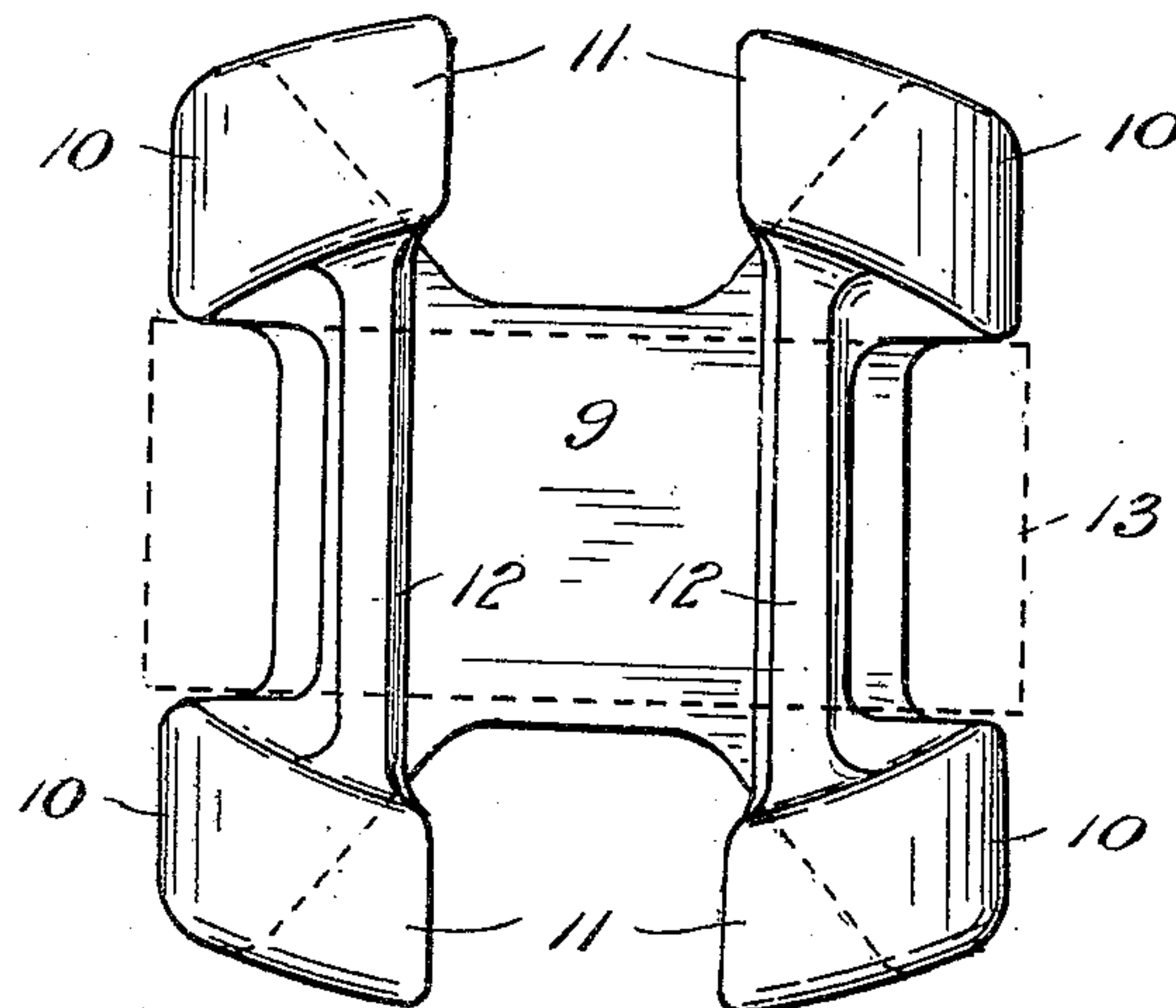
