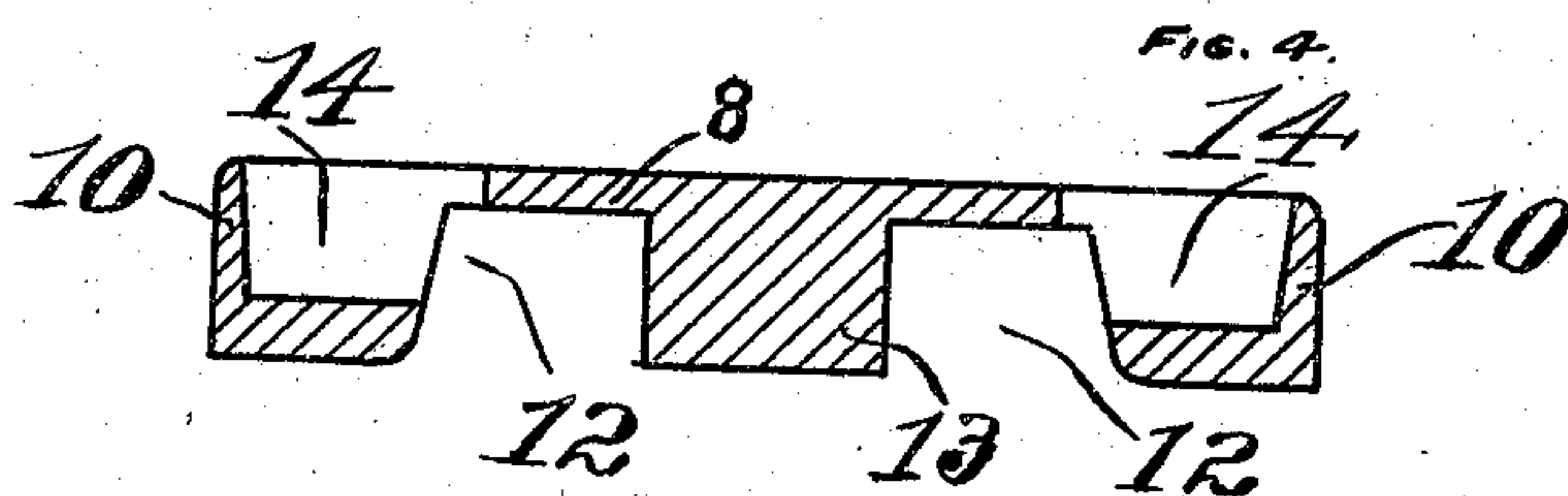
