

W. E. BEILHARZ.
MEANS FOR ATTACHING BOLTS TO CONCRETE.
APPLICATION FILED AUG. 8, 1907.

899,002.

Patented Sept. 15, 1908.

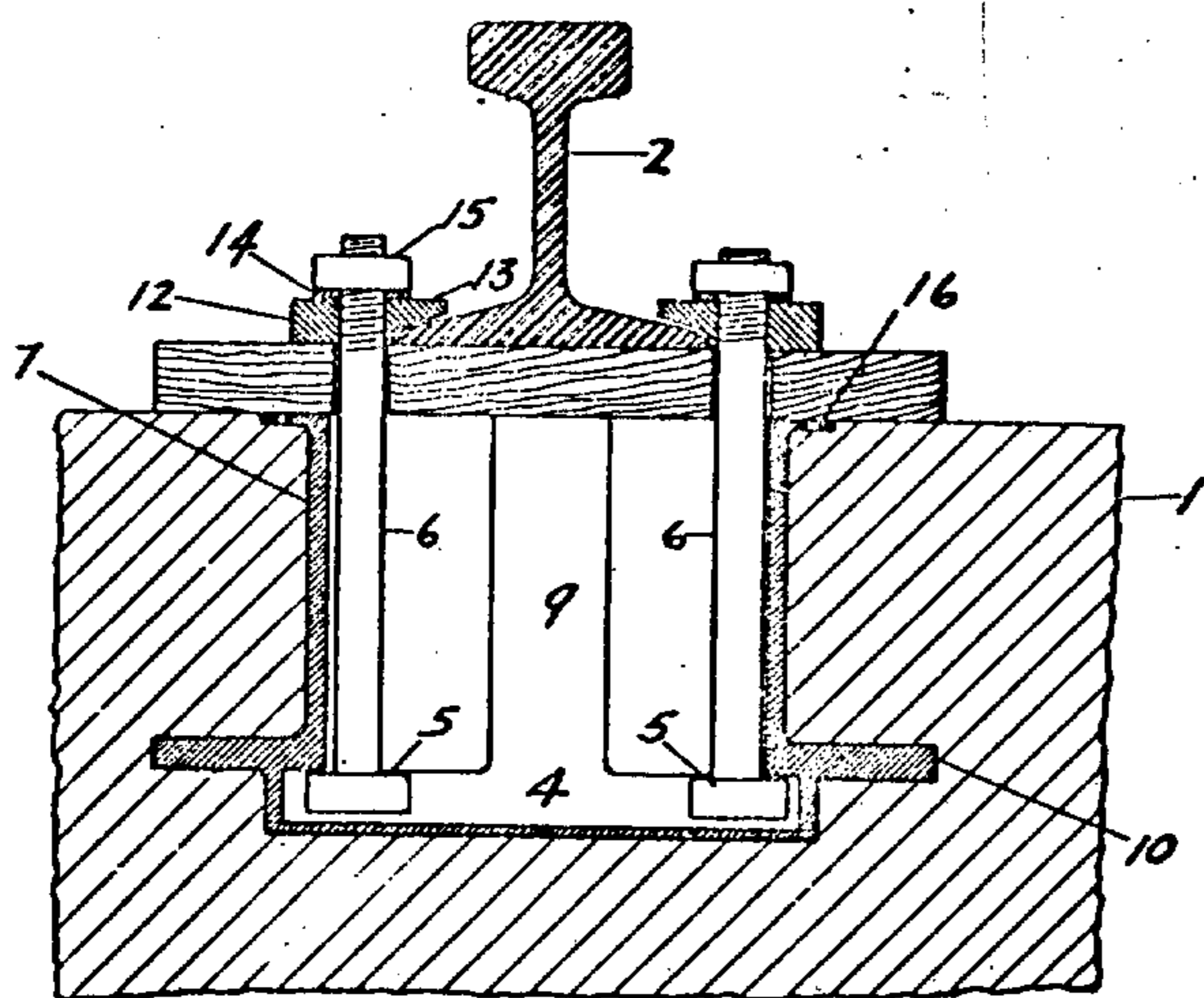


Fig. 1.

