

L. A. GORMAN.
RAIL JOINT.
APPLICATION FILED JUNE 6, 1911.

1,020,039.

Patented Mar. 12, 1912.

FIG. 1

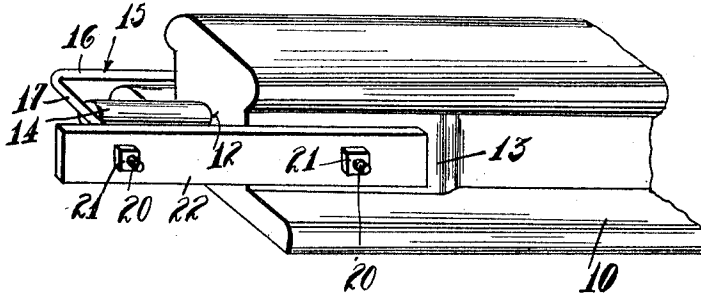


FIG. 2

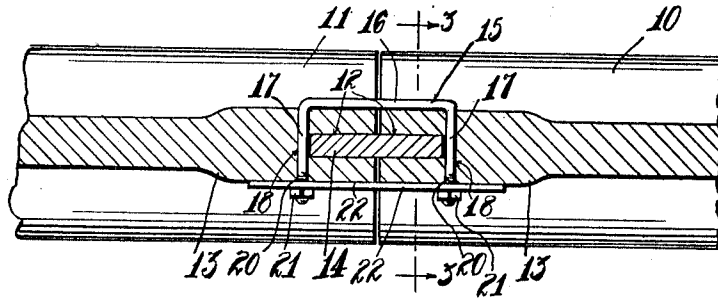


FIG. 4

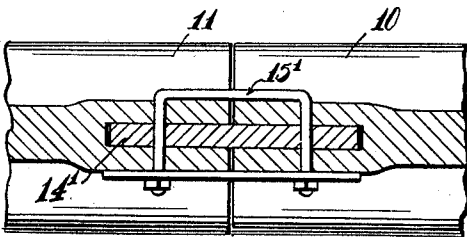
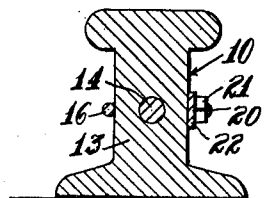


FIG. 5



Witnesses

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RAIL-JOINT.

1,020,039.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEXIE A. GORMAN, a citizen of the United States, residing at Germantown, in the county of Shelby, State of Tennessee, have invented certain new and useful Improvements in 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 rail joints and has for an object to provide a rail joint composed of a few simple and inexpensive parts.

A further object of the invention is to obviate the use of the usual fish plates, a novel U-shaped coupling member performing the function of the fish plates and fish plate bolts.

With the above objects in view the invention consists in certain novel details of construction and combination of parts herein-after fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claims.

In the accompanying drawing forming part of this specification:—Figure 1 is a perspective detail view of one of the rail ends with the coupling members applied. Fig. 2 is a longitudinal sectional view through the rail joint. Fig. 3 is a cross sectional view taken on the line 3—3 Fig. 2. Fig. 4 is a longitudinal sectional view through a modified form of joint.

Referring now to the drawing, the abutting rail ends are designated by the reference numerals 10 and 11, each of these rail ends being provided in its end face with a circular longitudinal orifice 12, this orifice being formed in the rail web which latter is considerably thickened, as shown at 13 to provide sufficient material for making this orifice without weakening the rail. The orifices 12 aline when the rail ends are in abutment and receive the opposite extremities of a pin 14, this pin when in operative position preventing movement laterally of the rail ends relatively to each other.

A coupling member is designated in general by the numeral 15 and is shown to be formed of a single length of round material bent approximately U-shaped, the bridge portion 16 of this member being

adapted to lie along one side of the abutting rail webs and take the place of the usual fish plate mounted upon this side. The legs 17 of the coupling member extend through alining openings 18 formed in the rail webs, the legs projecting considerably beyond the opposite side faces of the rail webs and being threaded as shown at 20 to receive retaining nuts 21. A fish plate 22 is interposed between the retaining nuts and opposite side faces of the rail webs and the retaining nuts are screwed up tight against this fish plate in mounting the coupling member.

It will be observed that by virtue of this U-shaped coupling member longitudinal displacement of the rail ends relatively with each other is prevented, while at the same time by virtue of the bridge 16 of this member being free from anchorage members such as bolts, screws or the like, that there will be a certain amount of flexibility to this bridge member so that the rails can expand and contract slightly. It will further be observed that the legs of this U-shaped coupling member take the place of the usual fish bolts employed in rail joints so that the joint is formed of a less number of parts than usual. It will further be noted that the pin 14 is of such length that it nearly abuts against the legs of the U-shaped coupling member, this disposition of the legs of the coupling member across the ends of the pin serving to hold the pin at two points on opposite sides of its center against movement so that creeping of the pin and consequent rattling of the joint is prevented.

In Fig. 4 is shown a modified form of my invention, and in this instance it will be noted that the pin 14' is provided with orifices which receive the legs of the U-shaped coupling member 15'. By virtue of this construction a more rigid rail joint is formed than in the preferred construction above described.

What is claimed, is:—

1. A rail joint including in combination with two abutting rail ends having longitudinal alining orifices in their webs, and having transverse orifices opening through the web sides and communicating with said longitudinal orifices, of a pin having its opposite ends engaged in said longitudinal orifices, and a U-shaped coupling member having its bridge portion extending along

- the rail web sides and having its legs engaged through the transverse orifices in said webs and preventing creeping of the pin, a fish plate extending along the opposite rail web sides from the bridge portion of the coupling member and connecting the terminals of the coupling member legs, and retaining nuts upon said legs bearing against said fish plate.
2. A rail joint including in combination with two abutting rail ends having longitudinal alining orifices in their webs, and having transverse orifices opening through the web sides and communicating with said longitudinal orifices, a pin having its opposite ends engaged in said longitudinal orifices, and having openings registering with said transverse orifices, a U-shaped coupling member having its bridge portion extending along the rail web sides and having its legs engaged through the registering transverse openings in the pin and rail webs, a fish plate extending along the opposite rail web side and connecting the terminals of said legs, and retaining nuts upon said legs bearing against said fish plate.
- In testimony whereof, I affix my signature, in presence of two witnesses.
- LEXIE A. GORMAN.
- Witnesses:
W. L. GRIFFIN,
W. H. McVAY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."