

903,528.

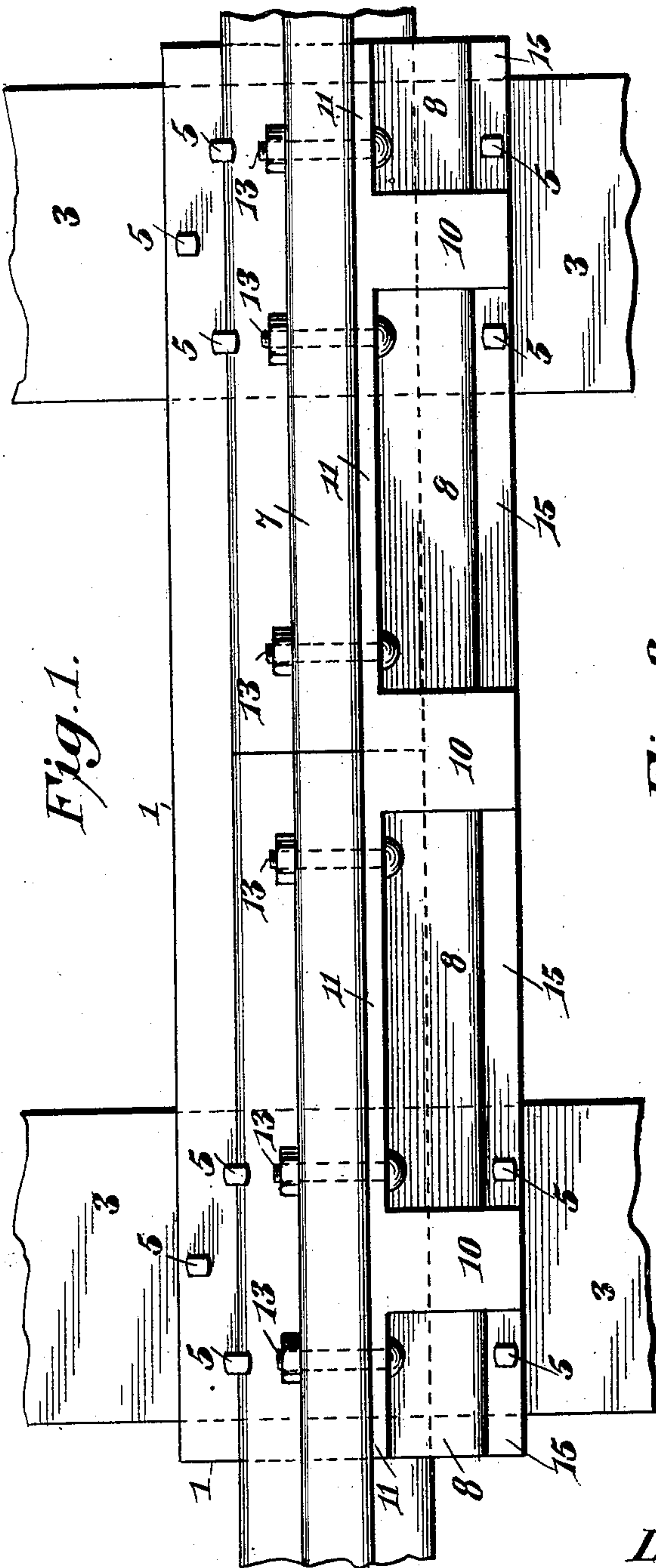


Fig. 1.

