

No. 826,840.

PATENTED JULY 24, 1906.

J. S. FERRELL & J. STILLWELL.

RAIL JOINT.

APPLICATION FILED MAY 7, 1906.

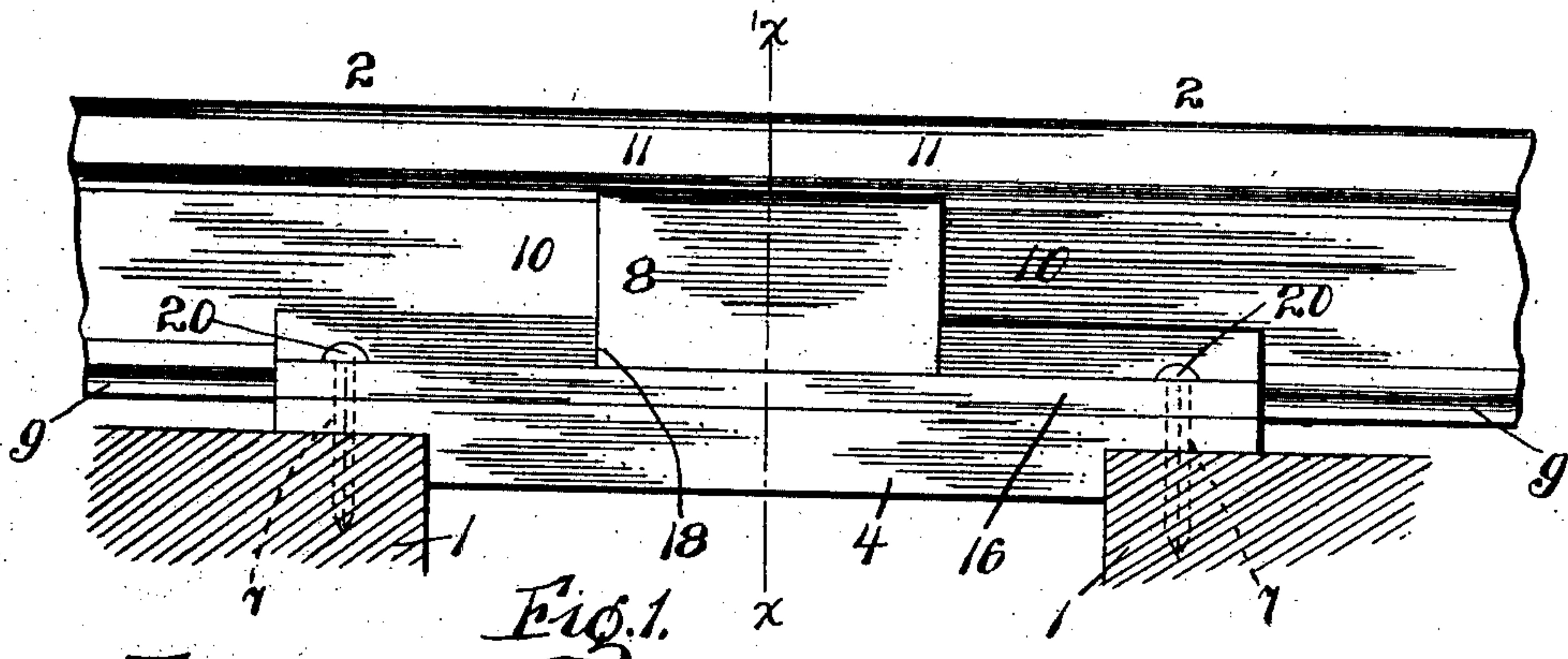


Fig. 1.

