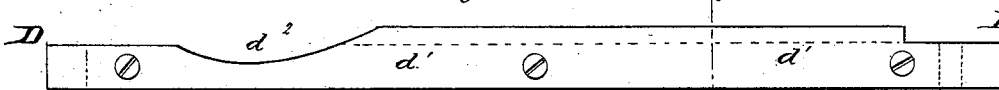
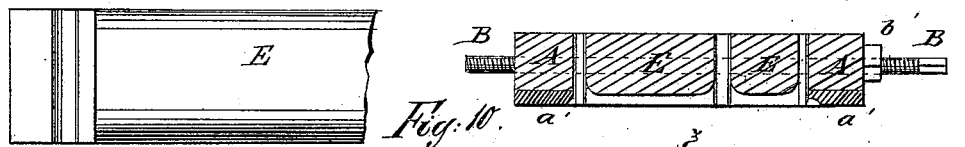
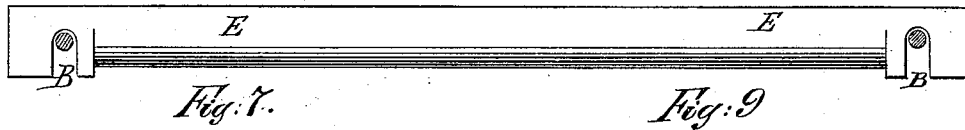
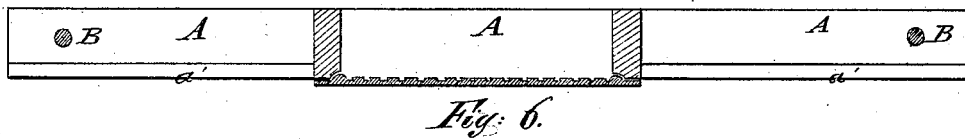
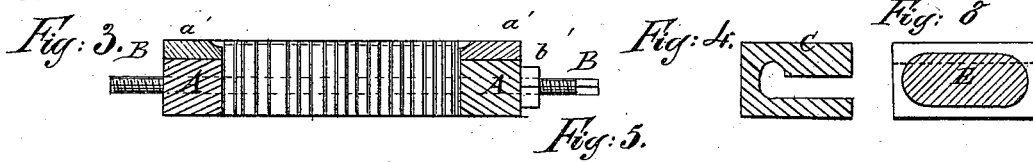
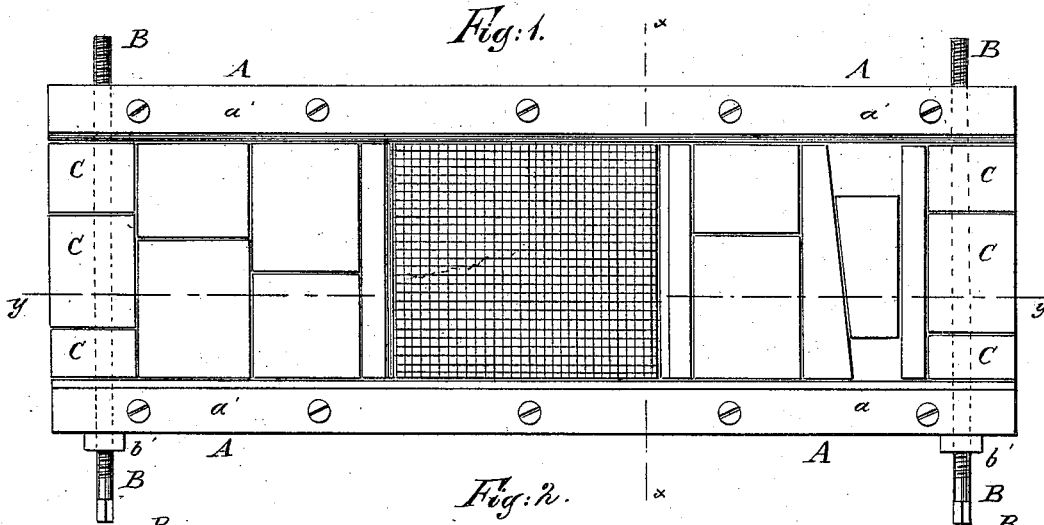


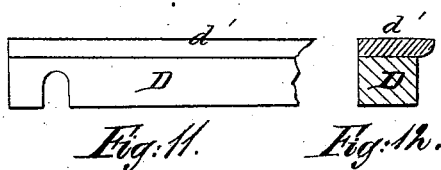
M. J. HUGHES.
 Apparatus for Casting Stereotypes.

