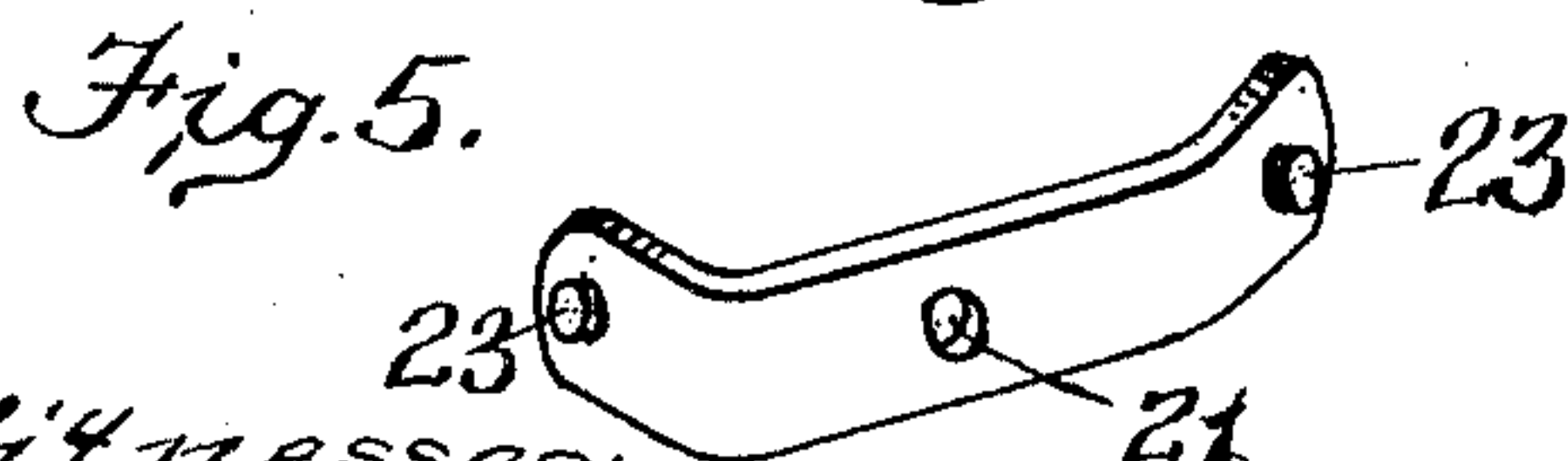
