

T. CATCHINGS.
RAILWAY TRACK CONSTRUCTION.
APPLICATION FILED MAY 12, 1911.

1,003,703.

Patented Sept. 19, 1911.

Fig. 1.

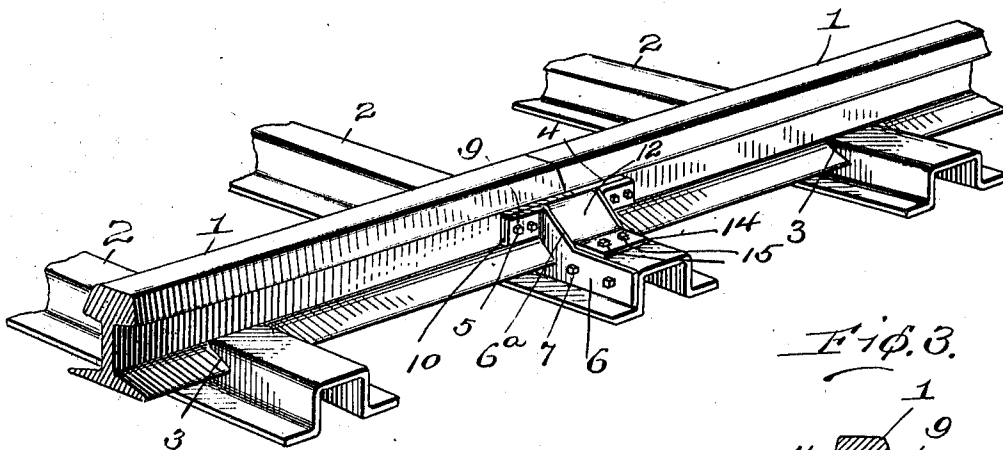


Fig. 2.

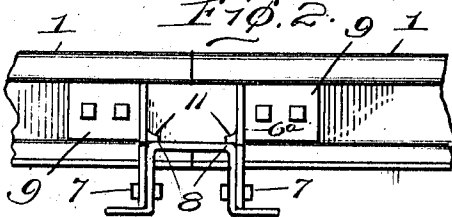


Fig. 3.

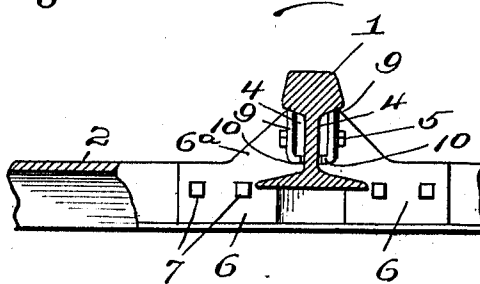


Fig. 4.

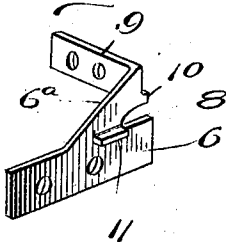


Fig. 5.



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RAILWAY-TRACK CONSTRUCTION.

1,003,703.

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To all whom it may concern:

Be it known that I, TOM CATCHINGS, a citizen of the United States, residing at Jackson, in the county of Hinds and State of Mississippi, have invented certain new and useful Improvements in Railway-Track Constructions, of which the following is a specification.

The present invention relates in general to railways, and more particularly to an improved method of track construction whereby the rails are retained securely in position upon the ties without the necessity of employing spikes or similar fastening members, and whereby the abutting ends of the rails are held rigidly against both vertical and lateral displacement.

The invention further contemplates the provision of a rail joint which is inexpensive in its construction, which securely holds the rail ends against relative displacement, and which comprises few and durable parts such as can be used repeatedly without deterioration.

