

No. 772,219.

PATENTED OCT. 11, 1904.

C. P. COTTRELL.
CLAMP FOR STEREOTYPE PLATES.

APPLICATION FILED MAY 26, 1904.

NO MODEL.

Fig. 1.

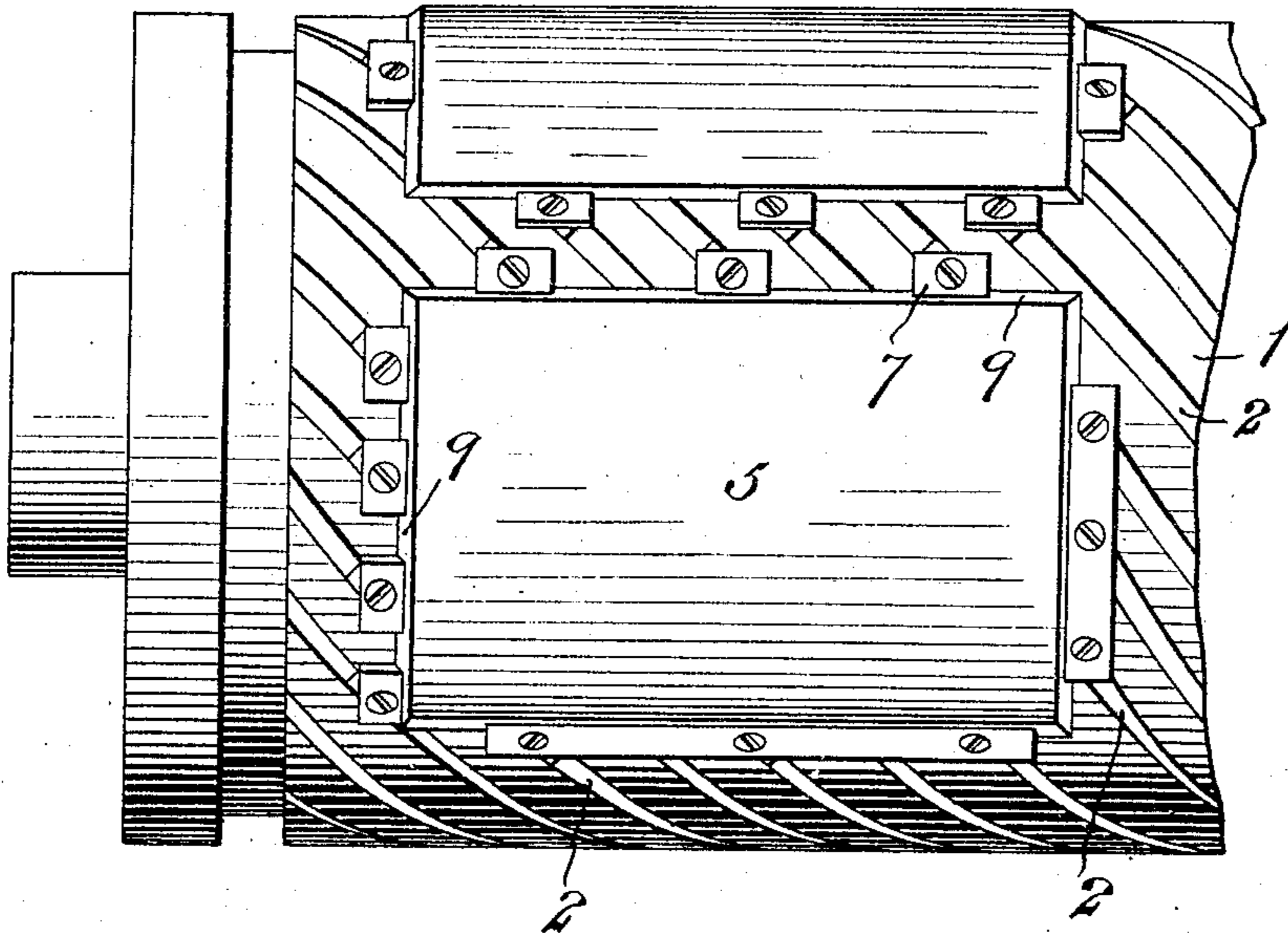


Fig. 3.

