

No. 671,932.

Patented Apr. 9, 1901.

C. S. MILLS.
PRINTING PLATE HOLDER.
(Application filed Aug. 27, 1900.)

(No Model.)

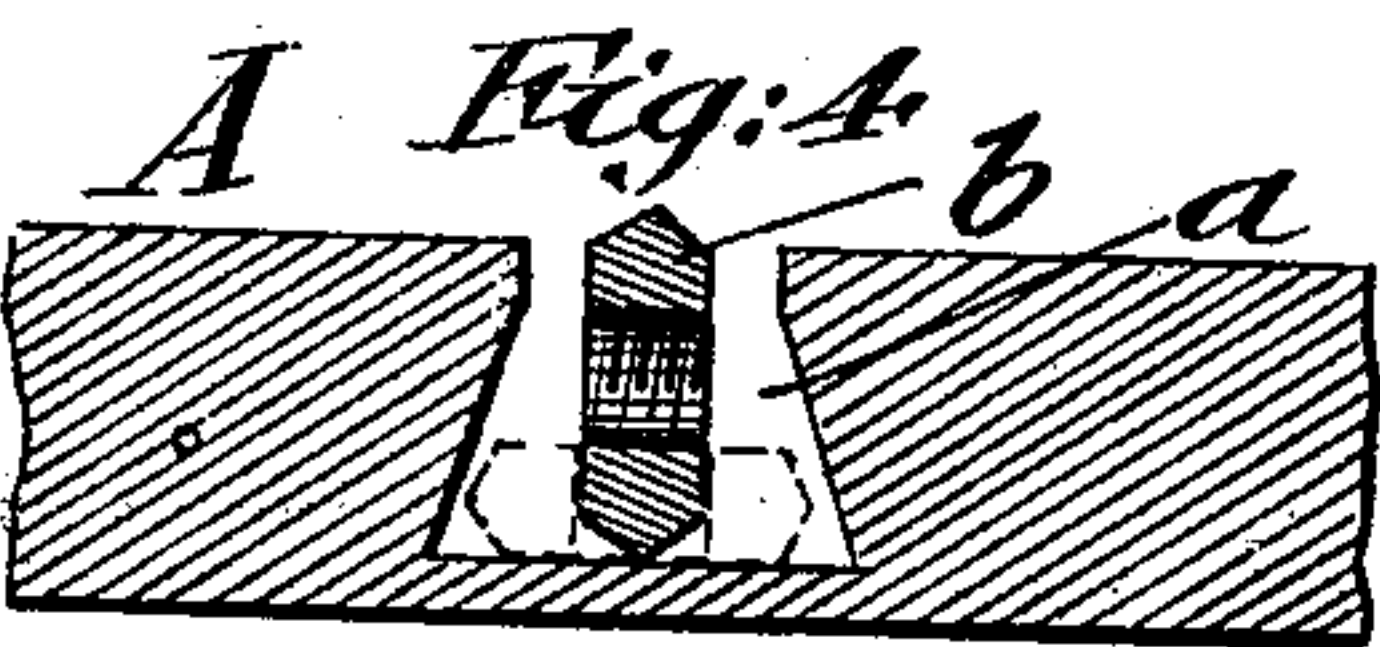
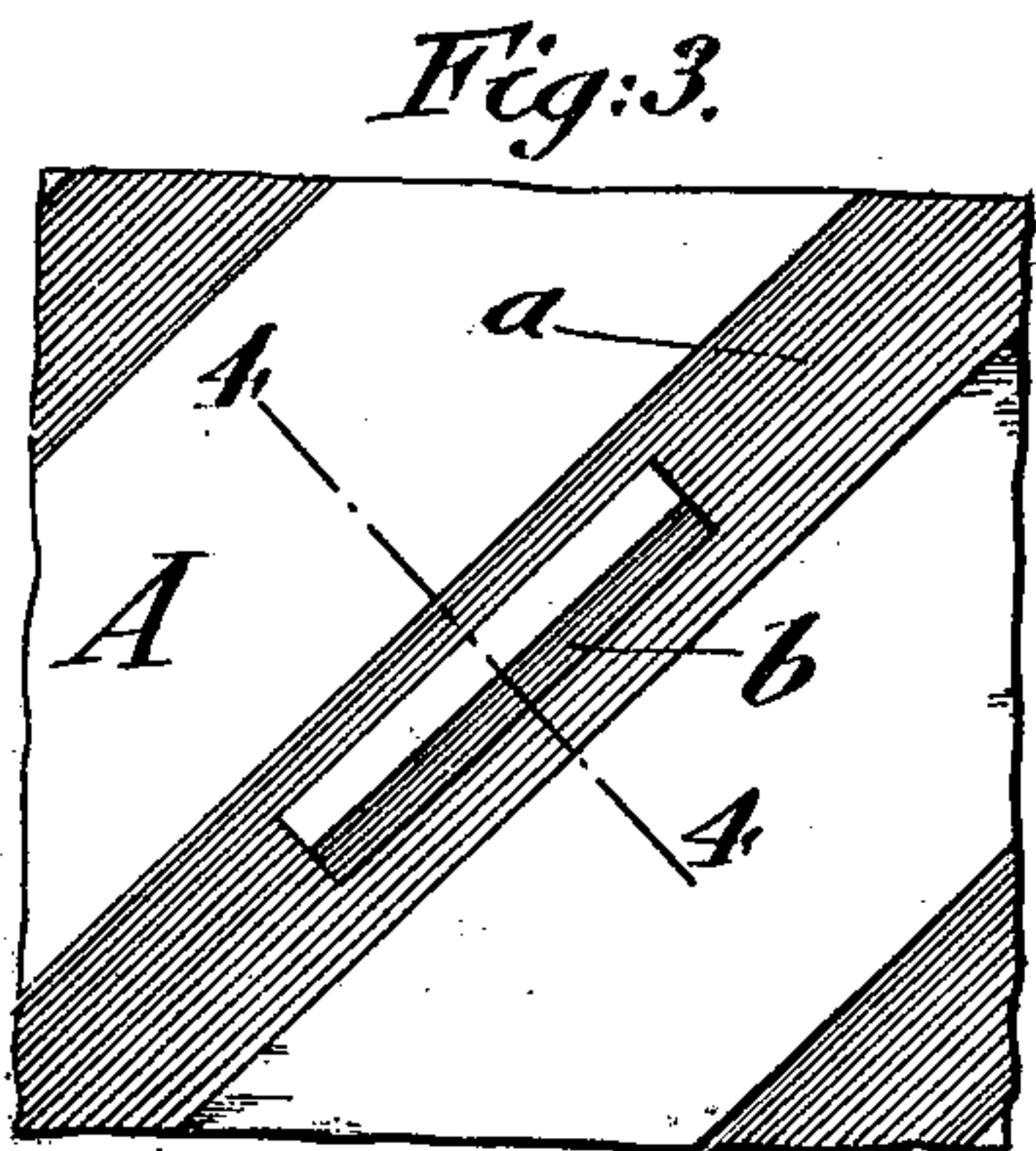