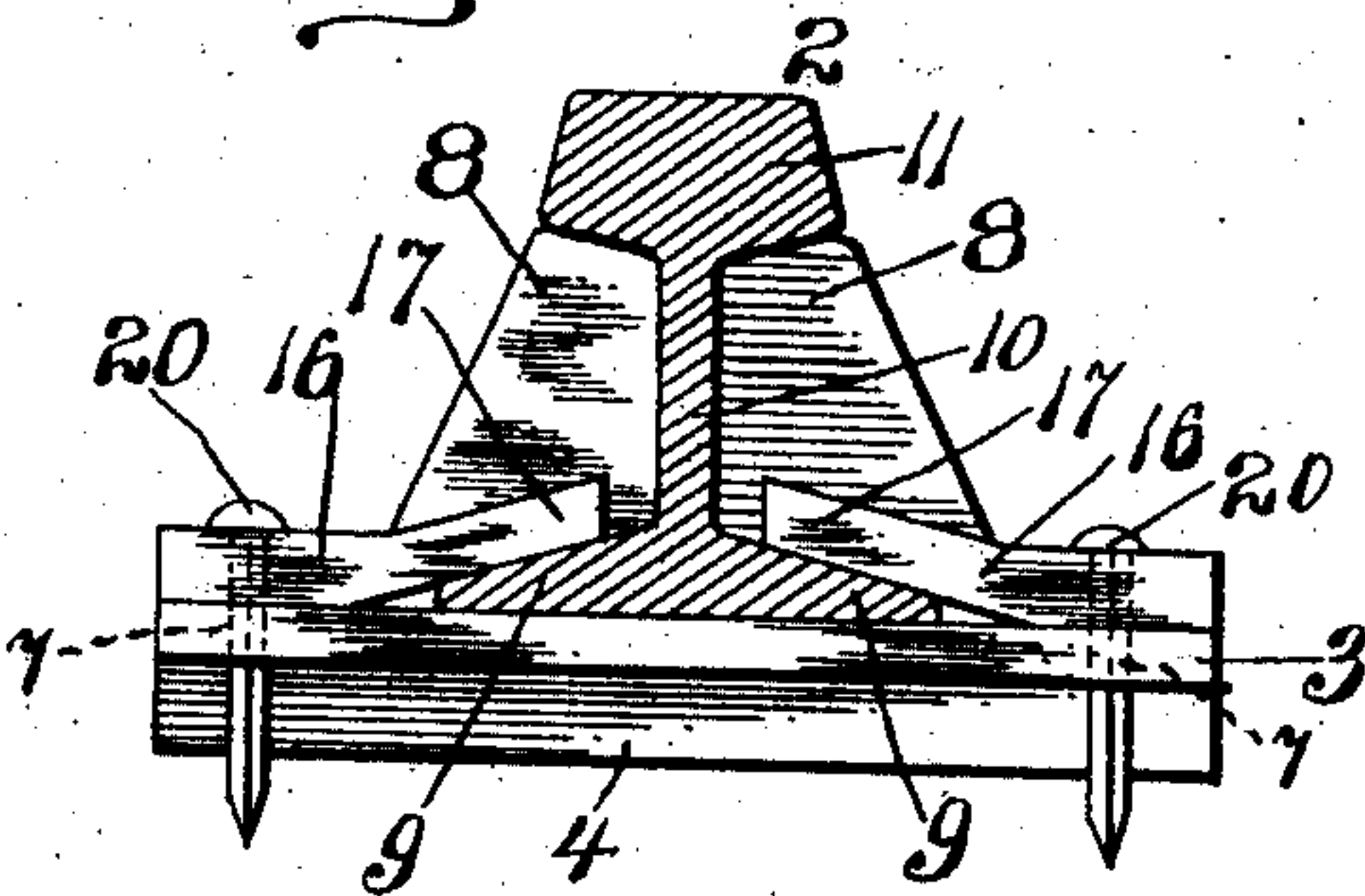


Fig. 2.