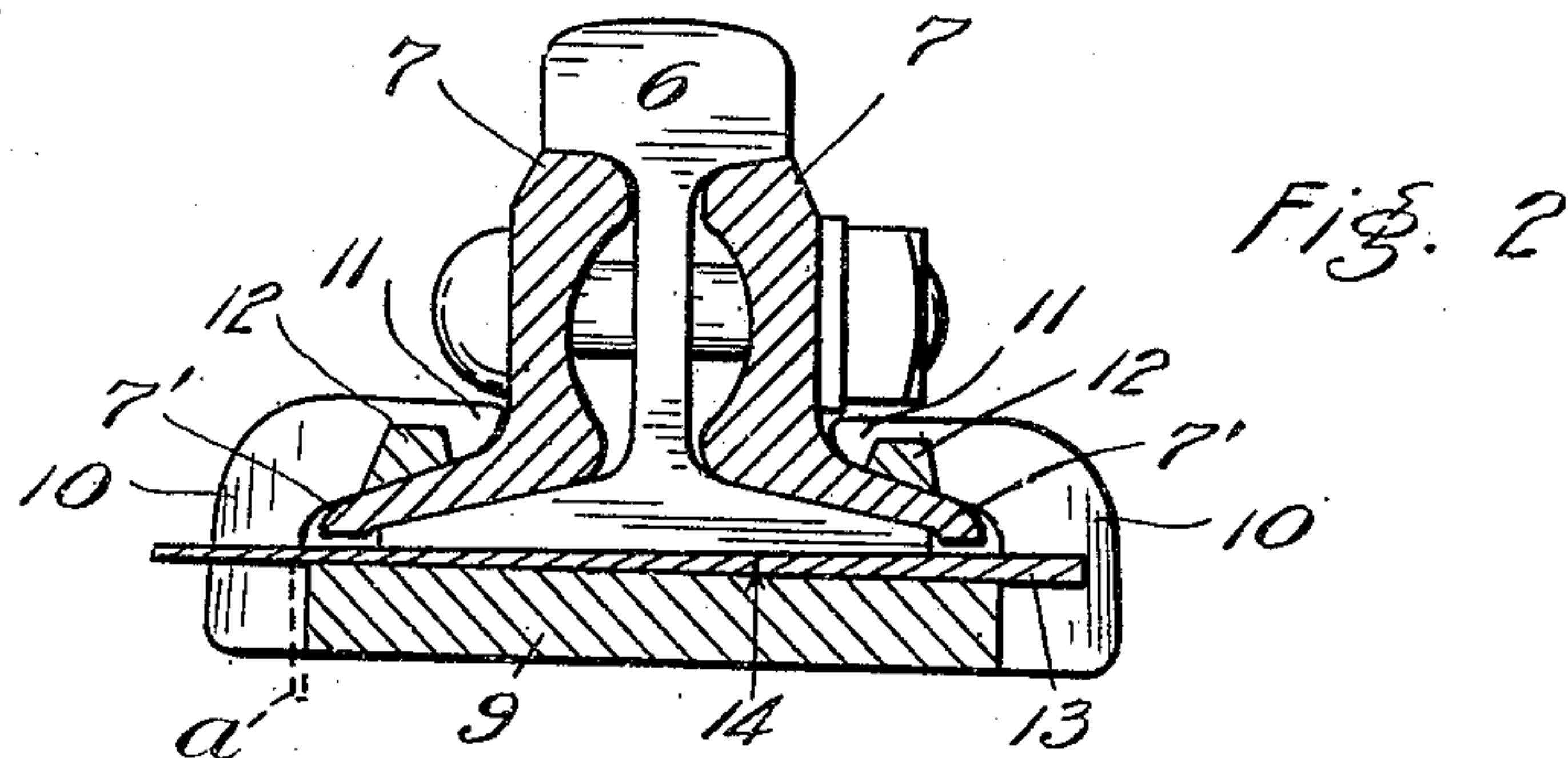
