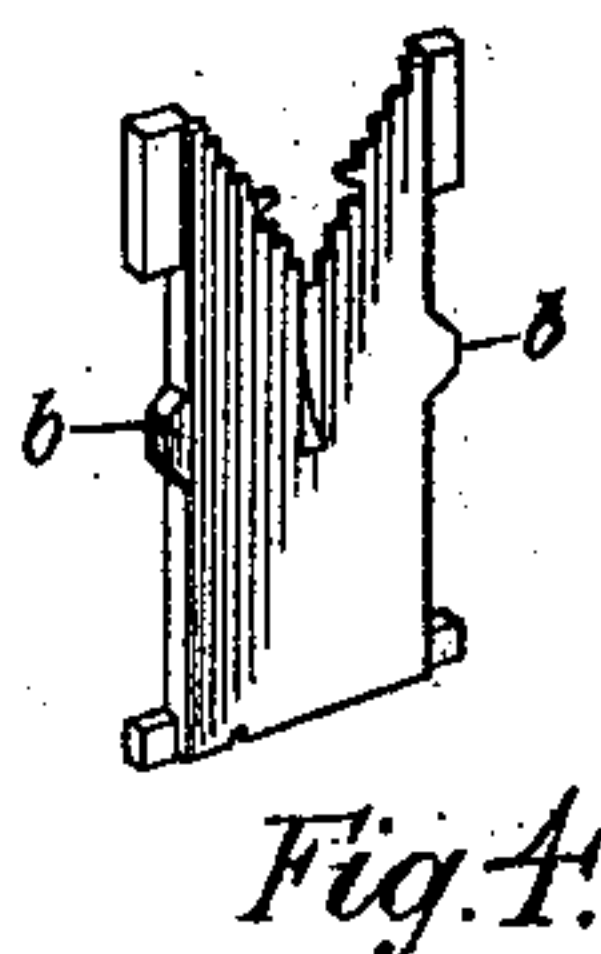
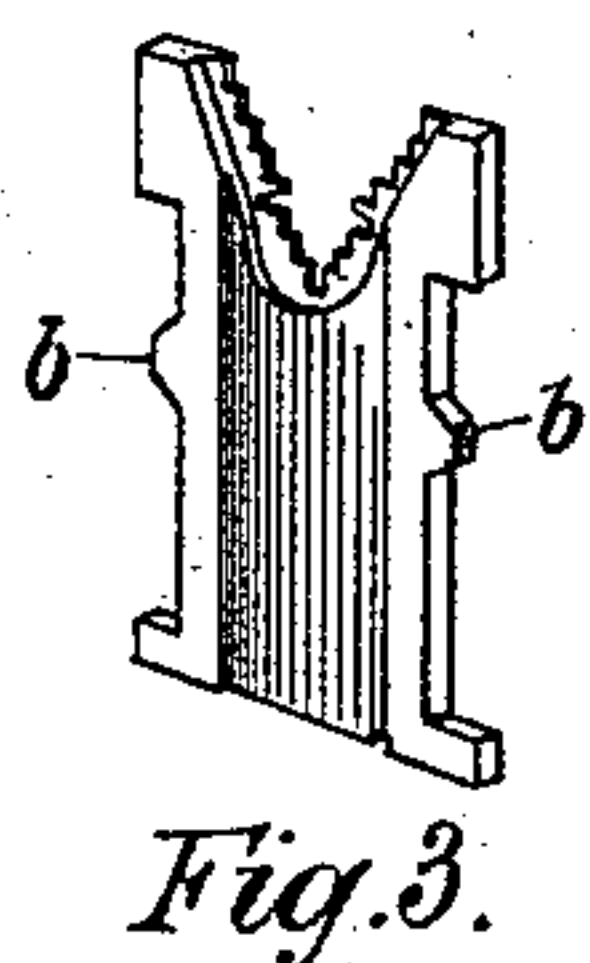
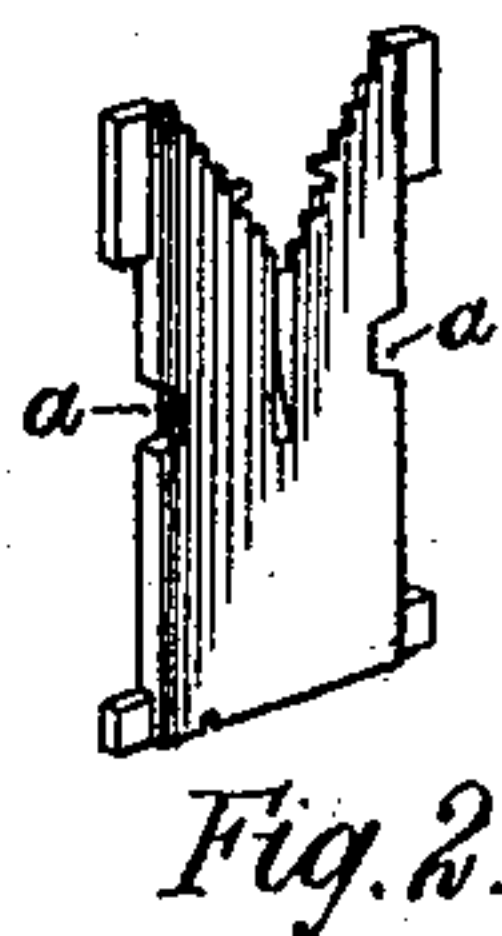
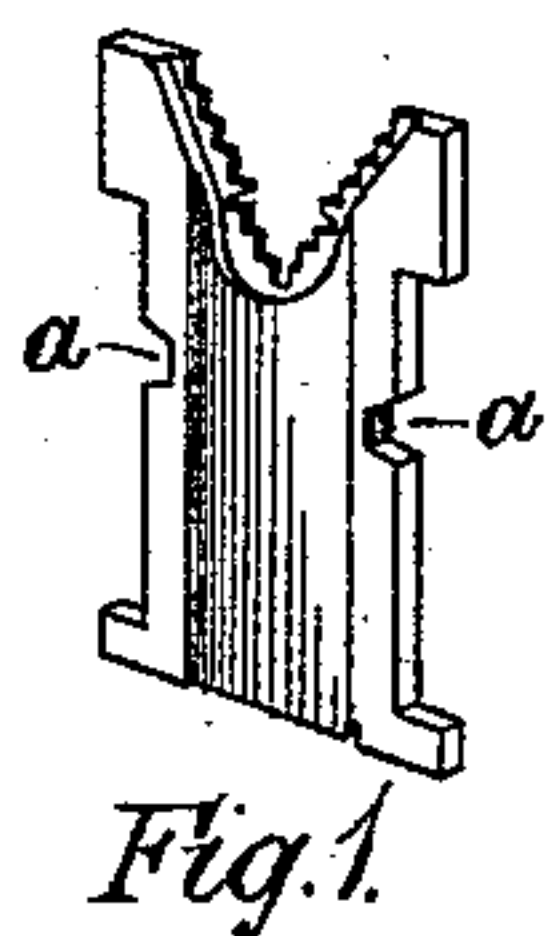