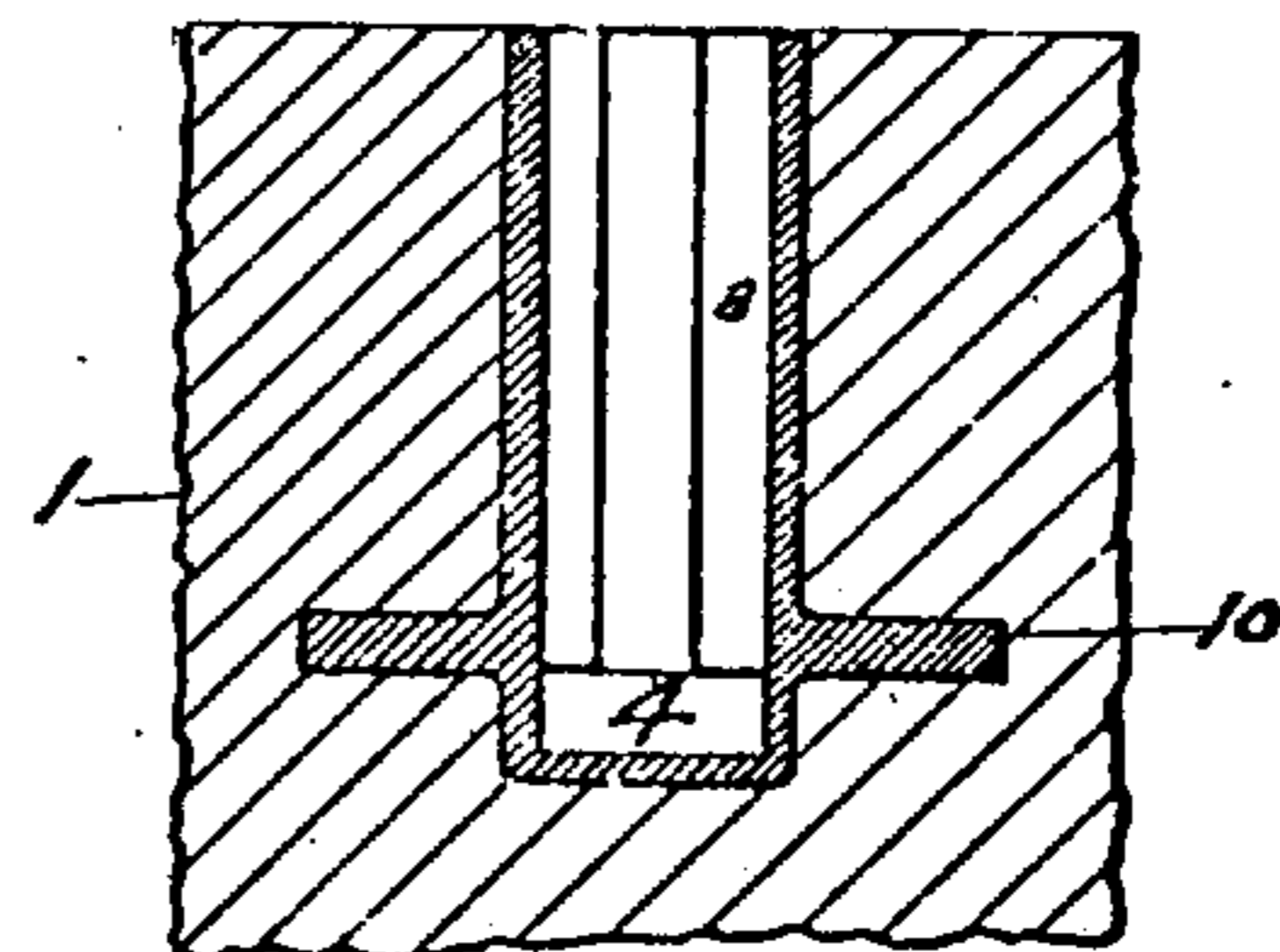


Fig. 2.