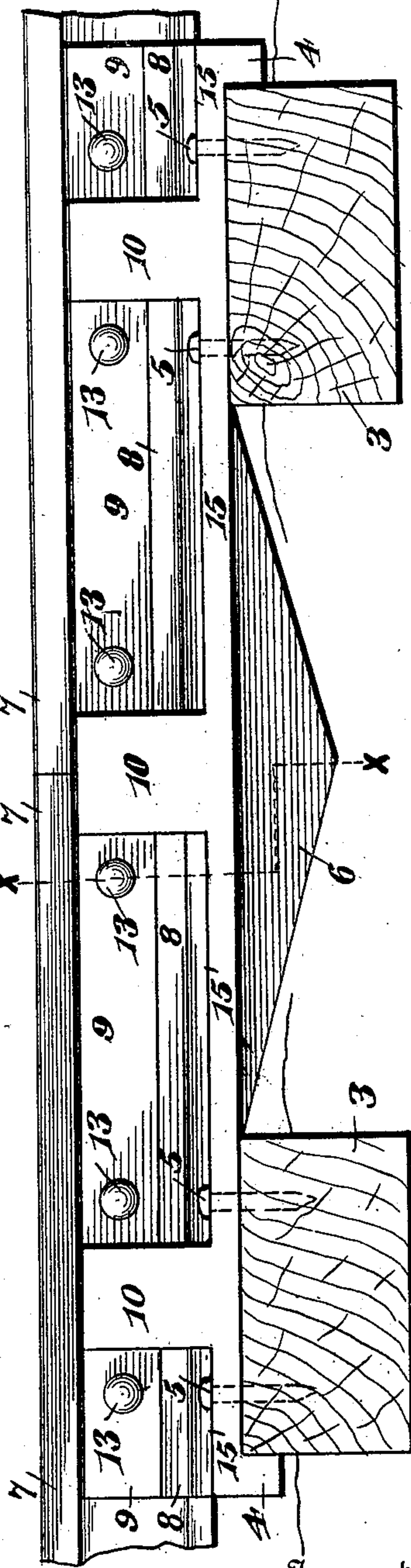


Fig. 2.

Witnesses
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RAIL JOINT SUPPORTER.
APPLICATION FILED OCT. 7, 1907.

Patented Nov. 10, 1908.
2 SHEETS—SHEET 2.

