

L. MUELLER.
TRUSS SUPPORT FOR RAIL JOINTS.
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919,617.

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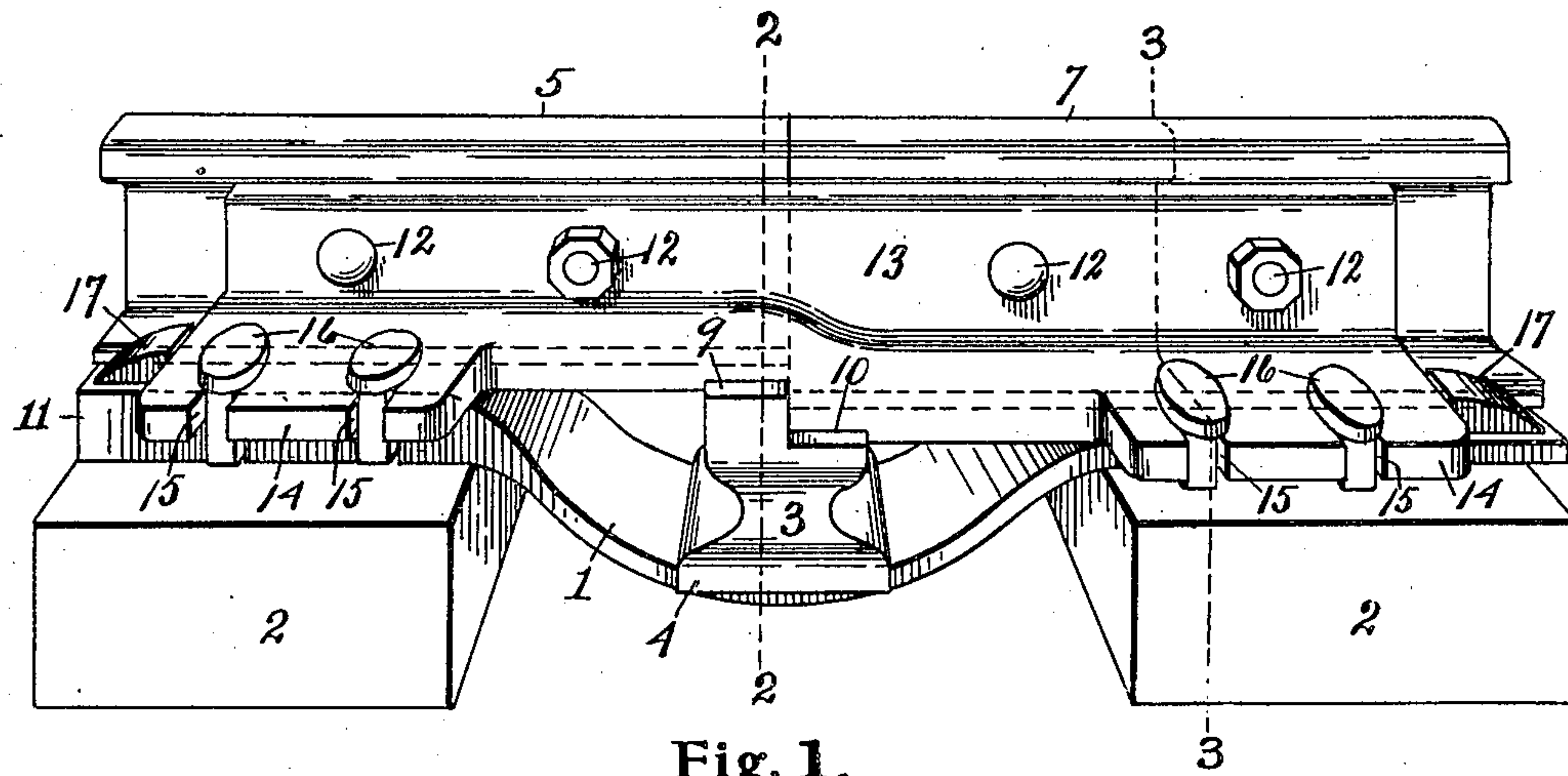


Fig. 1.