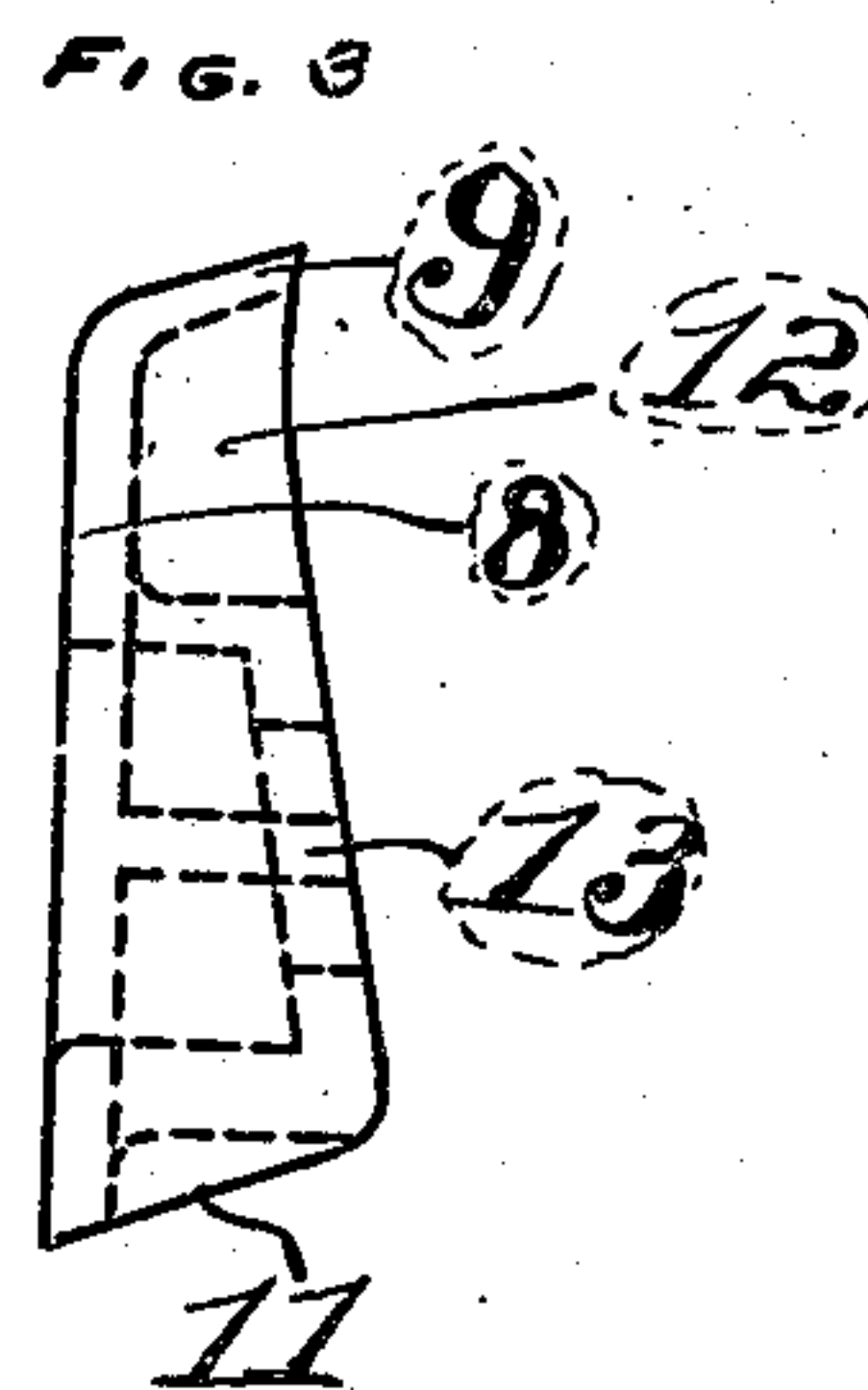
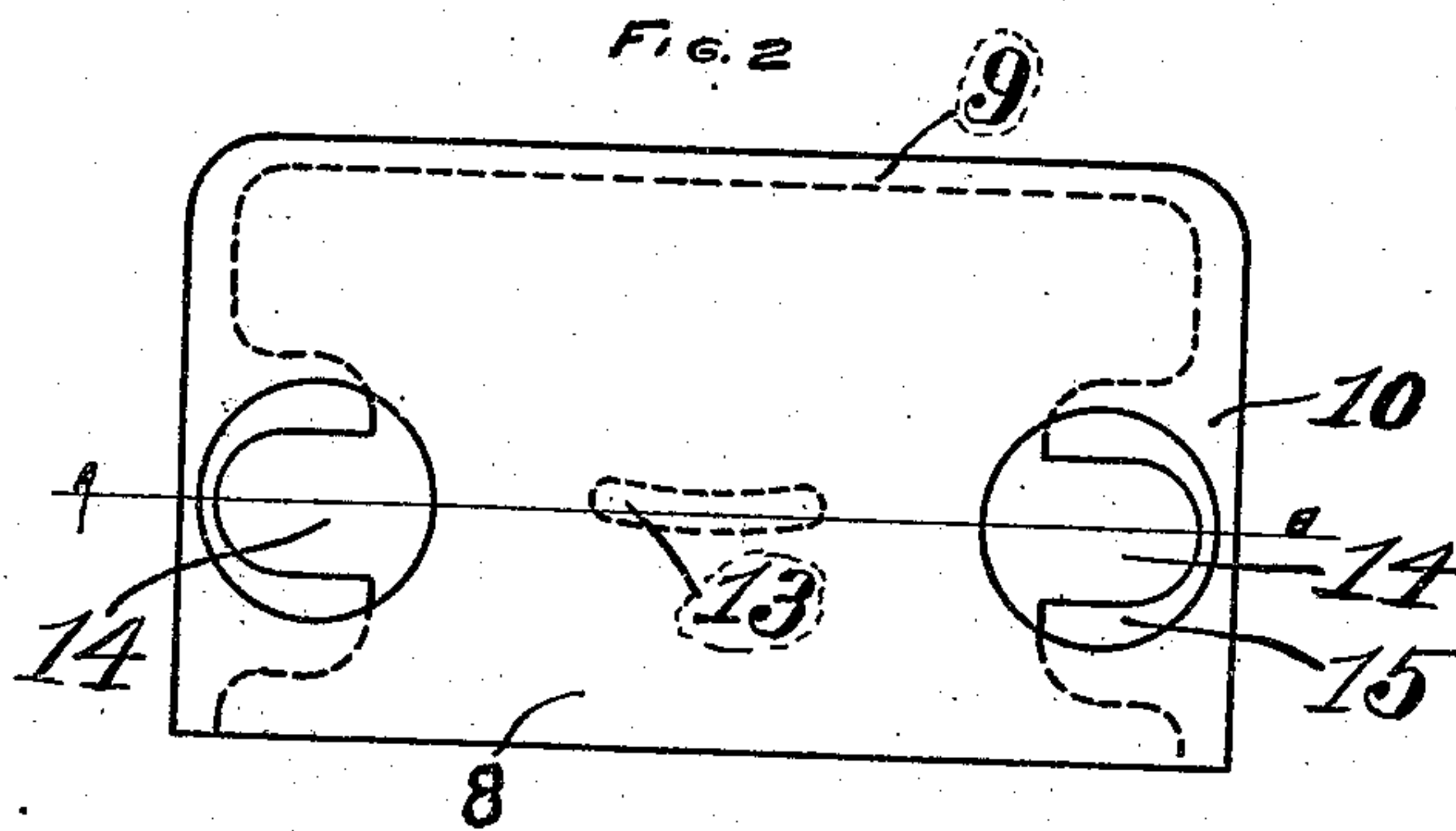
