No. 709,045. Patented Sept. 16, 1902.

L. ROTH.

RAIL JOINT.

(Application filed July 2, 1902.)

(No Model.)

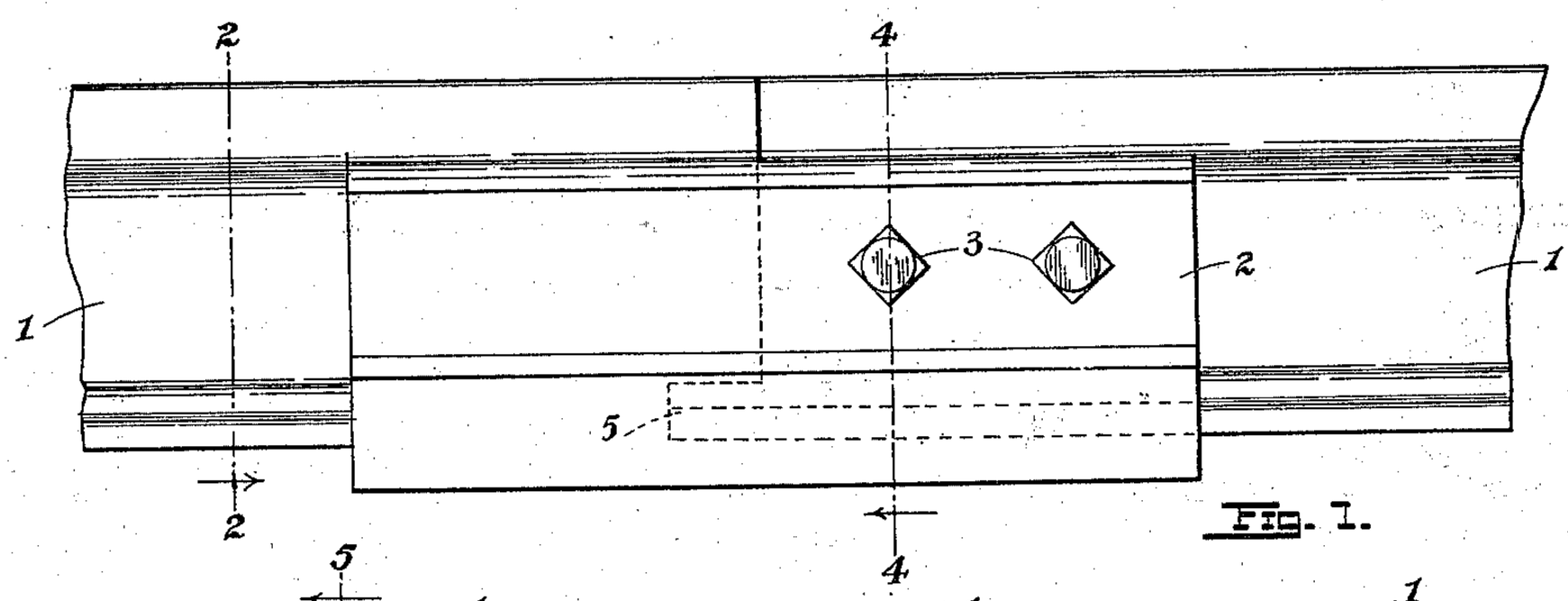

Fig. 1.

