

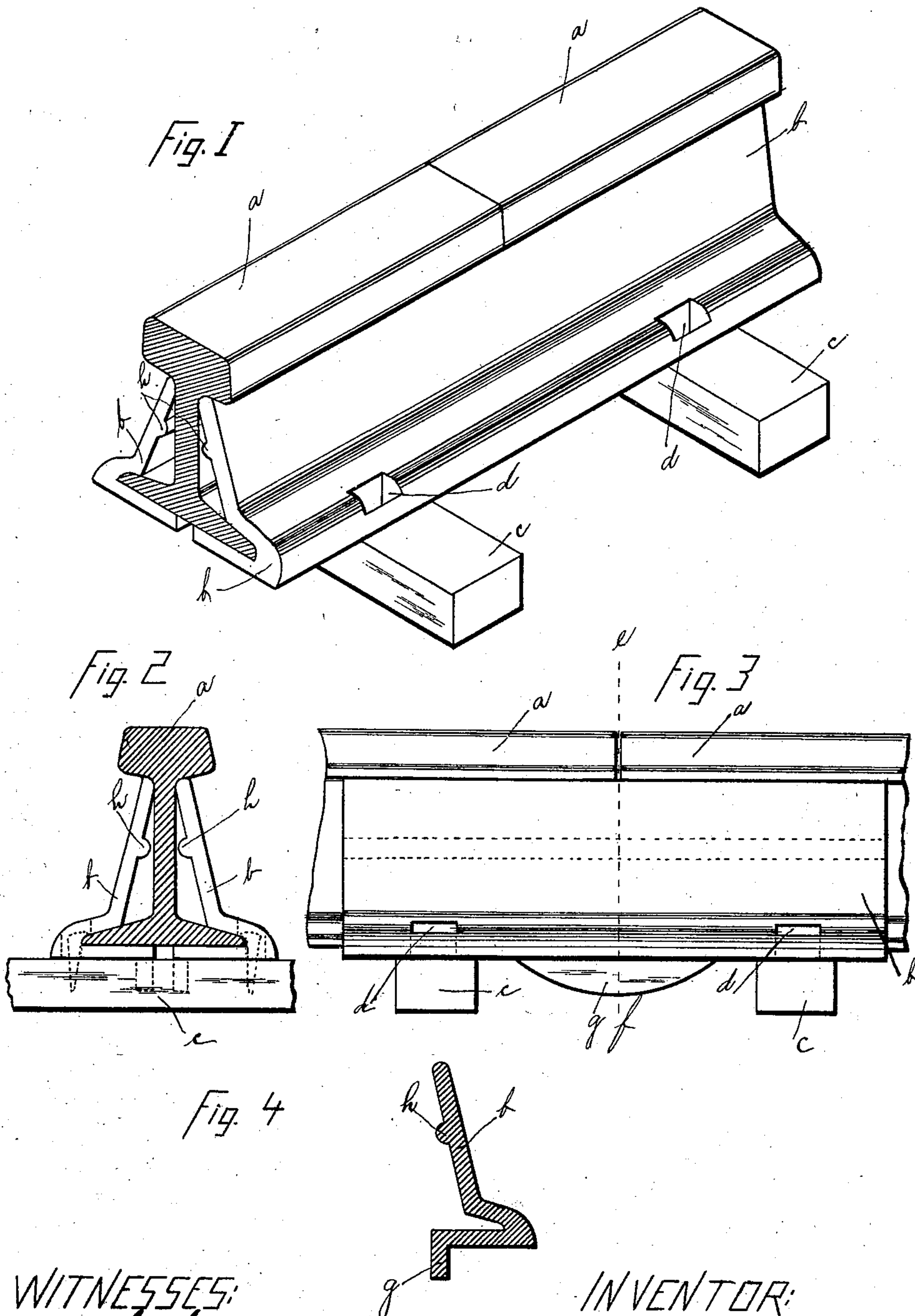
No. 694,655.

Patented Mar. 4, 1902.

J. L. MAYES.
RAILROAD JOINT.

(Application filed Mar. 27, 1901: Renewed Feb. 8, 1902.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN LEWIES MAYES, OF ST. LOUIS, MISSOURI.

RAILROAD-JOINT.

SPECIFICATION forming part of Letters Patent No. 694,655, dated March 4, 1902.