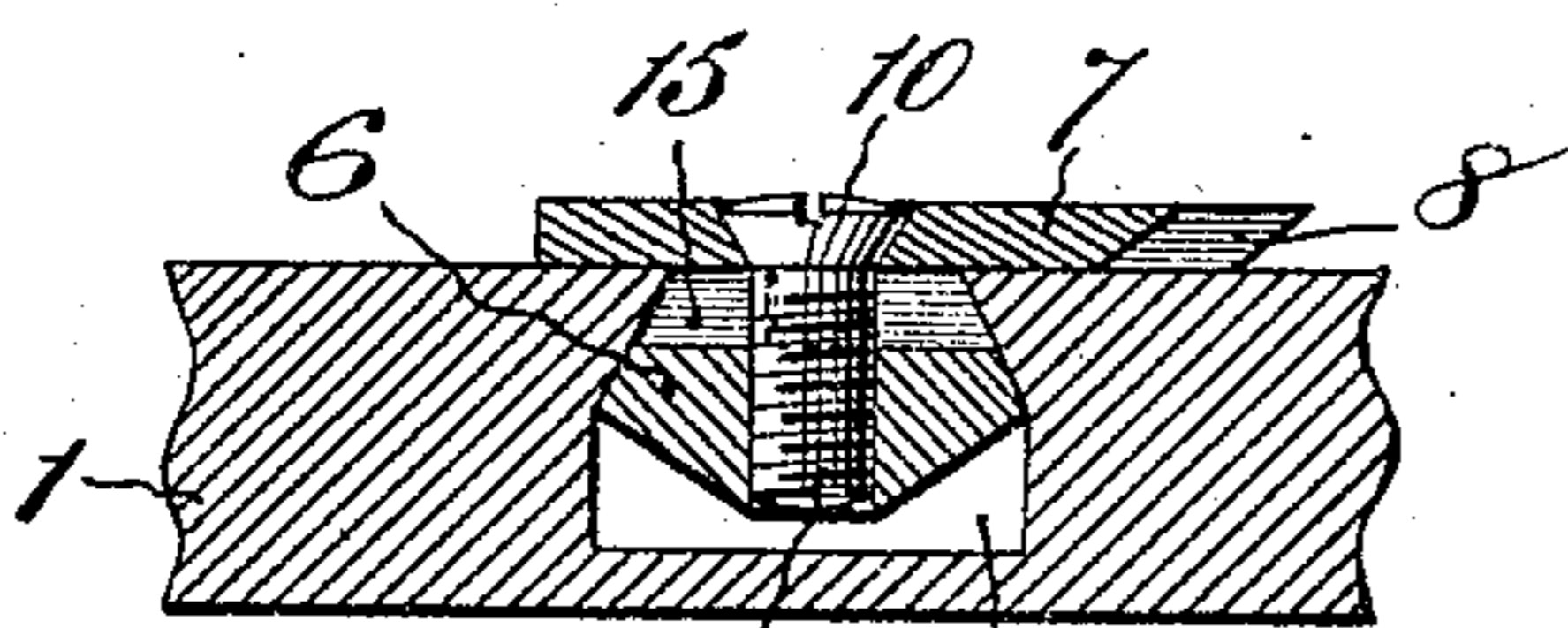


Fig. 4.