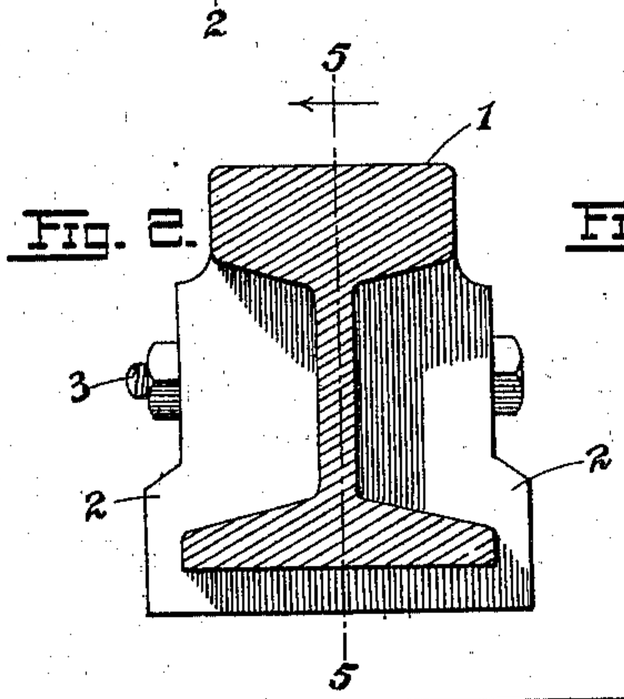

Fig. 2.

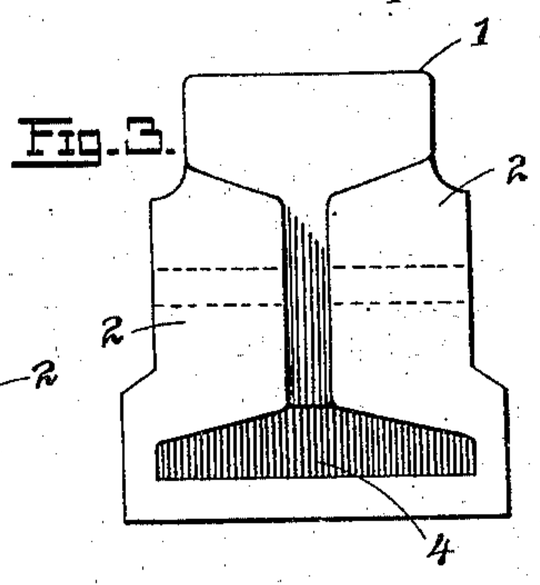

Fig. 3.

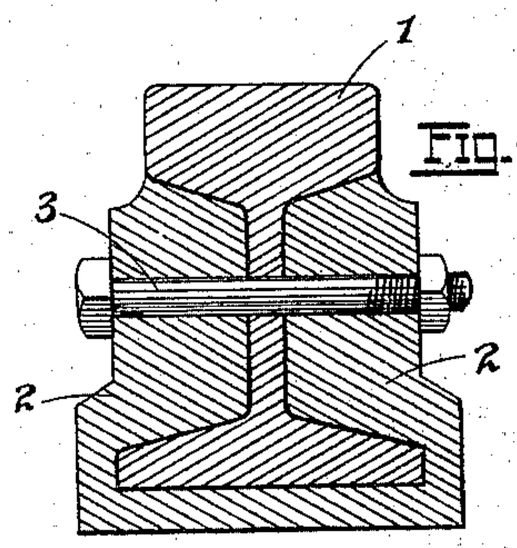

Fig. 4.

