

A. I. GAUMER.
RAILWAY RAIL JOINT.
APPLICATION FILED SEPT. 14, 1908.

932,979.

Patented Aug. 31, 1909.

2 SHEETS—SHEET 1.

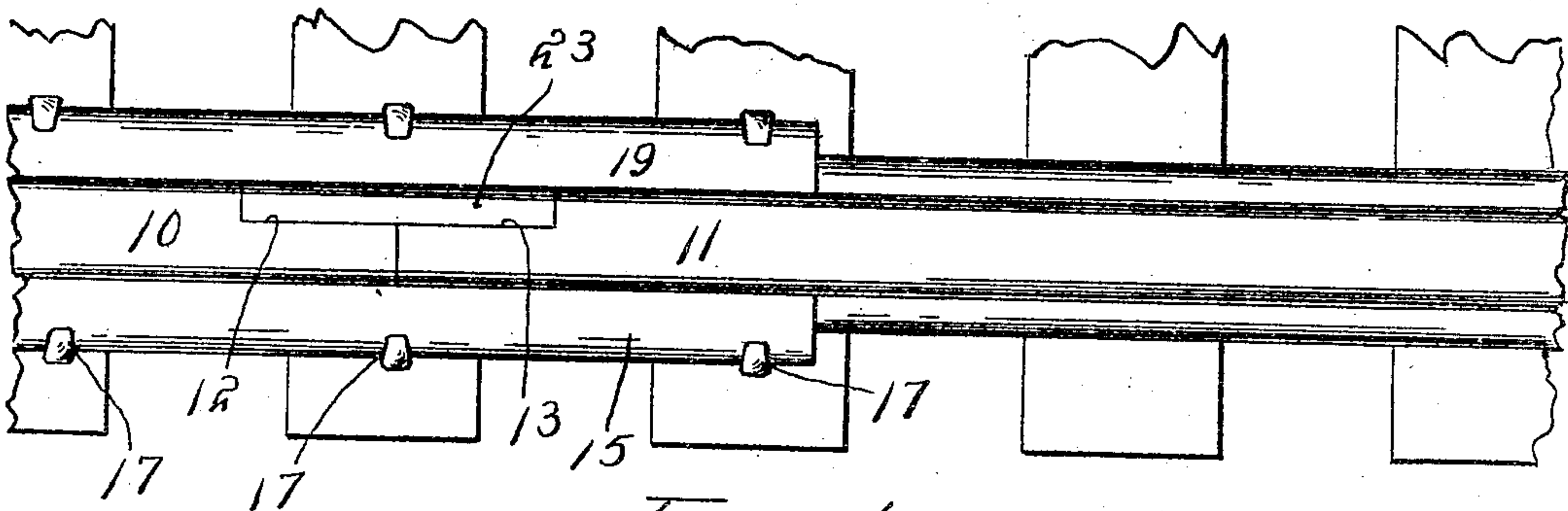
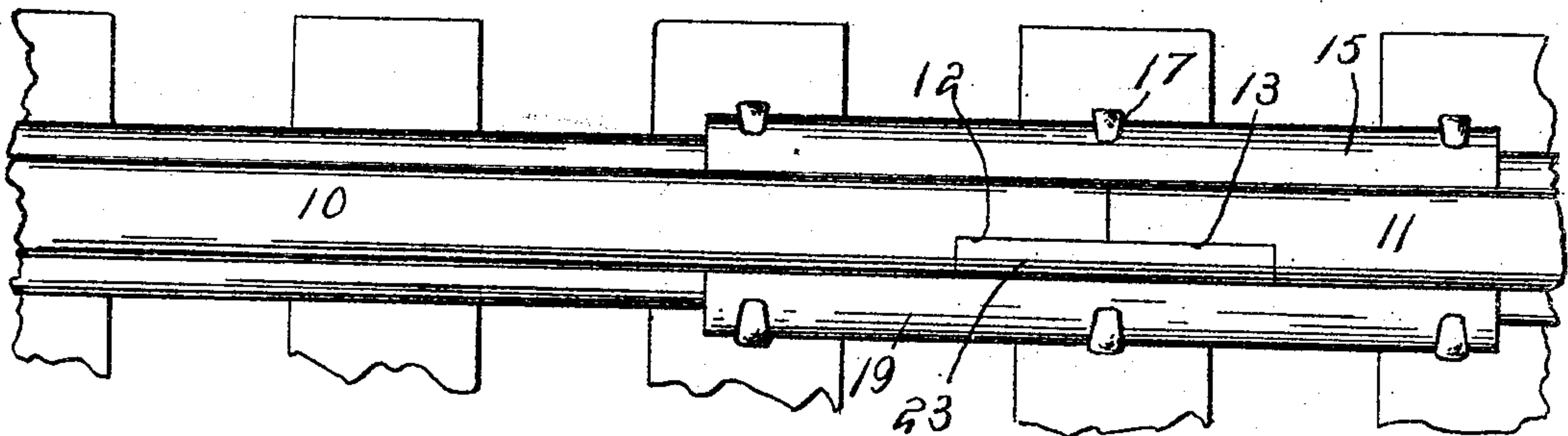


