

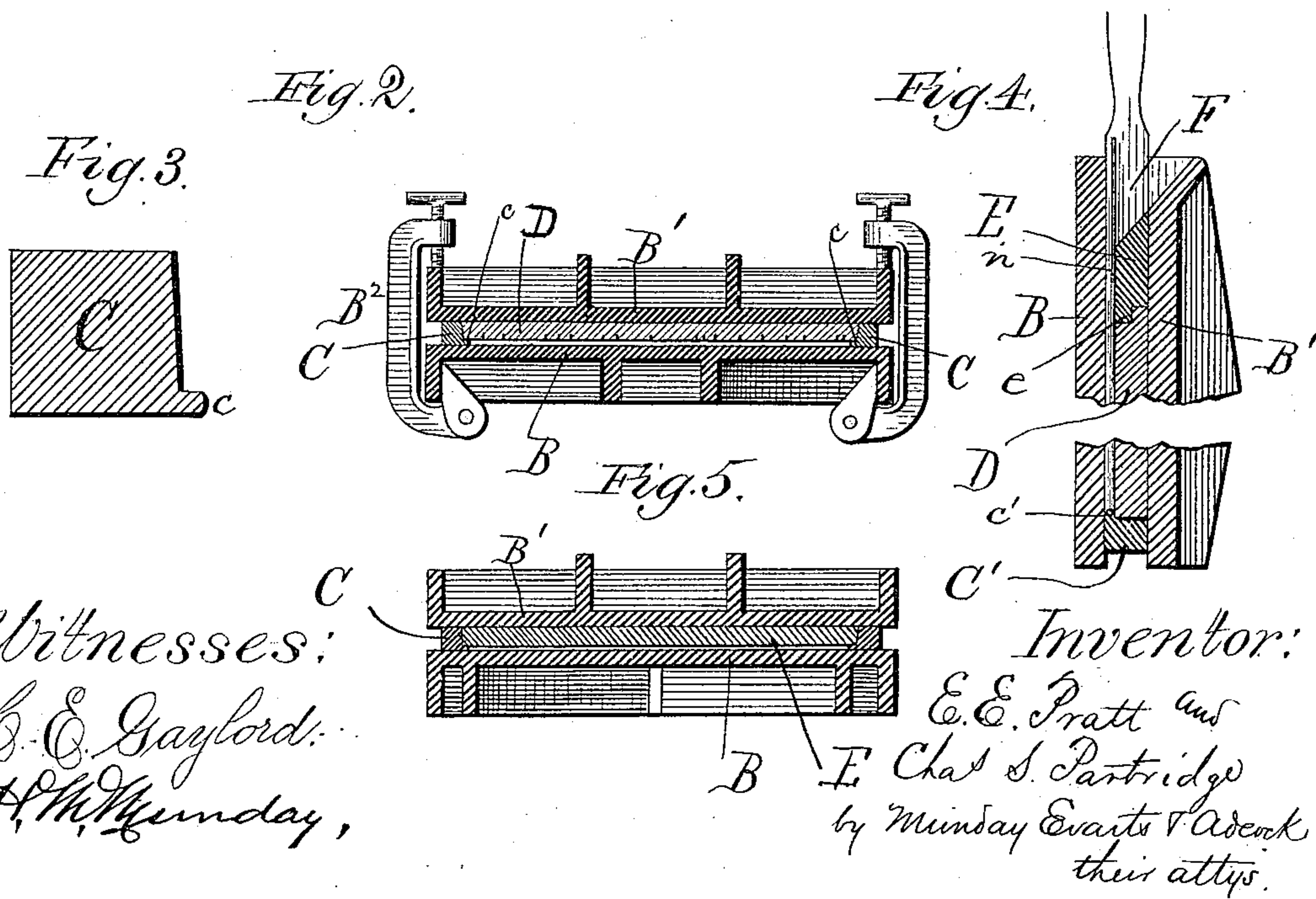
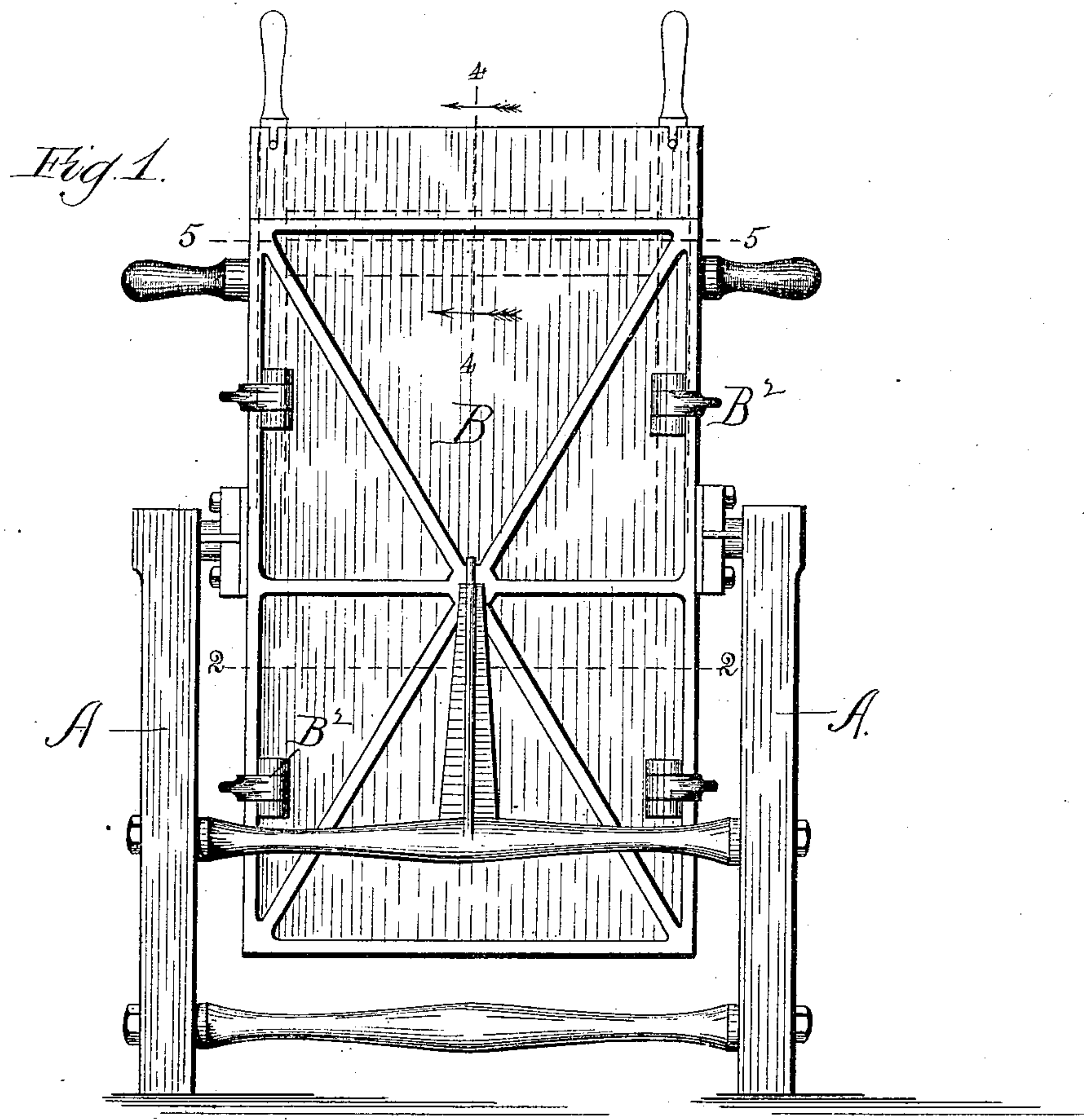
(No Model.)

