

No. 773,923.

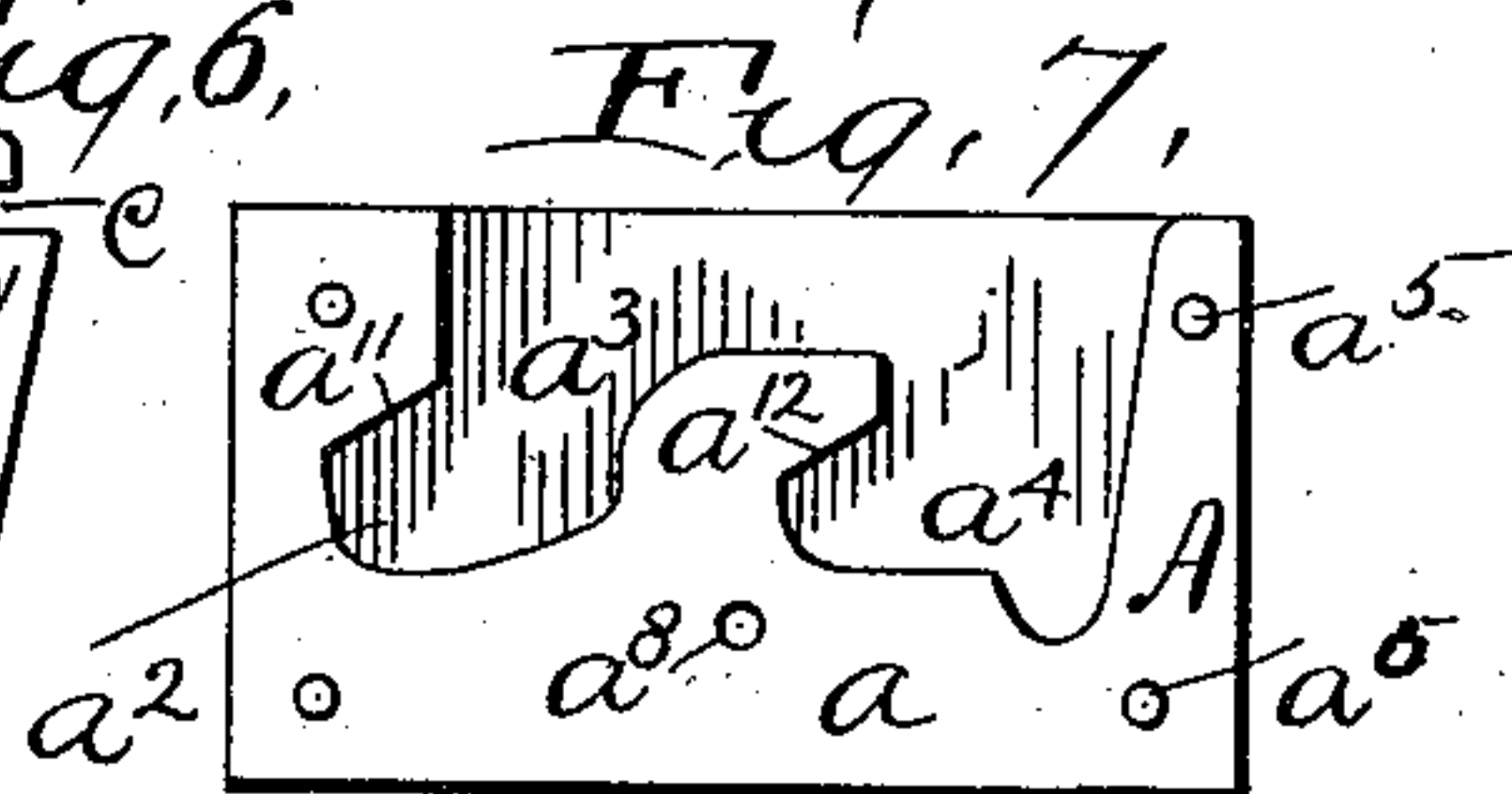
