

1,152,827.

Fig. 1.

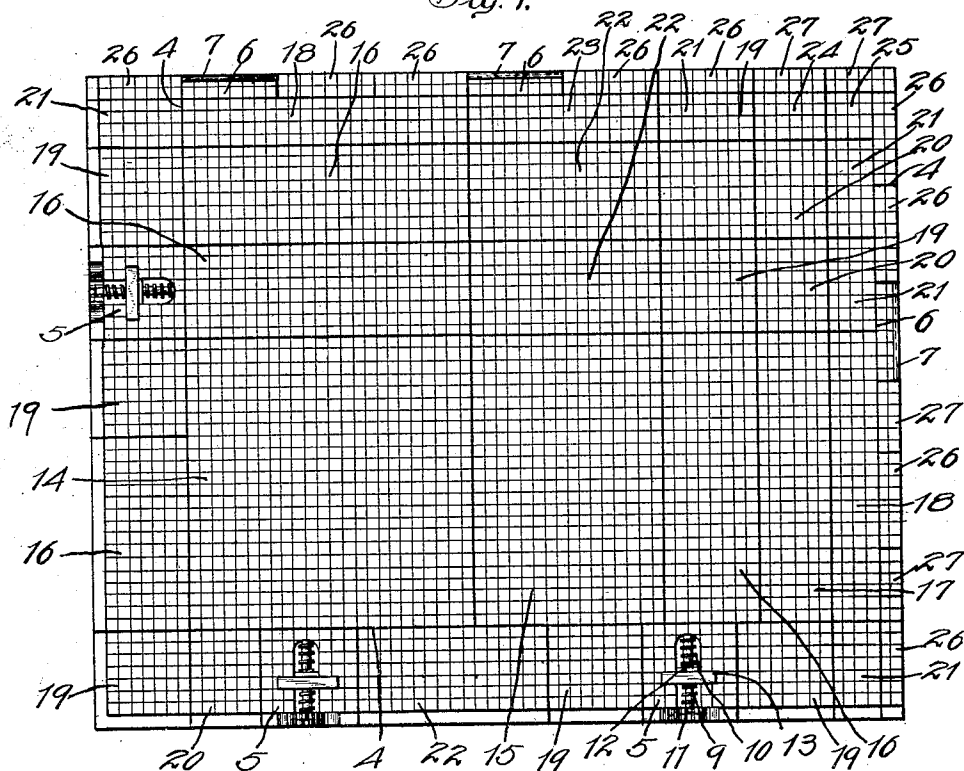


Fig. 3.

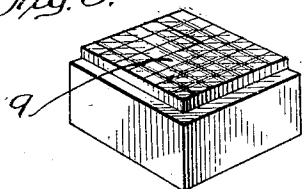
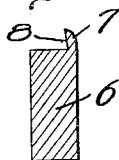


Fig. 2.



Witnesses:
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Indentor:
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his attys

UNITED STATES PATENT OFFICE.

GEORGE E. McCABE, OF GRAND HAVEN, MICHIGAN, ASSIGNOR TO THE CHALLENGE MACHINERY COMPANY, INCORPORATED, OF GRAND HAVEN, MICHIGAN.

PRINTING-BLOCK SYSTEM.

1,152,827.

Specification of Letters Patent.

Patented Sept. 7, 1915.

Application filed January 31, 1913. Serial No. 745,349.

To all whom it may concern:

Be it known that I, GEORGE E. McCABE, a citizen of the United States, residing at Grand Haven, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Printing-Block Systems, of which the following is a specification.

This invention relates to a block system for printing press forms, which consists of a certain assortment of blocks, hooks and catches, by means of which one or more plates may be secured in place to make up a page of a given size or multiples thereof.

The principal object of the invention is to operate a font of blocks, hooks and catches by means of which it is possible to vary the length or width of the makeup forms with the greatest ease and accuracy with the greatest facility and with the least possible number of separate blocks.