E. E. PRATT & C. S. PARTRIDGE.

STEREOTYPE CASTING BOX.

No. 334,048.

Patented Jan. 12, 1886.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

EDWIN E. PRATT AND CHARLES S. PARTRIDGE, OF CHICAGO, ILL., ASSIGNORS  
TO THE A. N. KELLOGG NEWSPAPER COMPANY, OF SAME PLACE.

## STEREOTYPE-CASTING BOX.

SPECIFICATION forming part of Letters Patent No. 334,048, dated January 12, 1886.

Application filed April 23, 1883. Serial No. 92,544. (No model.)

*To all whom it may concern:*

Be it known that we, EDWIN E. PRATT and CHARLES S. PARTRIDGE, citizens of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Stereotype-Casting Boxes, of which the following is a specification.

In those stereotype-casting machines which are employed to cast stereotype matter upon wood backs or blocks, it has been customary to hold the wood during the operation by friction only, such friction being exerted upon the edges of the block. This is practicable when the blocks are small or narrow, but is not the best method, and when the blocks are increased to large dimensions—say, for instance, to the size of two or more newspaper-columns—grave, if not insurmountable, difficulties are met with. These are owing, first, to the impossibility of obtaining wood which will not warp when subjected to the heat in casting, the edge-friction affording no sufficient impediment thereto; second, if the block be already warped, the edge-friction does not straighten or flatten it out; third, the clamping-pressure upon the edges is very likely to spring the block or curve it; and, fourth, it is liable to be driven in unequally, so that the layer of metal will be thick at some parts and correspondingly thin at others, and the combined product be of uneven height.