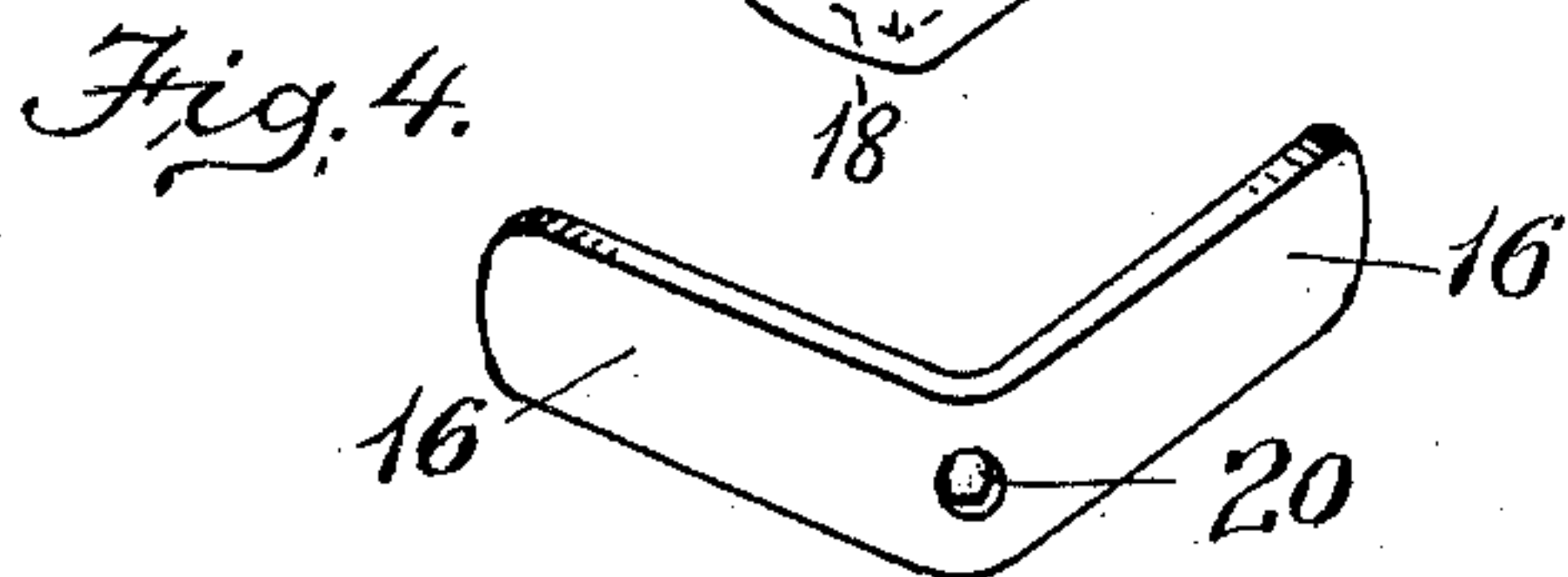
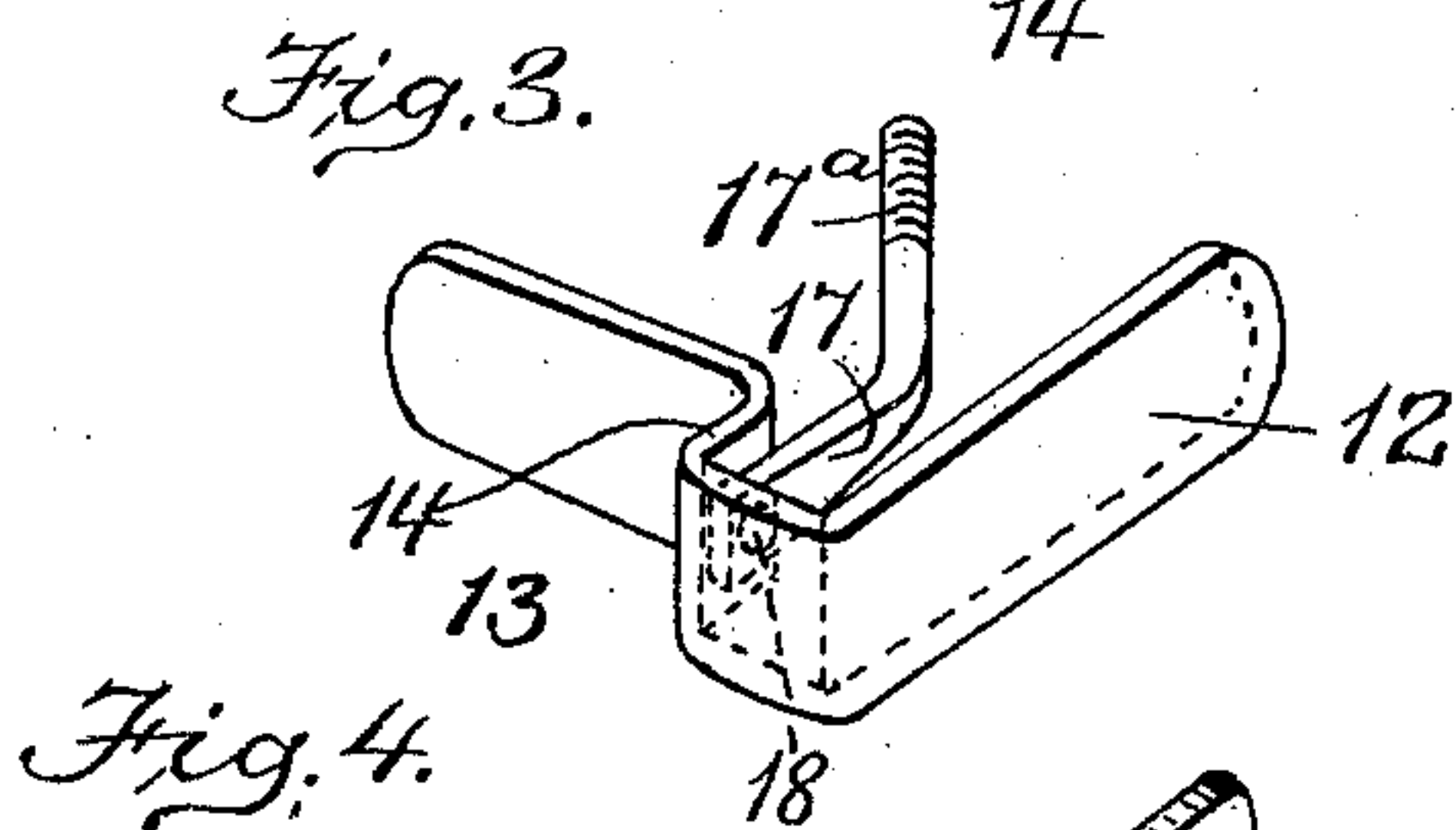
