

C. A. McCAIN & C. HENDERSON.
 PRINTING PLATE LOCKING DEVICE.
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964,174.

Patented July 12, 1910.

Fig. 1

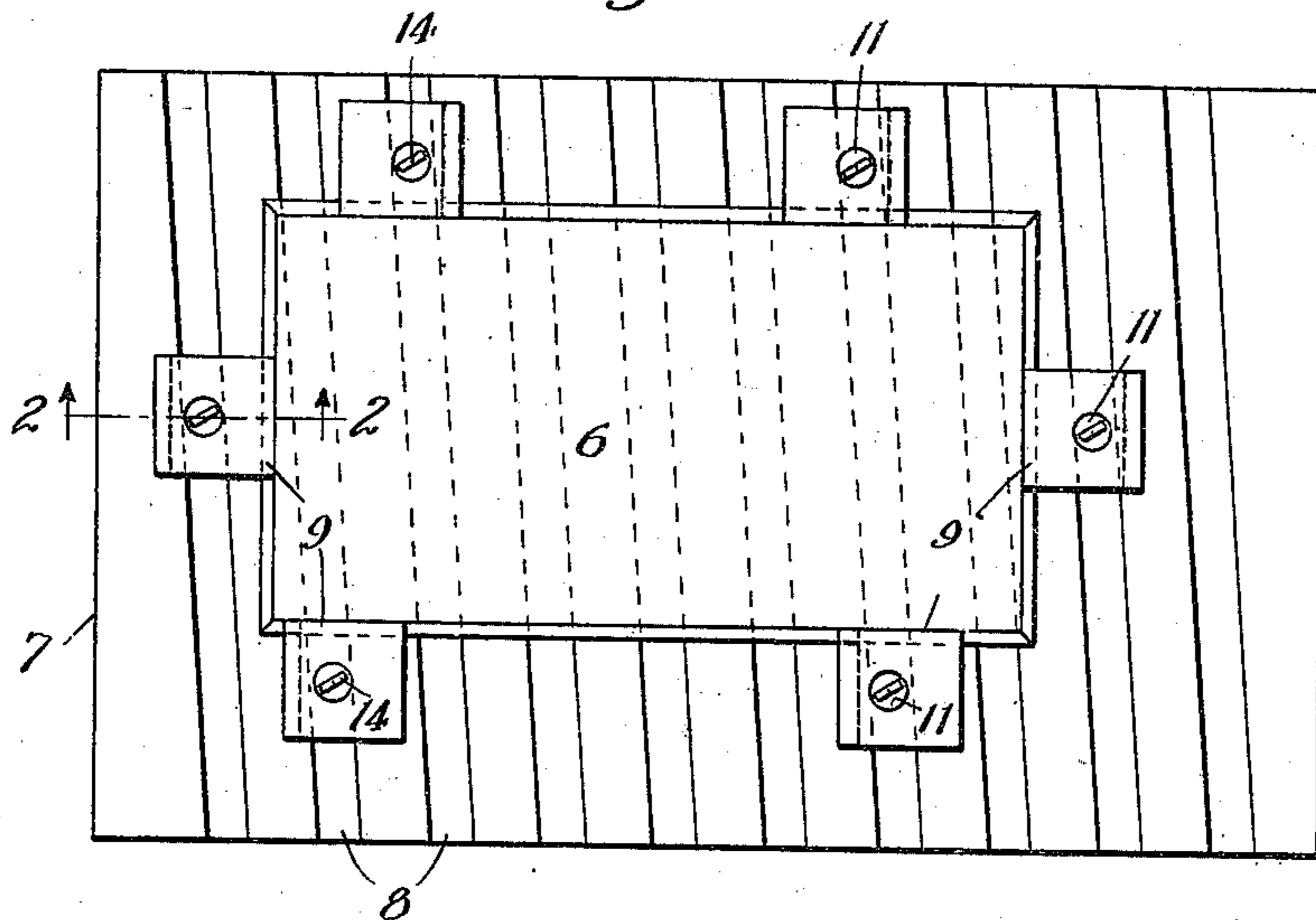


Fig. 2