For the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination, and arrangement of the several parts generally shown in the accompanying drawing and described in the specification but more particularly pointed out in the appended claims.

In the accompanying drawing, Figure 1 is a plan view of a selected assortment of blocks forming a font, together with the hooks and catches therefor. Fig. 2 is a sectional view of one of the catches, and Fig. 3 is a perspective of the corner rabbeted section.

In printing from plates it is desirable not only that the minimum number of blocks be employed for accurately making up the form for the press but it is also desirable that any desired variation may be made to accommodate any size or shape of plates with the utmost speed and accuracy. The present block system is adapted to present a simple method of makeup by means of which it is possible to reduce or vary the form in size either in length or width or both from the maximum to the minimum, or to enlarge from the minimum to the maximum with equal ease; in other words, to enable their variation to be made within the range of the font itself in the least possible time.

In Fig. 1 of the drawing a number of

blocks of various sizes are shown, the sizes of the several blocks being indicated by heavy lines 4, and some of the blocks, as 5, are provided with hooks to engage the edges of the plates to be printed, and being operative, in combination with catches 6, to secure the said plates in position. The preferred construction of the catches is shown more clearly by Fig. 2, in which a projection 7 is formed with a slightly beveled inner face 8. Each of the hooks comprises a screw 9 rotatable in a slotted portion 10 of the block 5 by means of a wheel 11. A threaded nut 12 having a portion adapted to engage the sides of the slot 10, and having a clutch 13 extending above the surface of the block, is adapted to be moved in the slot by the rotation of the wheel. The particular construction of this hook device is not a part of the present invention but enters into the combination to produce the desired results. The blocks which constitute the font are graduated in size preferably in some unit of measurement known in the art to which the invention relates, as, for example, in pica ems. The surface of the blocks is, therefore, preferably ruled or scored with light properly spaced lines, as shown in Fig. 1, to indicate more clearly the size of each block. An entire font consists of a plurality of blocks adapted to be arranged in sections, the sections each comprising a number of individual blocks having one common dimension and varying other dimensions. The blocks of a section are arranged contiguous to each other, and other sections are provided in which the common dimension of its blocks differs from the other section but the varying dimensions are the same. A border is also provided consisting of one or more sections of blocks each uniform in width and varying in length. The catches 6 constitute some of the border section blocks and the hooks 5 constitute some of the other border sections. The catches 6 are preferably 2x8 units in size and the hooks 8 units square. The other blocks, of which the font, as herein shown and described, is composed, comprise one block 14, 24 units square; one block 15, 16x24 units; three blocks 16, 8x24; one block 17, 6x24; two blocks 18, 4x24; seven blocks 19, 8x8; three blocks 20, 8x6; five blocks 21, 8x4; four blocks 22, 8x16; one block 23, 4x16; one block 24, 4x6; one block 25, 4x4;

nine blocks 26, 2x8 and four blocks 27, 2x6. It will be seen, therefore, that by combining and rearranging these blocks any desired form may be made up to engage any plate or plates within the size limited by the combined size of all the blocks, and by any desired variation. The variations in sizes are regular steps varying by two units in width and since the hooks may be varied more than two units in length the possible variation of the distance between a hook and a catch is any distance limited only by the distance apart of the hook and catch. By having the blocks arranged in regular sections, decreasing in size from the largest to the smallest in spaces of two units, it is possible to make any combination with the utmost rapidity and to make any desired variation within the limits of the size of the font. By having the separate blocks in graduated widths or sections it is possible to move or shift a whole section at once so that any desired change can be made in the quickest possible manner by simply shifting the position of an entire course of blocks having one dimension the same. It will also be noted that either a transverse or a longitudinal row of blocks may be changed since the blocks of a single section are all the same width and the various blocks of the different sections can be arranged to correspond as shown in the drawing.