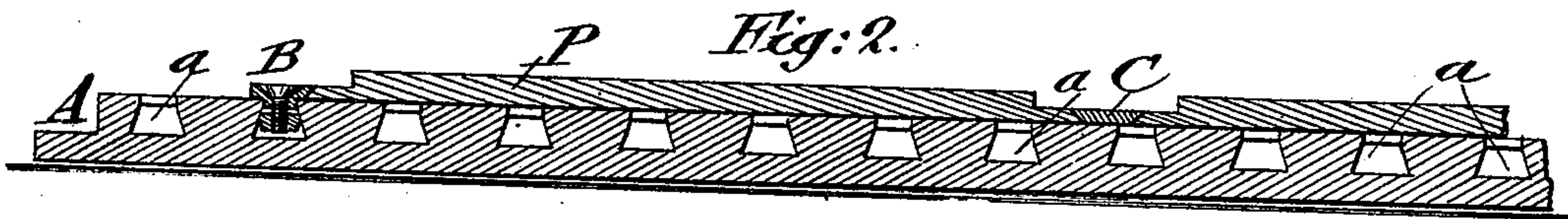
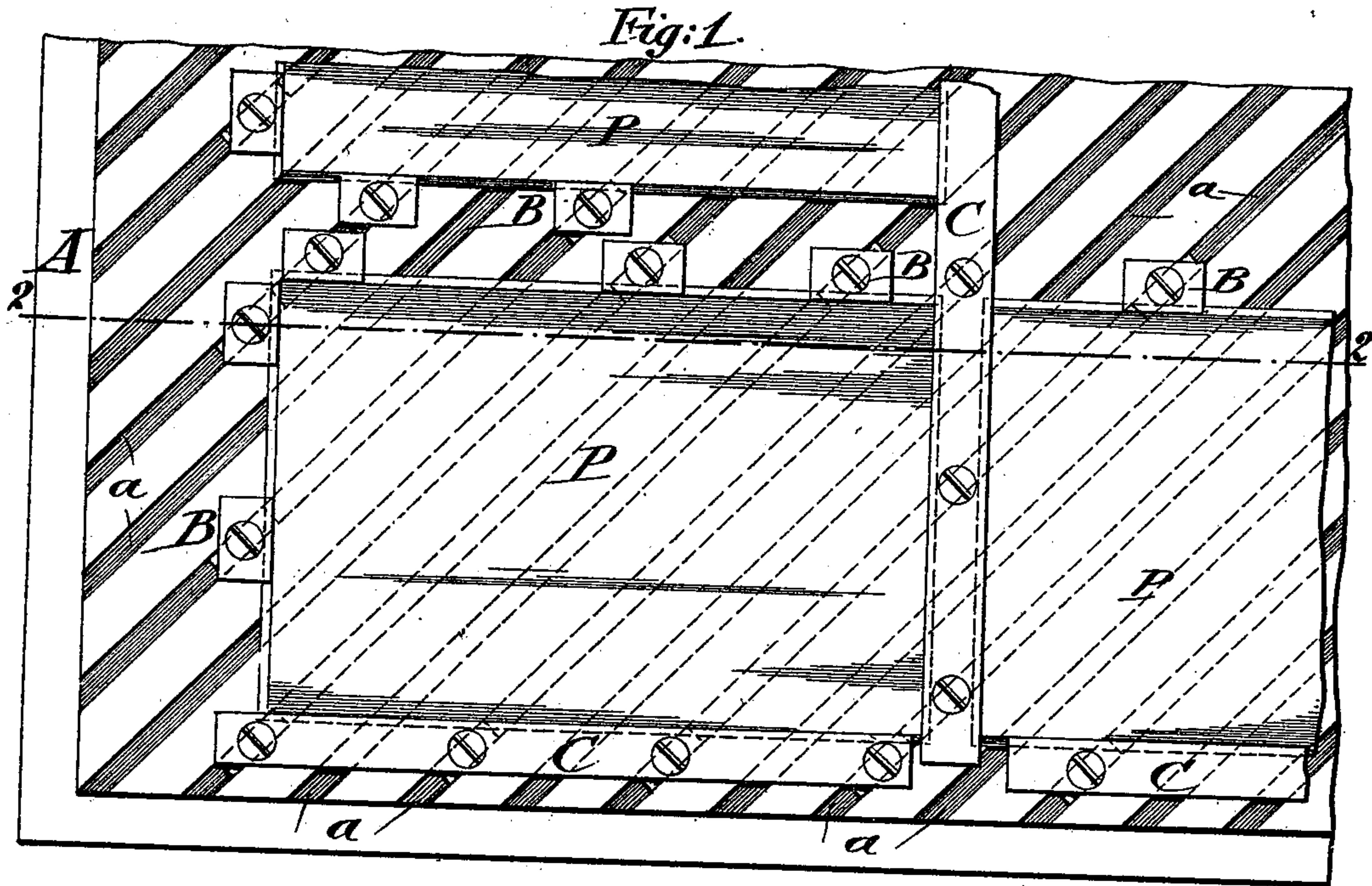


