

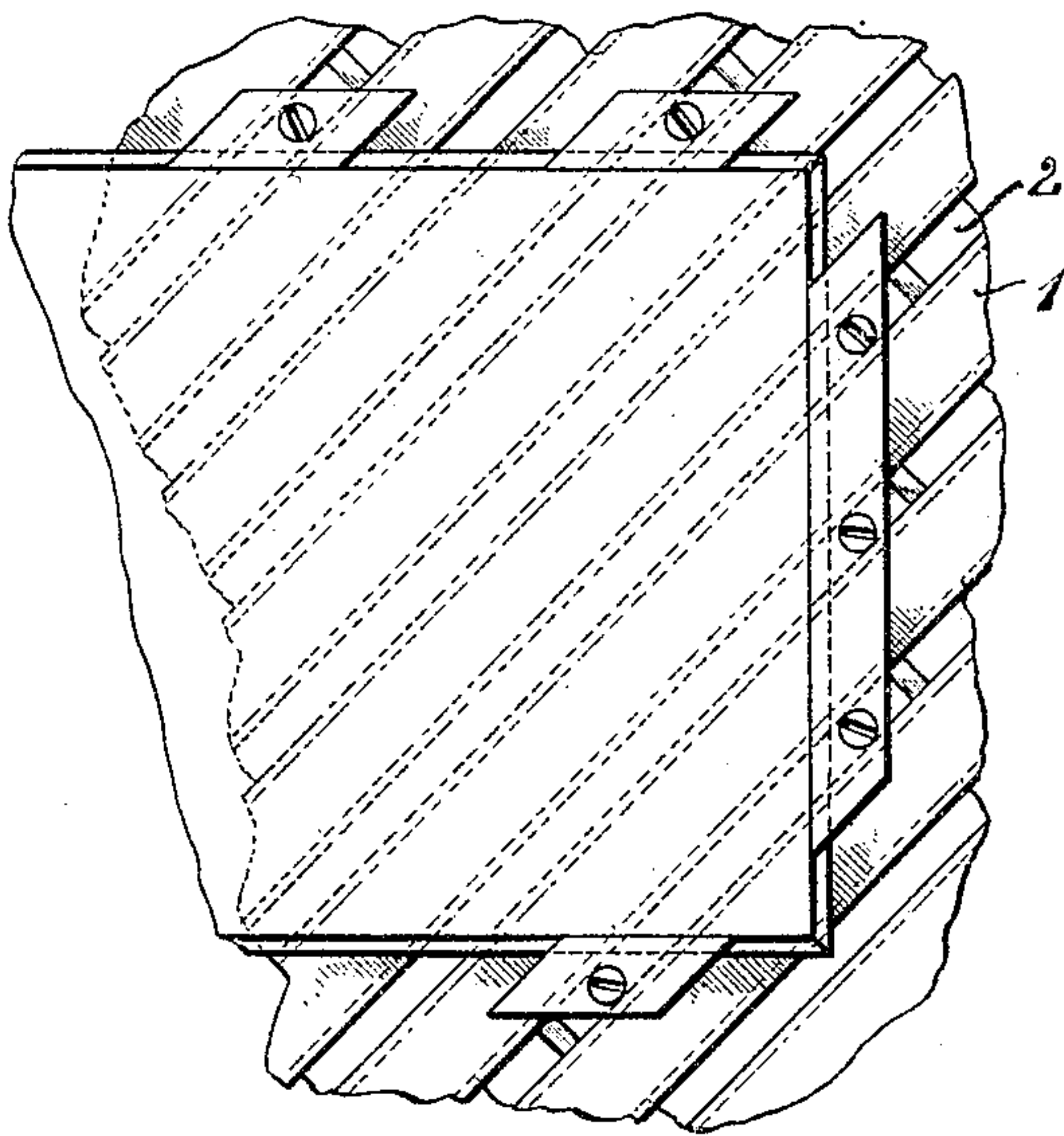
No. 778,829.

PATENTED DEC. 27, 1904.