Fig. 1

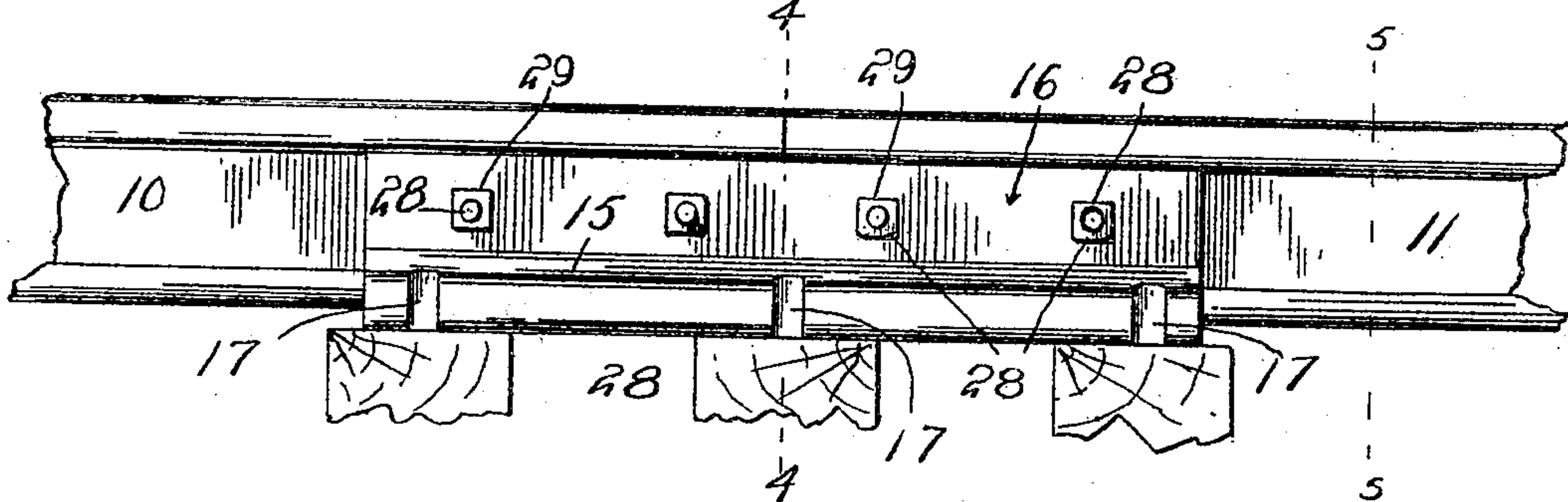


Fig. 2

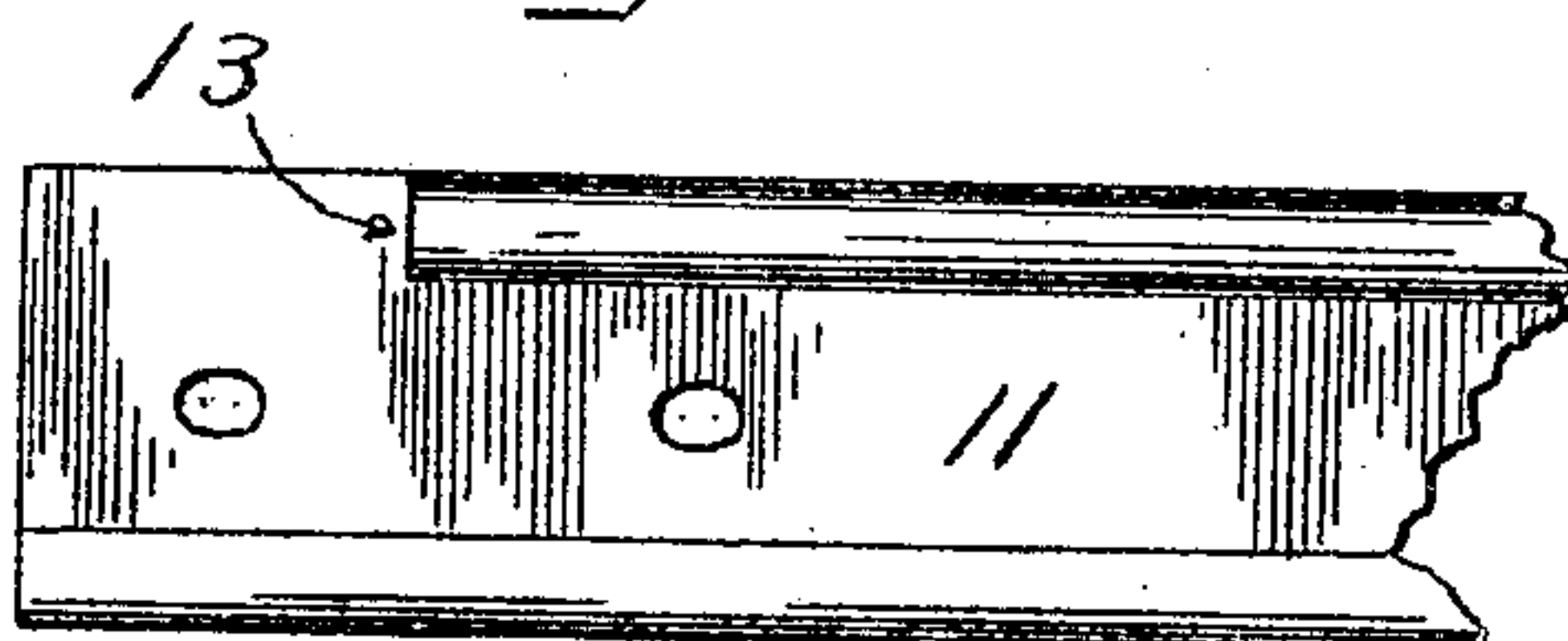


Fig. 3

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Witnesses