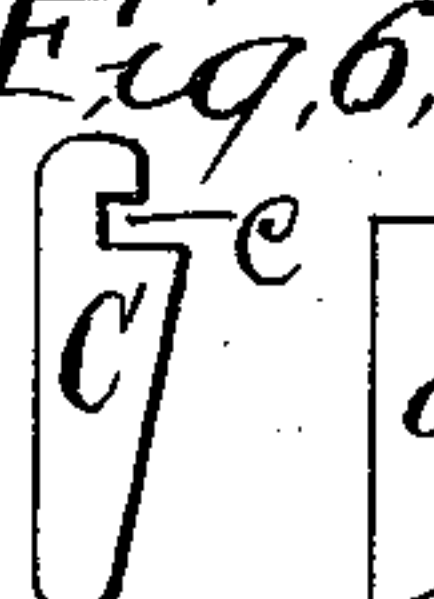
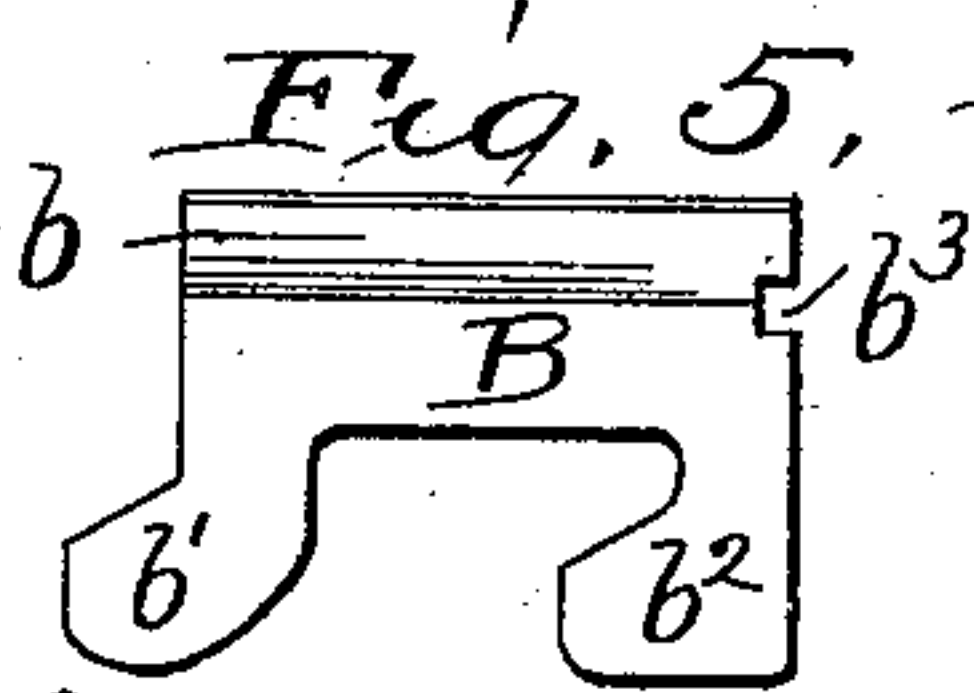