Application filed March 27, 1901. Renewed February 8, 1902. Serial No. 93,482. (No model.)

To all whom it may concern:

Be it known that I, JOHN LEWIES MAYES, a citizen of the United States, residing at St. Louis, State of Missouri, have invented a certain new and useful Improvement in Railroad-Joints, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention has relation to improvements in railroad-joints, and consists in the novel arrangement of parts, more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a perspective view showing the ends of two rails and the shape of my joint. Fig. 2 is an end view. Fig. 3 is a side elevation. Fig. 4 is a section of my joint, taken on the line E F of Fig. 3.

My object is to connect the meeting ends of railway-rails without the use of bolts passing through the rails and in such a manner that the joints will be as strong as the rail, thus producing a practically continuous rail; and my invention consists of two mating side pieces adapted to be arranged upon opposite sides of the rails and adapted to be held in position by being spiked to the ties and each of said side pieces being adapted to engage and support the ball or upper flange of the rail and also engage and support the lower flange, and each of said side pieces being trussed to increase their strength.

Referring to the drawings, A represents the ends of two rails; B, the two sides of the joint; C, the ties.

D are holes through which the spikes are driven to hold the joint and rail to the tie.

G is a projection on the under side of the joint and between the ties to give strength to the joint.

H is a rib running along the inner sides of the joint to act in the same manner as G.

Each one of the sides B consists of an inclined flat portion extending from the upper edge of the web of the rail and the lower face of the upper flange downwardly and outwardly to a point on the upper side of the lower flange about half-way from the lower edge of the web to the outer edge of the lower flange, thus occupying the position of the ordinary fish-plate, except that it is inclined away from the web instead of lying directly

against the web. Each of the sides B also has a second portion extending from the lower edge of the first portion outwardly and downwardly to the outer edge of the lower flange and a third portion extending backwardly from the lower outer edge of the second portion under the lower flange to a point in vertical alinement with the web. The projection G extends downwardly from the inner edge of the third portion at its longitudinal center and for some distance on each side of the center and serves as a truss. The rib H extends along the inner face of the first portion. The conformation, as shown in cross-section in Fig. 4, is well adapted to sustain all the strains to which a rail-joint is likely to be subjected. The spike-holes D are formed through the second and third portions.

There are several advantages in making the two pieces exactly alike. It provides two independent trussed members, it is exactly balanced in the distribution of strains, and there is no tendency to tip over or twist. There are two independent points of support upon each side and evenly balanced, and all shearing is eliminated.

In fish-plate and other similar joints pressure has a decided tendency to spread the plates and shear the bolts. In my construction the base which rests on the ties is wider than the rail and extends beyond the flanges on both sides, and then each side piece is inclined inwardly as it passes upwardly, so that they serve as braces upon opposite sides of the rail and braces to each other and pressure brings the upper edges together, firmly gripping the upper edge of the rail-web.

I claim—

1. In a device of the class described, two mating side pieces, each of said side pieces comprising a portion adapted to occupy a position extending from the lower face of the upper flange or ball and the upper edge of the rail-web to the center of the upper face of the lower flange, said portion being inclined away from the web, a second portion extending outwardly and downwardly to the outer edge of the lower flange; a third portion extending backwardly under the lower flange, and a projection extending downwardly from the inner edge of the third portion to form a truss, all adapted to support the ball of the rail and

grip the upper edge of the rail-web, without the use of bolts through the rail, and also adapted to support the lower flanges, and also adapted to serve as equalized braces to hold the rail from tipping or twisting, substantially as specified.

2. In a device of the class described, two mating side pieces, each of said side pieces comprising a portion adapted to occupy a position extending from the lower face of the upper flange or ball and the upper edge of the rail-web to the center of the upper face of the lower flange, said portion being inclined away from the web, a strengthening-rib extending along the inner face of said portion, a second portion extending outwardly and downwardly to the outer edge of the lower flange, a third portion extending backwardly under the

lower flange, there being spike-holes through the joined edges of the second and third portions outside of the rail, a projection extending downwardly from the inner edge of the third portion to form a truss, all adapted to support the ball of the rail and grip the upper edge of the rail-web without the use of bolts through the rail, and also adapted to support the lower flanges, and also adapted to serve as equalized braces to hold the rail from tipping or twisting, substantially as specified.

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

JOHN LEWIES MAYES.

Witnesses:

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JAS. H. WALKER.