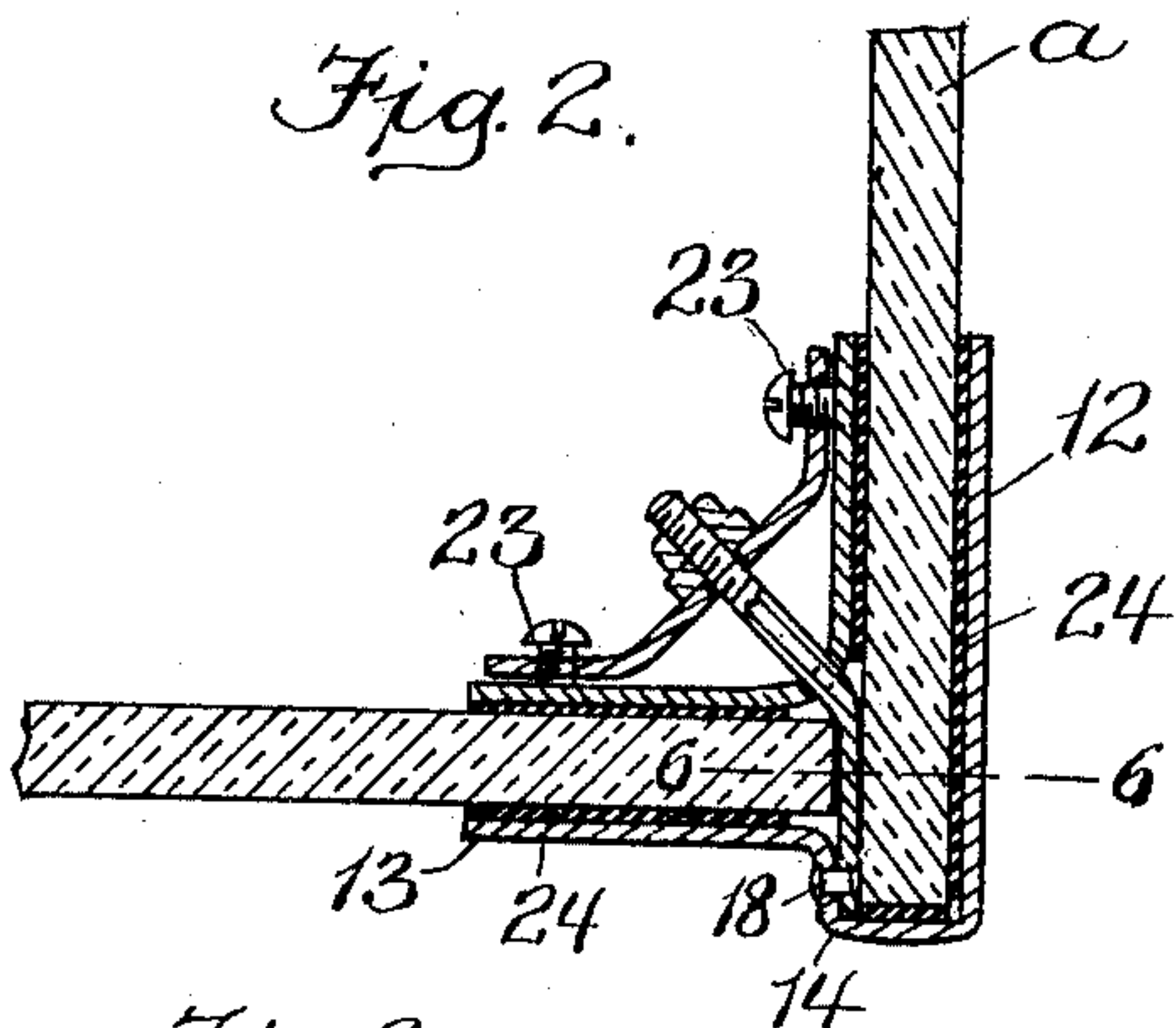
