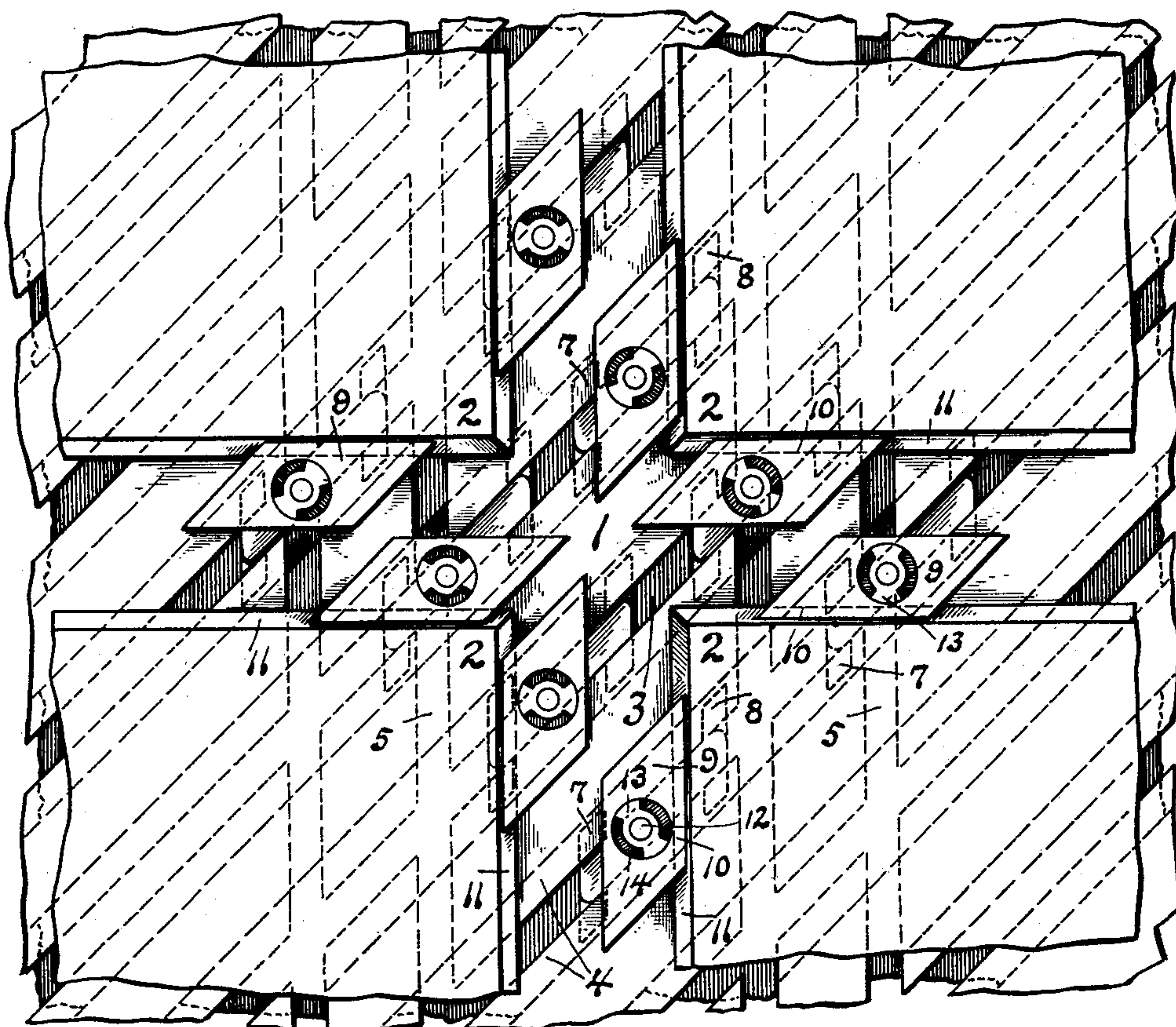


E. W. COOPER.
 PLATE HOLDING DEVICE.
 APPLICATION