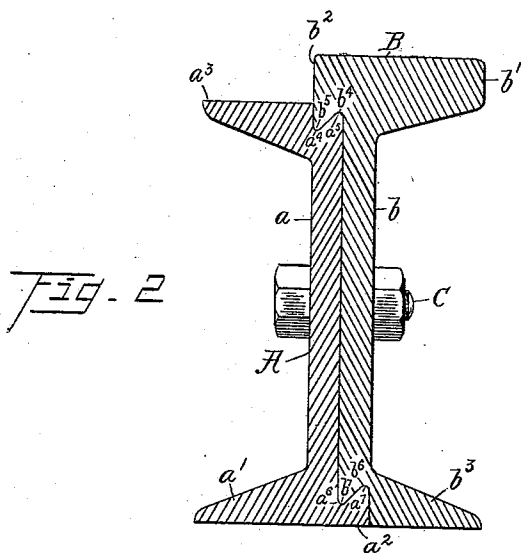
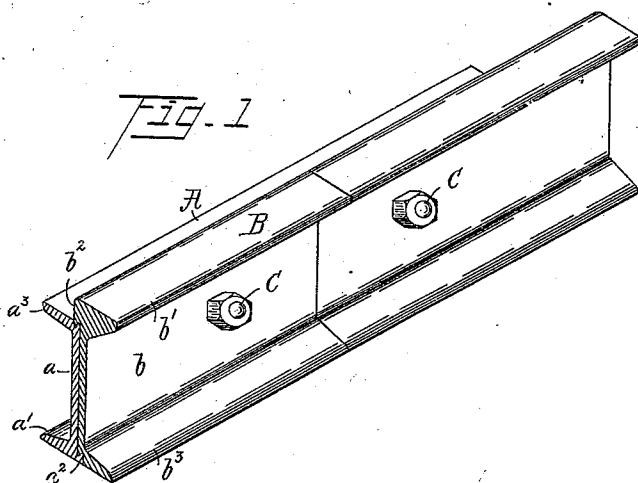


(No Model.)

R. L CALDWELL.
COMPOUND RAIL.

No. 556,044.

Patented Mar. 10, 1896.



Witnesses.

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UNITED STATES PATENT OFFICE.

ROBERT L. CALDWELL, OF CLEVELAND, OHIO.

COMPOUND RAIL.

SPECIFICATION forming part of Letters Patent No. 556,044, dated March 10, 1896.

Application filed December 21, 1895. Serial No. 572,853. (No model.)

To all whom it may concern:

Be it known that I, ROBERT L. CALDWELL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Compound Rails; 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.

My invention relates to an improvement in compound rails for railway-tracks.

The object of the invention is to produce a rail composed of two parts or sections so constructed that when placed in the desired relation to one another the rail-section which bears the ball shall rest upon and interlock with the other section at two points—viz., near the base of the rail and near the top thereof—whereby the weight of the cars is most effectually supported, and the separation of the rail-sections at bottom or top by the mere lateral movement of either is prevented.

The invention consists in the combination of the two rail-sections constructed substantially as hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a compound rail cut transversely through both sections, and Fig. 2 is a transverse sectional view.

Referring to the parts by letters, A represents the supporting-section. It consists of a vertical web a , an outwardly-extended base-flange a^1 at its lower end, and an inwardly-extended base-flange a^2 , the lateral width of which is substantially equal to the thickness of the web of the other rail-section. The section A has also at its upper end the outwardly-projecting flange a^3 .

By "outwardly" I mean away from the other section, and by "inwardly" toward the other section.

The section B has a vertical web b , a ball b^1 on the top thereof having an inwardly-projecting lateral extension b^2 . On the bottom of the web is an outwardly-projecting base-flange b^3 .

In the top of the web a is formed a longitudinal groove a^4 , which is substantially vertical on its outer face and beveled on its inner face.

The formation of this groove leaves the tongue a^5 , the outer face of which is the inner face of the groove, which, as above stated, is beveled. A similarly-shaped groove a^6 is formed in the top of the inwardly-extended base-flange a^2 , the outer face of said groove being a vertical extension of the inner face of the web. The outer face of the groove is beveled. The tongue a^7 , which is formed by the making of the groove, has consequently a beveled outer face, as shown.

In the bottom of the web b is formed a groove b^6 and tongue b^7 , which tongue and groove have each one vertical face and one beveled face. In the under side of the lateral inward extension of the ball are formed the similarly-shaped groove b^4 and tongue b^5 .

When the rail-sections are combined together, the tongues a^5 and b^5 enter the grooves b^4 a^4 and the tongues a^7 b^7 enter the grooves b^6 a^6 , the beveled edges of said tongues and grooves coming in contact with each other, whereby the two sections are drawn closely against one another, both at their upper and lower edges, by the relative downward movement of section B. The interlocking parts of the two rail-sections are directly above the web a and directly below the web b , wherefore the rail has the maximum strength.

The rail-sections are fastened at intervals by bolts C; but these bolts are subject to no other strain than that which results from the tendency, if there is any, of the section B to move upward relative to the section A. All the weight upon the rails tends to move said rail-section in the opposite direction. The two sections cannot be separated, either at the top or bottom, by any mere lateral movement of either, but only after the relative vertical movement of the section B.

Having described my invention, I claim—

1. In a compound rail, a section A consisting of, first, a web a ; second, an outwardly-projecting flange at its upper edge; third, an outwardly-projecting base-flange; and fourth, an inwardly-projecting base-flange, combined with the section B having, first, a web b ; second, the outwardly-projecting base-flange; third, an outwardly-projecting ball on its upper edge; and fourth, an inwardly-projecting flange on its upper edge, said sections having interlocking tongues and grooves near their

tops and bottoms, substantially as and for the purpose specified.

2. In railway-rails, the section A consisting of, first, the vertical web having a longitudinal tongue and groove on its upper edge; second, an inwardly-projecting base-flange having a tongue and groove on its upper side; and third, an outwardly-projecting base-flange, combined with the section B, consisting of, first, a web having a longitudinal tongue and groove in its lower edge; second, an outwardly-projecting base-flange; third, an outwardly-projecting ball on its upper edge; fourth, an inwardly-projecting flange on said upper edge having a longitudinal tongue and groove on its under side, the tongues and grooves on one section engaging with the tongues and grooves on the other section, and means for preventing the vertical movement of the section B relative to section A, substantially as and for the purpose specified.

3. In railway-rails, the sections A consisting of, first, the vertical web having a longitudinal

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