

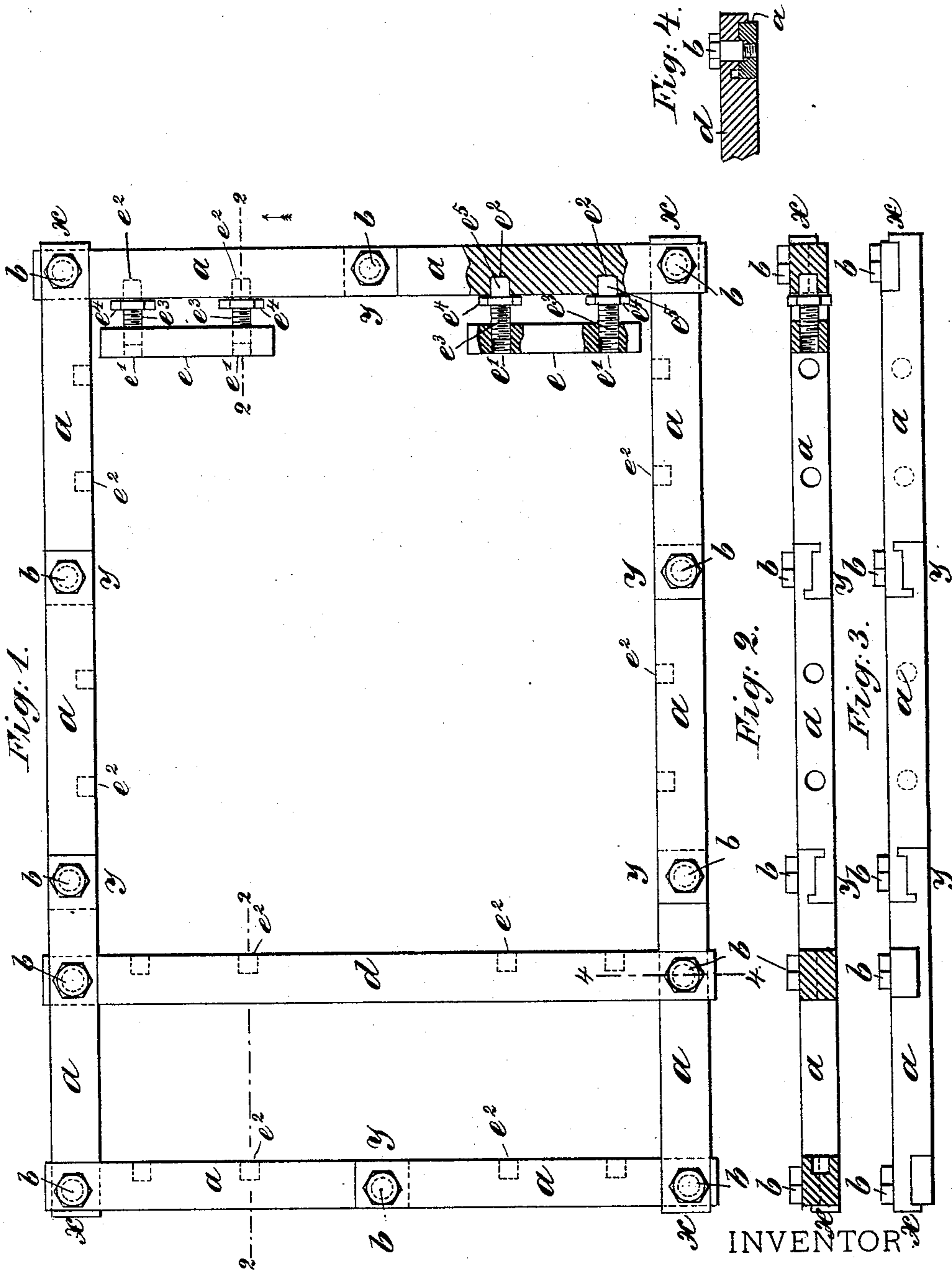
(No Model.)

2 Sheets—Sheet 1.

J. S. BROWN.  
PRINTER'S CHASE.

No. 487,710.

Patented Dec. 13, 1892.



WITNESSES:  
*Herbert Bloforn*  
*Peter A. Ross*

*John S. Brown*  
By *Henry Connors*  
Attorney.

(No Model.)

2 Sheets—Sheet 2.

J. S. BROWN.  
PRINTER'S CHASE.

No. 487,710.

Patented Dec. 13, 1892.