FILED MAR. 15, 1909.

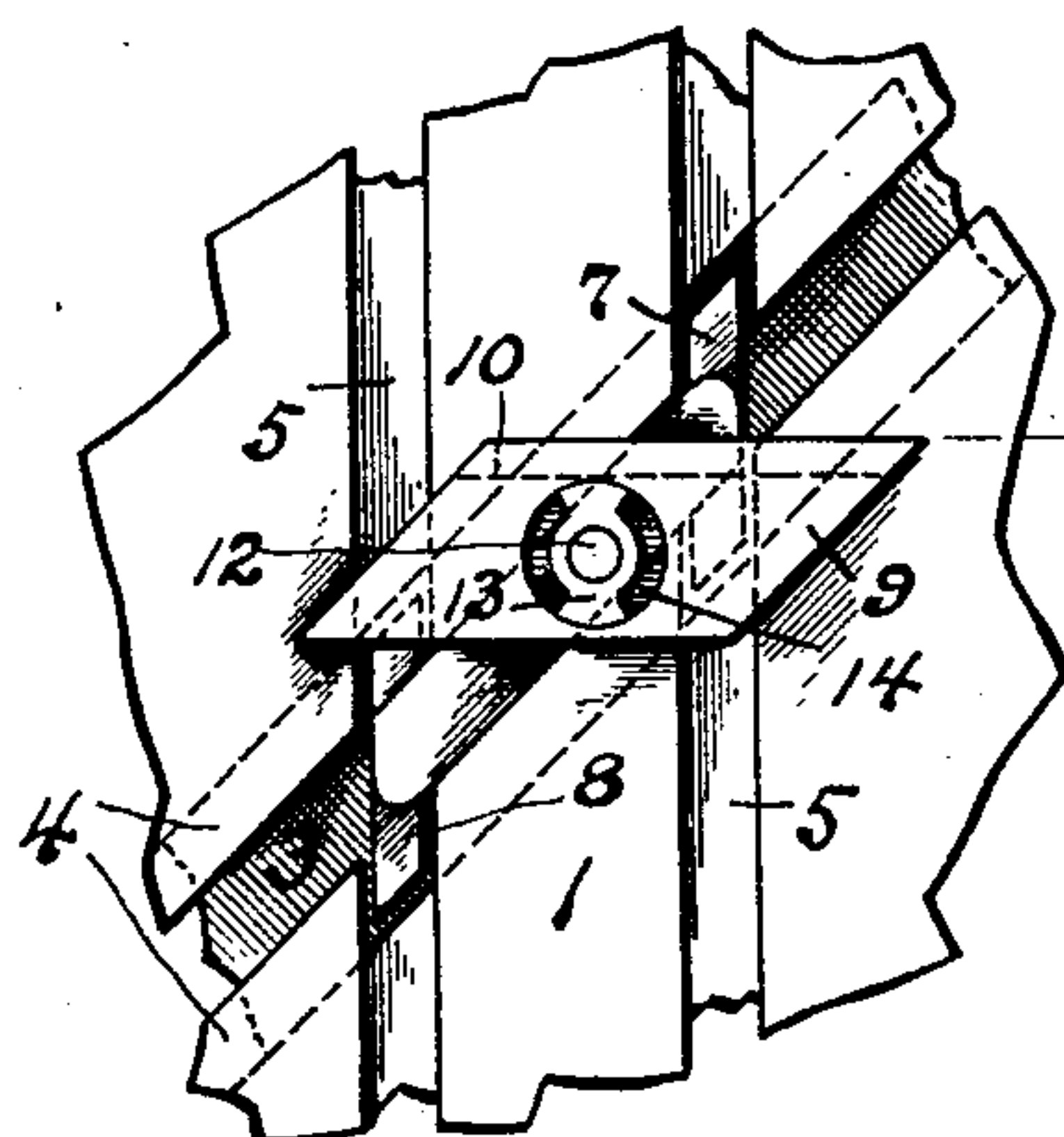
997,967.

Patented July 18, 1911.