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Attorneys

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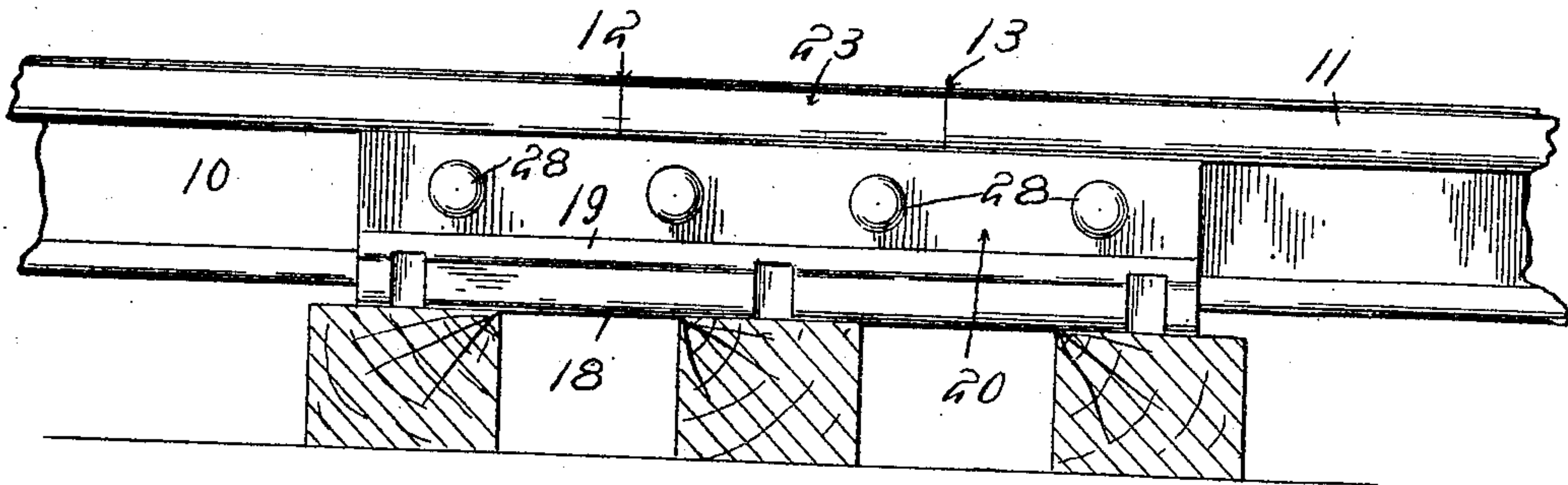