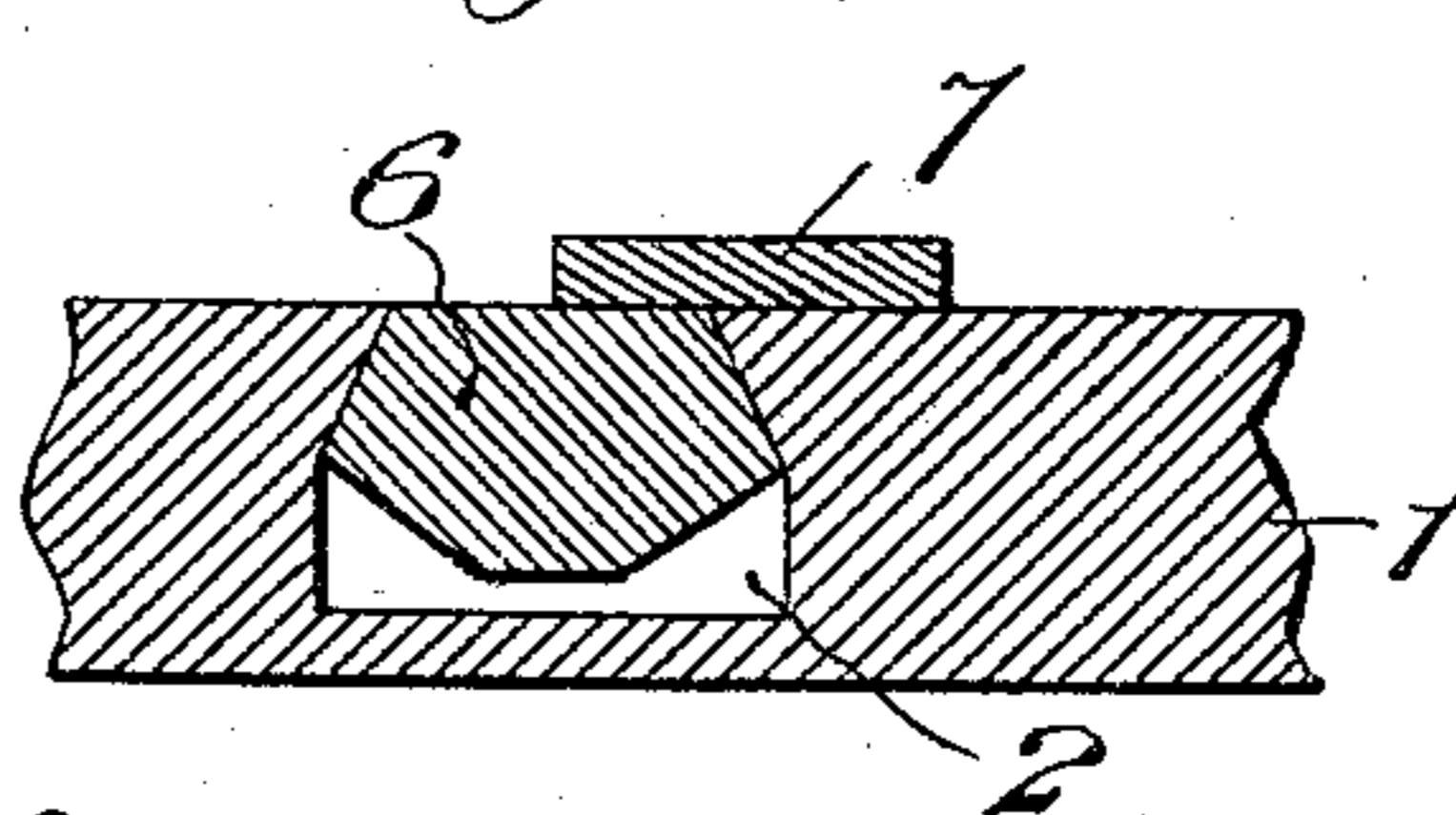


Fig. 5.

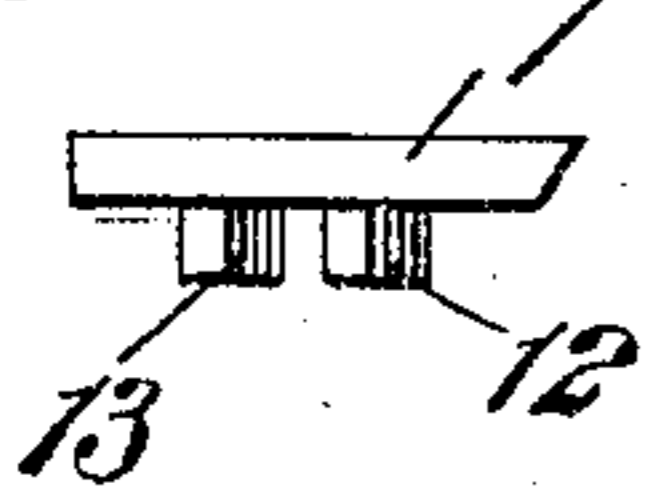


Fig. 2.