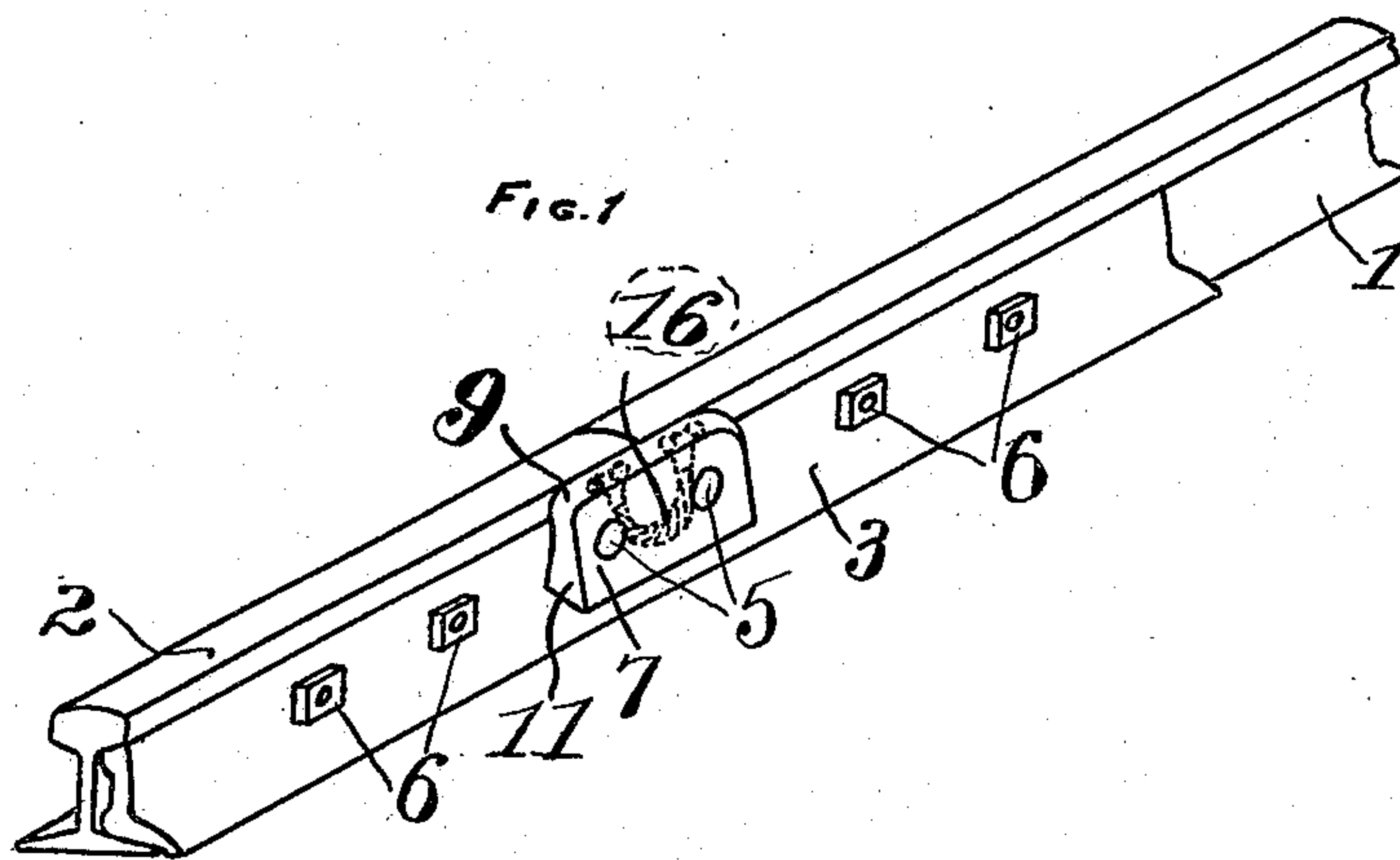