With these and other objects in view, the invention consists in certain combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a perspective view of one side of a portion of a track constructed in accordance with the invention. Fig. 2 is a side view of the joint. Fig. 3 is an end view of the joint, the rail being shown in section and portions of the tie being broken away. Fig. 4 is a detail perspective view of one of the side plates, and Fig. 5 is a similar view of the guard plate.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Specifically describing the embodiment of the invention illustrated upon the accompanying drawing, the numerals 1 designate the meeting ends of a pair of rails which may be of any conventional cross section and which are mounted upon the ties 2. These ties are preferably constructed of sheet metal and have a hollow

formation, the top of the ties being formed with dovetail notches 3 to receive the bases of the rails. In this manner the rails are held securely against spreading or lateral displacement without the necessity of using spikes or similar fastening members. Such a construction will be found particularly advantageous upon curves where the lateral thrust upon the rails is very great, and where the usual spikes are continually working loose. The ties 2 preferably have a transversely arched formation, the lower edges of the tie being extended outwardly so as to obtain a firm bearing upon the road bed which may be of any suitable construction.

The abutting ends of the two rails 1 are located immediately over one of the ties 2 and fish plates 4 are applied to the web portions of the rail ends upon opposite sides thereof, the said fish plates being held in position by means of the usual bolts 5. Vertical plates 6 are rigidly secured in some suitable manner as by means of the bolts 7 to the two sides of the tie 2 upon each side of the rails, the said plates being provided at their inner ends with the notches 8 which engage the bases of the rails and cooperate with the dove tail notch 3 in the tie to retain the rail ends securely against vertical displacement. It will also be observed that the inner end of each of the plates 6 is formed with an upward extension which carries a laterally projecting wing 9, the said wings fitting against the fish plates 4 and being engaged by the same bolts 5 which hold the fish plates in position. These fish plates bear against the heads of the rails but are slightly spaced from the bases of the rails, and the lower edges of the wings 9 are formed with the longitudinal ribs 10 which extend under the bottom of the fish plates so as to cooperate with the same to form a solid filling between the heads and bases of the rails. It will also be observed that the upward extension 6^a at the inner ends of the vertical plates are provided with the flanges 11 which engage the top of the tie 2 and tend to prevent any sagging of the plates 6.

In order to prevent dirt and foreign matter from accumulating between the extensions 6^a of the outer plates 6, a guard plate 12 may be employed. This guard plate fits between the edges of the extensions 6^a, the

inner end of the guard plate being extended downwardly at 13 and bearing against the fish plate 4, while the outer end of the guard plate is extended outwardly at 14 and secured to the tie 2 by means of the bolts 15.

With the foregoing construction, it will be obvious that the rail ends are mounted in such a manner as to render any relative vertical or lateral displacement of the same practically impossible. A joint will thus be provided which will prevent rounding of the rails at the extremities thereof and which will enable the rolling stock to pass thereover without the usual jolts and jars.

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

1. The combination of the abutting ends of a pair of rails, a tie supporting the same, fish plates applied to the webs of the rails, and plates secured to the sides of the tie on each side of the rails, the said plates being provided with lateral wings which bear against the fish plates and the said wings being formed with ribs which engage one of the edges of the fish plate.

2. The combination of the abutting ends of a pair of rails, a tie supporting the same, fish plates applied to the web portions of the rails, the said fish plates abutting against the heads of the rails but being spaced from the bases of the rails, and plates secured to the sides of the tie on each side of the rails, the said plates being formed with upward extensions which terminate in lateral wings

adapted to fit against the fish plates, the said lateral wings being formed with ribs adapted to fit between the lower edges of the fish plates and the bases of the rails.

3. The combination of the abutting ends of a pair of rails, a tie supporting the same and having an interlocking connection therewith, fish plates applied to the web portions of the rails, the said fish plates abutting against the head of the rails but being spaced from the bases of the rails, and plates secured to the sides of the tie on each side of the rails, the said plates having the inner ends thereof notched for engagement with the bases of the rails and being formed with upward extensions terminating in lateral wings adapted to fit against the fish plates, the said lateral wings being formed with ribs designed to fit between the lower edges of the fish plates and the bases of the rails.

4. The combination of the abutting ends of a pair of rails, a tie supporting the same, plates secured to the sides of the tie on each side of the rails and formed with upward extensions terminating in lateral wings designed to fit against the sides of the rails, and a guard plate fitted between the edges of the said upper extensions of the plates.

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

TOM CATCHINGS.

Witnesses:

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