Fig. 3

Fig. 4

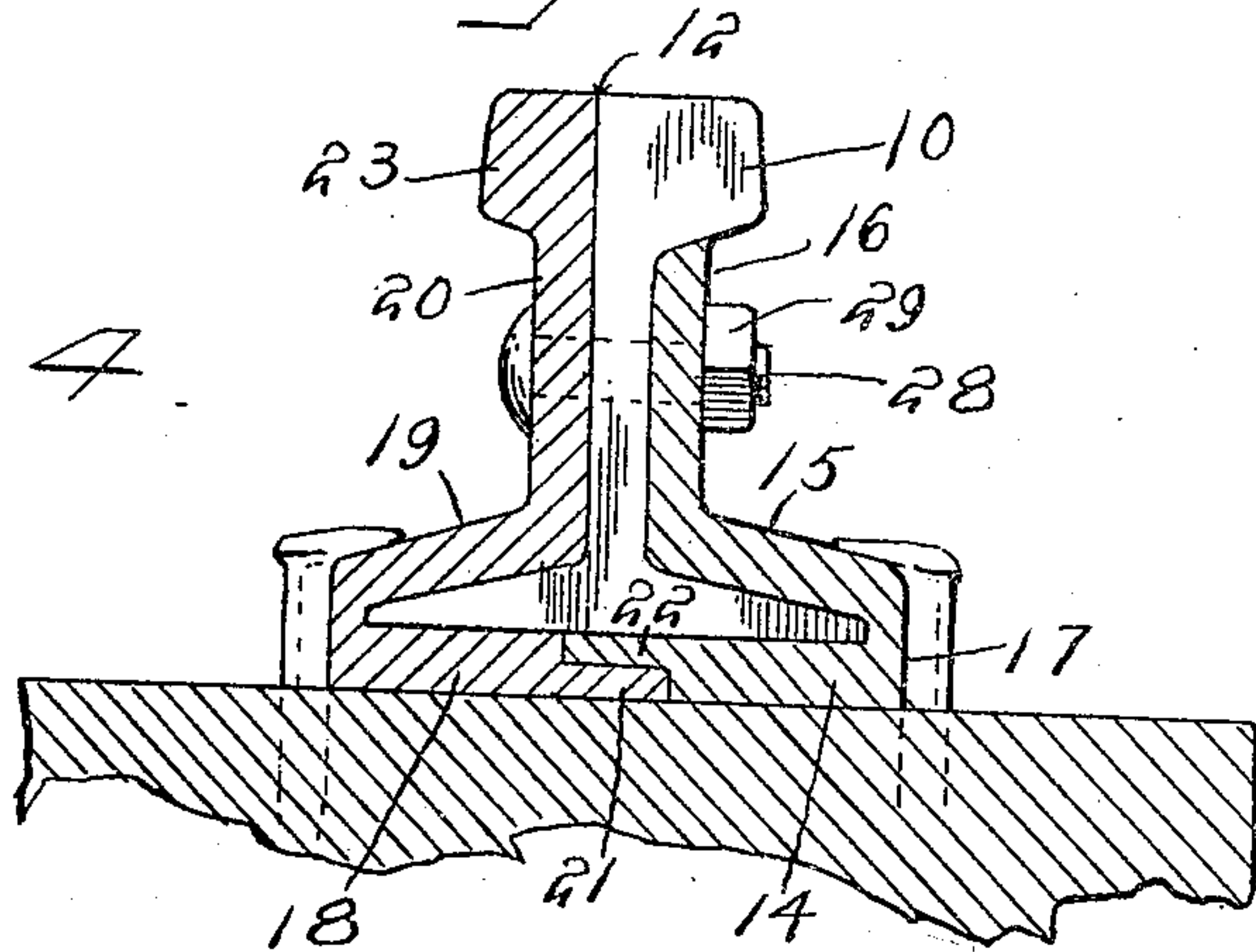
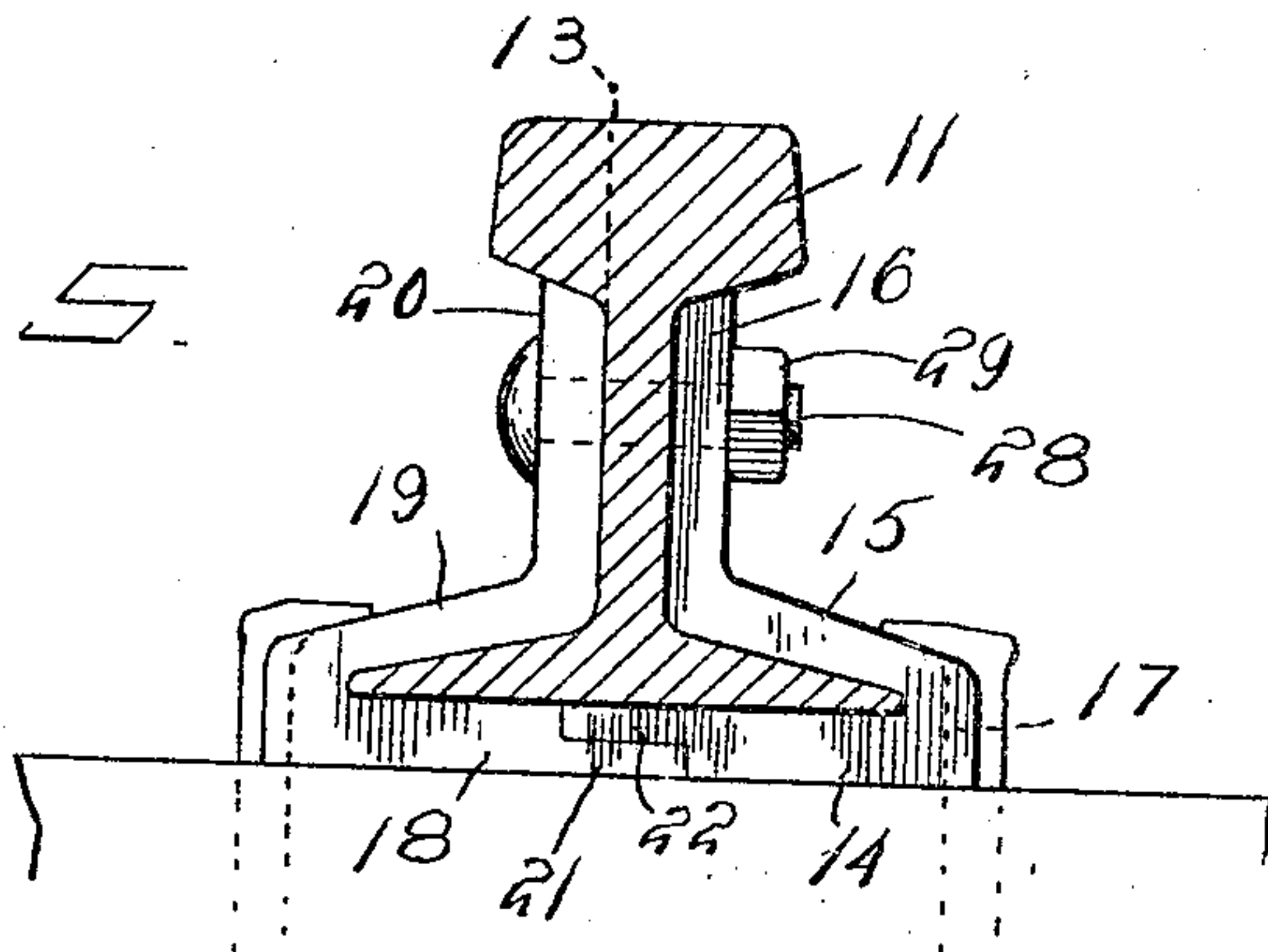