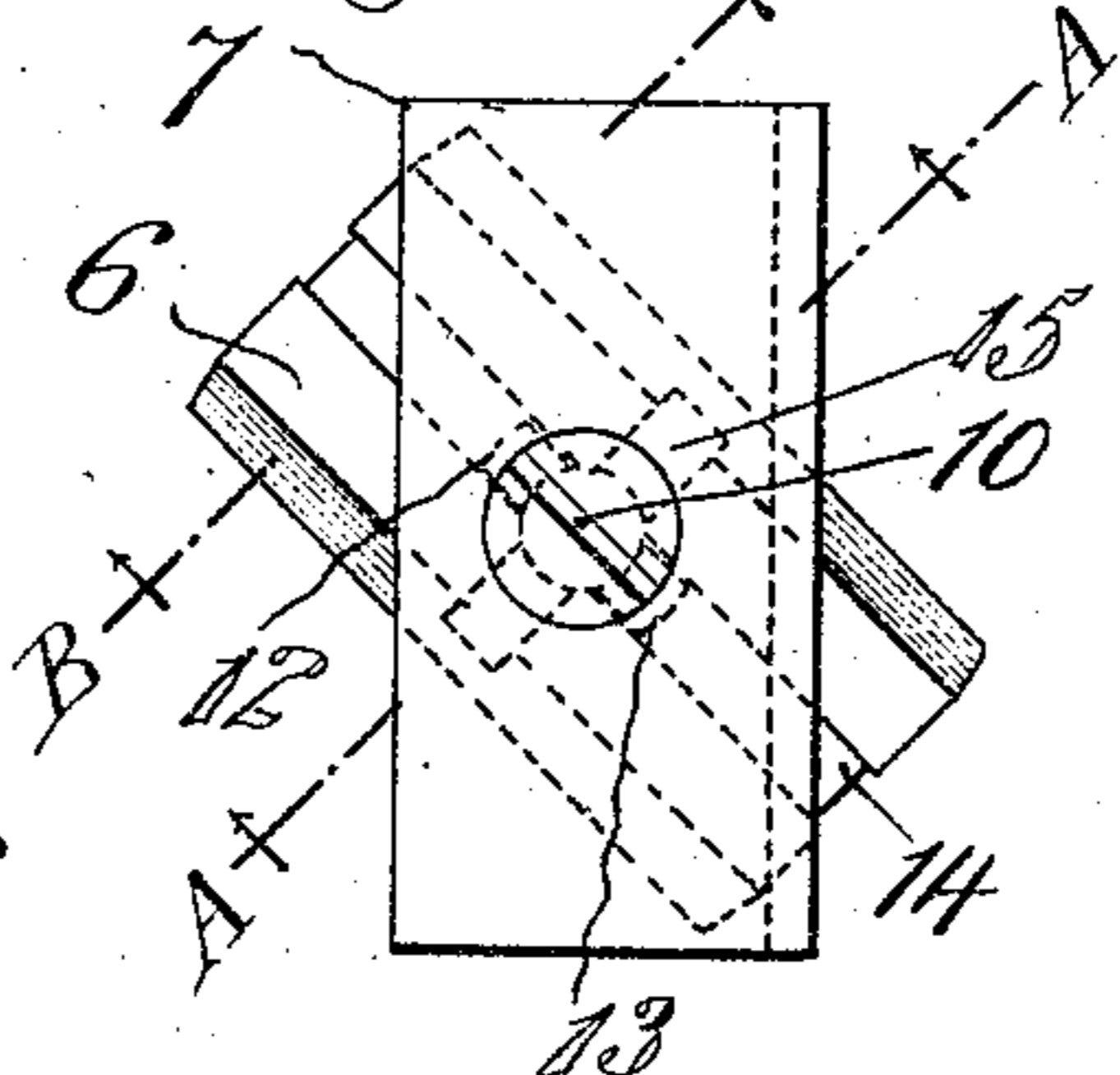


Fig. 7.