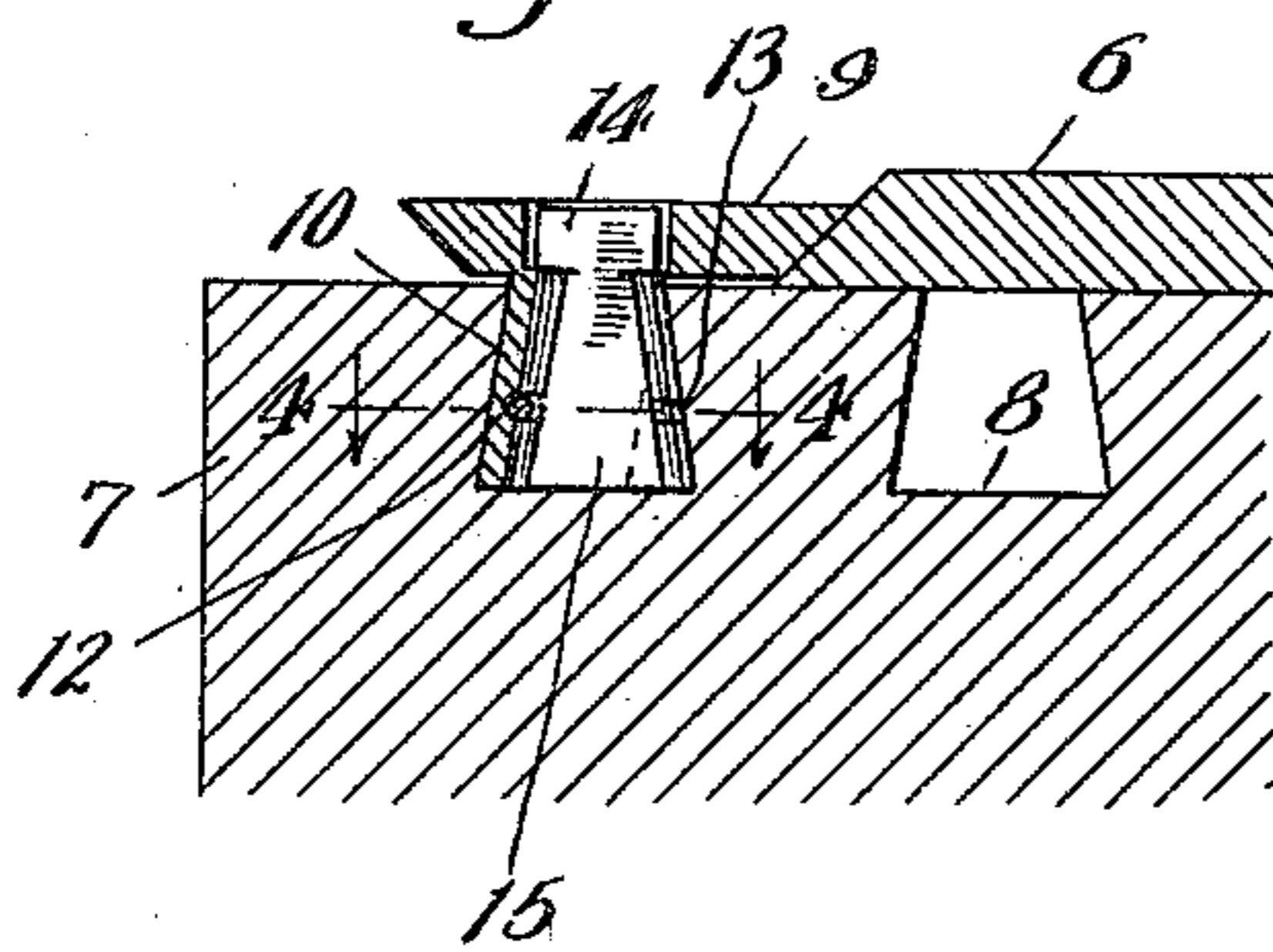


Fig. 6

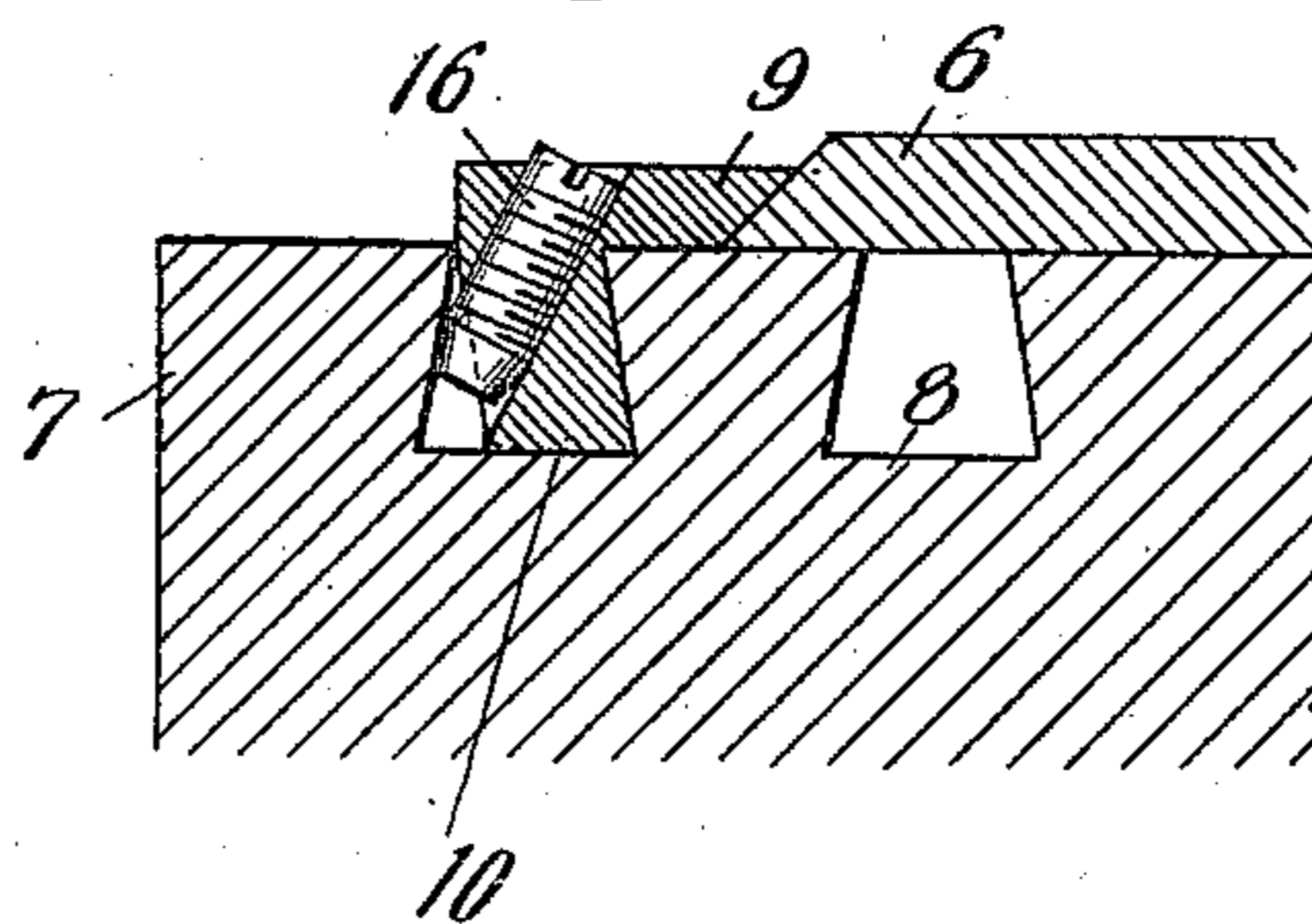


Fig. 3

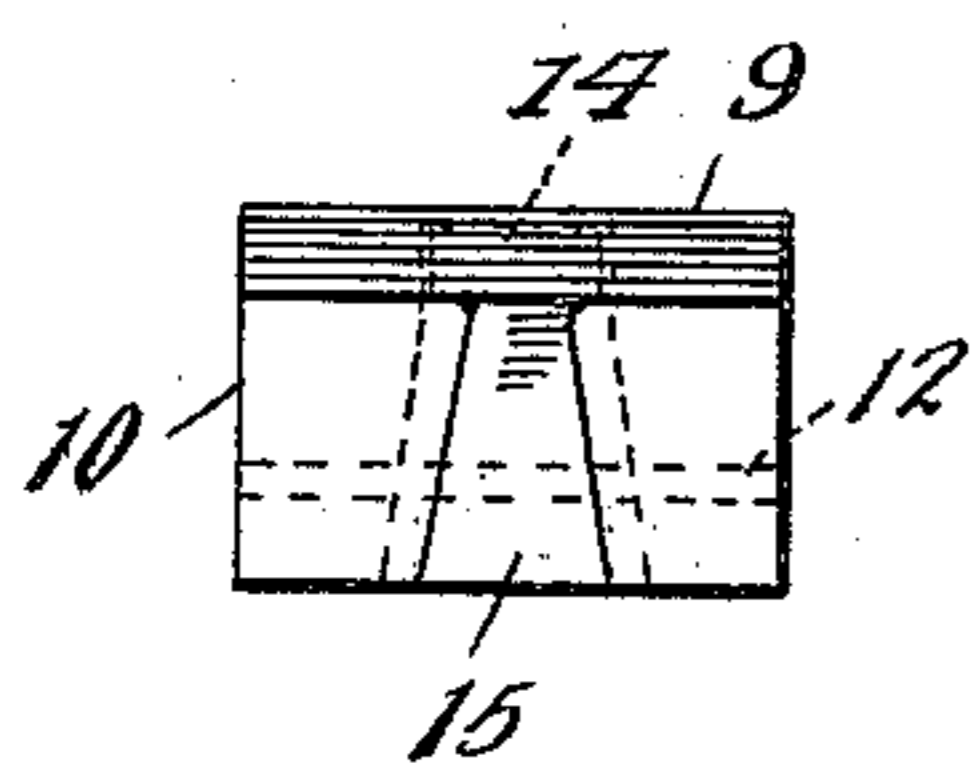