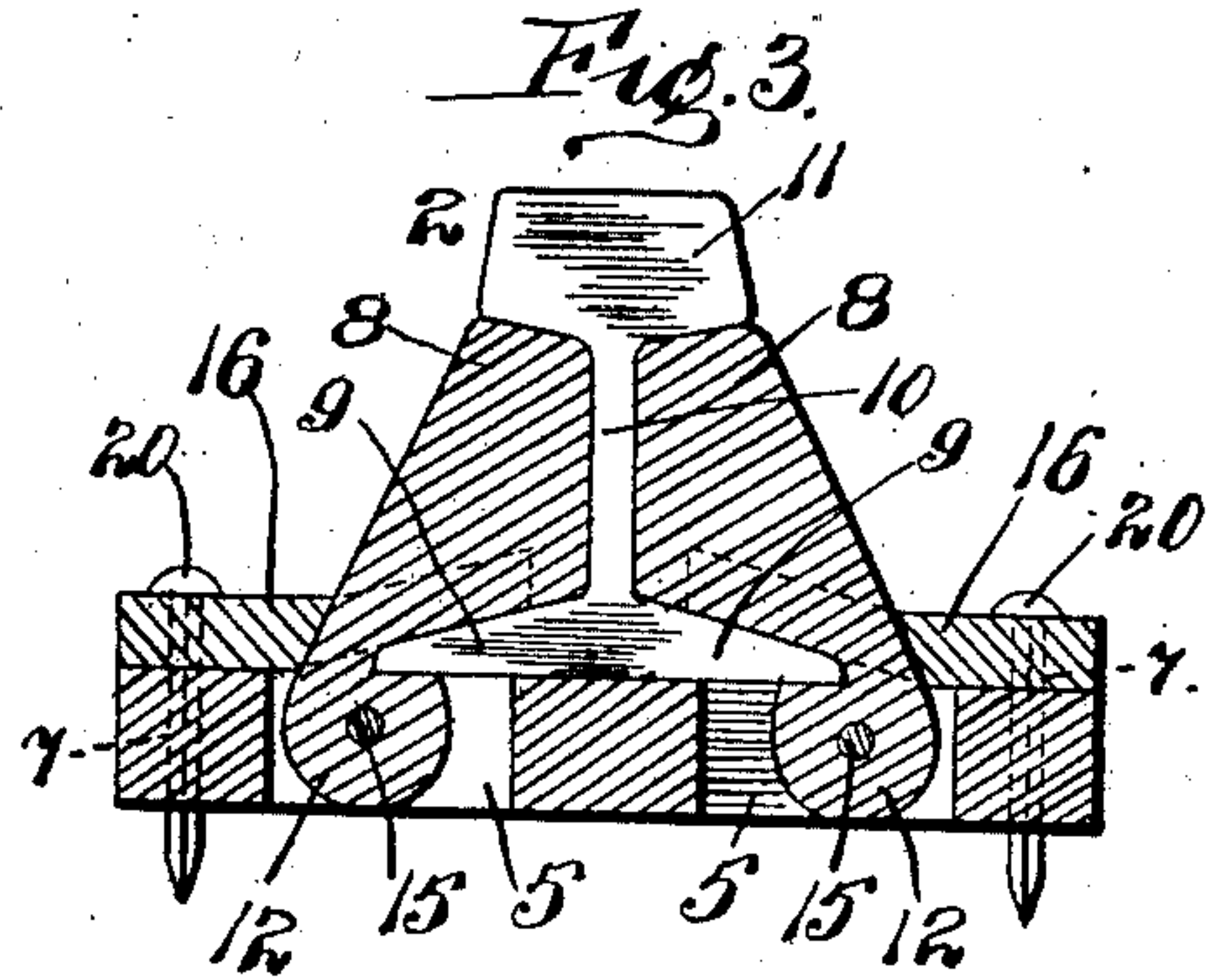


Fig. 3.