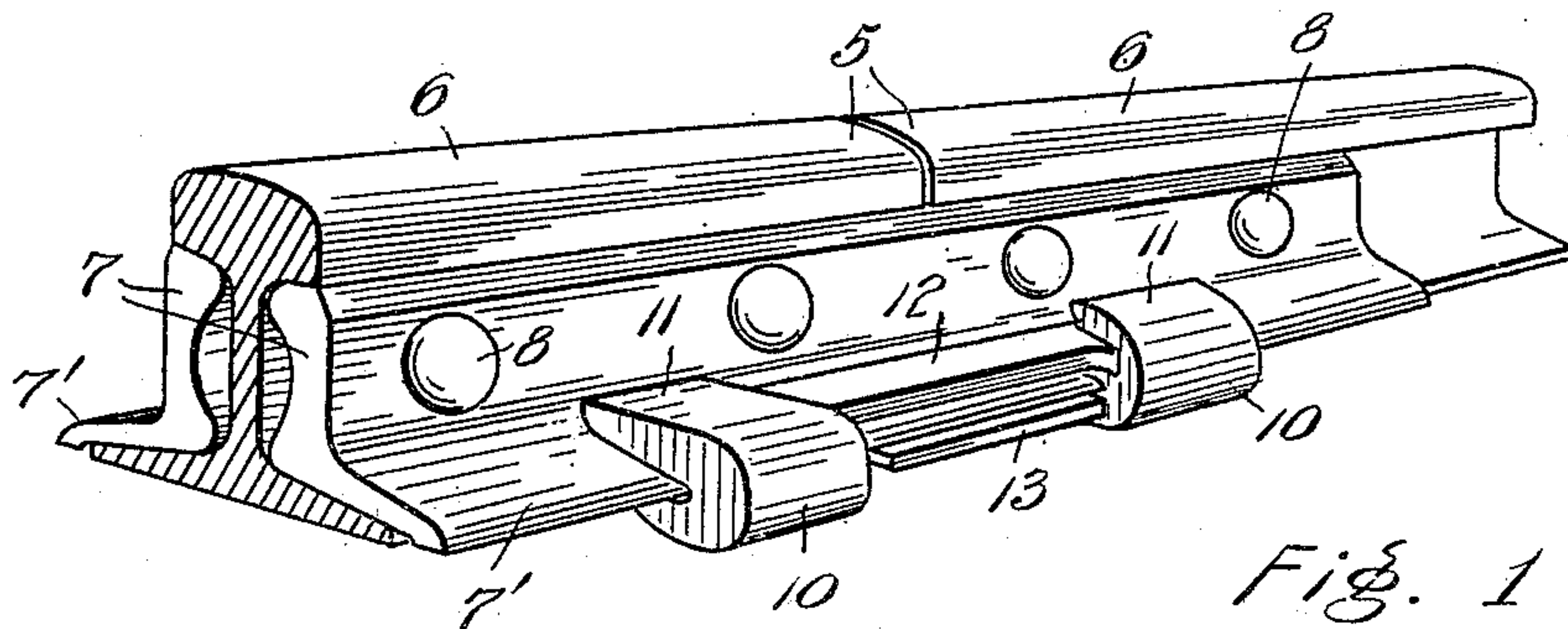