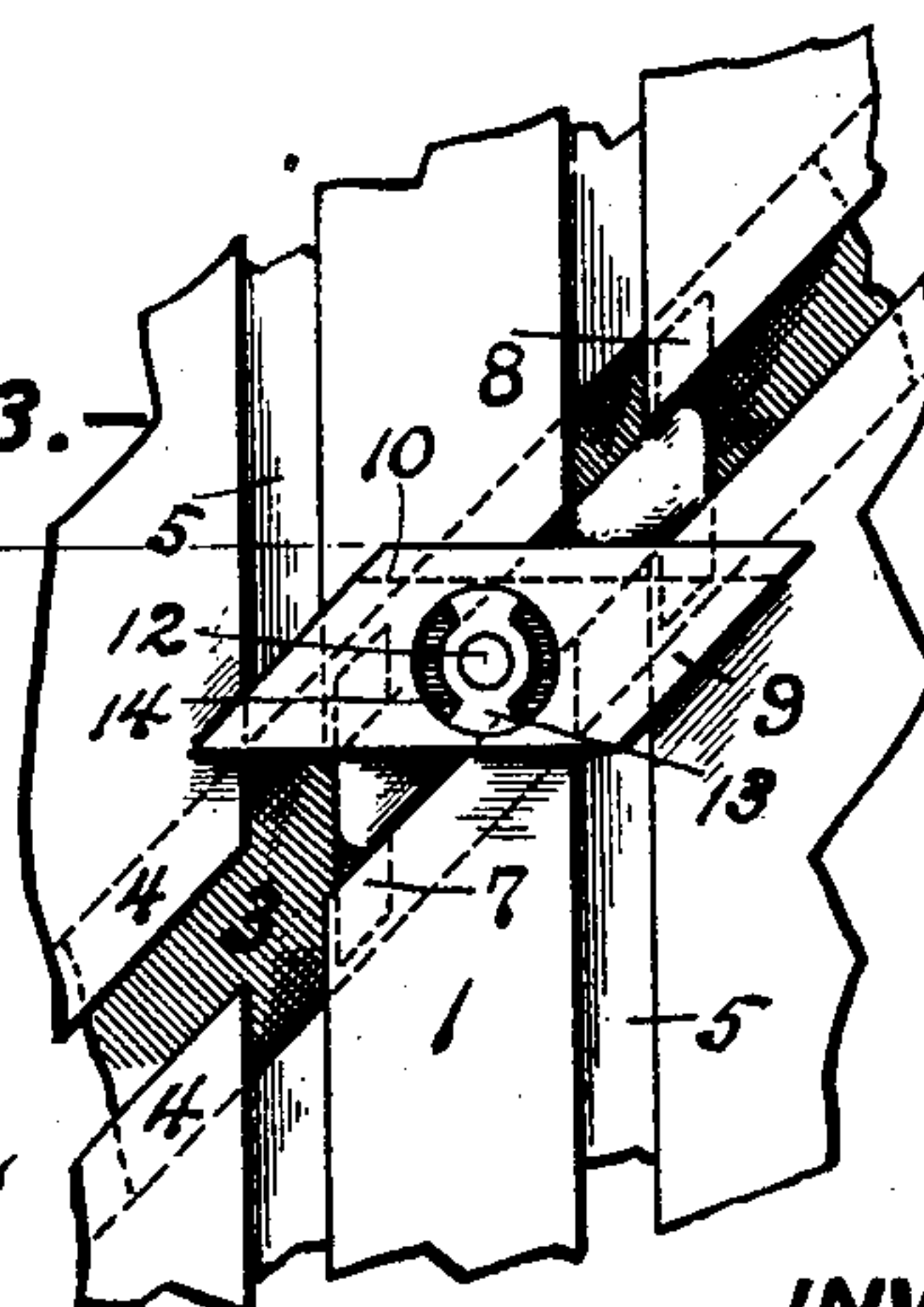


—FIG. 1.—

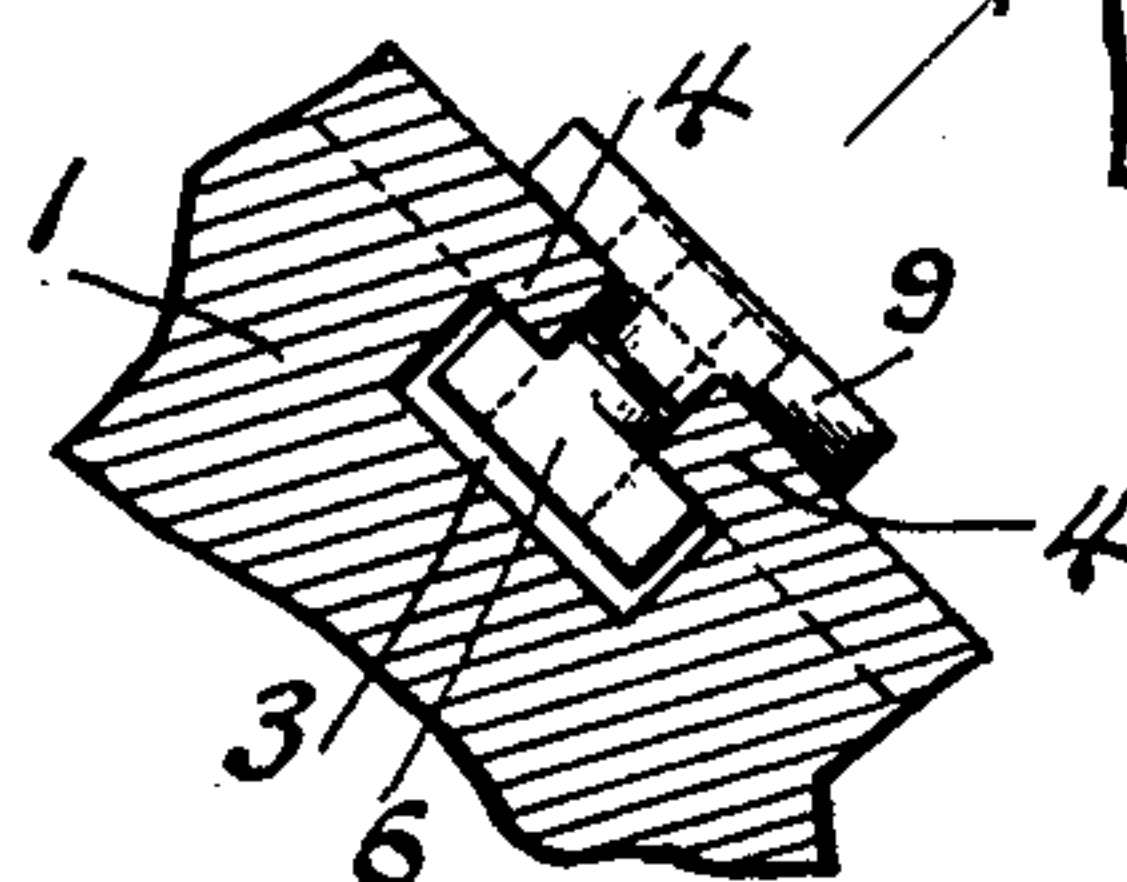
—FIG. 2.—



—FIG. 3.—



—FIG. 4.—



WITNESSES.

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UNITED STATES PATENT OFFICE.

ELLIS W. COOPER, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO R. HOE AND CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

PLATE-HOLDING DEVICE.

997,967.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed March 15, 1909. Serial No. 483,364.

To all whom it may concern:

Be it known that I, ELLIS W. COOPER, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Plate-Holding Devices, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to improvements in plate holding devices.

In securing plates, such, for instance, as ordinary stereotype printing plates, to their beds or carriers, constructions have been heretofore employed in which the bed or carrier was provided with undercut slots usually arranged diagonally on the surface of the bed or carrier. The plate holders proper were provided with bases arranged to engage these undercut slots and to slide freely along the slots, the bases having connected to them clips or blocks constructed to engage the edges of the plate. Such constructions have distinct advantages but, as heretofore made, it has been necessary to insert the holder bases into the slots at the edges of the bed or carrier and slide them along in the slots until they reached the desired position. This operation requires considerable time which is objectionable, particularly in newspaper offices where every effort is made to reduce to a minimum the time between the locking up of the forms and the running of the printing machine. Further, the operator, particularly where a large number of plates are to be placed upon the bed or carrier, must exercise considerable care in inserting the holder bases into the proper slots to bring them to the exact position required with respect to the plates which are to be mounted on the carrier.