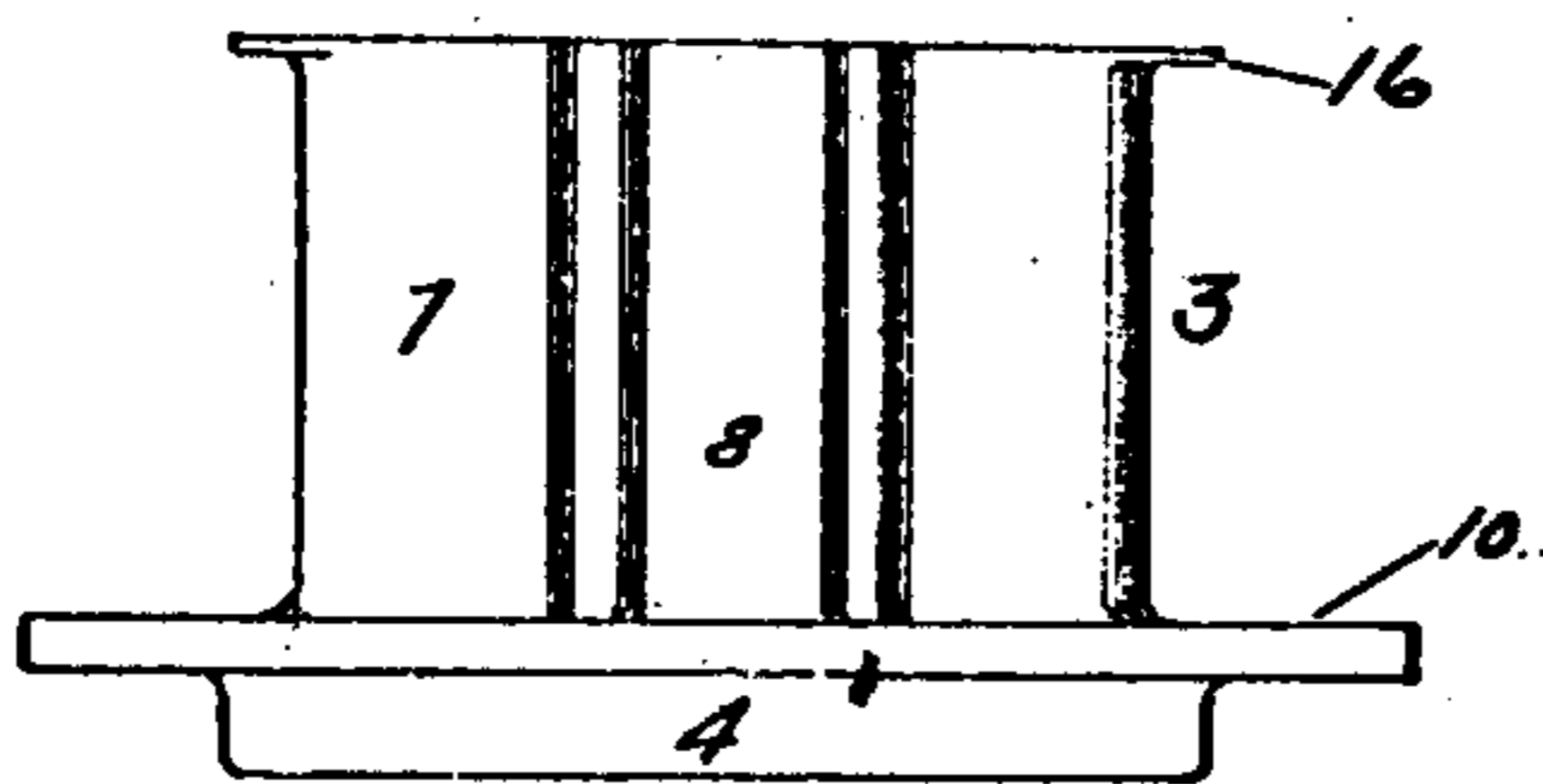


Fig. 3.