Fig. 5



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UNITED STATES PATENT OFFICE.

AARON I. GAUMER, OF SALT LAKE CITY, UTAH.

RAILWAY-RAIL JOINT.

932,979.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed September 14, 1908. Serial No. 452,895.

To all whom it may concern:

Be it known that I, AARON I. GAUMER, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake, State of Utah, have invented certain new and useful Improvements in Railway-Rail Joints; and I do hereby 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.

This invention relates to railway rail joints, and has for one of its objects to simplify and improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a rail joint wherein each part mutually supports and braces the other parts and prevents displacement both laterally and longitudinally, while at the same time producing what is known as a jointless rail or one wherein the abutting ends of the rails are bridged to prevent injury to the rails by the pounding action of the wheels in passing over the rails.

With these and other objects in view the invention consists in forming the confronting ends of the rails with recesses in the heads, locating a clamp plate beneath and over the tie flange and against the vertical web and beneath the head at one side, and a clamp plate bearing beneath the tie flange and interlocking with the adjacent edge of the first mentioned clamp plate and over the tie flange and vertical web at the opposite side and likewise beneath the ball or tread portion and with a projection adapted to fit in the recesses formed in the ball of the rail and to complete the ball or tread opposite the recess and with clamp bolts connecting the clamp plates and the rails.

