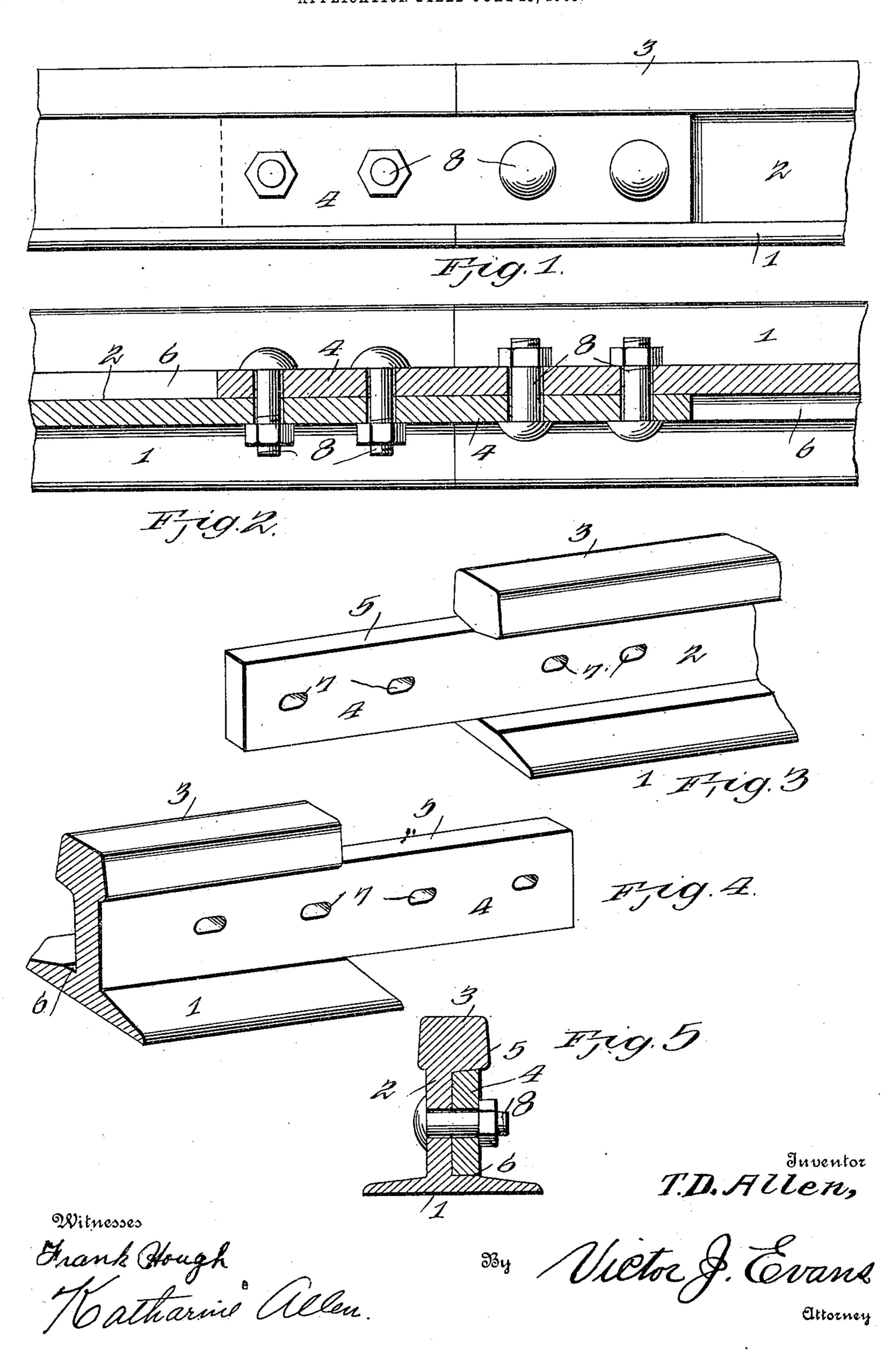
T. D. ALLEN.

RAIL JOINT.

APPLICATION FILED JULY 15, 1905.



## UNITED STATES PATENT OFFICE.

## THADDEUS D. ALLEN, OF YOUNGSTOWN, OHIO.

## RAIL-JOINT.

No. 807,986.

Specification of Letters Patent.

Patented Dec. 19, 1905.

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To all whom it may concern:

Be it known that I, Thaddeus D. Allen, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

The invention relates to an improvement in rail-joints designed particularly for securing the meeting end of railroad-rails together.

The main object of the present invention is the production of means formed integral with the rails and adapted to interlock and be secured with similar means on the adjacent end of the opposing rail whereby to prevent independent movement of the rail ends.

The invention will be described in connection with the accompanying drawings, wherein—

Figure 1 is a view in side elevation, showing my improved rail-joint. Fig. 2 is a longitudinal central section of the same, securing-bolts being shown in plan. Fig. 3 is a perspective of one of the rail ends constructed in accordance with my invention. Fig. 4 is a similar view of the adjacent rail end. Fig. 5 is a transverse section illustrating the connection between the rail ends.

Referring to the drawings, my improved rails comprise the usual base 1, web 2, and tread 3, which for the purposes of my invention may be constructed in any desired or preferred manner.

My invention consists in offsetting the web 2 of the rail and extending said offset beyond the rail end to provide an extension-bar 4. Each of the rails is formed with an extension-bar, but the meeting ends of adjacent rails are formed to project the extension-bars in offset planes, so that when said rails are connected the extension-bar of one rail will contact with and abut squarely against the extension-bar of the other rail.

To provide for properly supporting the rails against independent vertical movement, I arrange receiving-shoulders 5 and 6 for the extension-bars of the adjacent rail. These shoulders are formed by squaring the under side of the tread of the rail immediately ad-

jacent the web 2 and also in squaring a portion of the base-flange 1 of the rail contiguous the web 2. By thus providing shoulders 5 and 6 adjacent the web of each rail and arranging said shoulders to snugly receive the upper and lower edges of the extension-bars 55 I provide a squared socket in which the extension-bars fit and which by virtue of the contact described tend to prevent any independent movement of the rails.

The extension-bars 4 and the webs 2 of the 60 rails are provided with the usual elongated openings 7, designed to respectively register when the rails are assembled and receive the usual securing-bolts 8. In securing the rails together the respective extension-bars are inserted between the shoulders 5 and 6 of the receiving-socket, the rails being moved longitudinally until their respective treads 3 abut, as shown in Figs. 1 and 2. In this position the extension-bar of one rail will overlie and 70 contact with the web portion of the adjacent rail, the openings 7 registering to permit the insertion of the securing-bolts 8.

The rail-joint described is of simple construction, and owing to its integral formation 75 with rails proper is capable of the maximum service in use.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A rail-joint comprising rails having their base-flanges and treads terminating in vertical alinement, and extension-bars projecting from the webs of said rails, said bars being in parallel relation to the webs but in offset 85 planes to provide shoulders at the connection of the web and extension-bars to receive the extension-bar of the adjacent rail, the tread portion of one rail being squared adjacent its extension-bar to receive the upper edge of 90 the extension-bar of the adjacent rail.

In testimony whereof I affix my signature in presence of two witnesses.

THADDEUS D. ALLEN.

Witnesses:

GEO. H. GLAZZARD, THOMAS W. BELL.