Fig. 4

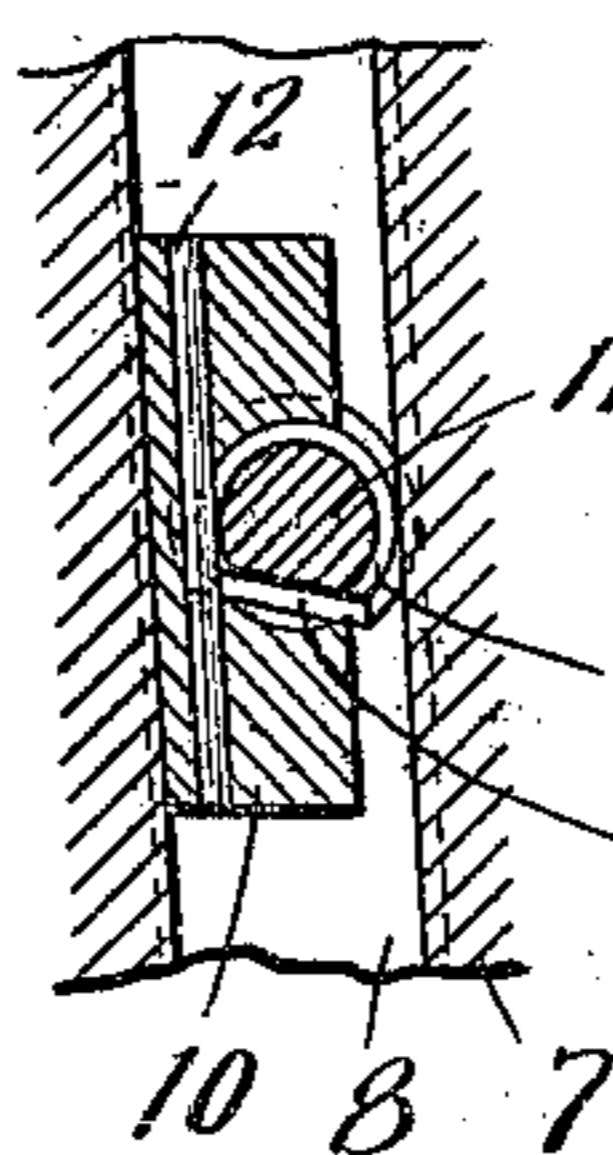
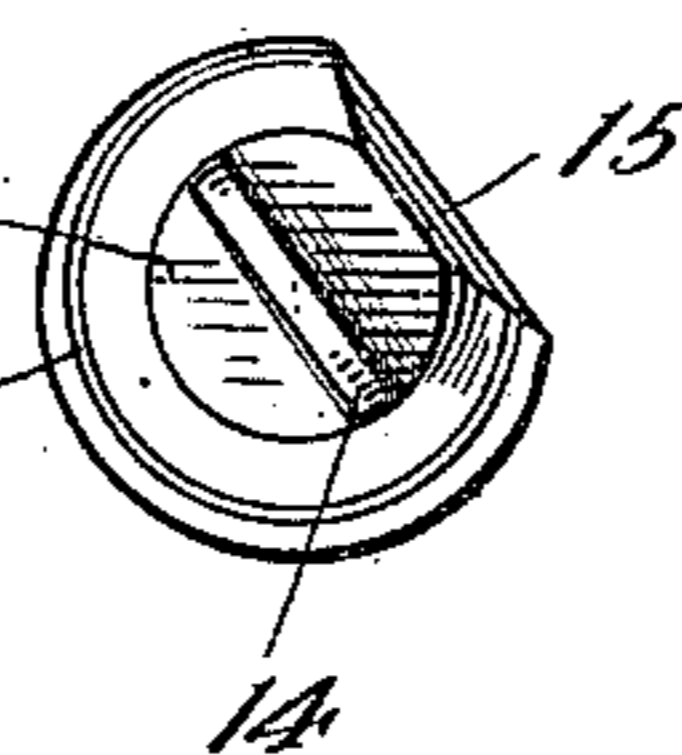