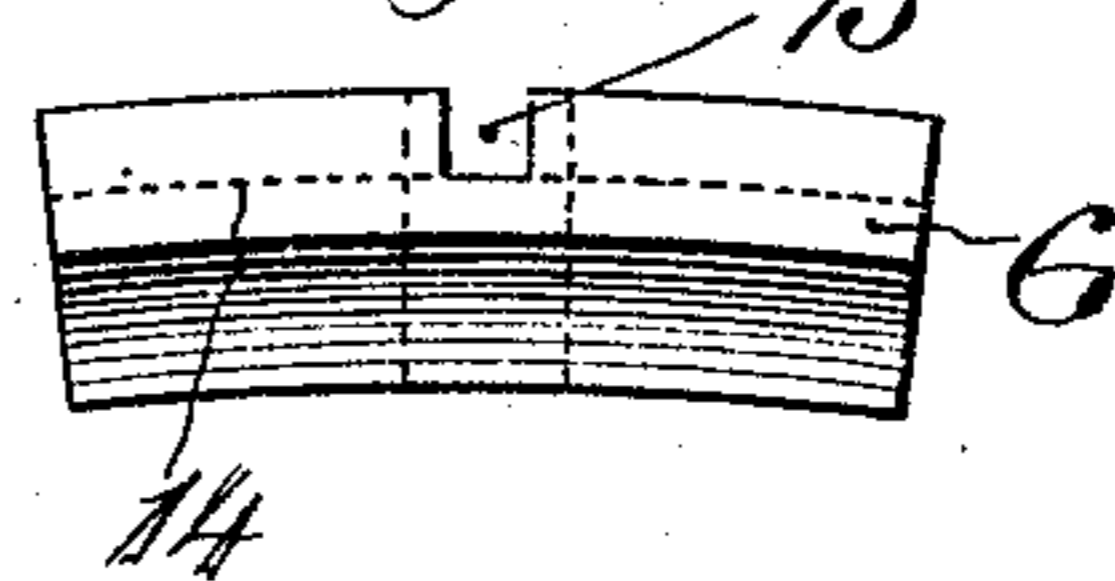


Fig. 6.

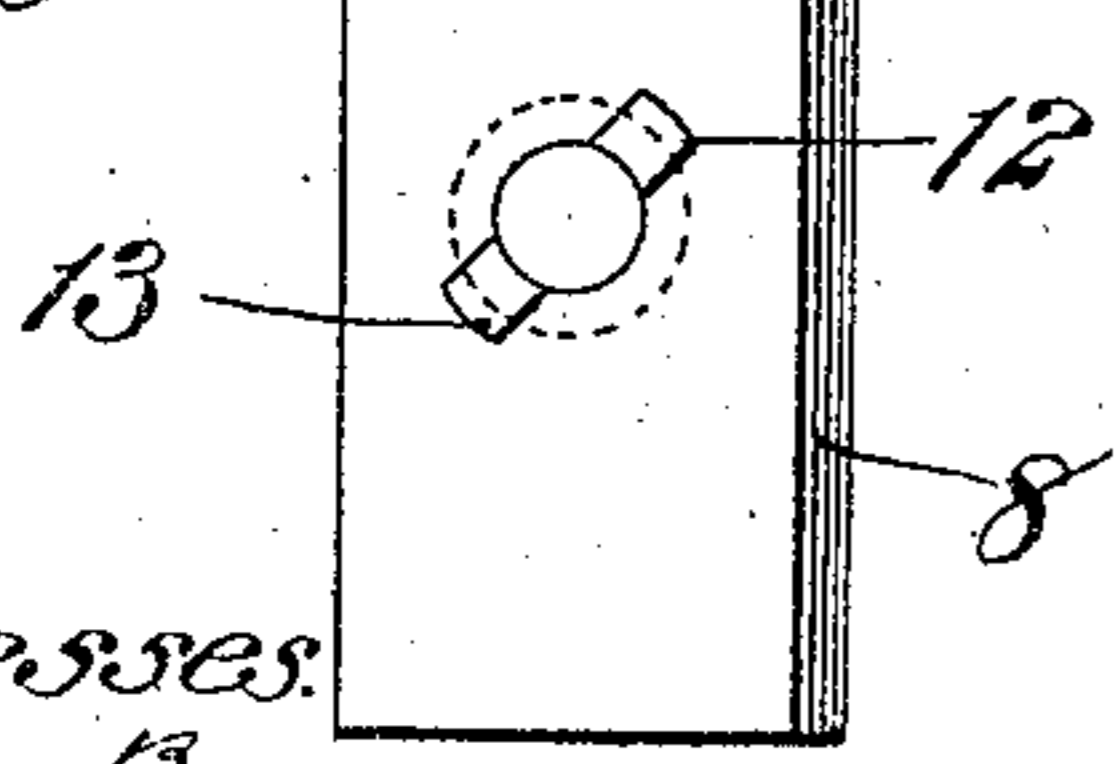
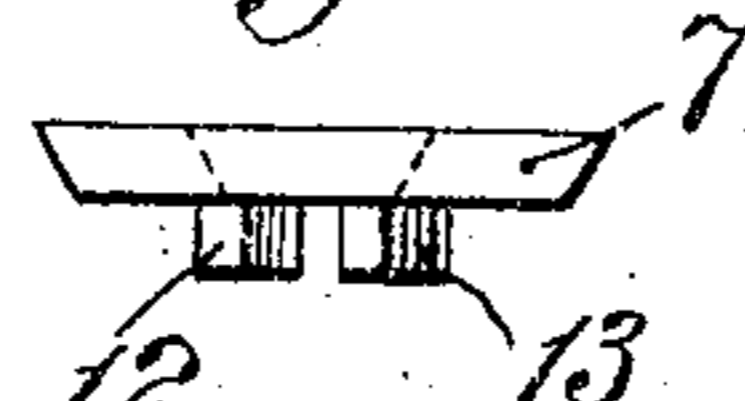