It is the object of this invention to produce a construction for holding stereotype or similar plates on beds or carriers in which the advantages incident to the undercut slot are obtained and in which the holding devices employed in connection therewith may be quickly and accurately put in place.

With this and other objects not specifically referred to in view, the invention consists in certain constructions and in certain parts, improvements and combinations as

will be hereinafter fully described and then specifically pointed out.

In the accompanying drawings—Figure 1 is a plan view illustrating a bed or carrier having stereotype plates thereon, the plates being secured in position by constructions embodying the invention. Fig. 2 is a detail view illustrating the position of one of the holders employed, at the time when it is put in place. Fig. 3 shows the construction illustrated in Fig. 2 but with the parts in a different position. Fig. 4 illustrates the construction shown in Fig. 3, in section, the position of the observer being indicated by the arrow.

Referring to the drawings which illustrate one embodiment of the invention, 1 indicates a plate holding surface, such, for instance, as a bed or carrier, and 2 indicates the corners of plates in position thereon. The surface of the bed or carrier is provided with undercut slots 3, the overhanging walls of these slots being marked 4. The carrier is provided with grooves 5 which are angularly disposed with respect to the slots and intersect the same. It will be obvious that the walls of the undercut slots, including the overhanging parts 4, will be cut away at the intersections of the slots and grooves, recesses being formed at these intersections which will permit the insertion of the holders into the slots.