(No Model.)

J. PLACE.
SEPARABLE MATRIX.

No. 540,001.

Patented May 28, 1895.



WITNESSES.
W. R. Kennedy
M. G. Cooper

INVENTOR:
John Place
By Phil. T. Dodge
Atty.

UNITED STATES PATENT OFFICE.

JOHN PLACE, OF LONDON, ENGLAND, ASSIGNOR TO THE MERGENTHALER
LINOTYPE COMPANY, OF NEW JERSEY.

SEPARABLE MATRIX.

SPECIFICATION forming part of Letters Patent No. 540,001, dated May 28, 1895.

Application filed August 18, 1894. Serial No. 520,697. (No model.) Patented in England August 11, 1892, No. 14,548.

To all whom it may concern:

Be it known that I, JOHN PLACE, a subject
of the Queen of the United Kingdom of Great
Britain and Ireland, residing at No. 6 Ser-
jeant's Inn, Fleet Street, in the city of London,
England, have invented certain new and use-
ful Improvements in the Separable Matrices
of Logotype, Linotype, and Similar Machines,
(for which I have obtained a patent in Great
Britain and Ireland, No. 14,548, dated August
11, 1892;) and I do hereby declare that the
following is a full, clear, and exact descrip-
tion of the invention, reference being made
to the accompanying drawings, which are to
be taken as part of this specification and read
therewith, and one which will enable others
skilled in the art to which it appertains to
make and use the same.

This invention relates to improvements in
the separable or individual matrices of logo-
type, linotype and similar machines.

In order that my invention and the means
by which it is to be carried into practical ef-
fect may be thoroughly understood, I will
now describe it in detail, referring in so doing
to the accompanying drawings, which are to
be taken as part of this specification and read
therewith.