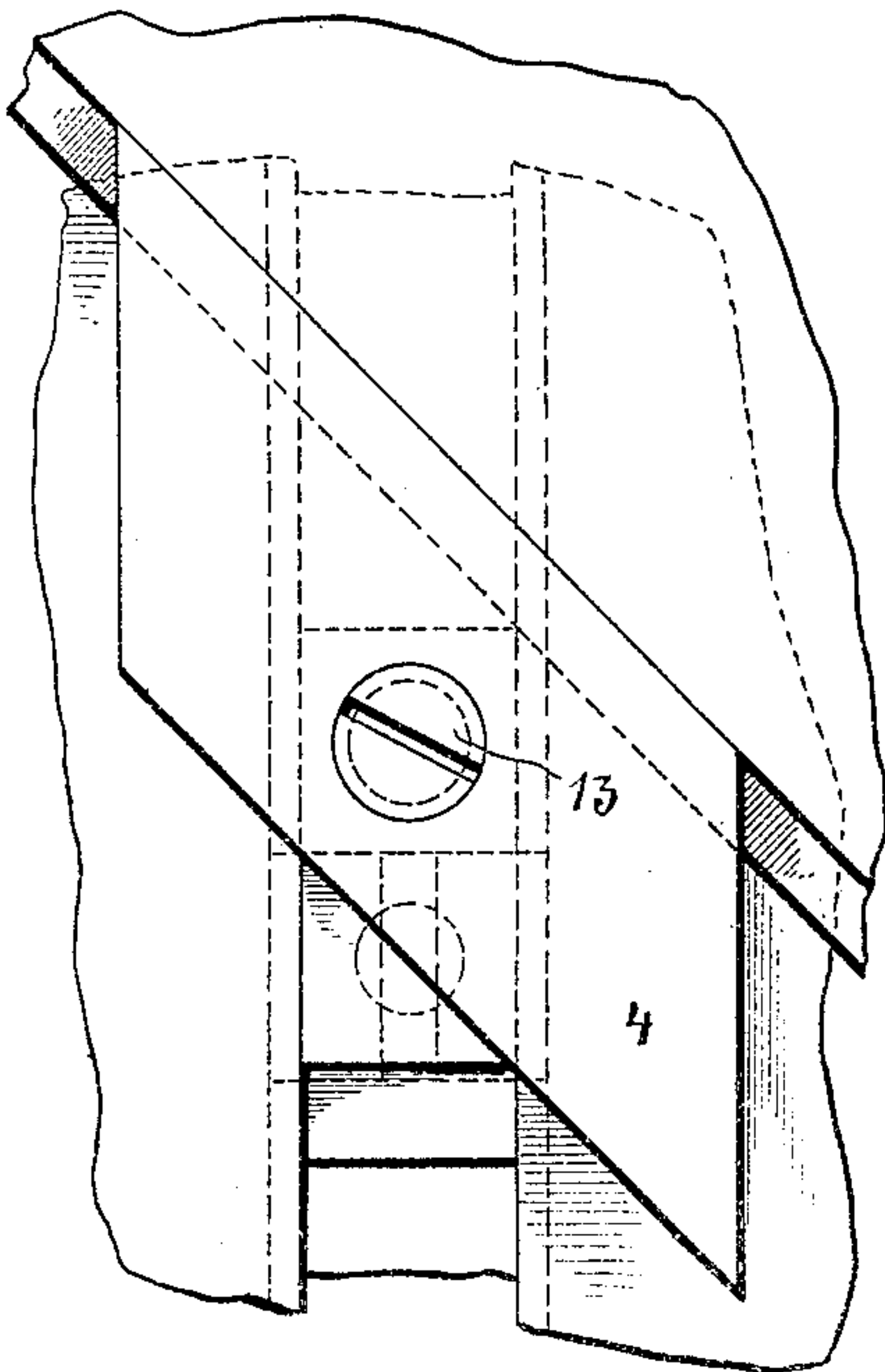
W. J. MAIN.  
PLATE CLAMP.

APPLICATION FILED APR. 23, 1903.