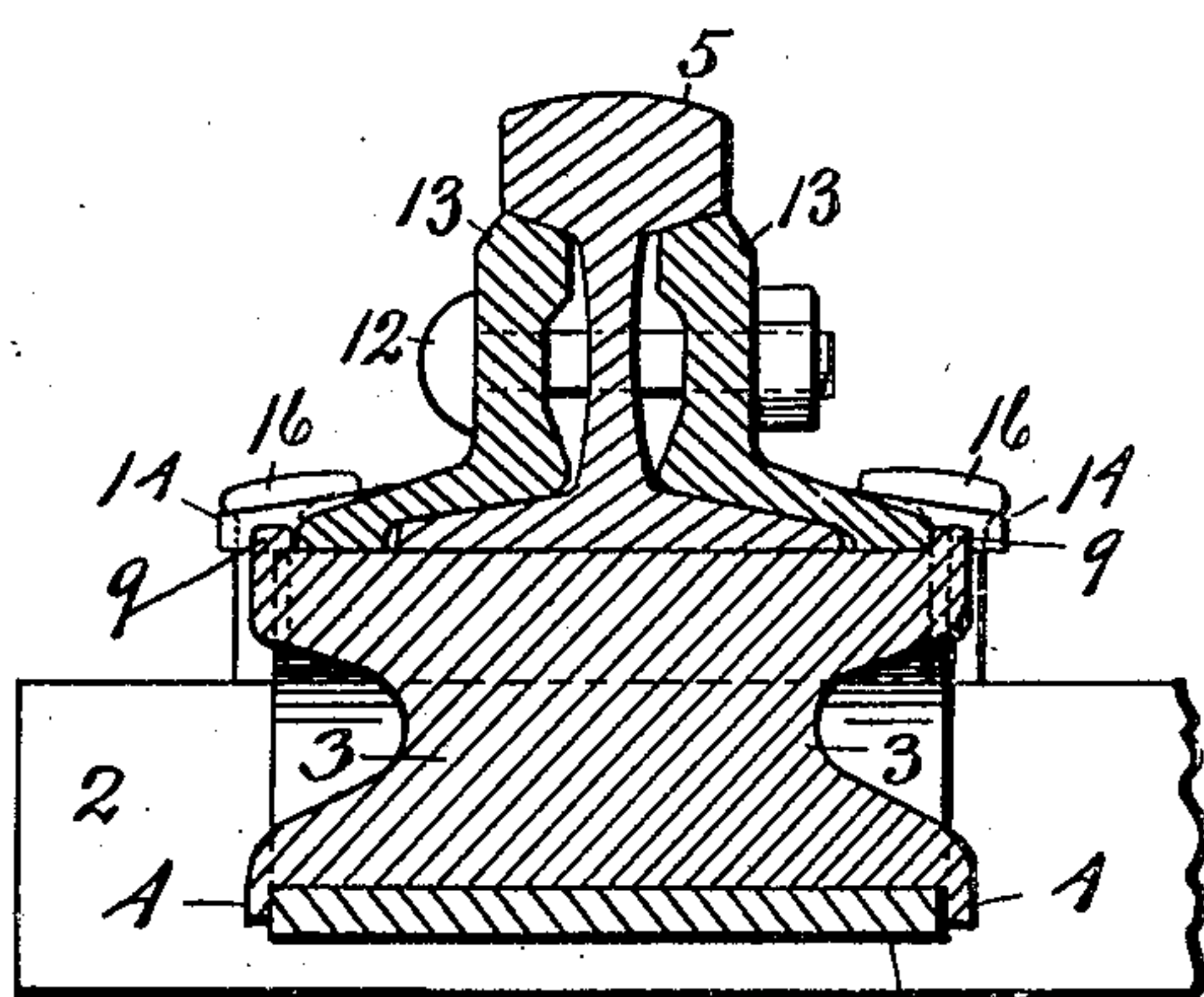


Fig. 2.