Figures 1 and 2 are perspective elevations,
from opposite sides, of a matrix made accord-
ing to my invention, for use in a Mergenthaler
linotype-machine, with others of the same con-
struction, in the manufacture of a linotype.
Figs. 3 and 4 are perspective elevations, from
opposite sides, of a duplex die made accord-
ing to my invention and adapted, with others
of the same construction, to indent a line of
type-impressions in a sheet or a strip of stereo-
type-matrix material. Fig. 5 is a perspec-
tive elevation illustrating the application of
the invention to a Rogers matrix-bar, such
as is described and illustrated in his British
Patent No. 15,060, of 1890. Fig. 6 is a per-
spective elevation illustrating the application
of the invention to a stereo-strip-indenting
bar.

Up to the present time it has been the prac-
tice to construct a linotype machine in such
a way that its magazine is capable of being
charged and operated with matrices of only

"upper" and "lower case" of any given font
of type. Whenever it has been necessary to
introduce into a line of matrices then under-
going the process of assemblage by a linotype
machine, a matrix of another font, such ma-
trix has been taken from a font held in a spe-
cial receptacle which forms no integral part
of the machine but has been only attached
thereto as an annex; or recourse has been
had to the resources of another machine.

The above statement applies with equal
force to other machines for making type bars
besides the Mergenthaler linotype machine.

The object of the present invention is to
minimize the inconvenience and loss of time
incidental to the composing room procedure
referred to above, by making each matrix
duplex, *i. e.*, the impressing each edge of the
body of the matrix with a formative surface,
e. g., Roman style on one edge and italic style
on the other and opposite one. Each depres-
sion of a finger lever of the key board or ac-
tuation of the matrix releasing mechanism,
as heretofore, leads up to the assembling of
one matrix, and this latter if made according
to the present invention, carries two type
formative surfaces, one upon each of its edges.

The formative surfaces above mentioned
may be either male or female, as may be re-
quired, according as to whether a linotype or a
linear matrix from which a stereotype can be
cast be required from it direct.

a, a are the female and *b, b*, the male forma-
tive surfaces. It is to be noted that the two
surfaces on any matrix or bar are opposite to
each other. This is necessarily so, inasmuch
as both must conform to the requirements of
the machine of which it is a part.

It will be understood that the opposite
edges of the matrix or bar will carry the same
character, but of different faces or styles—for
example, a Roman character on one edge and
the same character in a corresponding italic
or bold face, at the opposite edge.

The advantage of the invention lies in the
fact that by the use of the duplex or Janus
faced matrices, I am enabled to double the
number of characters which may be produced
by the machine, without increasing the num-
ber of matrices.

I believe myself to be the first to produce matrices or dies which are provided on opposite sides with variant characters, and adapted to be reversed or turned edge for edge to bring one or the other of the variant characters into action as demanded.

It will be observed that in order to permit the turning of the matrix edge for edge, the two characters must present the top of the character upward; or in other words, they must not occupy reverse positions.

Whenever it becomes necessary to make a matrix or bar face about, it is done by hand or by any convenient means.

It must be distinctly understood that the present invention is not limited in respect of its application to either the matrix of a Mergerthaler linotype machine, nor to the matrix bar of a Rogers machine for making type bars for printing, inasmuch as it is equally applicable to the corresponding member of any logotype, linotype or similar machine, provided that that member is normally a separable member or can be made to be separable. For instance, in the Rogers patent above referred to, the bar is described as suspended from a rod which passes through a closed eye on the end of the bar. This connection between the bar and the rod will of course prevent the former being faced about. Accordingly, when the present invention is to be applied to such bars, the device by which they are held to their machine must be modified

to the extent of allowing them to be faced about. The T tops *c, c* are intended to be releasably held in grooves or by equivalent devices.

I am aware that non-reversible matrices have been provided on the rear edge with dummy or non-active characters, corresponding to those on the front edge, for the purpose of indicating to the operator what characters are in the line, the face of which is concealed from view. My invention is limited to a matrix or die which is reversible and which has operative or usable characters at both edges.

Having thus described my invention, what I claim is—

1. A reversible type matrix or its equivalent, provided at opposite edges with two variant operative characters.

2. A type matrix, or its described equivalent, provided at the top with means of suspension and at opposite edges with two upright, variant operative characters whereby it is adapted to be reversed horizontally to present one or the other of the characters in operative position.

In witness whereof I have hereunto affixed my signature, in the presence of two witnesses, this 9th day of July, 1894.

JOHN PLACE.

Witnesses:

T. F. BARNES,

CHAS. S. WOODROFFE.