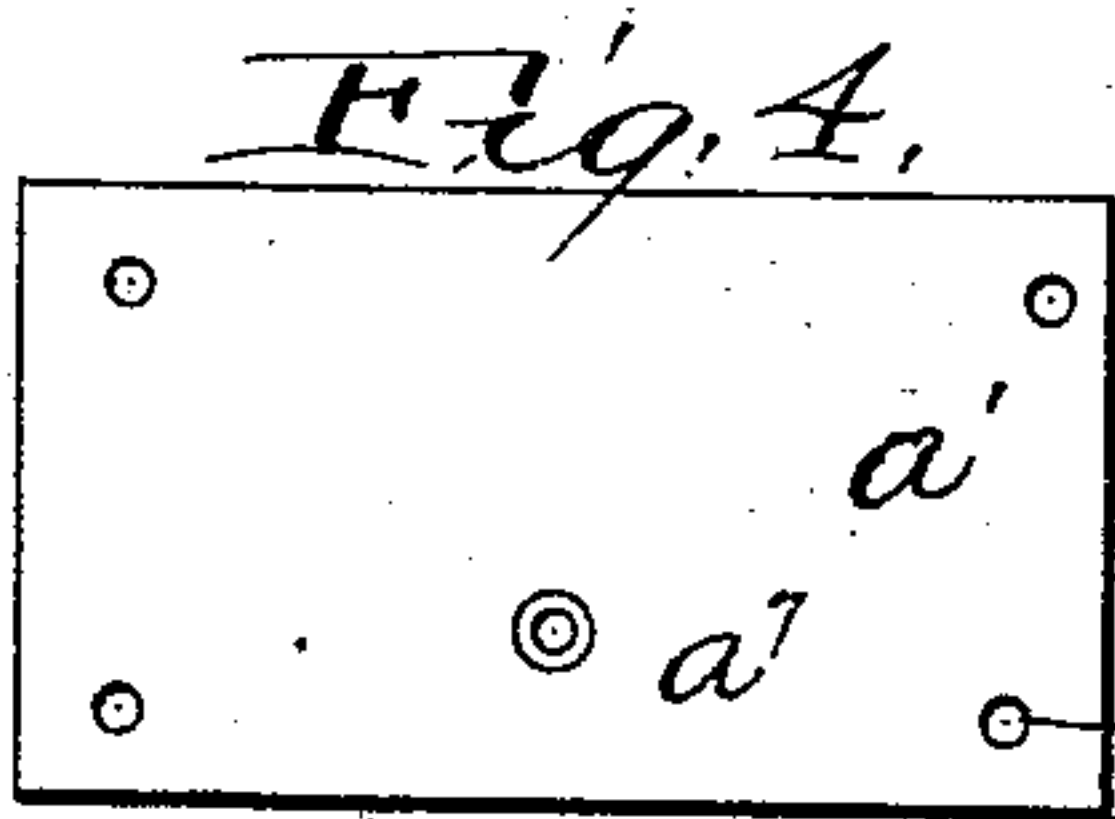