The invention further consists in certain novel features of construction as hereafter shown and described and specifically pointed out in the claims, and in the drawings illustrating the preferred embodiment of the invention. Figure 1 is a plan view of a portion of a railway track including the line rails with the improved device applied. Fig. 2 is a side elevation from the outside of one of the joints. Fig. 3 is a similar view from the inside. Fig. 4 is a transverse section on the line 4—4 of Fig. 2. Fig. 5 is a transverse section on the line 5—5 of Fig. 2. Fig. 6 is a detail side view of one of the rail ends,

illustrating the manner of constructing the same.

The improved device may be applied to any of the various sizes and forms of railway rails and for the purpose of illustration is shown applied to the confronting portions of two rails 10—11, the ends of the rails abutting squarely against each other and the balls or treads at one side cut away for a short distance to form recesses 12—13, the inner surfaces of the recesses being flush with the contiguous faces of the vertical webs.

Located at one side of the rail ends is a clamp plate having a portion 14 extending beneath the tie flanges of the rails and with a portion 15 bearing over the top of the tie flanges and a portion 16 bearing against the vertical web, the plate having spike recesses 17 as shown. Located at the opposite sides of the rail ends is another plate having a portion 18 extending beneath the tie flange, a portion 19 bearing over the tie flange and a portion 20 bearing against the vertical webs at the opposite sides from the first mentioned plate, the contiguous edges of the portions 14—18 interlocking as shown at 21—22 centrally of the under side of the rail. The portion 20 of the last mentioned plate is provided with a projection 23 conforming to the cut away portion of the tread and completely filling the recesses 12—13 and thus restoring the outlines of the tread or ball of the rail.

Formed through the plate portions 16—20 are bolt apertures, and formed through the vertical webs of the rails opposite the apertures are like apertures, the latter apertures being elongated to provide for the expansion and contraction in the ordinary manner as shown in Fig. 6. Clamp bolts 28 pass through the aligned apertures and are provided with clamp nuts 29 of the usual form and by which means the clamp plates and the rails are firmly united.

The projection 23 of the plate 20 it will be noted conforms exactly to the cut away portions of the heads of the rails 10—11, so that when the plate 20 with its projection 23 is applied to the rail ends the head portions of the rails are contiguous and without interruptions of any kind to interfere with the operation of the rolling stock. By this simple means it will be obvious that the confronting rail ends are firmly united and clamped together and secured not only from

lateral and vertical movement but also from longitudinal movement, and present to the wheels of the rolling stock a continuous unbroken joint, the projection 23 bridging what would otherwise be the end of the rails and preventing any uneven movement when the wheels pass over the joint. The projection 23 being integral with the portion 20 of the plate is firmly supported by the plate and all tendency to sag or be depressed obviated.

The improved device may be applied to any of the various sizes or "weights" of rails, and will materially improve the railway track and increase its efficiency and durability.

What is claimed, is:—

1. In a railway rail joint, two rails having the ball portions cut away at one side at their confronting ends, with the bottom face of the cut away portion even with the contiguous face of the vertical web, a clamp plate bearing beneath and over the tie flanges and against the vertical webs and beneath the heads of the rail ends at one side, a clamp plate bearing beneath and over the tie flanges and against the vertical webs and likewise beneath the ball portions beyond the ends of the cut away portion at the other side and with a projection uniform with the cut away portions of the rails and occupying the re-

cesses formed thereby, and clamp bolts extending through the plates and the vertical webs of the rails.

2. In a railway rail joint, two rails having the ball portions cut away at one side at their confronting ends with the bottom face of the cut away portion even with the contiguous face of the vertical web, a clamp plate bearing beneath and over the tie flanges and against the vertical webs and beneath the heads of the rail ends at one side and with a longitudinal scarf upon its inner edge, a clamp plate bearing beneath and over the tie flanges and with a longitudinal scarf engaging the scarf of the first mentioned plate, said plate bearing against the vertical webs and likewise beneath the ball portions beyond the ends of the cut away portion at the other side and with a projection uniform with the cut away portions of the rails and occupying the recesses formed thereby, and clamp bolts extending through the plates and the vertical webs of the rails.

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

AARON I. GAUMER.

Witnesses:

FRANK W. ALTIES.

JOHN DIETZ.