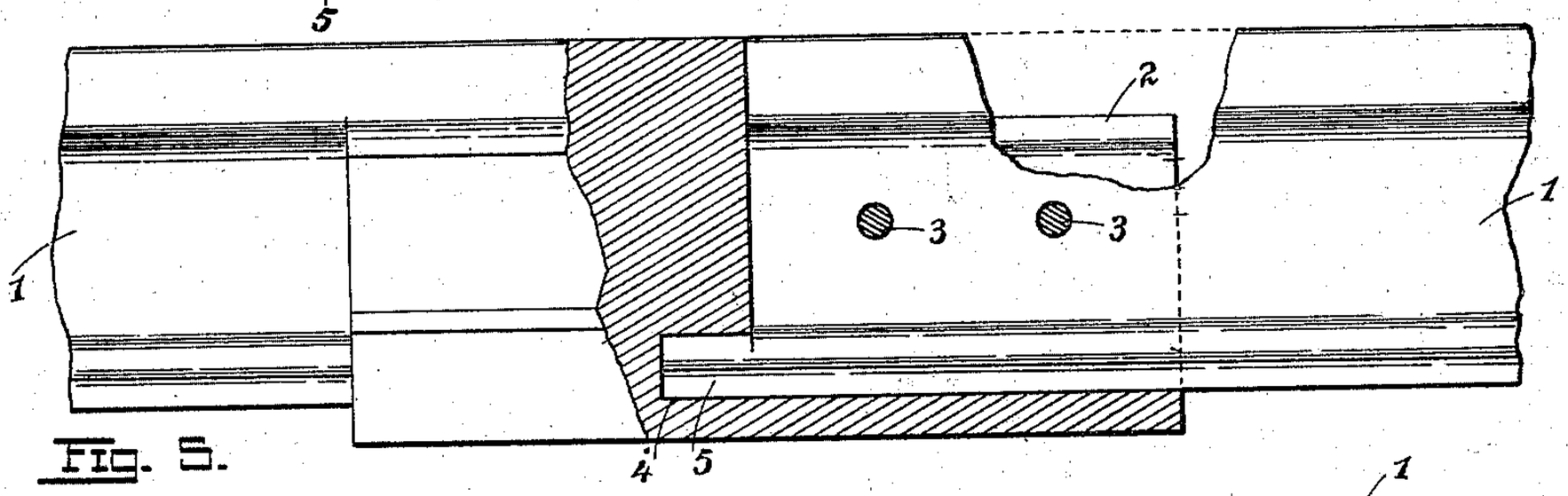

Fig. 5.