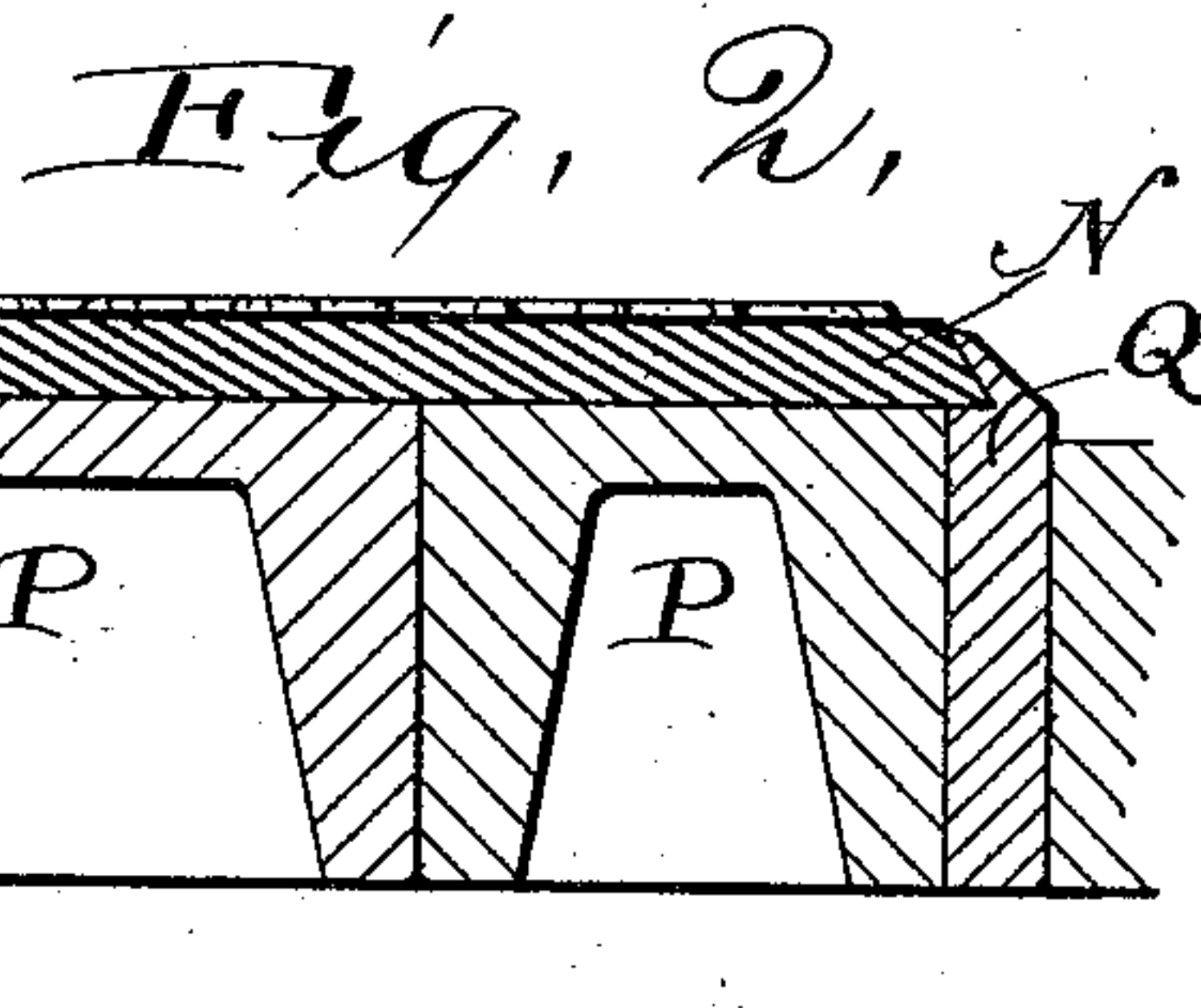
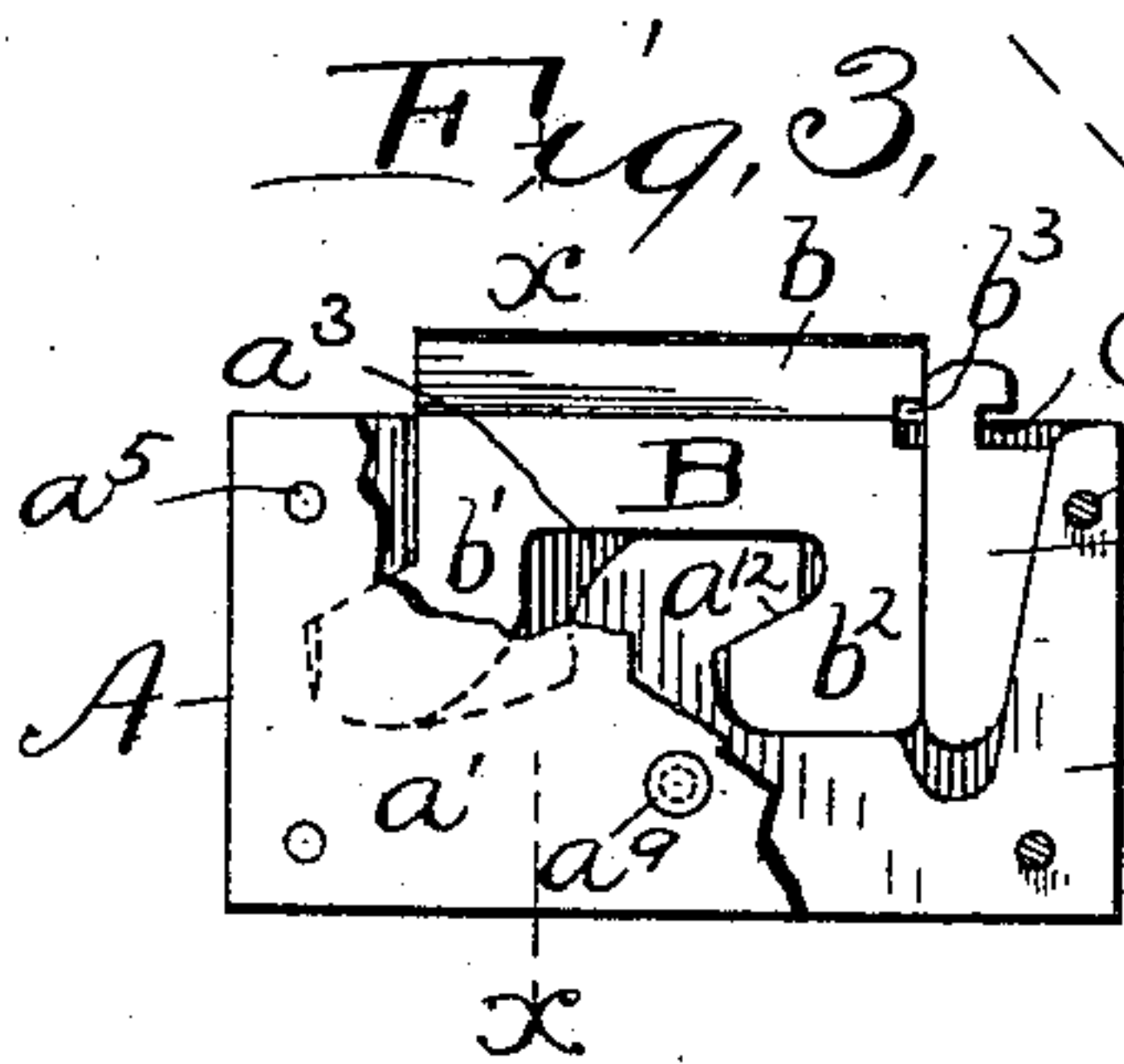