Fig: 5.

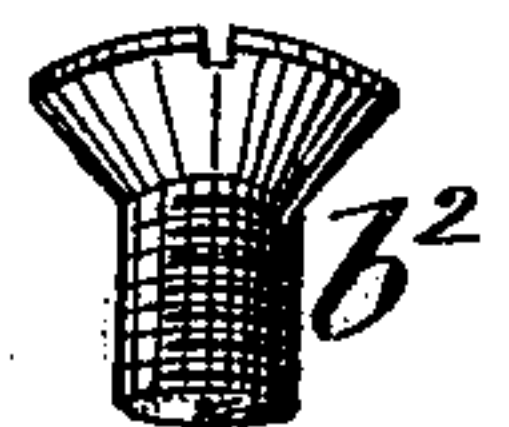


Fig: 6.

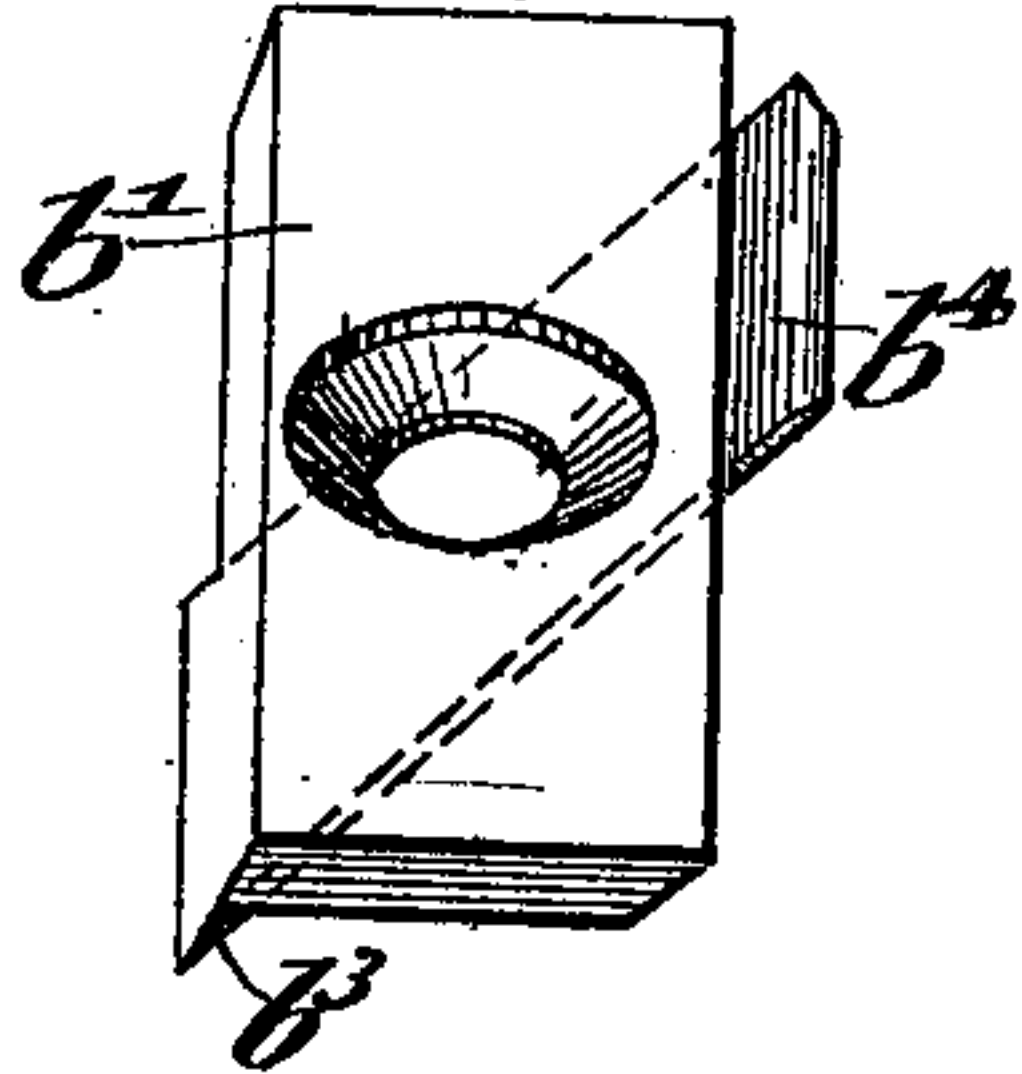


Fig: 8.