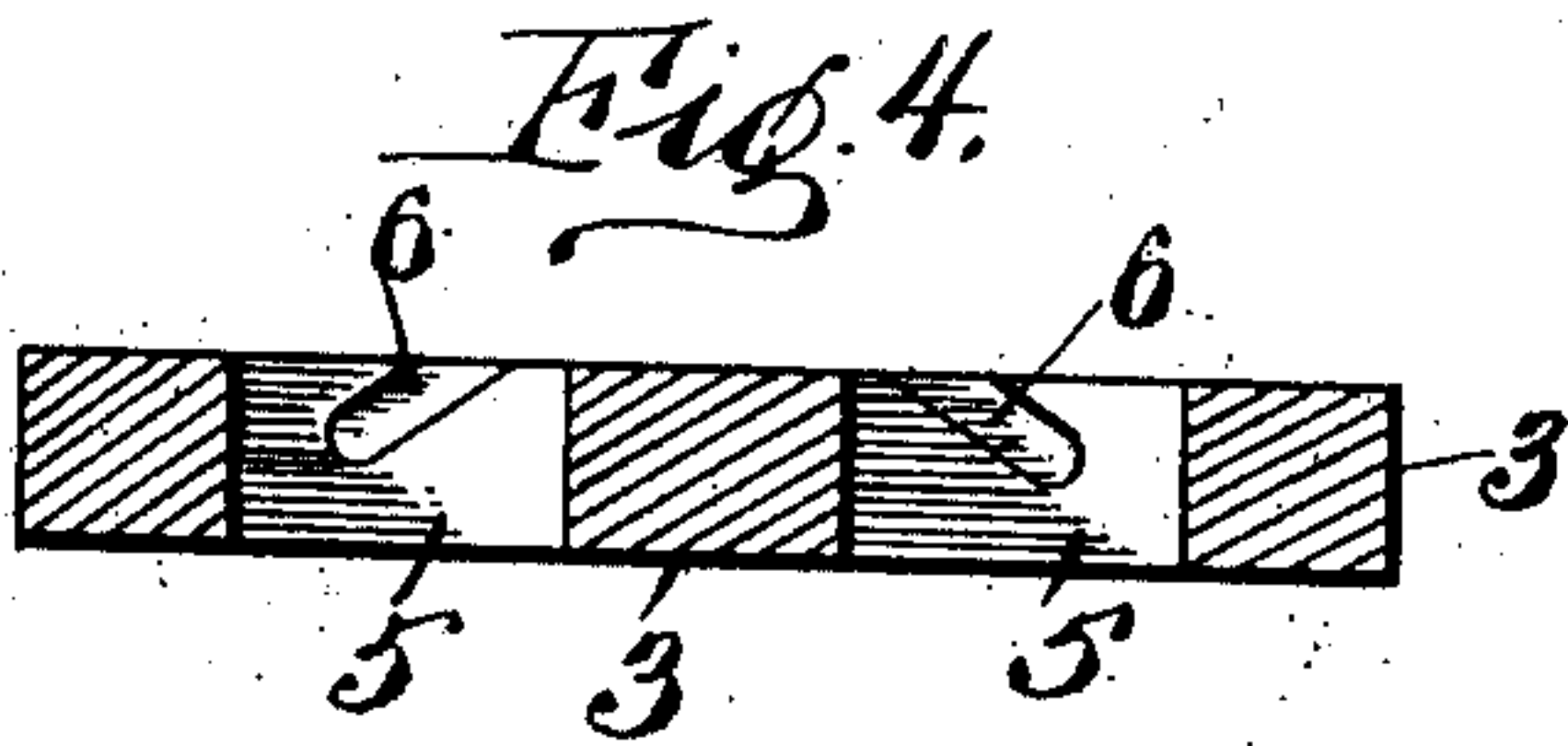


Fig. 4.