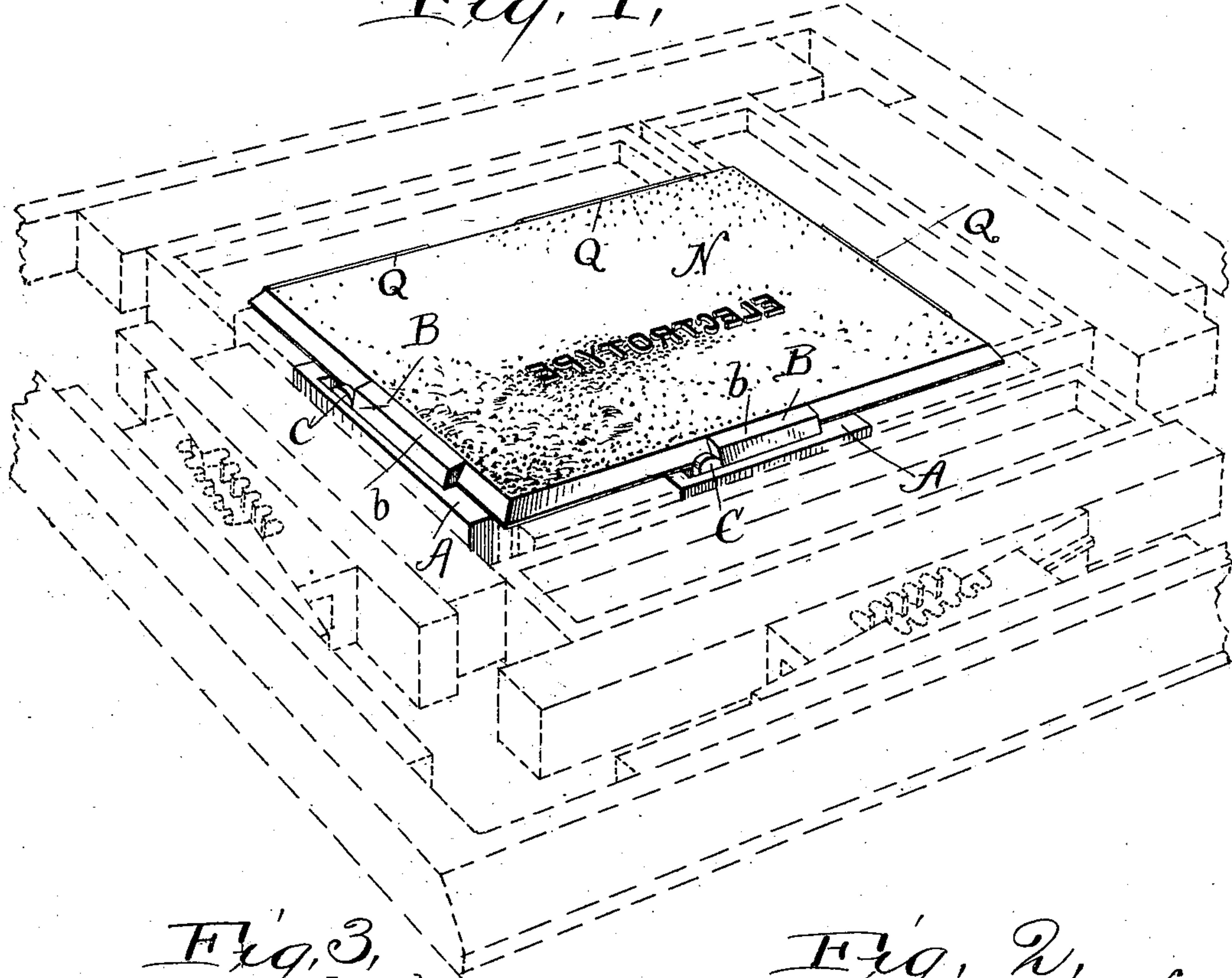
PATENTED NOV. 1, 1904.