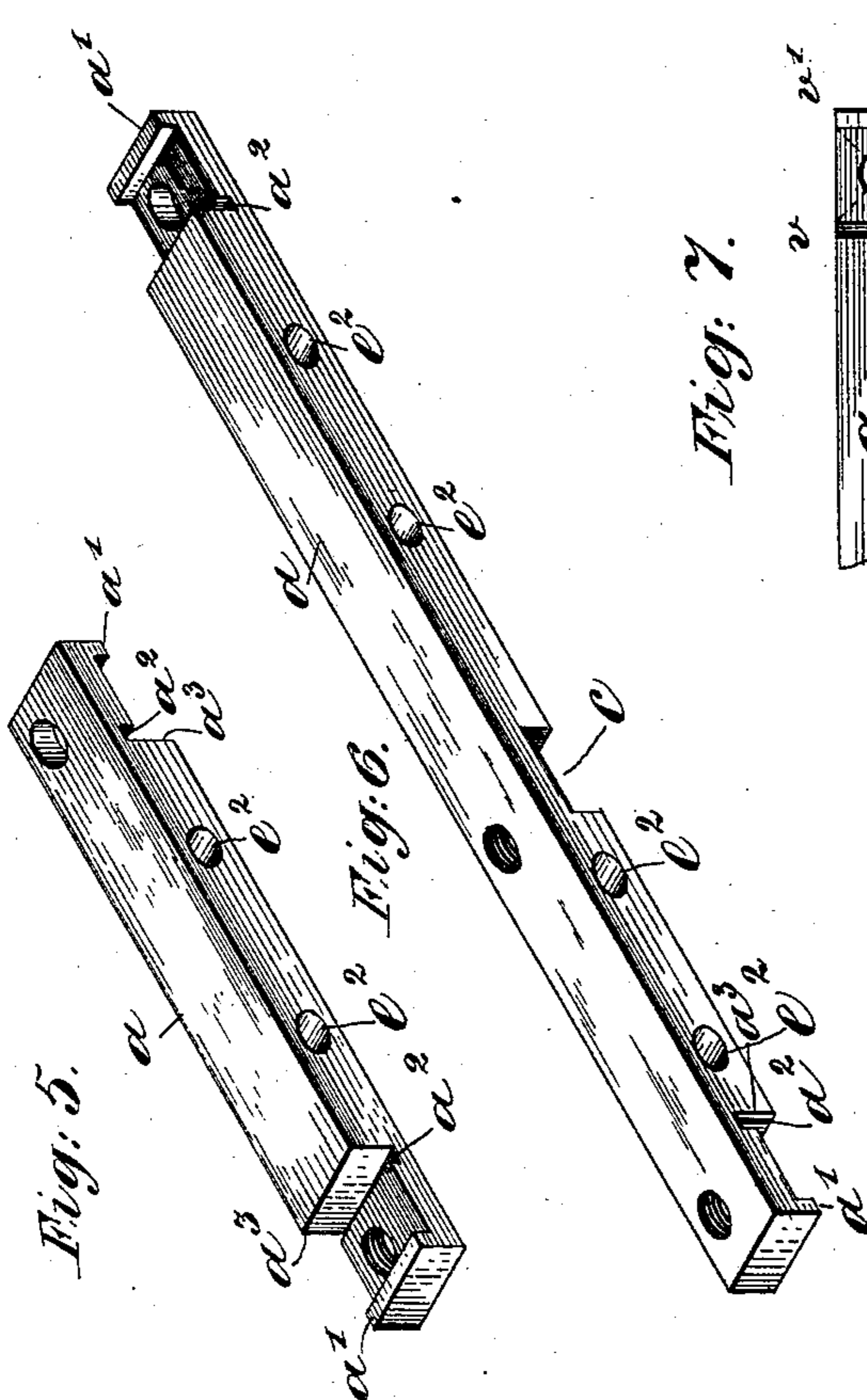


Fig. 7.