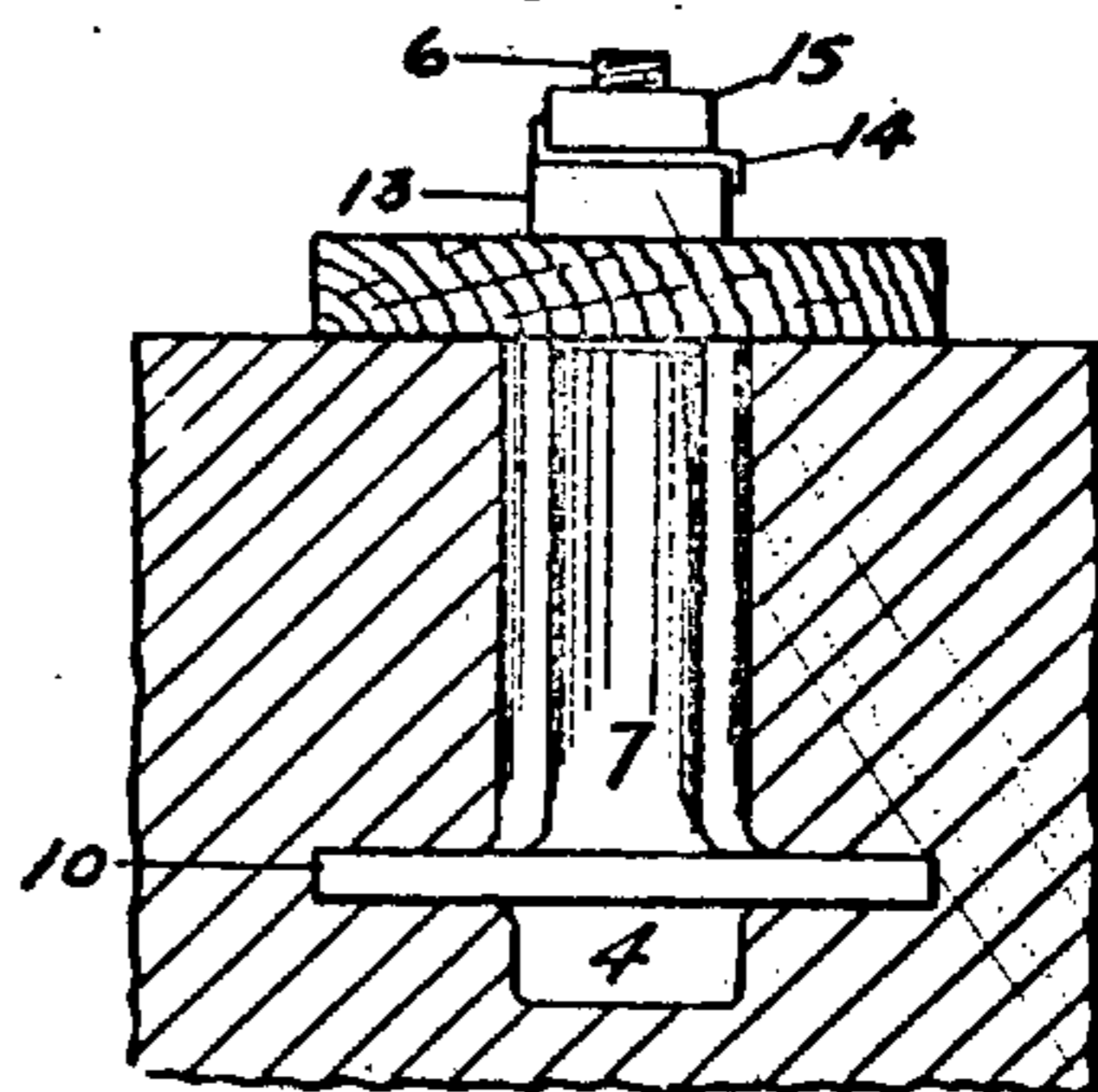


Fig. 4.