To obviate these difficulties, so specially true of large plate-casting, and also true in a less degree of small block-work, is the principal design of our present invention, which consists in a stereotype-casting box provided with devices by which the block is held near the edge upon its flat sides, substantially as herein set forth, whereby the block is not only prevented from any tendency to warp or curl while in the box, but is straightened if previously curled, the casting of blocks of very large size becomes a matter of perfect ease, the casting of matter upon separate independent blocks at one operation is permitted, and the putting in of the blocks preparatory to the casting is greatly expedited and simplified.

In the accompanying drawings, to which reference is hereby made, Figure 1 is an elevation of a stereotype-casting machine, show-

ing the box swung into position for the reception of the metal. Fig. 2 is a section of the box upon the line 2 2 of Fig. 1. Fig. 3 is an enlarged section of one of the side guides. Fig. 4 is a longitudinal section of the box upon line 4 4. Fig. 5 is a section of the box upon the line 5 5.

In said drawings, A represents the supporting-frame, and B the bottom; B', the top, and B<sup>2</sup> the clamps, of the box.

C C are side guides or rails, between which the block or wood backing D is placed, and between which it was formerly clamped.

C' is the head-guide or end piece, and E is a tail block or piece employed at the other end of the box from the guide C'. The matrix (not shown) is placed upon the bottom, and held thereto by the guides and head-piece.

At opposite sides of the space surrounded by the parts C C, C', and E, we place supports for the wood backing, which will sustain it at a distance above the bottom B equal to the thickness desired for the stereotype, and between which supports and the top B' the block will be held. These supports may consist of strips *c c* and *c' e*, though either *c c* alone or *c' e* alone may be used, the strip E and its ledge being supported at the proper remove from the matrix otherwise than by the ledges *c c* in the latter case, and they may be attached to or be integral with C C or C' and E, respectively, so as to form ledges thereon, as shown, or they may be removable and separate therefrom, or, instead of being continuous in length, they may consist of short pieces or points. They may be located above the bottom of the box, if the block is rabbeted to correspond. An instance of this is shown in connection with the supporting-ledge *e* upon the tail-piece, underneath which ledge and tail-piece is a space, *n*, for the admission of the molten metal; or the supports may be in the form of tenons or flanges located midway of the block's thickness, the edges of the block being grooved or mortised to receive the same. By placing the block with the ends of its grain resting upon these supports at either pair of the opposite sides of the box, it will be evident that when the top is clamped down the block will be very firmly held in its place, and that the results above described will follow. It is also evident



that the supports serve to gage the admission of the block within the box, so that it is positioned with absolute accuracy by simply laying it therein. We have shown these supports upon all four sides, and prefer thus to use them generally, because we thereby straighten and hold the wood both with and across its grain. When so used, the side supports *c* may be employed to support the tail-piece and ledge *e* at the proper remove from the bottom, as shown in Fig. 5; but the tail-piece and ledge may be otherwise supported, or they may be constructed to bridge the opening *n*.

Another evil attending the edge-clamping, which is avoided by our invention, is this: In the old way of holding the block it is necessary to put upon it sufficient friction to prevent dislodgment previous to the application of the metal. This does not leave sufficient room for the expansion caused by the heat, and the result is that the guides are so strained as to render them useless in a short time. The tail-piece is beveled off upon its outer edge, so as to form a part of the mouth *F*, into which the molten metal is delivered and from which it passes into the space *n*. The tail-piece is a separate and removable device, and does not act as a part of any matrix-clip or fastening-frame. It is, however, when thus constructed, very convenient and useful.

We claim—

1. The stereotype-casting box consisting of top and bottom plates and the guides and

head-piece, in combination with strips upon 35 opposite sides, supported from the bottom plate, and positioned and otherwise adapted, as specified, to support the wood backing uniformly at the proper remove from the matrix, and to act in conjunction with the top to clamp 40 the backing in the direction of its thickness, and thereby to straighten it and prevent its curling under the heat of the mold, substantially as specified.

2. The mold for casting stereotypes upon 45 wood backs, consisting of the bottom *B*, top *B'*, side rails, *C C*, head-guide *C'*, tail-block *E*, constructed as shown, and strips *c c*, substantially as specified.

3. The mold for casting stereotypes upon 50 wood backs, consisting of the bottom *B*, top *B'*, side rails, *C C*, head-guides *C'*, tail-block *E*, and strips *c c c' e*, substantially as specified.

4. The combination, in a stereotype-casting box, of the side guides and their ledges, and 55 the tail-piece resting upon said ledges, substantially as specified.

5. The stereotype-casting box provided with a removable tail-piece at the pouring end, and supports for said piece, whereby it 60 is sustained above the pouring-channel, substantially as specified.

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