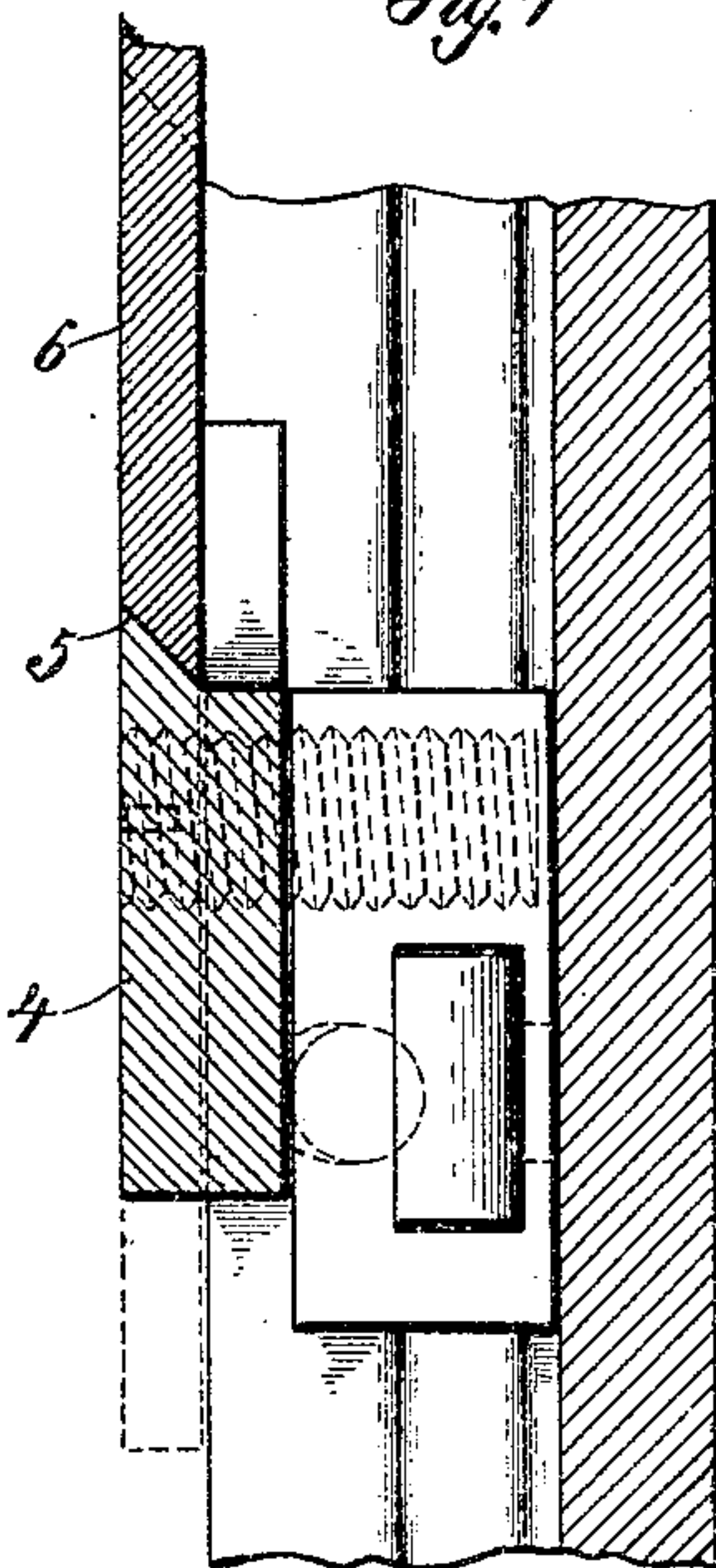
*Fig. 1*



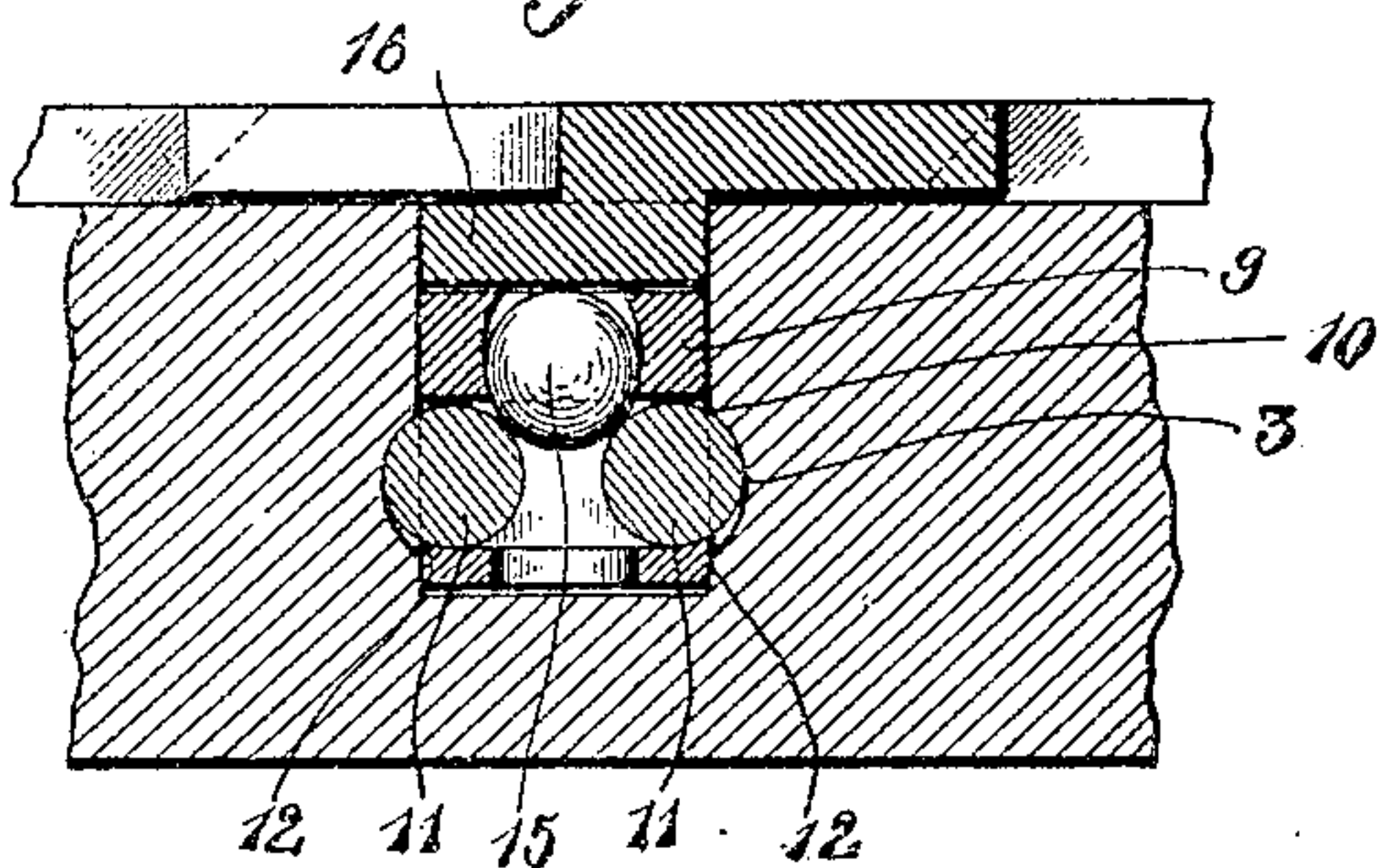
*Fig. 2*



*Fig. 4*



*Fig. 3*



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# UNITED STATES PATENT OFFICE.

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## PLATE-CLAMP.

SPECIFICATION forming part of Letters Patent No. 778,829, dated December 27, 1904.

Original application filed January 14, 1902, Serial No. 89,679. Divided and this application filed April 23, 1903. Serial No. 153,901.

*To all whom it may concern:*

Be it known that I, WILLIAM J. MAIN, 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-Clamps, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 This invention relates to certain improvements in clamping devices, and more particularly to that class of clamping devices which are used for securing electrotypes or stereotypic plates to the beds on which they are supported during the printing operation, the present application being a division of an earlier application filed by me on the 14th day of January, 1902, and serially numbered 89,679.

20 The invention has for its object to produce a simple and cheap clamp which can be readily adjusted in position, the parts of which are not liable to become lost, and which is very effective in operation.

25 With this and other objects 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 claims hereunto appended.

30 In the accompanying drawings, Figure 1 is a plan view of a portion of a plate-supporting bed, showing a part of a plate, the plate being secured thereon by the improved clamp. Fig. 35 2 is an enlarged detail view illustrating in plan the construction of the clamp. Figs. 3 and 4 are sectional detail views.