C. P. CARL & C. J. HANFBAUER.
PRINTER'S PLATE HOOK.

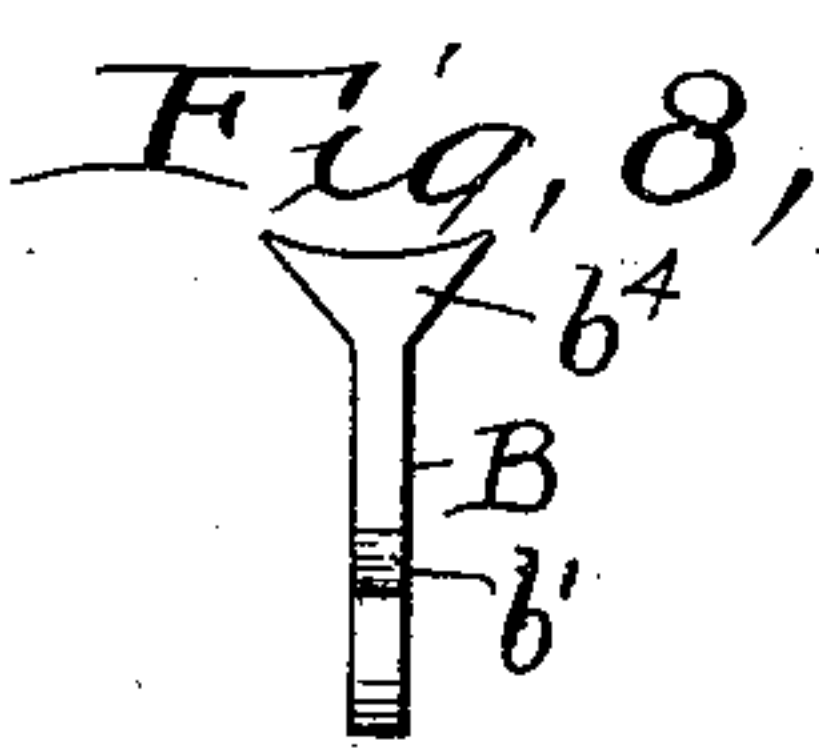
APPLICATION FILED OCT. 22, 1901. RENEWED JULY 5, 1904.

NO MODEL.

Fig. 1,



Witnesses
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UNITED STATES PATENT OFFICE.

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PRINTER'S PLATE-HOOK.

SPECIFICATION forming part of Letters Patent No. 773,923, dated November 1, 1904.

Application filed October 22, 1901. Renewed July 5, 1904. Serial No. 215,399. (No model.)

To all whom it may concern:

Be it known that we, CHARLES P. CARL and CHARLES J. HANFBAUER, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Printers' Plate-Hooks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to hooks or clamps adapted to hold in a printer's form an unmounted electrotpe or other printing plate. The old practice in regard to printing-plates has been to mount them on a wooden block; but this has been unsatisfactory and has given much annoyance by reason of the warping or shrinking of the block and the difficulty in justifying and locking it up. The amount of space required to store the block is also objectionable. Of recent years the use of unmounted plates on sectional metal bases has come into vogue and is much more satisfactory; but heretofore the plates have been held on such bases either by elaborate laterally-adjustable clamps, which take up a large amount of room, or by solid clamps. The disadvantage of the first method has been the amount of room required for the clamps and the consequent impossibility of setting other plates or type close to the margin of the plate. The difficulty with the second system has been that to change the plate on the base requires unlocking the form. It is therefore extremely inconvenient with such hook to make ready by underlaying the plate, (which would otherwise frequently be more satisfactory than to make ready at the tympan,) and, moreover, if it is desired to substitute another plate, as in color-work, it is very difficult to obtain proper registration owing to the different pressure unconsciously applied in relocking the form.