Fig. 8.



Fig. 9.



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UNITED STATES PATENT OFFICE.

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CLAMP FOR STEREOTYPE-PLATES.

SPECIFICATION forming part of Letters Patent No. 772,219, dated October 11, 1904.

Application filed May 26, 1904. Serial No. 209,849. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. COTTRELL, a citizen of the United States, and a resident of Westerly, in the county of Washington and State of Rhode Island, have invented a new and useful Improvement in Clamps for Stereotype-Plates, of which the following is a specification.

My invention relates to an improvement in clamps for stereotype-plates; and it consists in providing a clamp in which the outer member may be interlocked with the inner member at the desired angle with respect thereto for engaging one edge of the plate.

My invention further consists in providing a clamp in which the outer member may be interlocked with the inner member in position to engage any one of the four edges of the plate without removing the inner member from the groove in the cylinder.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents a portion of a cylinder having spiral grooves and stereotype or other printing plates secured thereon by my improved clamps. Fig. 2 is a detail top plan view of the clamp. Fig. 3 is a cross-section taken in the plane of the line A A of Fig. 2 looking in the direction of the arrows, a portion of the cylinder also being shown to illustrate the manner of securing the clamp within the groove. Fig. 4 is a similar view taken in the plane of the line B B of Fig. 2 looking in the direction of the arrows. Fig. 5 is an end view of the outer member of the clamp. Fig. 6 is an inverted plan view of the outer member. Fig. 7 is a side view of the inner member. Fig. 8 is a top plan of the same, and Fig. 9 is an end view of a modified form of the outer member.

The cylinder is denoted by 1 and its undercut spiral grooves by 2.

The stereotype or other printing plates are denoted by 5.

My improved clamp is constructed as follows: The inner member of the clamp is denoted by 6, and it is curved lengthwise, so as

to correspond to the curve of the cylinder along the spiral grooves. The sides of the inner member 6 are so shaped as to fit snugly against the outer portions of the undercut spiral grooves 2 throughout the entire length of the inner member, as is clearly shown by the two sections represented in Figs. 3 and 4. The shape of this inner member permits it being inserted into or taken out of the spiral groove at any point. The engagement of the inner member with the walls of the groove is such that the member is prevented from moving in other than a longitudinal direction within the groove.

The outer member of the clamp is denoted by 7, and it is provided with the usual bevel edge 8 along one side thereof, which is fitted to overlap one of the beveled edges 9 of the stereotype or printing plate 5. The clamp-screw for clamping the members in position comprises a head 10, countersunk in the outer member 7, and a shank 11, having a screw-threaded engagement with the inner member 6.

The two members 6 and 7 of the clamp are interlocked independently of the clamp-screw, so that the outer member is held at the desired angle with respect to the inner member to cause the beveled edge of the outer member to engage in one of the beveled edges of the stereotype or printing plate.

In the present instance I have shown this interlocking connection as follows: The outer member is provided with two pins or lugs 12 13, which project inwardly from its inner face. The inner member is provided with a longitudinal groove 14 and a transverse groove 15 in its outer face, which serve as sockets for receiving the pins or lugs 12 13 of the outer member 7. These pins or lugs 12 13 are so arranged that when they are caused to enter the longitudinal groove 14 the outer member will be locked in one angular position with respect to the inner member—as, for instance, in position to engage either one of two opposite sides on the stereotype or other printing plate.

When the lugs 12 13 are caused to enter the transverse groove 15, the outer member will

be interlocked with the inner member at the desired angle to engage one or the other of the opposite edges of the stereotype or other printing plate which could not be engaged by the outer member when the lugs 12 13 are within the longitudinal groove 14.