Referring to the drawings, 1 indicates a plate-supporting bed which is provided with 40 recesses for the clamps to be hereinafter described. While these recesses may be of any desired form, they will preferably be in the form of grooves 2, arranged diagonally across the bed, as is usual. The walls of these grooves 45 may be of any desired configuration; but they will preferably be undercut, and preferably also the undercut portion will be curved, as indicated at 3. With the recesses in the form of grooves, as shown, it is possible to adjust

the clamps readily by moving them from one 50 position to another without removing them from the grooves when the plates are changed, as might be necessary were the recesses simply holes in the bed.

The plate-clamp includes a retaining-plate 55 4, which is arranged to be in contact with the edge of the printing-plate. In the preferred form of the construction this retaining-plate is provided with a beveled edge 5, which takes over a similar bevel on the edge of the printing-plate 6, this being the usual arrangement. 60

The means by which the retaining-plate is locked to the bed will include a device or part which is adapted to be forced outward in opposite directions against opposite walls of the 65 groove or slot in the bed. While the construction of this locking part or device may be varied within wide limits, in the construction shown it consists of two cylinders 11, which are arranged to be forced outward against the 70 walls of the groove and which engage with the grooves in the walls when the walls are undercut and grooved as shown.

The means by which the locking device, whatever be its specific form, is guided and 75 supported may be widely varied and will be varied according to the specific construction of said device. As shown, there is provided a chambered block 9, having openings 10 in its side walls. The edge of the block which 80 bounds one or both sides of these openings is preferably upturned slightly, as shown at 12, so as to assist in retaining the cylinders 11 in the chamber of the block when the same is entirely removed from the groove. 85

The block may be connected to the retaining-plate or contact portion 4 in any desired manner. As shown, however, a screw 13 is preferably provided for this purpose. The means for causing the retaining device, whatever be its specific form, to engage with the 90 walls of the groove may be widely varied. As shown, this means includes a ball 15, which is mounted in the chambered block 9 before referred to, said block having an opening in 95 its top through which the upper surface of the ball projects slightly. This ball is located underneath the retaining-plate or contact por-



tion 4, said plate being provided in the construction shown with a projection 16, which enters the groove in the block and rests upon the top of ball 15. By turning the screw 5 13 the ball 15 is forced downward by the projection 16 on the under side of the retaining-plate and in turn forces the cylinders outward in opposite directions, causing them to squarely engage with the undercut walls of 10 the groove.

It is to be understood that changes and variations may be made in the specific construction hereinbefore described, and the invention is not, therefore, to be confined to said specific 15 construction, as it may be embodied in constructions which vary widely therefrom.

What is claimed is—

1. In a marginal clamp, the combination with a contact portion, of a guide portion, a 20 part adapted to be forced laterally outward in opposite directions against the opposite side walls of the receiving-slot, and means for so actuating the part, substantially as described.

2. The combination with a supporting-bed 25 provided with a recess, of a retaining-plate provided with two laterally-movable locking members for engaging opposite walls of the recess, and a spreading device for moving the locking members laterally, substantially as 30 described.

3. A plate-clamp comprising a retaining-plate provided with two laterally-movable locking members and a spreading device for moving them laterally, substantially as de- 35 scribed.

4. The combination with a supporting-bed provided with a recess, of a retaining-plate provided with two laterally-movable locking

members for engaging opposite walls of the recess, a spreading device for moving the 40 locking members laterally, and means for producing a relative movement between the locking members and said spreading device, substantially as described.

5. In a clamp, the combination with a re- 45 taining-plate, of locking members having curved operating-surfaces, means whereby said members are connected to the plate, and means for forcing the members into locking position, substantially as described. 50

6. In a clamp, the combination with a re- taining-plate, of locking members consisting of cylinders, means whereby said members are connected to the plate, and means for forcing the members into locking position, 55 substantially as described.

7. In a clamp, the combination with a re- taining-plate, of locking members, means whereby said members are connected to the plate, and means including a ball for forcing 60 said members into locking position, substantially as described.

8. In a clamp, the combination with a re- taining-plate, of a pair of cylinders, means for connecting the cylinders to the plate, a 65 ball, and means including a screw for forcing the ball against the cylinders and moving the cylinders into locking position, substantially as described.

In testimony whereof I have hereunto set my 70 hand in the presence of two subscribing witnesses.

WILLIAM J. MAIN.

Witnesses:

A. WHITE,  
J. A. GRAVES.