The object of our invention is to supply a plate hook or clamp which shall possess all of the advantages and none of the disadvantages of the above-mentioned methods, one which shall occupy very little space and shall allow

the removal of the unmounted plate from its base without unlocking the form. This we accomplish by providing a clamp with a body portion and an adjustable hook portion, the body portion being a narrow receptacle adapted to be locked into the form adjacent to the edge of the plate and having an upwardly-opening recess, in which the hook portion is vertically movable to allow the removal or clamping of the plate, and the invention includes such clamping device broadly.

In embodying the above-described method we have found it very convenient to make the hook portion removable and in the form of a flat plate having an overhanging upper edge and having below an inclined leg adapted to take under a corresponding inclined surface within the recess, whereby the hook may be drawn down different amounts, as required by the unmounted plate, and we combine with this a suitable lock to hold the hook in place. Our invention includes such an embodiment and also the still more specific arrangement of it, as shown in the drawings herein and hereinafter described.

In the drawings, which show the preferred form of our invention, Figure 1 is a perspective view showing an unmounted plate held in place within a form by our improved clamps. Fig. 2 is a tranverse section through such plate and one of the clamps. Fig. 3 is a side elevation of our clamp, a portion of the outer plate of the body being broken away to disclose the interior. Figs. 4 to 7, inclusive, are side elevations of different parts of our clamp as it is preferably made, consisting of the front plate, the hook, the locking-wedge, and the main body portion, respectively. Fig. 8 is an end view of a modified form of the hooking portion when it is provided with a double projection.

For convenience in the following description we shall speak of our "plate-hook" (which is the printers' term) as a clamp composed of the hook, lock, and box for receiving them.

The box A consists of the body and the

cover-plate a' , which may be removable from the body to allow it to be cleaned. The body is constructed of two parts, the intermediate portion a and the back plate a^2 , as indicated in the section Fig. 2, which is taken on the line $x x$ of Fig. 3. For convenience of construction the parts of the box may be made from printers' brass rules, which are supplied on the market in accurate sizes. Thus to make the box A we may take a rule, say, six points thick and machine it out, as shown in Fig. 7, presenting the recesses a^3 and a^4 , and to the back of this we secure by dowelpins a^5 the back a^2 , which is a plain flat rule of, say, three points thickness. The cover-plate a' may likewise be made from a plain flat rule of, say, three points thickness having openings a^6 to register with the dowelpins a^5 and an opening a^7 to receive a screw a^8 , adapted to extend into a threaded hole a^8 in the intermediate body. When such box is together, it is with the dimensions given twelve points in thickness and is adapted to justify at once with any point system of furniture.

The hook is designated B. It is formed, preferably, as shown in Fig. 5, having its upper edge inclined or overhanging, as at b , and having below one or more projections or legs inclined on their upper surfaces. There are preferably two of these projections, b' and b^2 , as shown in Fig. 5. In use these projections enter the recesses a^3 a^4 in the box, and then when the hook is shoved toward the left of the box in Fig. 7 the inclined upper surfaces of the legs b' and b^2 engage with the inclined lower surfaces a^{11} and a^{12} , carried by the box. Therefore the hook is drawn snugly down into place. In its lowermost position the base of the legs b' and b^2 engage the base of the recesses a^3 and a^4 , as appears in Fig. 3.

To hold the hook within the body, we provide a suitable lock, which is preferably a wedge, as shown in Figs. 3 and 6. This wedge (designated C) occupies a portion of the recess a^4 and bears against the adjacent edge of the hook B, whereby as the wedge is forced downward into the box the hook is forced along the box and locked thereto. Notches b^3 and c in the hook and wedge, respectively, allow their convenient removal by any suitable tool.

