(No Model.)

J. O. CLEPHANE.

MATRIX FOR PRINTING SURFACES.

No. 311,411. Patented Jan. 27, 1885.

Fig. 1

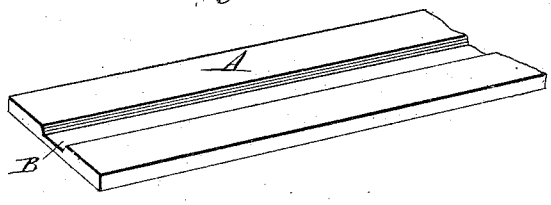


Fig. 2.

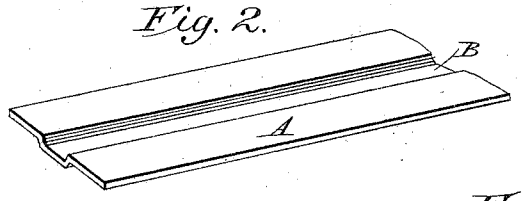


Fig. 3.

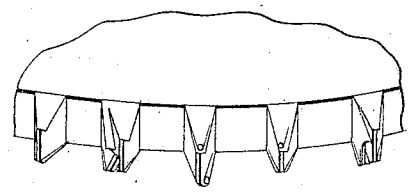


Fig. 4.

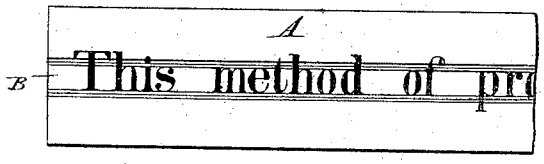


Fig. 5

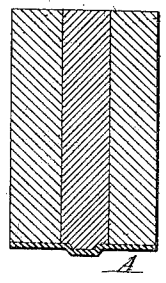
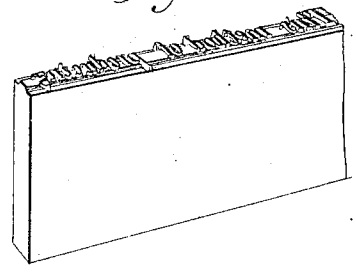


Fig. 6.



Attest.

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UNITED STATES PATENT OFFICE.

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MATRIX FOR PRINTING-SURFACES.

SPECIFICATION forming part of Letters Patent No. 311,411, dated January 27, 1885.

Application filed July 26, 1883. Renewed November 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES O. CLEPHANE, of Washington, District of Columbia, have invented certain Improvements in Matrices for Producing Printing-Surfaces, of which the following is a specification.

This invention relates to improvements connected with that method of producing stereotype-plates or printing-surfaces in relief which consists in indenting types or dies representing the desired letters or characters successively into a material from which the cast is subsequently taken.

The invention has reference more particularly to that system in which the casts or printing-surfaces are in the form of bars, each bar bearing on its face a single line of characters.

The aim of the invention is to produce the bars with retreating or depressed edges, in order to prevent the same from accidentally receiving ink and transferring the same to paper at improper points.

In carrying out the system above referred to it has been found that there is a liability in certain cases of the upper surface of the bars, particularly at their edges, approaching so nearly the height of the face of the characters as to receive ink. This difficulty my invention is intended to avoid.

The invention consists, substantially, in a blank matrix strip or sheet for stereotyping purposes grooved or channeled to receive the impression of the type, and with elevated marginal surfaces to receive the casting-frame, and in a matrix consisting of a strip or sheet provided with a groove or channel and with letters or characters sunk therein, the body portion of said characters being within the groove, and the remaining portion extended beyond the same into the margin of the strip. In using this strip or sheet the dies or type, being impressed in the central grooved or depressed portion, form therein a depression suitable to receive the type metal or other material and to produce upon the cast raised characters. The raised edges of the strip adjacent to the groove serve to limit the elevation or height of the edges of the cast bar, so that the characters will stand out boldly in relief above said edges.

Referring to the accompanying drawings, Figure 1 is a perspective view of my matrix strip or blank in one form. Fig. 2 is a perspective view of the same in another form. Fig. 3 is a view of a portion of a type-wheel such as may be employed to produce the indentations or characters in the matrix-strip. Fig. 4 is a face view of the strip. Fig. 5 is a cross-section illustrating the manner in which the cast is made from the indented strip. Fig. 6 is a perspective view illustrating the form of the type-bar or printing-surface.

Referring to Fig. 1, A represents a blank matrix-strip composed of paper, soft metal, celluloid, or other suitable material, into which the type or dies may be impressed. The strip is constructed with a flat surface upon the back, but with a longitudinal groove or depression, B, in the forward surface, the depression being made ordinarily of a width substantially equal to the width of the bodies of the type on their ends or faces. This blank strip is constructed, it will be seen, with thickened edges and with the groove or depression in the center only, being, in other words, a solid strip.

Fig. 2 represents a blank strip formed by bending a thin sheet into such shape as to produce a longitudinal groove or channel in the center similar to that represented in Fig. 1. In making use of this blank the letters or characters are impressed in the central channel by means of raised types or dies formed on the periphery of a type-wheel, as represented in Fig. 3, or otherwise, the construction of the type and of the machine by which they are operated constituting no part of the present invention. Any suitable machine, several of which are now known in the art, may be employed for the purpose. The channel being, as before stated, of suitable width to receive the body portion only of the type, such lower-case type as y, g, d, and l will have their extended ends or tails embedded in the blank-strip beyond or outside of the central channel, as represented in Fig. 4. The strip or sheet, being properly indented, is placed in or below a suitable mold and molten or plastic material or other suitable material to produce a printing-surface applied in such manner as

to enter the indentations or impressions. The result will be the production of a printing-surface having thereon raised letters or characters, and having its edges above and below the characters depressed or beveled, as shown in Fig. 6, so that in use ink applied in the ordinary manner will be received upon the faces of the characters only. It will be noted that the elevated edges of the blank are extended in flat form a considerable distance on each side of the groove or channel, these edges being adapted to receive and support the under surface of the mold or casting frame when it is in the desired position thereon.

Having thus described my invention, what I claim is—

1. As a new product, a blank matrix strip or sheet for stereotyping purposes, grooved or channeled to receive the impression of the type, with elevated marginal surfaces to receive the mold or casting-frame.

2. As a new article of manufacture, a blank matrix of paper or equivalent material, provided with a longitudinal groove or channel of relatively narrow width adapted to receive the impressions of the type therein.

3. The matrix consisting of a strip or sheet provided with a groove or channel and with letters or characters sunk therein, the body portions of said characters being within the groove and the remaining portions extended beyond the same into the margin of the strip.

JAS. O. CLEPHANE.

Witnesses:

ALBERT HARPER,

A. S. WORTHINGTON.