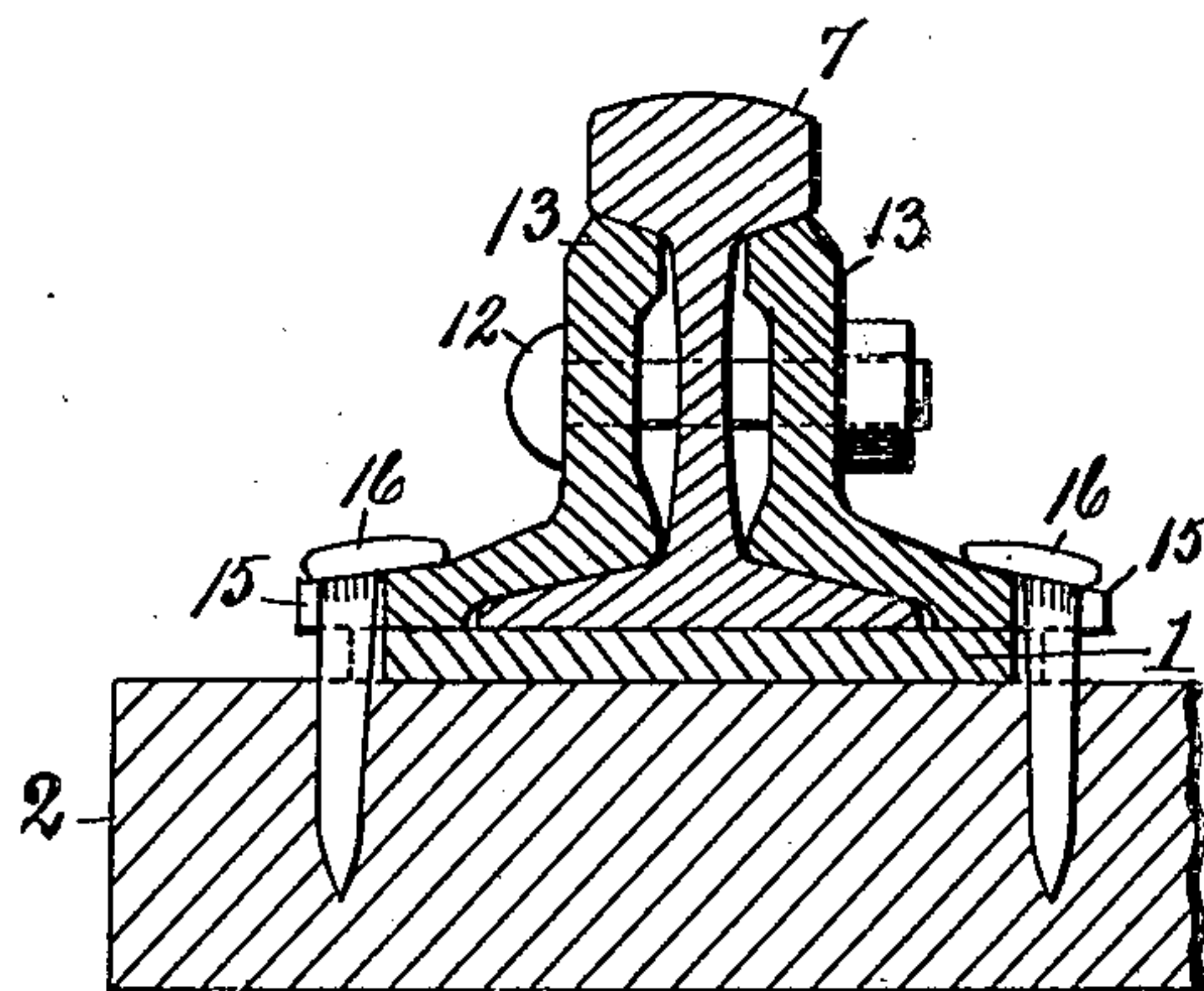


Fig. 3.