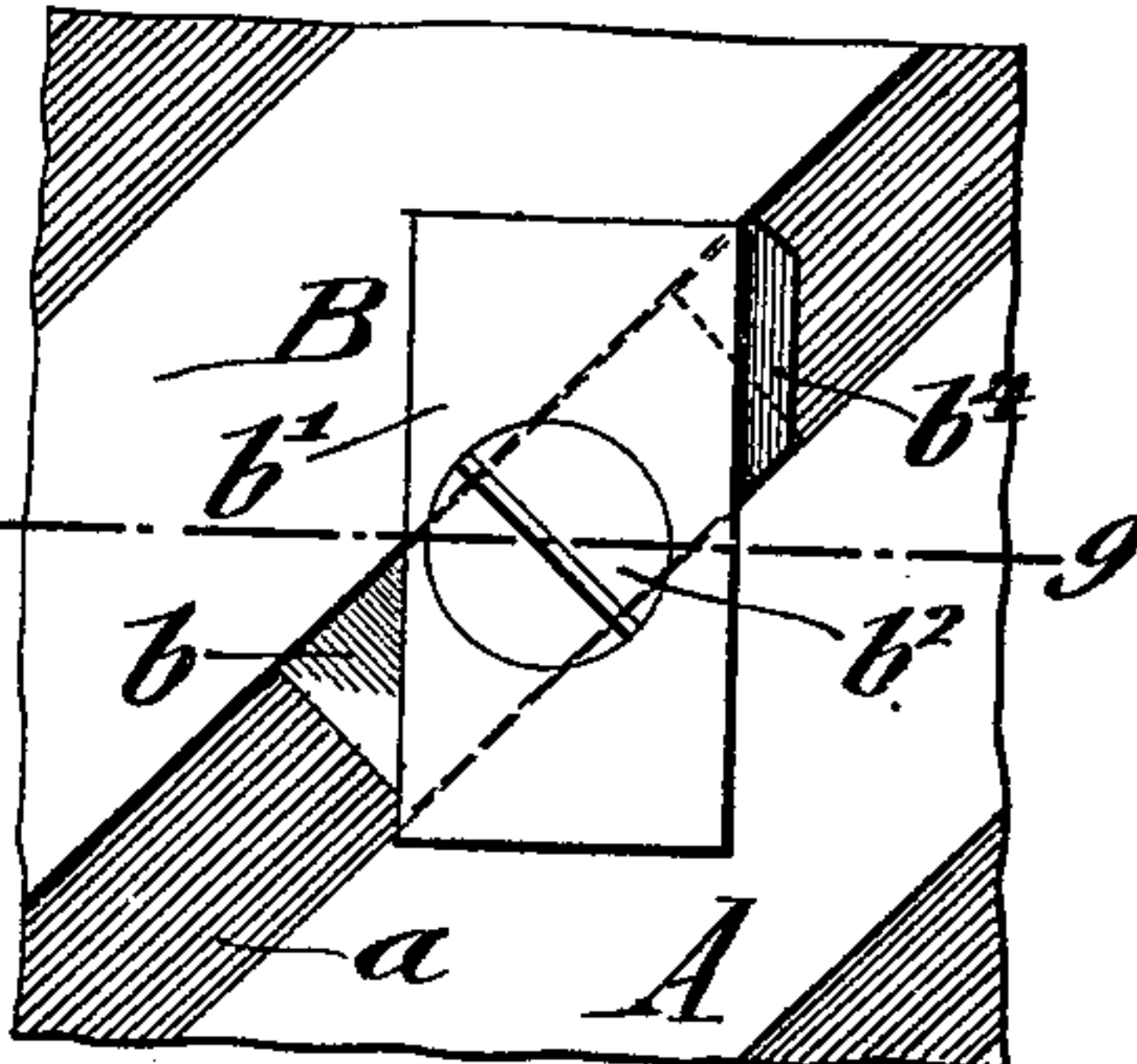
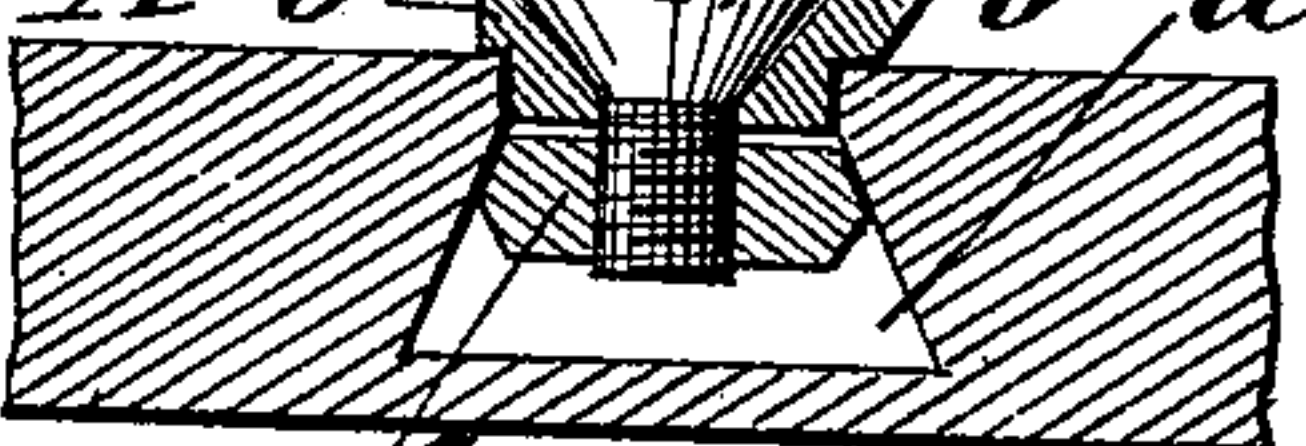


