

(No Model.)

J. R. CUMMINGS.
STEREOTYPE CASTING APPARATUS.

No. 472,473.

Patented Apr. 5, 1892.

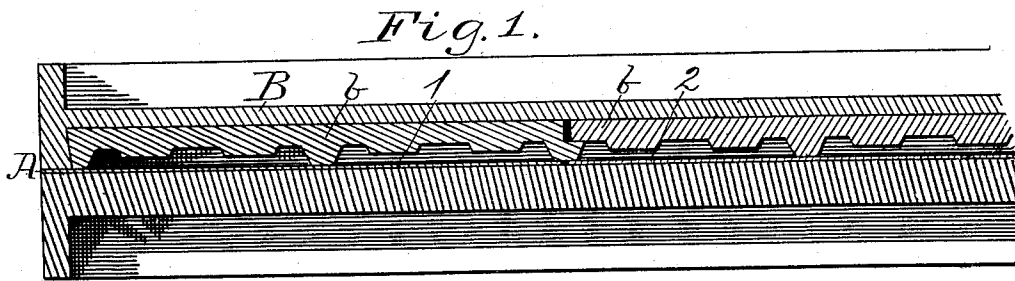


Fig. 2.



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JOHN R. CUMMINGS, OF NEW YORK, N. Y., ASSIGNOR TO THE AMERICAN PRESS ASSOCIATION, OF CHICAGO, ILLINOIS.

STEREOTYPE-CASTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 472,473, dated April 5, 1892.

Application filed November 13, 1888. Serial No. 290,673. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. CUMMINGS, of New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Stereotype-Casting Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

Heretofore stereotype-plates of the size of a page of newspaper-matter have been cast from papier-maché matrices made of one entire piece, and one of the great difficulties which stereotypers have had to contend with was due to the fact that when the metal-casting box became heated it expanded, while under like circumstances the matrix contracted. This contracting of the matrix, from which the type surfaces of the stereotype-plate was struck, and the expanding of the metal-box, from which the under conformation of the plate was struck, causes the configuration of the one to get out of register with those of the other, thus producing a plate the columns of which when separated will be imperfect and more or less difficult to trim and groove.

My invention avoids this difficulty and reduces the possibility of casting a plate, so that the objection above alluded to will be experienced to a minimum, substantially as hereinafter fully described, and as illustrated in the drawings, in which—

Figure 1 is a transverse section taken through a part of a stereotype-casting box, having my improvements applied thereto. Fig. 2 shows an end view of a complete column-wide stereotype-plate casting made thereby, having the edges of the lugs on its under side suitably squared by trimming.

In the drawings, A represents a portion of a papier-maché matrix, which latter, when entire, corresponds in size to a page of newspaper-matter of six columns width. I divide the papier-maché matrix longitudinally from top to bottom into sections 1 2, each of which is preferably not less than two columns in width. These sections are arranged in the box of the casting apparatus longitudinally with reference to the cored or recessed surfaces of certain removable casting-sections in the cover B—that is, so that the impression

or top surfaces of each column of matter in the matrix will be in longitudinal alignment and in register with the depressions in the said casting-sections in the cover B, which are to shape the legs and under part of a stereotyped plate, which latter, when completed and ready for use, looks like that shown in Fig. 2. When my divided matrix is placed in the casting apparatus and a casting made therefrom, the shrinkage is confined to each section and is so small, as compared to the total transverse shrinkage of a matrix, the superficial area of which corresponds to that of a full-sized newspaper, that it is not appreciable.

As hereinbefore stated, the recessed surfaces of the cover, which is to form the under part of the stereotyped plate, is made in sections *b b*. By doing this the oblong sections of recessed surface, which are about one-half inch thick, of a width slightly less than one column, or preferably two columns, and slightly longer than the length of a column, are placed in the depressed area of the inner surface of the cover side by side and in register with the matrix in the box with longitudinal ribs left in relief, as it were, which extend toward and cover the contiguous edges of the sections of matrix. Thus the expansion of metal in each of said sections when heated will only be about one-sixth or one-third of what the total expansion of the entire recessed surface of the said cover would be were the same integral or made in one piece.

What I claim is—

The combination, in a stereotype-casting apparatus, of a matrix divided longitudinally into strips and a series of removable casting-sections, which are placed within said casting apparatus opposite said matrix and which are of such width that longitudinal ribs extending toward said matrix cover the contiguous edges of the strips of matrix and secure the same and which have their broad surfaces adjacent to said matrix recessed, so as to admit of the casting being made between them and said matrix.

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Witnesses:

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