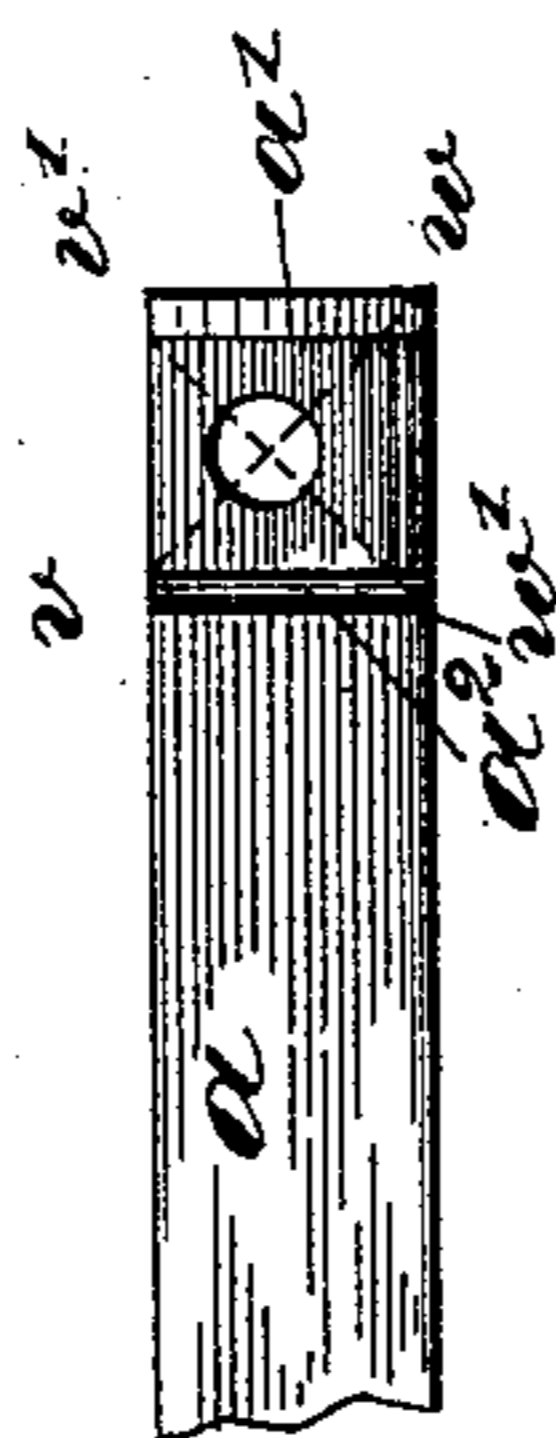


Fig. 8.



WITNESSES:

Herbert Bloom.  
Peter A. Ross.

INVENTOR:

John S. Brown  
By Henry Comstock  
Attorney.

# UNITED STATES PATENT OFFICE.

JOHN S. BROWN, OF JERSEY CITY, NEW JERSEY.

## PRINTER'S CHASE.

SPECIFICATION forming part of Letters Patent No. 487,710, dated December 13, 1892.

Application filed November 30, 1891. Serial No. 413,611. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. BROWN, a citizen of the United States, residing in Jersey City, Hudson county, New Jersey, have invented certain Improvements in Printers' Chases, of which the following is a specification.

My invention relates to the metal chases used by printers for locking up forms to be put on the press, and particularly to those employed on cylinder-presses.

A printer's chase as ordinarily constructed is a stout rectangular frame of iron in which the form of type is set and keyed up with "furniture" and "quoins." The form is set by preference in the middle of the chase and the space about it filled up with blocks of wood called "furniture" and the whole made tight or locked by means of wedges called "quoins." It is desirable that as little furniture be used as possible, and therefore if the form of type be small a small chase is used if one be at hand. This requires, however, a large number of chases, as the variation in the size of the forms commonly used is very great, and where the printer has an unusually-large form to print from he must purchase a larger chase to receive it, and he may never have occasion to use this chase a second time.

The object of my invention is to provide the printer with a sectional chase, or rather with chase elements from which he may in a few moments build up a chase of any desired size within wide limits and varying in proportion between length and width to suit the proportions of the form.

The object of the invention is, further, to provide means for partitioning the chase by a cross division or divisions, which may be constructed of the same elements or units as the chase.

The object of the invention is, further, to provide the chase with a quoin of novel construction for locking up the form therein.

My invention will be fully described hereinafter, and its novel features carefully defined in the claims.

In the drawings which serve to illustrate my invention, Figure 1 is a plan view of a chase constructed according to my invention. Fig. 2 is a longitudinal section of the same on the line 2 2 in Fig. 1. Fig. 3 is a side elevation of the chase. Fig. 4 is a section on line

4 4 in Fig. 1. Fig. 5 is a perspective view of one of the elements of which the chase is composed, and Fig. 6 is a similar view of a double element. Fig. 7 is a view illustrating the manner of ascertaining the proper position for the screw-hole at the joint. Fig. 8 is a detached view showing a different form of screw.

The chase is made up of like elements or sections, one of which is represented in perspective in Fig. 5, and the side and end bars of the chase will be composed each of one or more of these elements united end to end, as will be described. The chase illustrated in Fig. 1 has its side bars composed each of three of said elements and the end bars composed each of two elements. The side and end bars are united at the corners by interlocking joints, and the elements are united at their ends by the same interlocking joints. The element *a* (seen in Fig. 5) may be of any length; but I prefer to make them of moderate length of a definite length in inches. The width and thickness of the element are also arbitrary; but these will follow, by preference, nearly the proportions used in the ordinary chase when the same material is employed. The interlocking joint is formed by halving or gaining the extremities of the element *a* and forming on the same a locking-lip *a'* and a locking-groove *a''*, and these are formed on opposite faces of the element at the respective ends thereof. In order that the elements may be locked together at the corners *x* of the chase, as well as at the joints *y*, where the elements are united end to end, the space between the shoulder *a'''* on the element (see Fig. 5) and inner face of the lip *a'* will be exactly equal to the width of the element. When the elements are fitted together, they are firmly held by a screw *b*, which has a cylindrical shank and a screw-threaded tip. The shank of the screw fits into a smooth bore in the upper lap and the screw-threaded tip engages a screw-thread in the lower lap. Thus the heads of the screws are always on the upper face of the chase. I prefer to make the elements *a* of Bessemer steel, and in their manufacture I make them by planing and milling of exactly the same dimensions in length, breadth, and thickness, whereby their fitting together under all conditions is assured. I am also careful to mill the extremities at ex-