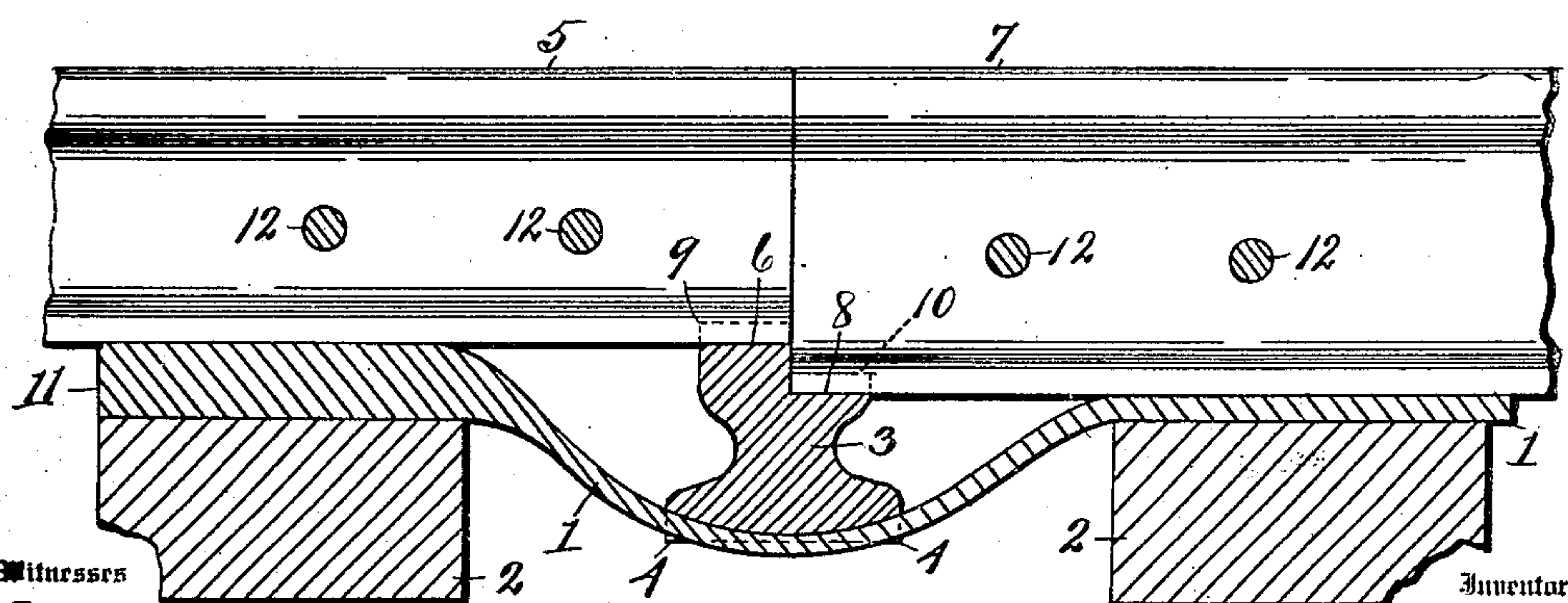


Fig. 4.

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TRUSS-SUPPORT FOR RAIL-JOINTS.

No. 919,617.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed October 26, 1908. Serial No. 459,519.

To all whom it may concern:

Be it known that I, LOUIS MUELLER, a citizen of the United States, residing at Owosso, in the county of Shiawassee, State of Michigan, have invented certain new and useful Improvements in Truss-Supports for Rail-Joints; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a truss support for rail joints, more expressly designed for effecting a compromise joint between the ends of railway rails of different cross section, and consists in the construction and arrangement of parts hereinafter more fully set forth and pointed out particularly in the claims.

The object of the invention is to provide a joint of the character described of comparatively simple and inexpensive construction, wherein the arrangement is such as to afford a firm support for the meeting ends of rails of different transverse section, and at the same time provide for carrying the wave motion of the rails through said joint and obviate wheel blows on the heads of the rail ends by maintaining a perfect surface between the heads of the rails at the joint.

The above object is attained by the structure illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of one side of a rail joint showing the application of my invention. Fig. 2 is a transverse section on line 2—2 of Fig. 1. Fig. 3 is a transverse section on line 3—3 of Fig. 1. Fig. 4 is a longitudinal section through one margin of the trussed joint-plate, and a transverse section through one end of the block resting thereon which receives the base of the rails at their ends, the ends of the ties on each side of the joint and the transverse bolts passing through the web of the rails, appearing in section.