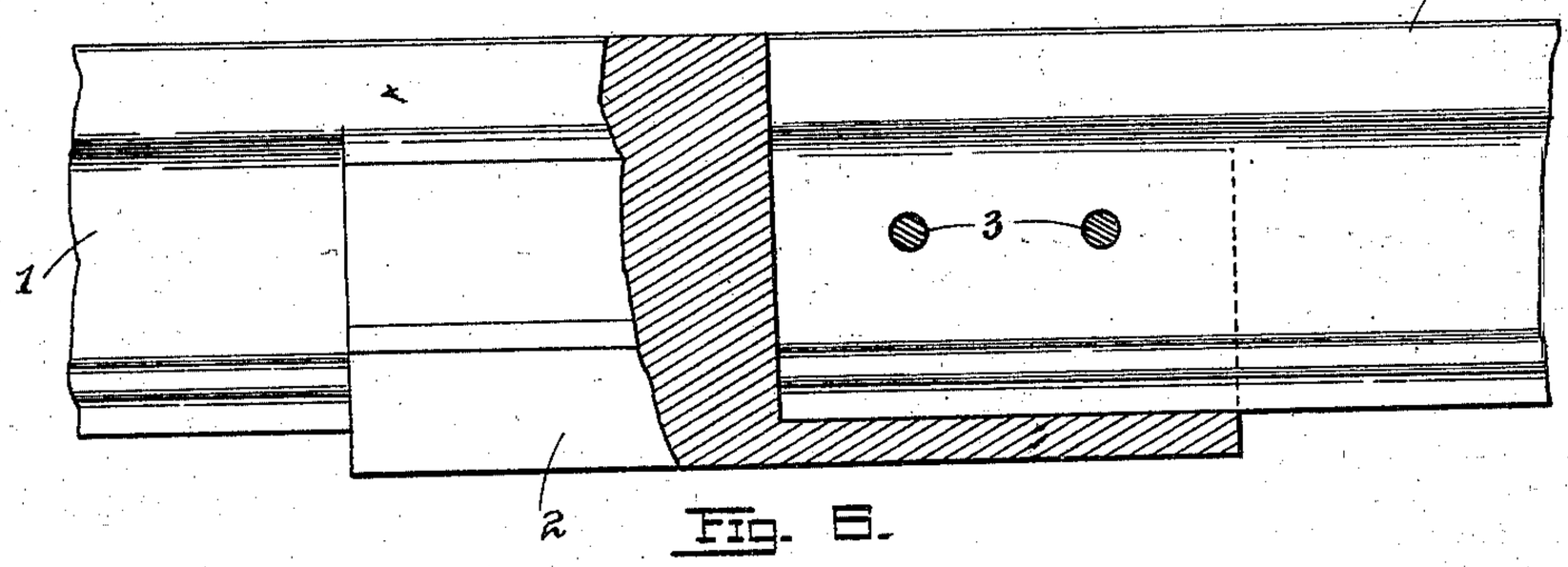

Fig. 6.

Witnesses
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UNITED STATES PATENT OFFICE.

LUDWIG ROTH, OF ST. LOUIS, MISSOURI.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 709,045, dated September 16, 1902.

Application filed July 2, 1902. Serial No. 114,144. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG ROTH, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Rail-Joints, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in rail-joints; and it consists in the novel construction of joint more fully set forth in the specification, and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of my invention. Fig. 2 is a vertical transverse section on line 2 2 of Fig. 1. Fig. 3 is an end view of the channel end of the rail. Fig. 4 is a section on line 4 4 of Fig. 1. Fig. 5 is a combined elevation and section on line 5 5 of Fig. 2, and Fig. 6 is a view similar to Fig. 5 of a modification.

The object of my invention is to construct a rail-joint which shall dispense with the ordinary and prevailing fish-plate by which the meeting ends of adjacent rails are usually connected, one which will be simple, durable, and elastic, and one possessing further and other advantages better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, 1 1 represent the rails. Formed integrally with one end of each rail is a channel extension 2, serving as a housing for the opposite end of the next adjacent rail. The interior contour of said channel conforms to the contour of the outer surface of the rail, so as to snugly receive the latter, and when once fully inserted into said channel the rail is secured to the vertical walls of the channel by means of bolts 3 3. The side walls of the channel project a suitable distance beyond the web of the rail of which the channel forms a part, and the base of the channel extends below the lower flange of the rail, as best seen in Figs. 2 to 4, inclusive. To impart elasticity to the joint, I form a pocket 4 at the inner end of the cavity forming the channel, said pocket receiving a tongue 5, forming an extension of the lower flange of the end of the rail inserted into the channel. In the passage of a rolling load over the joint the elasticity of the tongue will restore the joint to its normal level in case the load is of sufficient weight to depress said joint. The tongue 5, too, reduces the jar incident to the passage of a car over the joint. As seen in Fig. 6, I may dispense with the pocket 4 and tongue 5, in which case the cavity of the channel would terminate at the base of the end of the rail carrying the same.

It will be seen from the foregoing that I dispense altogether with fish-plates or any parts likely to become detached from the rails at the joint, the channel serving, too, as a convenient saddle for the end of the rail inserted thereinto. The upper edges of the side walls of the channel support the upper flanges of the rail inserted into it, so that the device forms a very effective joint.

Having described my invention, what I claim is—

1. A rail-joint comprising a channel extension formed integrally with one end of the rail, and adapted to receive the opposite end and support the flanges of the next adjacent rail, substantially as set forth.

2. A rail-joint comprising a channel extension formed integrally with one end of the rail and having its outer walls extending respectively beyond the web and below the lower flange thereof, a pocket formed in the chamber of the channel below the end of the rail proper, and adapted to receive the opposite end, and support the flanges of the next adjacent rail, a tongue forming a continuation of the lower flange of the end inserted into the channel, and adapted to be received by the said pocket, and securing-bolts passed through the side walls of the channel and the web of the rail end thus inserted, substantially as set forth.

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

LUDWIG ROTH.

Witnesses:
EMIL STAREK,
G. L. BELFRY.