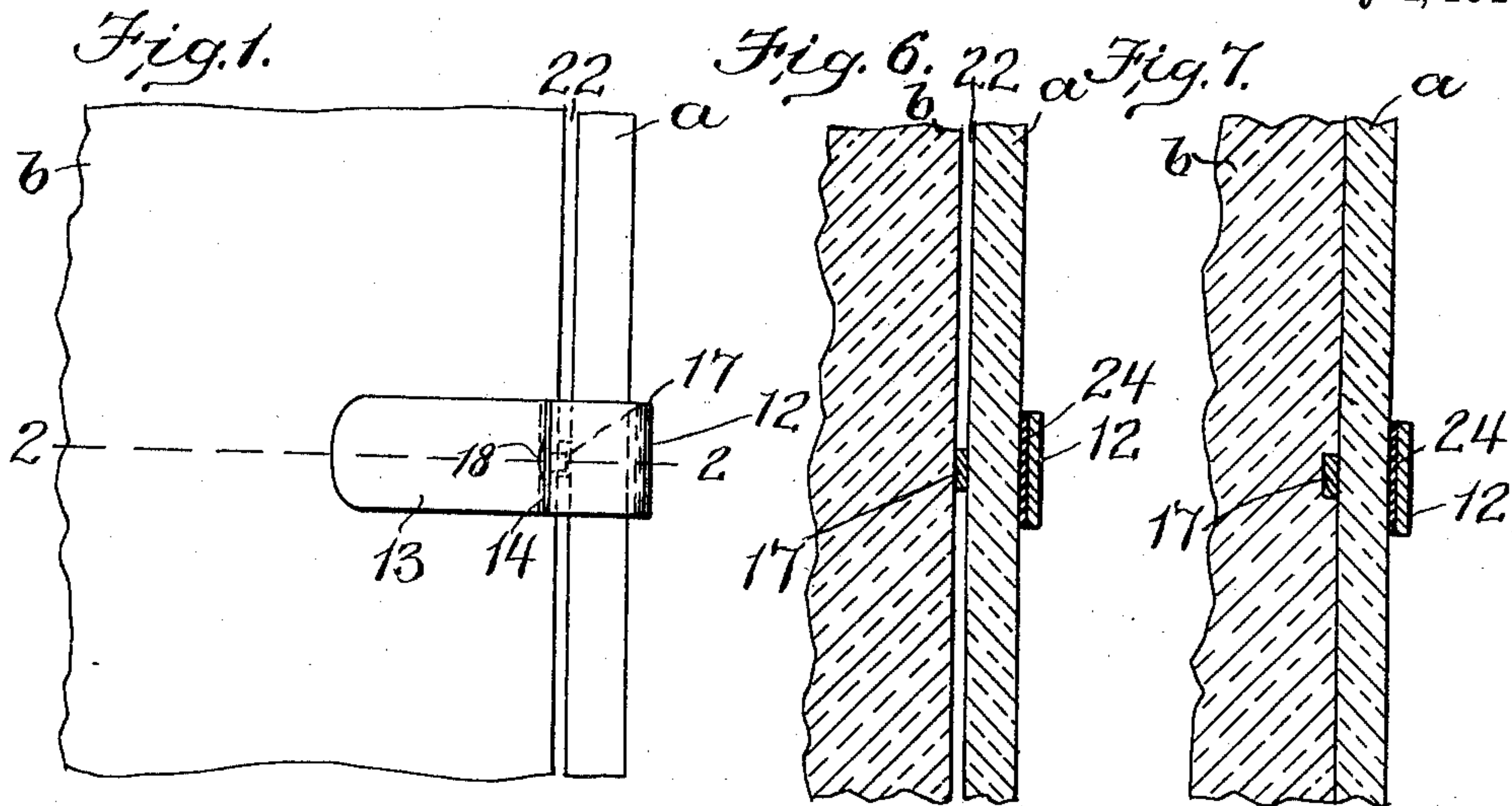