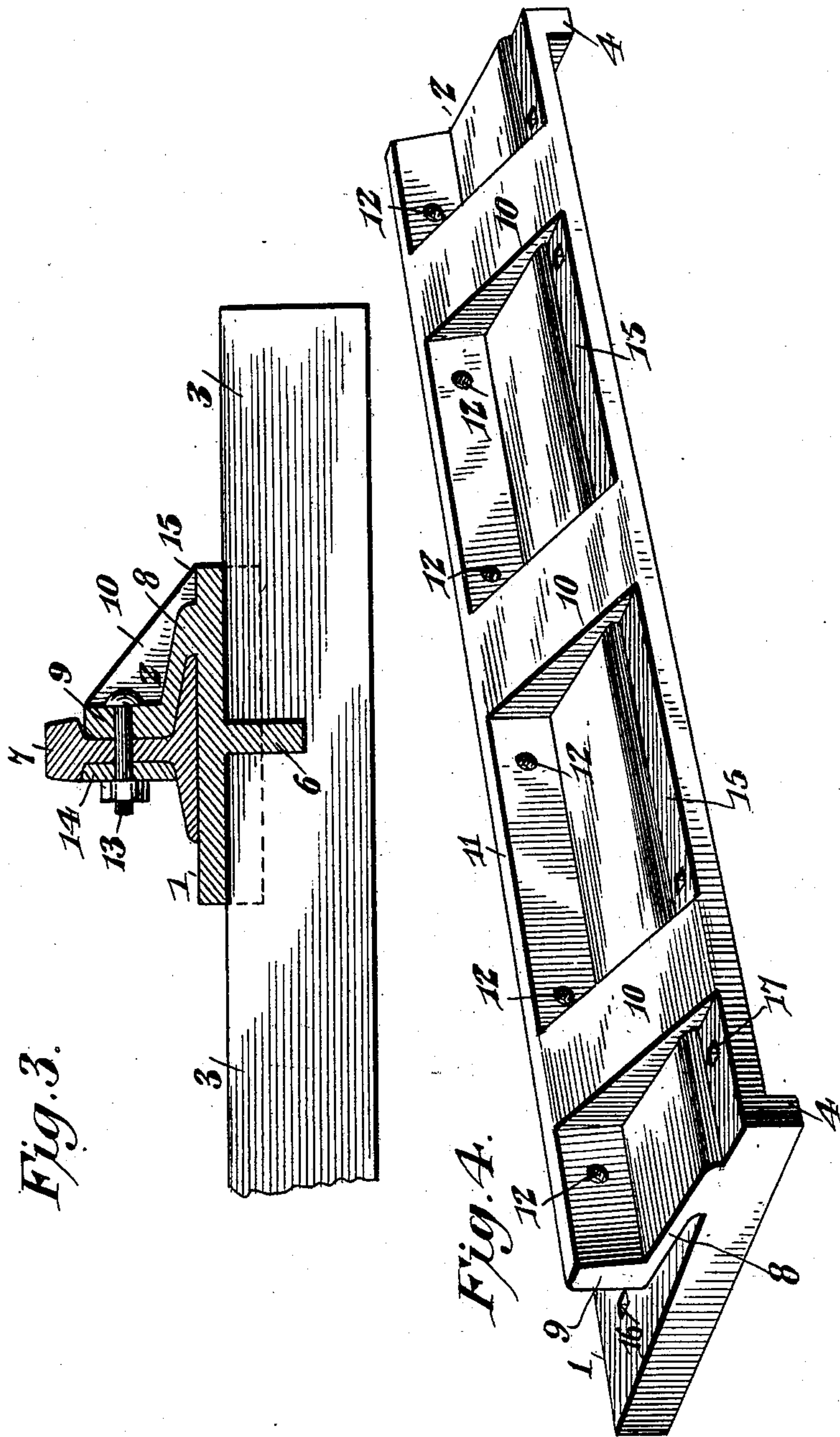


Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

LINNAEUS WINANS, OF HOOD RIVER, OREGON, ASSIGNOR OF ONE-THIRD TO AUDUBON WINANS AND ONE-THIRD TO EPHRIAM THOMAS WINANS, OF HOOD RIVER, OREGON.

RAIL-JOINT SUPPORTER.

No. 903,528.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed October 7, 1907. Serial No. 396,245.

To all whom it may concern:

Be it known that I, LINNAEUS WINANS, a citizen of the United States, residing at Hood River, in the county of Wasco and State of Oregon, have invented a new and useful Rail-Joint Supporter, of which the following is a specification.

The invention relates to improvements in rail joints.

10 The object of the present invention is to improve the construction of the rail joint support, shown and described in Patent No. 821,566, granted to me May 22, 1906, and to provide a combined rail joint support and rail brace, adapted to effectually prevent what is known as "sagging joints," and capable of also preventing rails from spreading on the curves and straight tracks.

20 A further object of the invention is to provide a simple rail joint of this character, adapted to be placed under any kinds of rails and on any kinds of ties as quickly as the parts of an ordinary rail joint can be assembled.

25 Also the invention has for its object to provide a rail joint, adapted to receive a sufficient number of spikes to hold it in position when subjected to the strain incident to a train traveling at a high rate of speed, whereby the wrecks resulting from the spreading of the rails under a rapidly moving train will be effectually prevented.

35 With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

45 In the drawings: Figure 1 is a plan view of a rail joint, constructed in accordance with this invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse sectional view, taken substantially on the line $x-x$ of Fig. 2. Fig. 4 is a perspective view of the device detached.