In Fig. 9 I have shown a form of outer member in which both sides of the member are beveled, so that it could be used between two adjacent plates where a narrow margin was required between the plates for the reason that the clamp could be pushed up into position to hold the edge of one plate and could then be used as the stationary clamp for the adjacent edge of the adjoining plate.

It will be seen that by the use of the clamps herein described I am enabled to use clamps of a single type for engaging the opposite edges of the stereotype or other printing plate or all of the edges of the plate, the outer members of the clamps at the same time being locked in lines parallel with the edges with which they are to be engaged. This construction obviates the necessity of providing a right-hand clamp, a left-hand clamp, and clamps for engaging the edges of the plate at right angles to the right and left hand clamps.

It is evident that changes might be resorted to in the arrangement of the several parts and that various forms of interlocking devices may be used between the outer and inner members without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the construction herein set forth; but

What I claim as my invention is—

1. A clamp for stereotype-plates comprising an outer member, a longitudinally-curved inner member, a clamp-screw and means for locking the outer member to the inner member at a predetermined angle across the inner member.

2. A clamp for stereotype-plates comprising an outer member, a longitudinally-curved inner member and a clamp-screw, the two members having an interlocking connection for holding the outer member at a predetermined angle across the inner member.

3. A clamp for stereotype-plates comprising an outer member, a longitudinally-curved inner member, a clamp-screw and a pin-and-socket connection between the outer and inner members for locking the outer member to the inner member at a predetermined angle across the inner member.

4. A clamp for stereotype-plates comprising an outer member, a longitudinally-curved inner member, a clamp-screw and means for locking the outer member to the inner member in either one of two positions at right angles to each other.

5. A clamp for stereotype-plates comprising a longitudinally-curved inner member having a groove therein, an outer member having a pin arranged to enter said groove for locking

the outer member at a predetermined angle across the inner member and a clamp-screw engaging both members.

6. A clamp for stereotype-plates comprising a longitudinally-curved inner member having two sockets, an outer member having a pin arranged to enter the one or the other of the two sockets for locking the outer member to the inner member at one of two different angles with respect thereto and a clamp-screw engaging both members.

7. A clamp for stereotype-plates comprising a longitudinally-curved inner member having a longitudinal and a transverse groove in its outer face, an outer member having pins arranged to enter one groove to lock the outer member at an angle with respect to the inner member and the other groove to lock the outer member at another angle with respect to the inner member and a clamp-screw engaging both members.

8. A cylinder having a spiral groove therein and a clamp comprising an inner member having its sides fitted to the walls of the groove, an outer member and means for clamping the outer and inner members to the cylinder.

9. A cylinder having a spiral groove therein and a clamp comprising a longitudinally-curved inner member having its sides fitted to the walls of the groove, an outer member and means for clamping the outer and inner members to the cylinder.

10. A cylinder having a spiral groove therein and a clamp comprising a longitudinally-curved inner member fitted to said groove and prevented from turning therein, an outer member arranged to be interlocked with the inner member at a predetermined angle across the inner member and a clamp-screw engaging the two members.

11. A cylinder having spiral grooves therein, a clamp comprising an inner member fitted to enter said grooves, an outer member, a clamp-screw engaging the inner and outer members and the said inner member having sockets and the outer member provided with pins arranged to enter the sockets in the inner member for locking the outer member at the desired angle with respect thereto.

12. A clamp for stereotype-plates comprising a longitudinally-curved inner member, an outer member, a clamp-screw engaging the two members and means independent of the screw for locking the outer member to the inner member at a predetermined angle across the inner member.

13. A clamp for stereotype-plates comprising a longitudinally-curved inner member, an outer member, a clamp-screw engaging the two members and means independent of the screw for locking the outer member to the inner member in one of a plurality of angular positions with respect thereto.

14. A clamp for stereotype-plates comprising a longitudinally-curved inner member, an

outer member, a clamp-screw engaging the same, the said outer member having pins upon opposite sides of the screw and the inner member having sockets arranged to receive the
5 pins for locking the outer member to the inner member at the desired angle with respect thereto.

In testimony that I claim the foregoing as

my invention I have signed my name, in presence of two witnesses, this 24th day of May, 1904.
A. D. 1904.

CHARLES P. COTTRELL.

Witnesses:

A. R. STILLMAN,

B. T. LAKE.