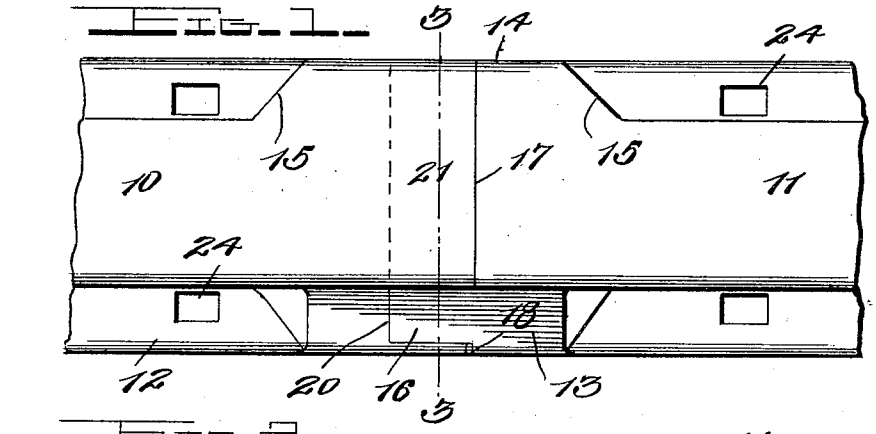
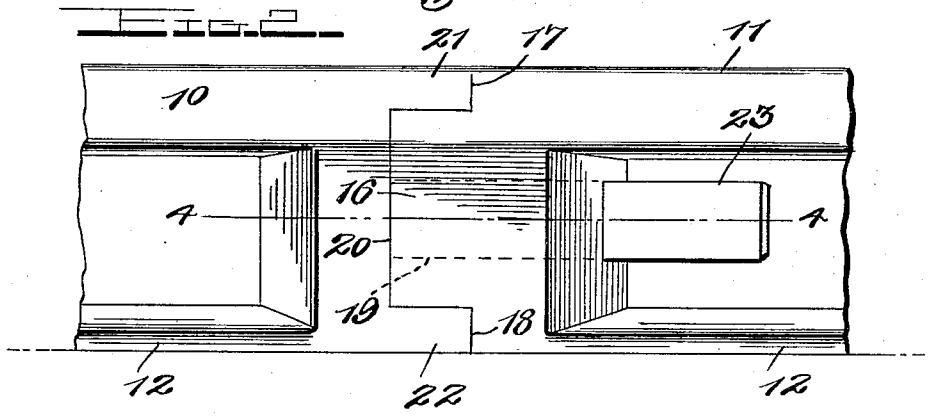
H. B. MADDOX.

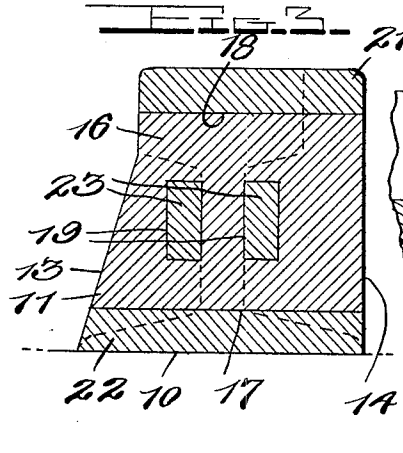
RAIL JOINT.

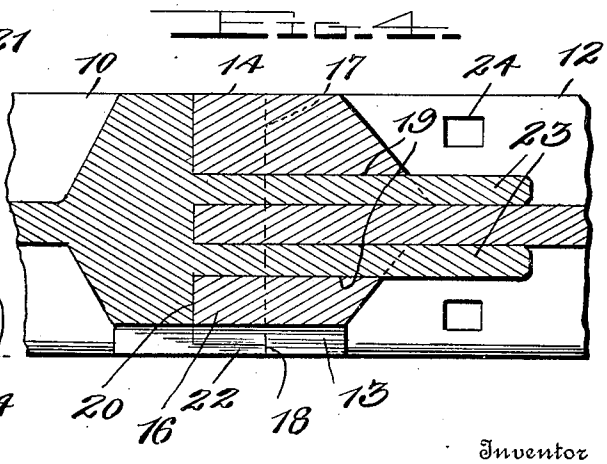
APPLICATION FILED JUNE 10, 1912.

1,042,702. Patented Oct. 29, 1912.









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UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

1,042,702. Specification of Letters Patent. Patented Oct. 29, 1912.

Application filed June 10, 1912. Serial No. 702,835.

To all whom it may concern:

Be it known that I, HARVEY B. MADDOX, a citizen of the United States, residing at Magee, in the county of Simpson and State of Mississippi, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a new and useful improvement in a rail joint which is designed more particularly to eliminate the use of nuts, bolts, or any other detachable fastening means, and the primary object of the present invention is to provide a novel means for connecting the abutting ends of the rails, which will be inexpensive in the cost of manufacture, strong, durable and efficient when in use.

Other objects of the present invention will be apparent as the description continues to those who are familiar with the art.