F. F. McAVOY.
 PLATE GLASS CLAMP.
 APPLICATION FILED DEC. 1, 1910.

997,202.

Patented July 4, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK F. McAVOY, OF CHARLESTOWN, MASSACHUSETTS.

PLATE-GLASS CLAMP.

997,202.

Specification of Letters Patent.

Patented July 4, 1911.

Application filed December 1, 1910. Serial No. 595,144.

To all whom it may concern:

Be it known that I, FREDERICK F. McAVOY, of Charlestown, in the county of Suffolk and State of Massachusetts, have
5 invented certain new and useful Improvements in Plate-Glass Clamps, of which the following is a specification.

This invention relates to clamps used for coupling together plate glass panes used in
10 forming show windows or store fronts, the plates being at right angles with each other and the inner side of one overlapping the outer edge of the other, to form what is known as a lap joint front.

15 The invention has for its object to provide a clamp adapted to firmly connect two glass plates relatively arranged as above stated, in such manner as to obviate the necessity of drilling holes in either plate, and
20 to reduce to the minimum the width of the crevice between the inner side of one plate and the outer edge of the other plate, or if desired to eliminate such crevice and permit the plates to meet.

25 The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings which form a part of this specification,—Figure
30 1 represents a fragmentary elevation showing the end of one plate and the side of the companion plate connected by a clamp embodying my invention; Fig. 2 represents a section on line 2—2 of Fig. 1; Figs. 3, 4, and
35 5 represent perspective views of the parts or members of the clamp disconnected; Fig. 6 represents a section on line 6—6 of Fig. 2; and Fig. 7 represents a view similar to Fig. 6, showing a modification.

40 Similar reference characters indicate the same or similar parts in all the figures.

In the drawings, *a* and *b* represent two plate glass sheets or panes which are arranged at right angles with each other. The
45 plate *a*, which I call the overlapping plate, has its inner side extended across the end of the plate *b*, which I call the abutting plate, the outer edge of the plate *a* projecting beyond the plane of the outer side
50 of the plate *b*. The plates thus relatively arranged constitute members of a lap-joint store front.