Fig. 5



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UNITED STATES PATENT OFFICE.

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PRINTING-PLATE-LOCKING DEVICE.

964,174.

Specification of Letters Patent.

Patented July 12, 1910.

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To all whom it may concern:

Be it known that we, CYRUS A. McCAIN and CARL HENDERSON, citizens of the United States, residing in Oak Park, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Printing-Plate-Locking Devices, of which the following is a specification.

This invention relates to the construction of what are known among printers as locking hooks for securing unmounted printing plates to the bases by which they are supported when embodied in printing forms in the printing press.

Our endeavor in the invention has been to construct a very simple locking hook, adapted to be inserted vertically in the groove of the base at any point desired, (thus avoiding the necessity of inserting it at the end of the groove and then sliding it along the groove to the point at which it is to be used,) and also to make the hooks so they can be locked in position almost instantly and by the use of very simple tools.

The nature of the invention is disclosed below, and illustrated in the accompanying drawing, and in the latter:

Figure 1 is a plan of a plate and its supporting base, the plate being attached to the base by our improved hooks. Fig. 2 is an enlarged vertical section on the line 2—2 of Fig. 1. Fig. 3 is an elevation of the hook illustrated in Figs. 1 and 2 detached, and Fig. 4 is a section on the line 4—4 of Fig. 2. Fig. 5 is an enlarged top plan view of the tapering locking pin removed from the hook, and Fig. 6 is a vertical section of a modified construction.

In said drawing 6 represents the printing plate, and 7 is the usual base on which the plate is mounted when in the form, and to which base it is locked by the hooks forming the subject matter of our invention. In Figs. 1 to 5, inclusive, we have illustrated one very desirable construction, and in Fig. 6 another and in many respects an equally desirable construction. The base is provided with parallel inclinedly extending grooves 8 the sides of which are undercut or dovetail in shape, so that said grooves incline but slightly to the edges of the printing plate to be locked thereon, as fully set forth in our prior Patent No. 872,004, granted November 26, 1907.