Referring to the characters of reference, 1 designates the truss plate for the rail joint, the central portion of which between the ties 2 is depressed, or curved downwardly, as shown, to form a support for the bearing block 3 which rests upon and extends transversely of the central portion of said plate,

and is provided with terminal flanges 4 at its ends which embrace the margins of said plate to prevent transverse movement of the bearing block thereon. The end of the narrow or light rail 5 rests upon the upper face 6 of the block 3, while the end of the wide or heavy rail 7 rests upon a step 8 formed in the face of said block, as clearly shown in Fig. 4, the end terminals of the face of the block and of said step, being provided with vertical flanges 9 and 10 respectively which embrace the opposite edges of the base of said rails to assist in maintaining the joined ends of the rails in perfect alinement. The height of the bearing block 3 above the surface of the step 8 compensates for the difference in the cross section of the rails, and supports the end of the light rail 5 in a manner to maintain a perfect surface between the rail ends and effect a practical continuity of the rail through the joint.

To provide for supporting the light rail at the point where it crosses the tie and near its end, the rail joint-plate at the end which rests upon said tie and receives the base of the light rail, is made sufficiently thick, as shown at 11, to support the base of the rail in alinement with the top 6 of the block 3. Bolted to the opposite sides of the rails at the joint by the transverse bolts 12, are the angle bars 13 which extend onto and partially embrace the base of said rails. Said angle bars are notched at the center to fit the step in the block 3, and at their ends are provided with the laterally extending flanges 14 having spike slots 15 therein which register with like slots in the margins of the end portions of the truss-plate, enabling the spikes 16 to be driven into the ties through said flanges of the angle bars and through the end portions of the truss-plate to anchor said parts to the ties, and at the same time firmly join the terminals of the angle bars and the truss-plate.

Formed at the terminals of the truss-plate on each side of the rails are the lugs or shoulders 17 which engage the ends of the angle bars, whereby the tendency of the ends of the truss plate to draw together when the heavy weight is applied at the center thereof, is resisted by said lugs and the strain of the weight at the center of the truss-plate is applied to the opposite ends of the angle bars, thereby effecting a perfect truss for the support of the rails at the joint.

This arrangement provides a suspension

joint in the form of a truss which carries the load between the ties, and which, while affording a perfect surface between the rails at the joint, is sufficiently flexible to maintain the wave movement of the rail through said joint practically the same as along an unbroken rail, insuring stability as well as flexibility at the joint, at the same time preventing a deflection in the end of the trailing rail and a consequent blow on the head of the facing rail by the passing wheels, resulting in a saving of labor in maintenance, a prolongation of the life of the rails and making a smoother riding track.

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

1. In a truss support for rail joints, the combination with the meeting ends of the rails of different transverse section, of the angle bars embracing said ends, a truss-plate mounted upon the ties and supporting the rails and angle bars, said truss-plate having a depressed central portion and an end portion of increased thickness lying under the lighter of said rails, a block interposed between the depressed portion of the truss-plate and the joint of the rails supporting the ends of the latter, said block having two bearing surfaces in different planes to compensate for the difference in the height of the rails, and bolts passing through the angle bars and through the web of the rails to secure said parts together.

2. In a compensating truss support for rail joints, the combination with the rails of different transverse section, of the angle bars crossing the joint between the rail ends and bolted to the rails, a truss-plate having terminal portions lying under and supporting the rail sections and a depressed central portion, a block carried by said depressed

central portion having bearing faces in different planes which receive and support the meeting ends of the rails, and means effecting an engagement between the terminals of said truss-plate and the end portions of said angle bars.

3. In a compensating truss support for rail joints, the combination with the ends of rails of different transverse section, of angle bars crossing the joint between said rails and bolted thereto, a truss-plate having terminals resting on the ties and supporting the base of the rail sections, one of said terminals being relatively thick to compensate for the difference in the height of the rails, the central portion of the truss-plate being depressed between the ties, a bearing block carried by said depressed portion having supporting faces in different planes which receive the meeting ends of said rails, means for tying the angle bars and the truss-plate together at their margins, and means for imparting the longitudinal stress upon the truss-plate to the ends of the angle bars.

4. In a truss support for rail joints, the combination with the rails of different transverse section, of a truss-plate lying under and supporting said rails near their ends, angle bars crossing the joint of the rails and bolted thereto, the central portion of the truss-plate being depressed below the joint, and a bearing block carried by the depressed portion of said plate having supporting faces in different planes which receive the ends of said rails.

In testimony whereof, I sign this specification in the presence of two witnesses.

LOUIS MUELLER.

Witnesses:

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L. A. SANDERHOFF.