actly a right angle to the edges, so that the corners of the chase may always be right angles.

In order that the hole in the upper lap may always register exactly with that in the lower lap, whether the joint be made by placing the elements end to end or by placing them at right angles, as at the corners of the chase, I locate its center as indicated in Fig. 7—that is, at the intersection of diagonal lines drawn from  $w$  to  $v$  and from  $w'$  to  $v'$ .

I can use, in connection with the element  $a$ , other elements precisely like it, except as to length, and in this respect these elements may be multiples of the element  $a$ . For example, elements may be used which are each exactly the length of two of the united short elements. The use of such double elements lessens the work of assembling the elements in making the chase. The end bar of the chase illustrated in Fig. 1 might be formed of one of such double elements in lieu of two elements  $a$ , as shown. Fig. 6 shows such a double element.

In some cases it may be advisable to furnish the chase with a cross bar or bars. To provide for this, some or all of the elements may have each a gain, as  $c$  in Fig. 6, cut in its face to receive a cross-bar, as  $d$  in Fig. 1, which bar may be made up of elements  $a$  like the other parts of the chase. In Fig. 1 this bar is represented as a double element similar to that seen in Fig. 6.

I will now describe the quoin I prefer to employ with the chase.  $e$  is the quoin, of metal, in which are two screw-threaded holes  $e'$ . In the inner face or edge of the elements  $a$  are two holes  $e^2$ , spaced like the holes  $e'$ . In the holes in the quoin  $e$  are screwed two setting-screws  $e^3$ , which are provided with polygonal heads  $e^4$  to receive a wrench and with smooth journals  $e^5$  exterior to the head. These journals fit and find bearings in the holes  $e^2$  in the element  $a$ . By rotating the screws the quoins are forced inward or away from the bar of the chase, as will be well understood. The screws may be capstan-head screws in place of having polygonal heads.

I have shown only a part of the chase elements provided with gains  $c$  to receive cross-bars; but all of the elements may be so provided. Indeed the elements may be exactly alike in every respect.

In Figs. 1, 2, and 3 the screws  $b$  are represented with heads of polygonal form adapted to receive a wrench; but they may be let into the bar, as seen in Fig. 8, and be provided with nicks to receive a screw-driver.

I am aware that it is not new to make a

printer's chase of four bars united separately at the corners and that such chases have been made up of four bars with gains in them at regular intervals, whereby the space within the frame formed by the bars can be reduced or enlarged at will. This I do not claim. My chase is composed of elements capable of being united end to end, as well as at right angles, the gains being proportioned to the bar forming the element for this purpose. Thus I am enabled not only to reduce or enlarge the interior of the chase at will, but the exterior as well. It is this particularly-constructed chase element which constitutes the leading feature of my invention.

Having thus described my invention, I claim—

1. A printer's chase having its bars made up of elements  $a$  of rectangular cross-section, each of said elements provided at each end with a locking-lip  $a'$ , a locking-groove  $a^2$ , and the space between said lip and groove having a screw-hole therein, and the clamping-screw whereby said elements are rigidly locked together when assembled, as set forth.

2. A printer's chase having its bars made up of elements  $a$  of rectangular cross-section, the ends of each element halved or gained, as shown, and provided with locking-lips and locking-grooves, and the space between said lips and grooves having the screw-holes therein, and the clamping-screws whereby said elements are rigidly locked together when assembled, said grooves and lips on the respective ends of said elements being arranged on opposite faces of the same, as set forth.

3. A printer's chase having its bars made up of elements  $a$  of rectangular cross-section, each of said elements having its ends halved or gained and provided at each end with a locking-lip  $a'$ , a locking-groove  $a^2$ , and the space between said lip and groove having a screw-hole therein, the width of the element being equal to that of the space between the locking-lip and the shoulder of the gain, whereby the joint may be made with the elements arranged end to end or at right angles, and the clamping-screw whereby said elements are rigidly locked together when assembled, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN S. BROWN.

Witnesses:

HENRY CONNETT,

HERBERT BLOSSOM.