A. H. SHOEMAKER.  
RAIL END CLAMP.  
APPLICATION FILED JULY 26, 1909.

994,038.

Patented May 30, 1911.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ALVIN H. SHOEMAKER, OF SEATTLE, WASHINGTON, ASSIGNOR OF ONE-HALF TO  
WILLIAM I. EWART, OF SEATTLE, WASHINGTON.

## RAIL-END CLAMP.

994,038.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed July 26, 1909. Serial No. 509,692.

*To all whom it may concern:*

Be it known that I, ALVIN H. SHOEMAKER, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Rail-End Clamps, of which the following is a specification.

This invention relates to rail-clamping devices, the object of the invention being to provide a strong, simple and efficient bond whereby the rails of a railway track may be held in alinement and by which they may be supported at their juncture against the severe vertical strains to which they are commonly subjected.

A further object of the invention is to provide devices of this character which may be utilized in connection with railway track appliances now in general use.

The invention consists in the novel construction, and adaptation of a rail-end clamp, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of devices embodying the invention applied to a pair of track-rails. Fig. 2 is a vertical cross sectional view of the same taken at the rail joint. Fig. 3 is a plan view of the clamp shown detached.

The reference numeral 5 designates the meeting ends of two rails 6 which are secured together as usual by angle-bars 7 extending across the joint and secured to the adjoining rails by nutted bolts 8. According to my invention I provide a clamp member for said rails which is formed of a substantially rectangular-shaped base-plate 9 having at its corners hooked arms 10 extending outwardly therefrom. The hooks proper extend upwardly and have their bills 11 directed toward the longitudinal axis of the member. The inner ends of the hooked arms of each pair are connected together by a longitudinally extending tie bar 12 having a beveled lower face engaging the upper face of the base of an angle bar 7. With the base-plate subjacent to the rail-flanges the hooks are adapted to overlie the lower flanges 7' of the said angle-bars. The hooks being thus arranged afford two pairs of elements which in proximity of their extremities, or bills, are respectively connected by longitudinal tie-bars 12 whose under surfaces are adapted to contact with the corresponding top surfaces of the flanges 7'.

The distance between the underside surface of the hook-bills 11 and the upper surface of the plate 9 upon one side of the plate is somewhat greater than the corresponding distance between the bills and the base-plate at the other side of the plate. A wedge 13 having a taper proportional to the difference in height of the spaces inclosed by said hooks at the opposite sides of the plate 9 is employed to occupy the space between the opposing faces of the rail-flanges 14 and said plate. The wedge is adapted to be driven into such space to cause the angle-bar flanges 7' and said rail-flanges to be clamped between the hooks 10 and the wedge which is introduced above the plate 9. After the wedge has been driven by blows delivered upon its butt, the point of the wedge which protrudes beyond the plate 9 is bent downwardly thereover, as indicated by broken lines *a* in Fig. 2.

The clamp may be applied to a rail-joint during the construction of the track or it may be attached thereto subsequently and without the necessity of displacing the rails. The distance between the respective pairs of hooks is such that the flanges of the rails may be introduced therebetween by first inserting the flanges upon one side of the rails into the hooks of one side of the clamp while the latter is in a tilted condition and then bringing the clamp to a level to receive the other flanges of the rail within the gap, which by a side movement of the clamp are caused to occupy the hooks to the opposite side to those first entered. The angle-bars may then be inserted endwise between the rails and the respective pairs of hooks and brought into position to have the bolt-holes thereof register with those of the track-rails for the reception of the securing-bolts. The clamp is now properly located and the wedge driven in, as explained, to secure the parts rigidly together.

The clamp may be readily disconnected and removed from the rails by removing the clenched portion of the wedge 13, as with a hammer and cold chisel, or by straightening the same to its original plane condition and whereupon it may be withdrawn.

The advantage of a rail-end clamp constructed in accordance with my invention as herein disclosed resides primarily in its extremely strong and durable construction whereby greatly added strength is imparted



to that part of a railway track where heretofore it has been relatively weak.

A further advantage of this invention is the provision of a joint construction wherein the strains are distributed throughout the entire joint connection excepting that the bolts are thereby relieved of considerable of the strains to which they have hitherto been subjected.

Further advantages lie in the adaptability of the clamp to railway construction now in common use and the facility with which it may be applied thereto subsequent to the installation of the same, and in its extreme simplicity causing economy in manufacture and unskilled labor only being necessary in its application.

Having described my invention, what I claim, is—

1. A rail-end clamp comprised of a base-plate, upturned and inwardly extending hook-ends integral with and upon opposite sides of said base-plate, a longitudinally extending tie bar formed integral with the inner termini of each pair of hooked ends and a wedge adapted to be inserted between said base-plate and the flanges of a pair of rail-ends inserted within the said hook-ends.

2. The combination with a pair of rails and the angle-bars therefor, of a rail-end

clamp comprising a base-plate having at two of its opposite sides upturned elements terminating in inwardly extending hooks adapted to engage with the flanges of said angle-bars, a longitudinally extending tie bar formed integral with the inner termini of each pair of hooks and engaging the base of an angle bar and a wedge adapted for insertion between the base-plate and the bottom flanges of said rails.

3. In combination with a pair of rails and the angle-bars therefor, of a base-plate disposed therebelow and having a plurality of integral upturned elements each provided with an inwardly extending hook-end adapted to overlies the lower flanges of said angle-bars upon each side of the rails, the said hook-ends being also disposed to engage the said flanges at opposite sides of the rail-joint, a longitudinally extending tie bar formed integral with the inner termini of each pair of hooks and having a beveled lower face engaging the upper face of the base of an angle bar and means for rigidly securing the base-plate to the rails and angle-bars.

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Witnesses:

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