J. J. SAPPER & J. G. BRUEGGEMANN.
 GUARD FOR ELECTRIC RAILWAY RAIL BONDS.
 APPLICATION FILED AUG. 26, 1907.

915,797.

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UNITED STATES PATENT OFFICE.

JACOB J. SAPPER AND JOSEPH G. BRUEGGEMANN, OF ST. LOUIS, MISSOURI.

GUARD FOR ELECTRIC-RAILWAY RAIL-BONDS.

No. 915,797.

Specification of Letters Patent.

Patented March 23, 1906.

Application filed August 26, 1907. Serial No. 390,263.

To all whom it may concern:

Be it known that we, JACOB J. SAPPER and JOSEPH G. BRUEGGEMANN, both citizens of the United States, and residents of St. Louis, Missouri, have invented certain new and useful Improvements in Guards for Electric-Railway Rail-Bonds, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to a guard for an electric railway rail bond, and consists of certain novel features of construction and arrangement of parts, which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of two railway rails secured together, with parts broken away, having our invention applied thereto; Fig. 2 is a bottom plan view of the same; Fig. 3 is an end view, showing the interior structure of the end of the guard in dotted lines; Fig. 4 is a sectional view taken on the line A—B of Fig. 2.

The object of our invention is to construct a guard or shield to protect the copper bonding wire which is used for bonding the joints of electric railway track rails, to prevent the same from being torn away by accident, or by unauthorized persons.

Referring by numerals to the accompanying drawings:—1 and 2 indicate sections of track rails, said rails being connected by a fish plate 3, of any preferred construction. The fish plate 3 is secured to the rails by means of bolts 5, and nuts 6.

In the ordinary construction of securing the fish plate to the rails, the same is secured by means of six bolts. In applying our guard to the rail, we utilize two of these bolts and reverse the same; that is, the nuts of the two bolts which hold the guard to the rails are located on the inside of the rail.

7 designates the guard, which may be cast or pressed, as desired. Said guard comprises an exterior shell or casing 8, provided with a longitudinal flange 9, having rounded corners, and which flange is adapted to fit snugly against the side of the ball of the rail; and with vertical flanges 10, which are adapted to fit snugly against the fish plate 3, and which flanges are provided with inclined ends 11, which are cut away to fit the

fish plate. The shell 8, longitudinal flange 9, and the vertical flange 10 form a chamber or cavity 12. Secured to the shell 8 is a curvilinear stud 13.

14 designates circular openings, which pass through the shell 8 and through a portion of the vertical flanges 10; and formed in said openings are shoulders 15.

16 designates the bonding copper wire, the ends of which are secured to the adjacent ends of the rails 1 and 2 in any suitable manner. That is to say, these ends may be secured to the rails by being soldered; or holes may be drilled in the ball of the rails, and the twin-terminals of the wire driven into the holes.

Two of the bolts which are used for fastening the fish plate to the rails are inserted through the openings 14, and the nuts are applied thereto, on the inside of the rail, as hereinbefore stated; and, when tightened, the heads of said bolts are countersunk beneath the face of the shell 8, and are seated on the shoulders 15, it being understood, of course, that the guard is placed over the copper wire 16. The center portion of this wire will pass beneath the stud 13.

When our guard is applied to the rails, the flange 9 lies in a plane below the top surface of the balls of the rails, and consequently does not interfere with the passing of the wheels of the cars.

The guard thoroughly conceals and protects the bonding wire 16, and prevents said wire from being dislodged by accident, or from being tampered with by unauthorized parties. In order to obtain access to said wire, it would be necessary to take off the nuts of the bolts which secure said guard to the rails, which would necessitate the use of a wrench, and considerable manual labor.

Having fully described our invention, what we claim is:—

1. The herein described guard for electric railway rail bonds, comprising a plate, a flange integral with three sides of said plate to form a chamber on one side thereof, there being a pair of horizontally aligned apertures formed through said plate adjacent its ends, and a centrally disposed stud formed integral with the plate within the chamber.

2. The herein described guard for electric railway rail bonds, comprising a plate, a flange integral with the top and ends of said plate to form a chamber on the inside of

said plate, and there being a pair of horizontally alined apertures formed through said plate adjacent its ends.

3. The herein described guard for electric
5 railway rail bonds, comprising a plate, a
flange integral with the top and ends of said
plate to a form a chamber on the inside of
said plate, there being a pair of horizontally
alined apertures formed through said plate
10 and adjacent its ends, and shoulders inte-

gral with the flanges on the ends of said plate,
which shoulders project into the openings.

In testimony whereof, we have signed our
names to this specification, in presence of
two subscribing witnesses.

JACOB J. SAPPER.

JOSEPH G. BRUEGGEMANN.

Witnesses:

EDWARD E. LONGAN,
E. L. WALLACE.