Owing to the cooperating inclines in the box and the hook, there is considerable leeway in the vertical position of the hook, dependent upon the amount of overlapping of the cooperating inclines, which is varied by the lateral positions which the hook may occupy. The wedge is inserted to a position which takes up the lateral space which the hook leaves between its end and the proximate end of the box-recess. The recess a^4 is preferably extended downward at the extreme end to give the wedge leeway. The wedge may thus clamp the hook tightly and the hook clamp the plate tightly, though the hook

does not reach its extreme setting position, and thus the plate does not have to justify perfectly on its base.

In use the plate N is laid upon the sectional base, (indicated by P,) with a stationary hook Q at two of its adjacent sides. On the opposite sides our hooks are employed, and the whole is locked in place by the usual furniture, wedges, &c. If it is desired to underlay the plate, (which can only be discovered after the form is on the press,) the wedges C and the hook D are simply withdrawn. This allows the removal of the plate N without disturbing the rest of the form. Another plate may be substituted for the plate N with equal facility and without interfering with the registration in any manner.

It will be seen that our clamping device takes up very little room, (as heretofore stated, it may very conveniently only require twelve points of space,) allowing the setting of other plates or type as close to the plate as desired. If it is desired to employ plates adjacent to each other with a very narrow margin between them, the same hook may be used to hold the adjacent edges of the two plates. The point of the hook would then be made double, as indicated at b^4 in Fig. 8.

We claim—

1. A printer's plate-hook comprising a narrow vertical box, a hook portion consisting of a vertical plate adapted to enter a recess in said box and having an overhanging upper edge, the hook and box having cooperating inclines, the incline of the hook being adapted to take beneath the incline of the box, and means for holding the hook within the box, substantially as described.

2. In a printer's plate-hook, in combination, a box having a vertical longitudinal recess extending downward and then under an inclined projection, with a hook adapted to occupy such recess and having a correlatively inclined projection, and means for forcing the hook longitudinally within the box and thereby locking the plate, substantially as described.

3. In a printer's plate-hook, in combination, a body adapted to be locked in a printer's form and having a recess opening upward, a hook adapted to occupy such recess, and means for locking the hook within such recess by moving it longitudinally within the body, and a vertical wedge adapted to occupy the recess in said body left vacant by said longitudinal movement, substantially as described.

4. In a printer's plate-hook, in combination, a narrow body having a longitudinal recess therein, a removable cover secured to the side of said body, said body being adapted to be locked in a printer's form, and a hook snugly occupying the recess in said body and being retained therein by said cover, substantially as described.

5. A printer's plate-hook comprising a box,

a hook, and a lock therefor, the box consisting of an intermediate recessed plate, and a pair of flat plates on opposite sides thereof—the hook consisting of a plate—adapted to
 5 snugly occupy the recess between said flat plates, and the lock consisting of a wedge, also adapted to occupy such recess and force the hook longitudinally, the hook and intermediate plate having interlocking projections,
 10 substantially as described.

6. A body adapted to be locked in a printer's form, and having a vertical recess which divides into two recesses a^3 and a^4 which have overhanging inclined surfaces a^{11} and a^{12} , combined with a hook B adapted to enter said recess, and having legs b' b^2 with inclined upper edges adapted to engage the surfaces a^{11}
 15 a^{12} , substantially as described.

7. In a printer's plate-hook, in combination,
 20 a body having a recess, a hook adapted to lie therein, said hook and body having inclined cooperating faces whereby said hook may be drawn downward by being forced internally within said recess, and means for so forcing
 25 said hook, substantially as described.

8. The combination of a box built up of brass plates on the point system, and a movable hook consisting of a plate having an over-

hanging edge adapted to occupy a vertical recess within said box and snugly engage the
 30 inner side of the extreme brass plates, substantially as described.

9. A printer's plate-hook comprising a long narrow body adapted to be locked in a printer's form with the length of said body parallel with the plate and a hook adapted to be
 35 slid longitudinally within said body, the longitudinal movement of said hook operating to draw said hook downward and thereby lock the plate in the form, substantially as described.
 40

10. In a printer's plate-hook, in combination, a narrow body portion adapted to be locked in a printer's form and a movable hook occupying said body portion and extending
 45 parallel with the length thereof, said hook having overhanging edges extended in opposite direction, substantially as described.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses. 50

CHARLES P. CARL.

CHARLES J. HANFBAUER.

Witnesses:

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