Some of the sections are formed with rabbeted corners, as shown more clearly in Fig. 3, which, together with the hook sections, form one side and one end of the block being made up. To make-up a complete block it is the custom to lay out these rabbeted sections, first starting with the corner piece, to the desired length and width of the block to be assembled. In the corner of the right angle thus formed fill in with one of the large sections, then a smaller one and so on until the vacant space is filled, finally placing opposite the hooks the catches 6, and then filling up the block with the other necessary sections. By providing the border section with this rabbeted portion the clutches 13 may be operated by means of a rack moved along the rabbeted portion, and by having the rabbeted blocks of the same size as other blocks in the font they can be used interchangeably with the other ones when not in use along the two sides of the border.

What I claim is:

1. In a furniture font the combination of a plurality of separate blocks arranged in sections and adapted to constitute a form of given size, the blocks of each section being contiguous and having one common and one variant dimension, and the blocks of other sections each having a different common dimension and the same variant dimensions.
2. In a block furniture system the combi-

nation of a plurality of separate pieces adapted to be arranged in sections and to fill a form of given size, the blocks of each section being contiguous and having one common and one variant dimension, and the pieces of other sections each having a different common dimension and the same variant dimensions, and a border section having pieces of uniform width and differing in length.

3. In a furniture block system for making up forms of predetermined size the combination of a plurality of separate pieces adapted to be arranged in sections, the blocks of each section being contiguous and having one common and one variant dimension, and the pieces of other sections each having a different common dimension and the same variant dimensions, and a border section having pieces of uniform width and differing in length, and means to engage the edges of plates placed on top of the blocks.

4. In a furniture block system for making up forms of predetermined size the combination of a plurality of separate blocks adapted to be arranged in sections, the blocks of each section being contiguous and having one common and one variant dimension, pieces of other sections each having a different common dimension and the same variant dimensions, and one or more border sections having blocks of uniform width and differing in length, some of the blocks of one border section being provided with catches, and some of the blocks of another border section being provided with hooks, said hooks and catches being adapted to engage a plate placed on top of the blocks, and the hooks and catches being adjustable to any desired positions.

5. In a furniture block system for making up forms of predetermined size for printing plates, the combination of a plurality of separate blocks arranged in sections, the blocks of each section being contiguous and having one common and one variant dimension, and the blocks of other sections each having a different common dimension and the same variant dimensions, and one or more border sections each having blocks of uniform width and varying in length, of a catch member comprising a block of the width of one of said border sections having an inclined projection extending above the face of the other blocks, and a hook consisting of an adjustable clamping member extending above one of the blocks of another border section and adapted to be moved to engage the edges of a plate placed on top of the blocks and to press the same against the said catches to bind the plate firmly in position, said hooks and catches being adapted to be moved into any desired positions with respect to the other blocks and with respect to each other, the blocks filling the form.

6. In a furniture font for printers, the combination of a plurality of rectangular blocks arranged contiguously in rectangular formation so as to form a plurality of series
5 in both of the surface dimensions of such formation, the blocks being of sizes such that the lines of cleavage between the different series in both directions will be straight lines and the different series in either direc-
10 tion will be of different widths.

7. In a furniture font for printers, the combination of a plurality of rectangular blocks of different sizes arranged contiguously in rectangular formation constituting
15 a plurality of series of different widths extending across the formation in each dimension of the surface thereof, with straight lines of cleavage between the different series in both directions, and catch-carrying mem-
20 bers adapted to be inserted between the series along any one of the lines of cleavage.

8. In furniture for a printer's chase, a rectangular form, straight lines of cleavage extending across the form in one direction and dividing the form into sections of dif- 25
ferent widths, straight lines of cleavage extending across the form in the other direction and dividing the form into sections of different widths, and catch-carrying mem- 30
bers adapted to be inserted between the sections along the lines of cleavage whereby printing plates of various sizes may be secured in place.

In testimony whereof I have signed my name to this specification, in the presence of 35
two subscribing witnesses, on this 28th day of January A. D. 1913.

GEORGE E. McCABE.

Witnesses:

FRED RIGG,

E. E. EMERY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."