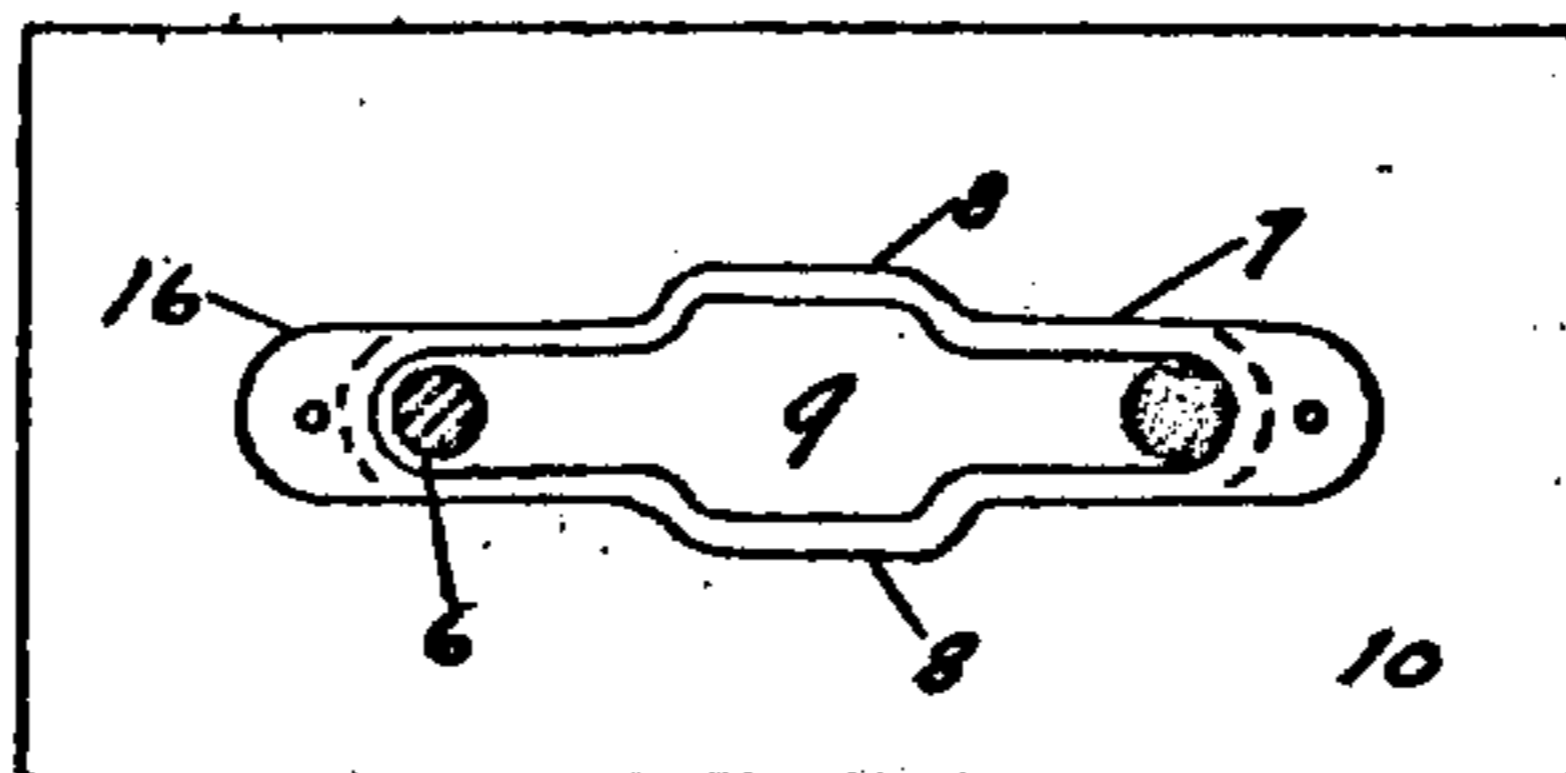


Fig. 5.