With the above and other objects in view, this invention consists of the novel details of construction, combination, formation and arrangement of parts as will be hereinafter more fully described, claimed and particularly pointed out in the appended drawings, in which:—

Figure 1 is a plan view of the abutting ends of rails embodying my invention, Fig. 2 is a side elevation of the same. Fig. 3 is a transverse section taken on the line 3—3 of Fig. 1, and Fig. 4 is a longitudinal horizontally extending view taken on the line 4—4 of Fig. 2.

Reference now being had to the accompanying drawings wherein like parts are illustrated by like numerals throughout the several views, the numerals 10 and 11 indicate the abutting ends of the ordinary rails which are now in use and which are provided with my improved joint.

The extremities of both of the rails are enlarged as shown and when connected the ball of the rail formed is substantially square in section, as more clearly illustrated in Fig. 1 of the drawings, which is approximately divided into three sections, two-thirds of which being formed integral with the abutting ends of the rail 10 and the other portion thereof being formed integral with the extremity of the rail 11 for a purpose which will be hereinafter more fully described. The lower extremities of these enlarged portions formed on the ends of the rails are substantially co-extensive with the flange 12 of the rails, the inner wall thereof being inclined as at 13 to the inner edge of the ball of the rail, whereas the outer wall 14 of these enlarged portions extends substantially perpendicular with the base of the rail, thereby forming the ball of the rail at the joint considerably wider than the ball of the body portion of the rail, which adds to the strength of the joint. The outer face of the ball of each rail forms a continuation with the enlarged portion of the rails by the inclined portions 15.

The enlarged end portion of the rail 11 is provided with an extension 16 which is of substantially the same width as the enlarged portion of the rail, but has formed upon its upper and lower faces thereof recesses 17 and 18 for a purpose which will be hereinafter described. A pair of substantially rectangular openings 19 are formed in the enlarged portion of the rail 11 and extend substantially longitudinally of the rail. These openings 19 are spaced apart at a distance equal to the web of the rail so that when the fastening means which will be hereinafter described are inserted into these openings they will lie adjacent each side of the web of the rail. The opposite end of the rail indicated by the numeral 10 has provided in the forward face of the enlarged portion a recess 20 of substantially the same width as the enlarged portion, thereby forming an upper and a lower flange 21 and 22, respectively, which are adapted to rest within the recesses 17 and 18, respectively, when the abutting ends of the rails are connected together. Extending from the enlarged portion of the rail 10 and made integral therewith is a pair of substantially rectangular parallel locking arms 23 which are adapted to extend within the openings 19 formed in the opposite rail 11.

It will be obvious from this construction that when the two abutting ends of the rails are connected together the arms 23 will lie within the openings 19 and the flanges 21 and 22 will lie within the recesses 17 and 18, respectively, and lie flush with the flange and ball of the rail, thereby forming a connection which will prevent the flange from moving when the rolling stock passes over the same which has a tendency to wear the abutting edges of the rails and cause a jar to the train as it passes over the same. It will be further seen that the abutting ends

may move longitudinally, thereby providing the proper expansion and retraction for the rails. I have also provided openings 24 which are formed within the flanges of the rails for receiving a spike, or other fastening means which are used in securing the rails to the ties thereby holding the same at the proper gage. It will be further noted that the arms 23 extend through the openings and lie on each side of the web of the rail and are of greater length than the enlarged portion formed at the ends of the rails to permit the proper expansion and contraction of the rails and also forming guides therefor.

Other uses and advantages of the present invention will be readily apparent to those who are familiar and skilled in the art and, of course, it is to be understood that other minor details of construction, changes as to form and operation, may be resorted to that come within the scope of the present invention without departing from the spirit thereof.

What I claim is:—

1. In a rail joint, comprising two sections having enlarged ends, one of the said sections provided with a reduced extension provided with openings, the other said section having a recess formed therein for receiving said reduced extension, arms extending from the said section having a recess formed therein and adapted to extend within said openings formed in the other said section, substantially as described.

2. A rail joint comprising two sections having enlarged ends, one of the said enlarged ends having recesses formed in the upper and lower faces thereof, flanges extending from the other said enlarged end and adapted to rest within said recesses, the said enlarged portion provided with the recesses having a pair of longitudinally extending openings formed therein, in the medial portion thereof and on each side of the web of the rail, the opposite said section having a pair of spaced parallel arms extending from the medial portion thereof and adapted to extend within said openings formed in the opposite section substantially as described.

3. A rail joint, comprising two sections having enlarged ends, said enlarged ends being substantially co-extensive with the flange of the rail, the inner wall of the said enlarged extension being inclined and terminating at its upper end with the ball of the rails, a reduced portion formed on one of the said enlarged portions being of the same width thereof, the opposite said enlarged section having a recess formed therein for receiving the reduced portion of the opposite section, arms extending from the medial portion of said recess formed in the last mentioned section and adapted to operate within openings formed in the medial portion of the first mentioned section substantially as and for the purpose described.

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

HARVEY B. MADDOX.

Witnesses:

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E. L. WALKER.