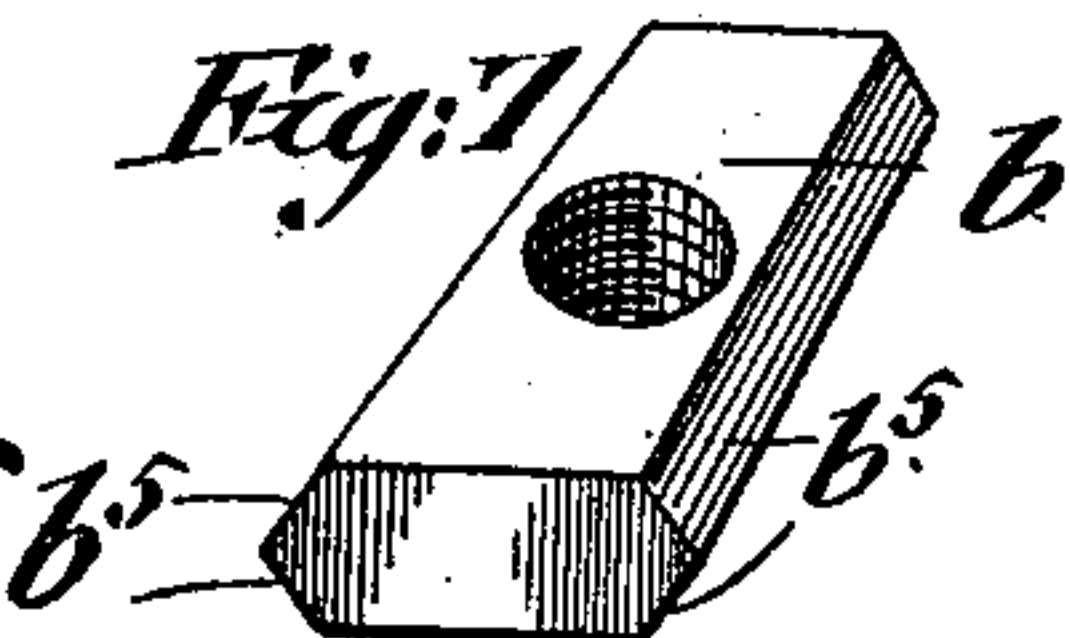
Fig: 9.



WITNESSES:

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Fig: 7.



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PRINTING-PLATE HOLDER.

SPECIFICATION forming part of Letters Patent No. 671,932, dated April 9, 1901.

Application filed August 27, 1900. Serial No. 28,109. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. MILLS, a citizen of the United States, residing in the city of New York, borough of Manhattan, in the State of New York, have invented certain new and useful Improvements in Printing-Plate Holders, of which the following is a specification.

This invention relates to improvements in holders for printing-plates—such, for example, as electrotype-plates—the invention being designed with the object of providing means for quickly and reliably securing the plates to the block for printing or for removing the plates after printing. For this purpose the invention consists in a holder for printing-plates comprising a block having grooves of greater width at the lower than at the upper part, and plate-clamps arranged on said block, each of said clamps consisting of a nut of such thickness as to pass into the groove at its upper part and of greater width than the upper width of the groove, a face portion, and a screw connecting said nut and face portion, said grooves being of such dimension as to permit the falling in the same of the nut from upright into flat position, and the parts being so proportioned that the screw when inserted through the top of the groove can pick up the fallen nut; and the invention consists, further, of certain other details of construction and combinations of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a portion of the plate-holder, showing a plate clamped upon the block. Fig. 2 is a vertical section on line 2 2, Fig. 1. Figs. 3 and 4 are respectively a top view and a sectional view on line 4 4, Fig. 3, showing the manner of inserting the nut into a groove of the block. Figs. 5, 6, and 7 are perspective views, respectively, of the connecting-screw, face portion, and nut of the clamp; and Figs. 8 and 9 are respectively a top view and a vertical section on line 9 9, Fig. 8, showing the clamp locked to the block.