No. 212,228.

Patented Feb. 11, 1879.



WITNESSES:
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UNITED STATES PATENT OFFICE.

MARSHALL J. HUGHES, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN APPARATUS FOR CASTING STEREOTYPES.

Specification forming part of Letters Patent No. 212,228, dated February 11, 1879; application filed September 2, 1878.

To all whom it may concern:

Be it known that I, MARSHALL J. HUGHES, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Apparatus for Casting Stereotypes, of which the following is a specification:

Figure 1 is a plan view of my improved device arranged for taking a mold. Fig. 2 is a longitudinal section of the same, taken through the line *y y*, Fig. 1. Fig. 3 is a cross-section of the same, taken through the line *x x*, Fig. 1. Fig. 4 is a detail section of one of the sectional pieces. Fig. 5 is a longitudinal section of the same arranged for casting. Fig. 6 is a side view of one of the core-bars. Fig. 7 is a face view of a part of one of the core-bars. Fig. 8 is a cross-section of a modified form of a core-bar. Fig. 9 is a cross-section of the frame and the core-bars arranged for casting hollow plates. Fig. 10 is a top view of the center bar. Fig. 11 is a side view of a part of the same. Fig. 12 is a cross-section of the same, taken through the line *z z*, Fig. 10.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawings and all that is necessary to a full understanding thereof, and then pointed out in the claims.

A represents two type-high bars, formed by attaching thin plates *a'* to the upper sides of the main bars. Along the inner upper edges of the bars A *a'* are formed rabbets or grooves, as shown in Figs. 1 and 3, to act as or take the place of stereotype-guards.

The bars A are connected at their ends by screws B, which pass loosely through holes in the one bar and screw into screw-holes in the other bar. The screws B, at the outer side of the loose bar, are provided with set-nuts *b'*, which may be screwed up against the said bar, to hold it in any desired position.

This construction also allows the bars A *a'* to be used as a chase for locking up a form and as a casting-frame.

C represents sectional or combination pieces, slotted from their outer ends, so that they can be readily placed upon and removed from the screws B.

The pieces C are made from the thickness of a hair-space to any desired thickness, so that the space between the bars A can be accurately filled at whatever distance apart they may be adjusted in locking up forms and in casting.

The bars A are of proper height for use in casting printers' furniture, and the plates *a'* are of such a thickness that when attached they make the bars exactly type-high.

D is a center piece or bar, having a thin plate, *d'*, of exactly the same thickness as the plates *a'*, screwed to its top, and having a funnel-shaped notch, *d''*, formed in one side.

The bar D, with the plate *d'* attached, is used exclusively for casting stereotype-guards.

In using the bars D for this purpose they are placed, properly spaced, between the bars A, and the metal is poured in through the notch *d''*, which notch gives the metal a better flow between the bars.

All kinds of casting with this apparatus are done in a casting-box, with top and bottom lids.

In casting leads, slugs, and printers' furniture, the top plates *a' d'* are removed from the bars A D, making the said bars of furniture lead and slug height. In this case sectional pieces C of the same height should be used.

E represents core-bars, which are made of different widths, and are adjusted between the bars A with or without sectional pieces C.

The core-bars E are used in wide castings, to reduce the amount of metal that would otherwise be required.

If desired, the core-bars E can be made round or oval and slightly tapered, so that they may be entirely surrounded with metal, and so that they can be readily removed from the casting, leaving it hollow.

This apparatus can be readily adjusted to a mold of any size and to any width of furniture, thus saving a great amount of labor in sawing and planing the sides of each cast, and dispensing with the complicated and expensive machinery generally used for these purposes.

The apparatus thus saves much time and labor, and greatly simplifies and facilitates the business of casting and preparing for the press,

as any desired thickness of leads and slugs and any desired width of furniture or of stereotype jobs can be readily obtained.

I propose to make application for a separate patent on a stereotype plate or cast having in its under side open spaces or grooves with parallel sides, in which wooden cores or filling-pieces are held; and in so far, therefore, as such subject-matter may be described or illustrated in this patent I do not herein claim it.

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

1. The combination of the adjustable bars

A A, the end screws B B, and the section-pieces C, the latter slotted at the outer ends, as and for the purpose described.

2. The combination of the two rabbeted bars A, provided with thin plates *a'*, and connected at the ends by screws B, the section-pieces C, slotted at the outer ends, and the notched center-piece D, having thin plate *d'*, as and for the purpose specified.

MARSHALL J. HUGHES.

Witnesses:

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