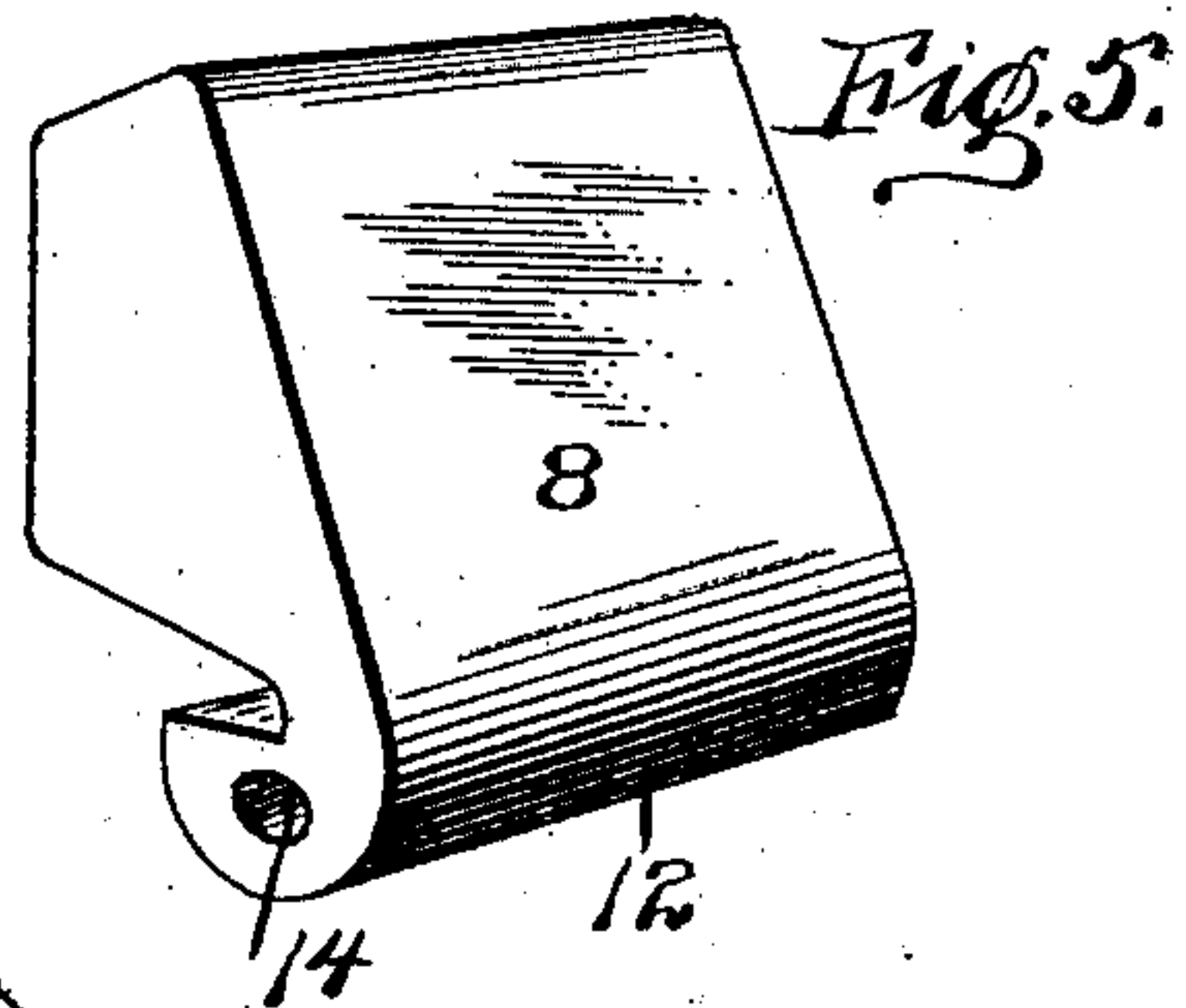


Fig. 5.