WITNESSES:

N. Keating
M. Eastman

INVENTOR,

William E. Beilharz.

BY

J. M. Wright,
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM E. BEILHARZ, OF SAN FRANCISCO, CALIFORNIA.

MEANS FOR ATTACHING BOLTS TO CONCRETE.

No. 898,002.

Specification of Letters Patent.

Patented Sept. 16, 1908.

Application filed August 3, 1907. Serial No. 337,539.

To all whom it may concern:

Be it known that I, WILLIAM E. BEILHARZ, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Means for Attaching Bolts to Concrete, of which the following is a specification.

The object of the present invention is to provide an improved means for securing bolts to concrete or other masonry, so as to permit of the ready insertion and removal of the bolt and to prevent disruption of the concrete or masonry due to the strain on the bolt. It is especially useful for securing rails to concrete railway ties.

In the accompanying drawing, Figure 1 is a broken longitudinal section of a concrete railway tie, having my device embedded therein and showing the rail in cross section; Fig. 2 is a cross section of the same through the enlarged central chamber; Fig. 3 is a side view of the device detached; Fig. 4 is an end view thereof; Fig. 5 is a plan view.

Referring to the drawing, 1 indicates a concrete railway tie in which my improved device is embedded, and 2 indicates a rail laid on the top of said tie. It is to be understood that, while the device is here shown as embedded in a concrete railway tie, it can also be used in other masonry constructions.

The device itself, shown at 3, is in the nature of a metallic housing, or socket, and comprises, first, a long, narrow box-like chamber 4 of uniform width, just sufficient to receive the head 5 of the bolt 6, second, parallel walls 7 extending from said chamber 4 upwards to the upper surface of the concrete separated by a distance a little greater than the thickness of the stem of the bolt, but formed at the middle with oppositely facing recesses or off-set portions 8, which thus form a central chamber 9 of sufficient width to receive the head of the bolt, and third, a flange or plate 10 extending horizontally from the level of the top of chamber 4, which plate, being embedded in the concrete, serves to secure the housing or socket very firmly therein.

The housing being in place is used in the

following manner. The head of the bolt is first passed below the level of the flange 10 and into the chamber 4. The bolt is now moved longitudinally to one end of the passage between the walls 7. Said walls are of sufficient length to permit two bolts, when in position at the ends of said passage, to extend on opposite sides of the flange of the rail. There is now passed down over the upper end of the bolt a clip 12 having an undercut beveled part 13 adapted to extend over the edge of the rail flange. Over said clip is now passed a piece 14 of thin sheet metal, and a nut 15 is now screwed down on the end of the bolt. The opposite projecting edges of the thin metal sheet 14 are now bent at right angles in opposite directions so that one edge engages the clip and the other engages the nut, thereby locking the nut against turning and firmly securing the rail in place.

From the ends of the walls 7 at the top extend outwardly small lugs 16, having apertures therein for the purpose of supporting the device when embedded in concrete. Rods may be passed through said apertures, and when the device is embedded in place said rods may be broken off at the top.

I claim:—

In a device of the character described, in combination with masonry construction, a metallic housing or socket, having in its lower portion a long narrow box-like chamber adapted to receive the head of a bolt, and having parallel walls extending upwards from said box-like portion and a sufficient distance from each other, for the main portion of their length, to receive the stem of a bolt but to exclude its head, and having at the center offset portions at a sufficient distance to receive therebetween the head of the bolt, substantially as described.

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

WILLIAM E. BEILHARZ.

Witnesses:

FRANCIS M. WRIGHT
D. B. RICHARDS.