My improved clamp comprises an outer angular member and an inner angular member.
55 The outer member has an arm 12 formed to bear on the outer side of the

plate *a*, and an arm 13 which is offset at 14 to form two sides of a recess which receives the projecting portion of the plate
60 *a*, the arm 12 forming another side of said recess. The arm 13 extends at a right angle with the arm 12, and its outer portion bears on the outer side of the plate *b*. The inner member has two arms
65 16, 16 at right angles with each other, said arms bearing on the inner sides of the plates. The outer member is provided with a stud composed of an inner portion 17 which is attached by a rivet 18 to the offset
70 portion 14 and extends between the edge of the plate *b* and the inner side of the plate *a*, and an outer portion 17^a which is screw-threaded and extends obliquely to the sides
75 of the two plates. A nut 18 engaged with the threaded portion 17^a, bears on a bridge piece 19 which is formed to extend obliquely
80 from one arm of the inner member to the other. The inner member has an orifice 20, and the bridge piece an orifice 21, said orifices receiving the portion 17^a of the stud.

It will be seen that when the nut 18 is turned inwardly, the bridge piece exerts outward pressure against the inner clamp member, and the stud tends to draw the outer
85 clamp member inwardly, so that said members are pressed firmly against the surface of the plates. The inner portion 17 of the shank is flattened so that it permits the edge
90 of the plate *b* and the inner side of the plate *a* to closely approach each other, as shown by Figs. 1, 2 and 6, so that the width of the
95 crevice 22 between the plates is reduced to the minimum, said crevice being no wider than is required to contain the usual filling of cement which is desirable to make a water
tight joint. If desired, however, the edge of the plate *b* may have a notch to receive the
100 flattened shank portion 17, as shown by Fig. 7, so that the edge of the plate *b* may bear directly on the inner side of the plate *a*.

The end portions of the bridge piece are preferably provided with bearing screws 23 adapted to be adjusted inwardly to bear on the arms of the inner clamp member and
105 compensate for any bending of the latter under the pressure of the nut 18. The clamp members are preferably provided with rubber facings 24 which bear on the glass plates, and maintain a firm frictional hold thereon.

110 It will be seen that the stud connects the outer and inner clamping members without

requiring the formation of an orifice in either of the connected plates, and that its thin inner portion obviates the necessity of an objectionably wide crevice between the plates.

I claim:

1. A clamp for lap-jointed glass plates, comprising an outer member having two arms arranged substantially at right angles with each other, one of said arms being adapted to bear on the outer side of an overlapping plate, while the other arm is offset to form, with the first-mentioned arm, a recess adapted to receive the edge of the overlapping plate, and a portion adapted to bear on the outer side of an abutting plate, a stud having an inner portion bearing against and attached to one side of said recess and formed to pass through the crevice between said plates, said stud having an oblique outer portion, an angular inner member formed to bear on the inner sides of the two plates and perforated to receive said stud, and means cooperating with the stud for pressing the members against the said plates.

2. A clamp for lap-jointed glass plates, comprising an outer member having two arms arranged substantially at right angles with each other, one of said arms being adapted to bear on the outer side of an overlapping plate while the other arm is offset to form, with the first-mentioned arm, a recess adapted to receive the edge of the overlapping plate, and a portion adapted to bear on the outer side of an abutting

plate, a stud having an inner portion bearing against and attached to one side of said recess and formed to pass through the crevice between said plates, said stud having an oblique screw-threaded outer portion, a right-angled inner member formed to bear on the inner sides of the two plates and perforated to receive said stud, and a bridge piece formed to extend obliquely between the arms of the inner member and also perforated to receive said stud, the screw-threaded portion of the stud being provided with a nut bearing on the bridge piece.

3. A clamp for lap-jointed glass plates, comprising an outer member formed to bear on the outer and inner sides and on the edge of an overlapping plate and on the outer side of an abutted plate, and an inner member formed to bear on the inner sides of said plates, the outer member having a stud formed to extend between the edge of the abutted sheet and the inner side of the overlapping plate, said stud having an oblique screw-threaded inner portion, and a bridge piece formed to extend obliquely between the arms of the inner member and provided with set screws bearing on the said arms, the stud being provided with a nut bearing on the bridge piece.

In testimony whereof I have affixed my signature, in presence of two witnesses.

FREDERICK F. McAVOY.

Witnesses:

C. F. BROWN,
P. W. PEZZETTI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."