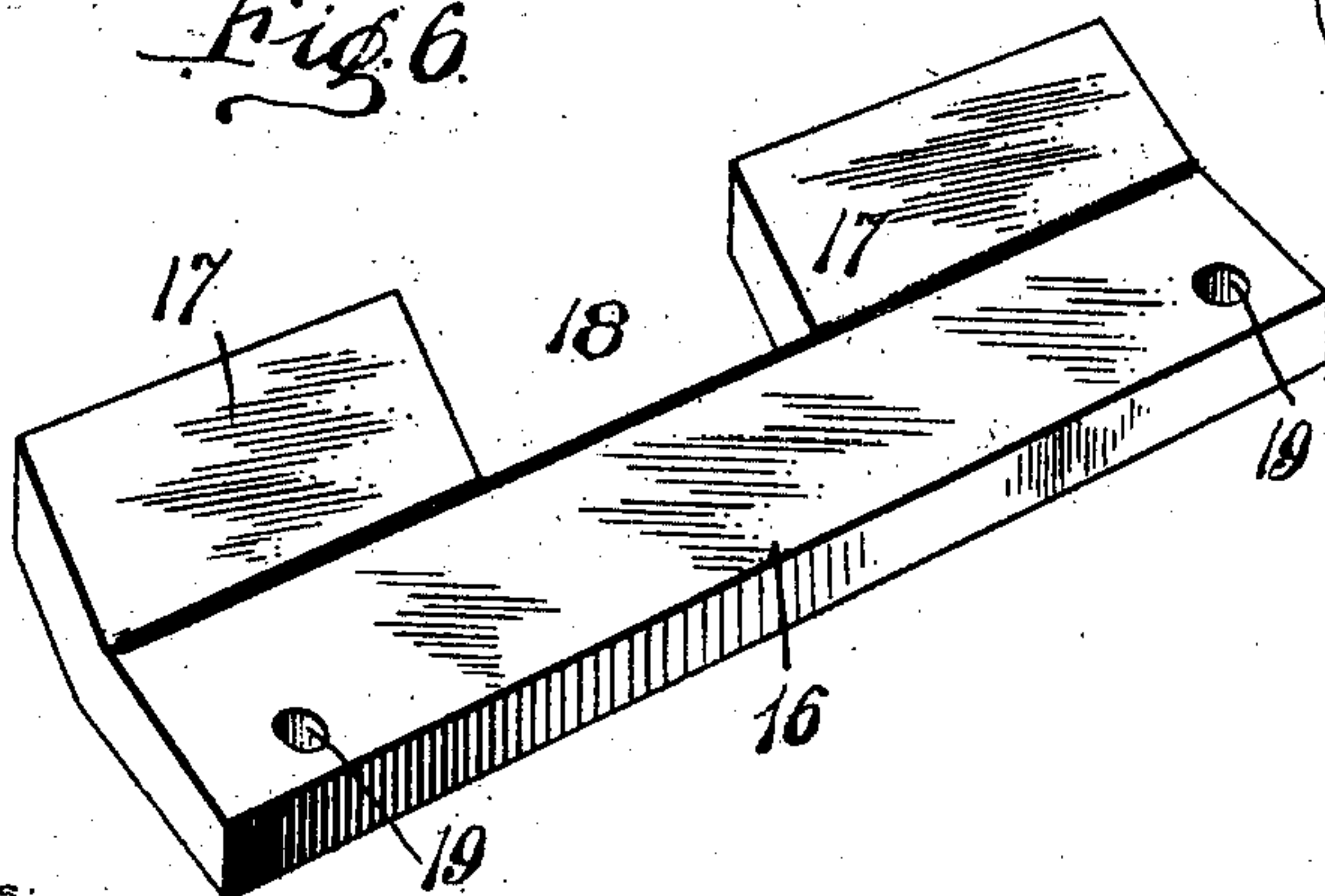


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOEL S. FERRELL AND JERRY STILLWELL, OF MASON, WEST VIRGINIA.

RAIL-JOINT.

No. 826,840.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed May 7, 1906. Serial No. 315,558.

To all whom it may concern:

Be it known that we, JOEL S. FERRELL and JERRY STILLWELL, citizens of the United States of America, residing at Mason city, in the State of West Virginia, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in rail-joints; and the invention has for its primary object to dispense with the use of nuts and bolts heretofore employed for retaining the confronting ends of two sections of rails together.

In dispensing with the use of nuts and bolts we not only reduce the expense of manufacturing and maintenance, but eliminate certain defects which were a source of continuous trouble in maintaining a safe joint between the ends of two rails.

Our invention aims to provide a rail-joint wherein positive means are employed for effecting a safe and non-vibrating connection between the confronting ends of the rails. In constructing our joint we use as few and simple parts as are essential in maintaining a strong and durable connection, these parts being easily and quickly assembled without the employment of skilled labor.