50 Like numerals of reference designate corresponding parts in all the figures of the drawings.

The combined rail joint support and rail

brace, which may be constructed of any suitable material, may be made of any desired size to suit the character of the rails to be supported and braced, and it may be either cast, rolled or pressed into shape. It comprises a horizontal rail-receiving base plate 1 and an integral outer angle plate 2. The horizontal base plate is designed to be of a length to bridge the space between two adjacent cross ties 3, and to extend across the upper faces thereof, and it is preferably provided with depending transversely disposed terminal flanges 4, arranged to engage the outer side faces of the cross ties 3, as clearly illustrated in Fig. 2 of the drawings, whereby the cross ties are held against lateral displacement and the device securely retained in position. The terminal flanges may, however, be omitted as the rail joint is adapted to receive a sufficient number of spikes 5 to securely fasten it to the cross ties. The bottom plate is also provided at its lower face with a central longitudinal depending strengthening flange or web 6, preferably extending across the space between the cross ties 3 and tapered from its center to its ends, so that the greatest thickness lies beneath the contiguous or meeting ends of the rails 7, whereby the latter are vertically supported and effectually prevented from sagging.

85 The integral angle plate, which consists of an inclined lower portion 8 and a substantially vertical upper portion 9, is reinforced at intervals by integral central and end braces 10, extending from the adjacent side of the base plate to the upper edge 11 of the angle plate, and located opposite the meeting ends of the rails and over the cross ties. The upper edge of the angle plate is slightly rounded, as shown, and it is spaced sufficiently from the heads of the rails to relieve it of the strain incident to the pounding of the wheels on the rails, whereby the rails will be adapted to yield and the angle plate, which is rigid with the base plate, will be effectually prevented from being cracked, or otherwise injured by such pounding action of the wheels. The vertical portion 9 of the angle plate is provided at intervals with openings 12 for the reception of transverse bolts 13, which also pierce a fish plate 14 of the ordinary construction. The fish plate 14, which is of the ordinary type, has its upper and lower edges abutting against the head of the

rail and the base thereof, and it may be either flat or concave at its inner face, and the rails are designed to be provided with elliptical bolt openings to provide for the
5 creeping of the rails incident to the expansion and contraction of the same. The vertical portion 9 of the integral angle plate, although shown with a vertical inner rail-engaging face, may also be provided with a
10 concave rail-engaging face, if desired. The angle plate, which is formed integral with the base, is of sufficient strength to effectually brace the rails against outward lateral movement to prevent the rails from spreading,
15 and the device may be either straight or curved for use on straight tracks and at curves. It is adapted to enable an ordinary fish plate to be arranged at the inner side of the rail joint, but an angle plate may of
20 course be employed if desired.

The base plate is extended beyond the rails at the inner side of the joint, and it is also extended beyond the integral angle bar 2 to provide a spike-receiving portion 15. These
25 lateral extensions of the bottom plate are provided with spike-receiving openings 16 and 17, which may be of any desired number, whereby the rail joint may be fastened to the cross ties with a sufficient number of spikes
30 to effectually prevent the rails from spreading under a train traveling at an excessively high rate of speed. In practice, the number and arrangement of the spikes will be varied to suit the varying conditions of the roads
35 on which the device is used. The spikes at the outer side of the rail joint are located beyond the angle plate, as clearly illustrated in Fig. 1 of the drawings, and the spikes

at the inner side of the rail joint engage the bottom flange of the rails.

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

A combined rail joint support and rail brace of a length to extend across the space
45 between and be supported by two cross ties, and comprising a horizontal base plate provided at its ends with terminal transversely disposed depending flanges for engaging the cross ties at the relative outer side edges
50 thereof, and having a longitudinal web or flange depending from the lower face of the base plate and arranged centrally beneath the rails and tapered from the center to the ends and extending across the space between
55 the cross ties, the greatest thickness of the brace being located beneath the meeting ends of the rails, an angle plate formed integral with the base plate and arranged at one side thereof and spaced from the adjacent side
60 edge to provide a spike-receiving portion, and integral central and end braces extending from the upper edge of the angle plate across the said spike-receiving portion of the base plate to the adjacent side edge, the central
65 brace being located opposite the meeting ends of the rails and the end braces over the cross ties.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LINNAEUS WINANS.

Witnesses:

I. A. JONES,
CARLOS LEEDE.