The construction of holder employed may be varied, but it will be of such a character that the base of the holder may engage the slots when the holder is in locking position. In the particular construction illustrated, the holder comprises a base embodying a body portion 6, this body portion being provided with projections 7 at or near one end and projections 8 at or near the other end. In the construction illustrated, the body portion is substantially equal in width to the opening between the overhanging walls 4 of the slot, and the projections extend far enough from the body portion to insure a firm bearing against the overhanging walls when the holder is locked in position. In the particular construction illustrated, the distance between the projections 7, 8 of the holder is equal to the distance between the intersecting grooves 5. The base of the holder has secured thereto a holder block 9,

this block having the usual undercut edge, indicated by the dotted line 10, in Figs. 2 and 3, in order that the holder block may firmly engage the beveled edge 11 usually
 5 formed on stereotype plates. While the holder block may be secured to its base in any suitable manner, in the best constructions embodying the invention, it will be detachably connected thereto, and, further, the
 10 point of connection will be between the projections 7, 8 when these projections are employed, and farther from one of these projections than the other. In the particular construction illustrated, the body portion of
 15 the holder is provided with a threaded stud 12, this stud being engaged by a nut 13 located in a recess 14 in the holder block. It will be observed that this stud forms a pivoted connection between the base and the
 20 holder block and that this pivot is nearer the projections 7 than the projections 8.

The operation of the construction will be readily understood. After a plate has been positioned upon the bed or carrier, the holders
 25 are inserted into the slots at the intersections nearest the plates, and the holders then slid up against the plate edges, after which the nuts 13 are tightened, so as to bring the projections of the bases up against
 30 the overhanging walls 4 of the slots. It may happen, however, that the position of the plate on the carrier would require a holder block to be positioned in relation to the intersections of the grooves and slots
 35 which is shown in Fig. 2, in which case it is apparent that the holder could not be locked in position. Should this occur, however, the position of the base with respect to the holder is reversed, as shown in Fig. 3. It
 40 will be noticed that in Fig. 2 the projections 7 are lying in the right hand groove 5 and the projections 8 in the left hand groove, and that in this position of these parts, the holder engages the edge of a plate, indicated by the dotted line 14' extending across
 45 Figs. 2 and 3. Should, however, it be attempted to tighten the holder block by turning the nut 13 the base would be forced upward lifting the projections in the open
 50 grooves. By reversing the position of the base, however, as shown in Fig. 3, the projections 8 can be located in the right hand groove and the projections 7 in the left hand groove 5. The holder block is now positioned slightly back from the edge of the
 55 plate. The base can, therefore, be advanced along the undercut slot to the position shown in Fig. 3, in which position the projections

will underlie the undercut walls of the slot so that when the nut 13 is tightened the
 60 holder is locked in position.

Changes and variations may be made in the construction by which the invention is carried into effect. The invention is not, therefore, to be confined to the particular
 65 construction herein shown and described.

What is claimed is:—

1. The combination with a bed having undercut holding slots, of a plate holder comprising a base having projections which
 70 engage the slots, of a holder block detachably connected to the base at a point between the projections but farther from one than the other, whereby the position of the base may be reversed with respect to the holder,
 75 the walls of the slots being cut away at points along their length to permit the insertion of the holder.

2. The combination with a bed having undercut holding slots, of a plate holder
 80 comprising a base having projections which engage the slots, of a holder block pivotally connected to the base at a point between the projections but farther from one than the other, whereby the position of the base
 85 may be reversed with respect to the holder, the walls of the slots being cut away at points along their length to permit the insertion of the holder.

3. The combination with a bed having
 90 undercut holding slots therein and also having grooves arranged transversely to and intersecting the slots, the walls of the slots being cut away at the intersections, of a plate holder comprising a base having pro-
 95 jections which engage the slots and a holder block detachably connected to the base at a point between the projections but farther from one than the other.

4. The combination with a bed having
 100 undercut holding slots therein and also having grooves arranged transversely to and intersecting the slots, the walls of the slots being cut away at the intersections, of a plate holder comprising a base having pro-
 105 jections which engage the slots and a holder block pivotally connected to the base at a point between the projections but farther from one than the other.

In testimony whereof, I have hereunto set
 110 my hand, in the presence of two subscribing witnesses.

ELLIS W. COOPER.

Witnesses:

F. W. H. CRANE,

GEO. V. WILLIAMSON.