Similar letters of reference indicate corresponding parts in the several views.

A indicates the block of my improved plate-holder, which block is of the same construction as now in common use and of any desired size. The grooves *a a* are wider at their

lower than their upper parts. The plates *P* are secured to the block by means of plate-clamps *B*, each of which is composed of three parts—namely, a nut *b*, a face portion *b'*, and a screw *b²*, the beveled head of which fits into a countersunk opening in the face portion, while its threaded shank engages a threaded opening in the nut. The shoulder *b³* of the face portion extends diagonally across the same and beyond the beveled side of the face portion, forming the lip *b⁴*. The nut is made of such thickness as when turned on edge it will pass easily into the groove, as shown in Figs. 3 and 4, and the width of which is greater than the width of the groove at its upper portion, so as to prevent withdrawal of the nut when in the position indicated in dotted lines in Fig. 4 and in full lines in Fig. 9. The width of the nut is not, however, so great as to prevent its turning in the groove. The grooves of the blocks at present in common use are of such dimensions as to permit the nut to fall from upright into flat position in the groove. The sides of the nut are so formed as to present the same contact-surface to the groove sides, whether the nut fall in one direction or the other, each side of the nut being beveled in both directions—*i. e.*, from the two opposite faces, as shown at *b⁵*—to conform to the shape of the groove and preferably at an angle corresponding to that of the groove sides.

The clamps are used in the following manner: The nut is dropped into a groove at a convenient distance from the edge of the plate to which the clamp is to be applied. It immediately falls into the position shown in dotted lines in Fig. 4. The face portion is now placed above it upon the block, with the shoulder *b³* in the groove, and the screw *b²* is inserted through the face portion and screwed into the nut. The connected clamp is now moved up to the plate, the beveled edge of which is engaged by the beveled edge of the face portion. The screw is now tightened, drawing the nut up into tight frictional contact with the groove sides of the block, as shown in Fig. 9, thereby locking the clamp immovably upon the block in contact with the plate. When it is desired to remove the clamp, the screw is completely removed from the nut and the face portion and screw re-

moved. A small hook-shaped tool of any suitable construction is then inserted into the groove and the nut quickly raised on edge and removed.

5 In place of a number of individual clamps clamping-bars *c* may be employed, such a bar consisting of a face-strip provided with properly-spaced shoulders *b*³ and connected
10 by clamping-screws to nuts of identical construction with the nuts of the individual clamps.

The advantage of my improved nut is that it permits the connecting of the clamps with the block at any point desired without the
15 necessity of sliding the nut in from the end of the groove at the side of the block in each case, which was inconvenient and was heretofore the only way of inserting the nut. By my improved clamps both time and labor here-
20 tofore consumed are saved and the operation of locking the plates to the block is greatly facilitated.

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

1. A holder for printing-plates, comprising a block having grooves of greater width at the lower than at the upper part, and plate-
30 clamps arranged on said block, each of said clamps consisting of a nut of such thickness

as to pass into the groove at the upper part, and of greater width than the upper width of the groove, a face portion, and a screw connecting said nut and face portion, said
35 grooves being of such dimension as to permit the falling in the same of the nut from upright into flat position, and the parts being so proportioned that the screw when inserted through the top of the groove can pick up the
40 fallen nut, substantially as set forth.

2. A holder for printing-plates, comprising a block having grooves of greater width at the lower than at the upper part, and plate-
45 clamps arranged on said block, each of said clamps consisting of a nut of such thickness as to pass into the groove at its upper part, and of greater width than the upper width of the groove, and having its sides beveled from
50 two opposite faces to conform with the shape of the groove, a face portion, and a screw connecting said nut and face portion, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CHARLES S. MILLS.

Witnesses:

PAUL GOEPEL,
J. H. NILES.