To accomplish the above objects, we have devised a joint consisting of a rail-supporting base-plate, clamping-blocks, and block-locking plates, said plates, together with the base-plate, being spiked or otherwise secured to the rail-ties to firmly hold the clamping-blocks in engagement with the rails.

The detail construction and arrangement of the blocks and plates will be presently described and specifically claimed; but reference will first be had to the drawings forming a part of this specification, wherein—

Figure 1 is an elevation of an improved joint. Fig. 2 is an end view of the joint. Fig. 3 is a cross-sectional view taken on the line *xx* of Fig. 1. Fig. 4 is a cross-sectional view of the rail-supporting base-plate. Fig. 5 is a perspective view of one of the clamping-blocks, and Fig. 6 is a perspective view of one of the locking-plates of our improved joint.

In the accompanying drawings we have illustrated two ties 1 1 as indirectly supporting the confronting ends of two sections of rails 2 2.

Our invention resides in arranging a rail-supporting base-plate 3 upon the ties 1 1,

said plate being provided with a depending intermediate spacing portion 4, which, besides spacing the ties 1 1, adds strength and rigidity to said plate. The portion 4 of the plate 3 is formed with two parallel longitudinally-disposed openings 5 5, the material bordering upon the ends of said opening being provided with angularly-disposed slots or pockets 6 6, the sockets 6 6 of one opening being disposed at an opposite angle to the sockets of its associate opening. To permit of the plate 3 being spiked or fixed to the ties 1 1, we provide the ends of the plate with apertures 7 7.

In conjunction with the plate 3 we use clamping-blocks 8 8, adapted to embrace the base-flanges 9 9 and web portions 10 10 and support the heads 11 11 of the rails 2 2. Each block is formed with a depending cylindrical portion 12, having a longitudinally-disposed aperture or bore 14 formed therein. Through the bore 14 of each block passes a pin 15, the ends of which engage in the sockets 6 6 of one of the openings 5 of the plate 3.

To retain the clamping-blocks in engagement with the rails 2 2, locking-plates 16 16 are used. These plates, besides locking the blocks 8 8, serve functionally as fish plates or bars. Each plate has an angularly-disposed edge 17, which is cut away, as at 18, to embrace one of the blocks 8, while the opposite edge of each plate is pierced, as at 19, in order that spikes 20 or similar fastening means can be employed to retain the plates 16 16 upon the rail-supporting base-plate 3. The spikes 20 pass through the apertures 7 7 of the plate 3 and engage in the ties 1 1.

In assembling the various parts or pieces of our improved joint we first position the clamping-blocks 8 8 in the plate 3. As these blocks are pivotally held, they can be swung outwardly to permit of the confronting or adjoining ends of the rails 2 2 being positioned upon the plate 3 between said blocks. The blocks are then swung inwardly to embrace and clamp the rails, at which time the block-locking plates 16 16 are secured to the plate 3 and the ties 1 1 to firmly hold the blocks and the rails together.

Since the ends of the rails 2 2 are supported by a common plate and embraced and clamped by blocks common to both rails, we have practically devised a continuous tread for the rolling-stock which passes over the rails 2 2. By the novel construction of our joint it will be impossible for one rail to sag

or become laterally displaced relative to its adjoining rail.

Such changes in the details of construction of our joint as are permissible by the appended claims may be resorted to without departing from the spirit and scope of the invention.

What we claim, and desire to secure by Letters Patent, is—

10 1. In a rail-joint, the combination with ties and rails, of a rail-supporting base-plate carried by said ties, clamping-blocks pivotally mounted in said plate and embracing said rails, locking-plates adapted to engage
15 said blocks and the base-flanges of said rail,

and means to secure said base-plate and said locking-plates to said ties, substantially as described.

2. In a rail-joint, a rail-supporting base-plate, pivotally-mounted clamping-blocks, 20 locking-plates, and means to secure said plates and blocks together, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

JOEL S. FERRELL.

JERRY STILLWELL.

Witnesses:

W. H. FOGLESONG,
TUNIS NUMMAKER.