9, 9 are the tops of the hooks for securing the plate to the base. The tops are adapted

to set over the edge of the printing plate and are provided with depending flanges or members 10, integral with the tops and inclined so that one face of the flanges or members corresponds to and fits one side of the grooves 8. The flanges or members are adapted to be entered by a vertical movement in the grooves at any point in the latter, so that the hooks can be positioned in the grooves at or immediately proximate to the point where they are to be used. The hooks are also provided with a device, such for instance as the rotatable tapering pin 11, located in the flange or member 10, and which may be positioned by turning it part way around after the hook has been inserted in the groove and thereby made to form, in conjunction with the depending flange or member, a dovetail wedge filling the groove and locking the device to the base. The pin may be confined in the flange 10 by a horizontal key 12 entering a groove 13 in the eccentric part of the pin. The pin is provided at its top with an upstanding web 14, adapted to receive an appropriate tool for turning it. Each pin is flattened upon one side as at 15, and is turned normally when not in use so that this flattened side is parallel or flush with the surface of the flange 10 in which it is mounted. When thus positioned the hook can be easily inserted in the groove by a vertical movement. The balance of the pin back of the flattened side, is round or substantially so, whereby the full diameter portion is brought into contact with the opposing side of the groove so that a very efficient lock is caused. Each hook is provided with its own pin 11, so that each may be locked or released at pleasure.

Instead of the eccentric pin above described, we sometimes use screws 16 which are inserted in the flange 10 in an angling direction and provided with conical ends, as seen in Fig. 6, so that when turned inward the conical point of the screw will fit the opposite side of the groove 8 and supplement the flange and form therewith a wedge filling the groove and locking the hook therein.

We claim:

1. The combination with a supporting base provided with parallel inclinedly extending dovetail grooves, a printing plate on said base crossing the grooves therein, the grooves inclining but slightly with relation to the edges of the plate, of a locking hook

adapted to be inserted in the base groove at any point, said hook having a depending flange or member integral therewith and fitting one side of the base groove, and also
 5 having a rotatable device at the side of said flange or member adapted, after the hook has been positioned in the groove, to be moved into position to form with the flange or member a wedge locking the hook to the
 10 base.

2. The combination with a supporting base provided with parallel inclinedly extending dovetail grooves, a printing plate on said
 15 base crossing the grooves therein, the grooves inclining but slightly with relation to the edges of the plate, of a locking hook adapted to be inserted in the base groove at any point, said hook having a depending
 20 flange or member integral therewith and fitting one side of the base groove, and also having a rotatable device supported in said flange and adapted when positioned by a turning movement to fit the other side of the
 25 groove, and thus effect a lock of the hook to the base.

3. The combination with a supporting base provided with parallel inclinedly extending dovetail grooves, a printing plate on said
 30 base with relation to the edges of which said grooves incline but slightly, of a locking hook adapted to be inserted in the base groove at any point, said hook having a depending flange or member integral there-
 35 with and fitting under one side of the groove in the base, and also having a device adapted to be positioned by a turning movement under the other side of the groove, and thus complete the locking of the hook to the base.

4. The combination with a supporting base
 40 provided with parallel inclinedly extending dovetail grooves, a printing plate on said base crossing the grooves therein, the grooves inclining but slightly with relation to the

edges of the plate, of a locking hook adapted to be inserted in the base groove at any point, 45
 said hook having a depending flange or member integral therewith and fitting one side of the base groove, and also having a screw adapted to be inserted through the top of the
 50 hook and at the side of said flange and to form with said flange a wedge locking the hook and the base.

5. The combination with a supporting base provided with parallel inclinedly extending dovetail grooves, a printing plate on said 55
 base crossing the grooves therein, the grooves inclining but slightly with relation to the edges of the plate, of a locking hook adapted to be inserted in the base groove at any
 60 point, said hook having a depending flange or member integral therewith and fitting one side of the base groove, and also having a rotatable screw inserted through the top of the hook and supported in said flange and acting with the flange to lock the hook to 65
 the base.

6. The combination with a supporting base provided with parallel inclinedly extending dovetail grooves, a printing plate on said 70
 base crossing the grooves therein, the grooves inclining but slightly with relation to the edges of the plate, of a locking hook adapted to be inserted in the base groove at any
 75 point, said hook having an inclined or angling depending flange or member integral therewith and fitting one side of the base groove, and a rotatable screw entering the hook through its top and supported by said
 80 flange in an inclined position, and forming with the flange a wedge locking the hook to the base.

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Witnesses:

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