

C. B. SCOTT.
RAIL FASTENER.
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974,301.

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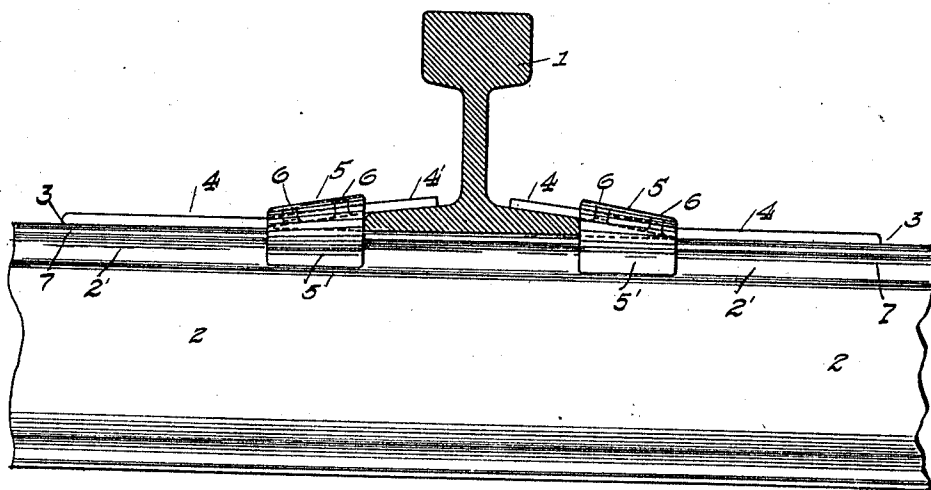


Fig. 1.

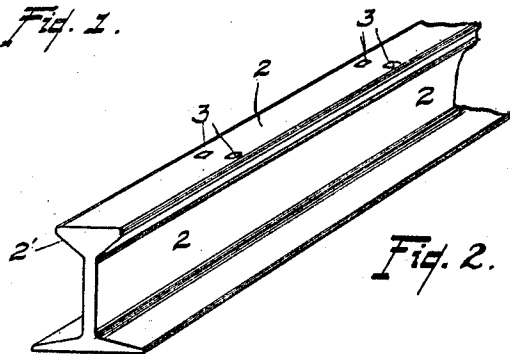


Fig. 2.

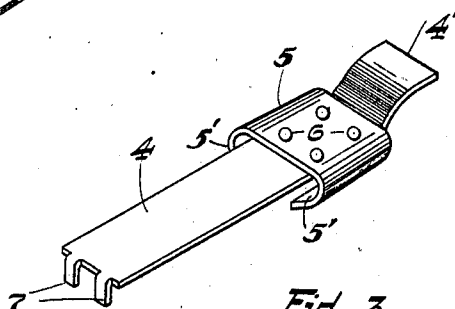


Fig. 3.

WITNESSES:

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CLYDE BELMONT SCOTT, OF MERCER, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO
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RAIL-FASTENER.

974,301.

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To all whom it may concern:

Be it known that I, CLYDE BELMONT SCOTT, citizen of the United States, residing at Mercer, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Fasteners, of which the following is a specification.

This invention pertains to means for fastening rails to ties, and is intended primarily to be used in connection with metallic ties.

One of the objects of my invention is to provide a cheap, practical and simple means which dispenses with the necessity of using nuts and bolts for fastening the rails to the ties.

Another object is to provide such fastening means which may be applied without the use of any special tools, and which may be released by the use of an ordinary crowbar.

A still further object is the construction of such a fastener as will maintain a spring grip hold of the rail which will in turn react to maintain a rigid connection of the fastener with the tie.

Still further objects and purposes of my invention will appear from an inspection of the drawing, the specification thereto, and the claims appended, in which are set forth the combination of elements, arrangements of parts, and elements of novelty properly comprised within the scope of my invention.

Referring now to the drawing in which is shown a preferred construction of my invention, Figure 1 represents a side elevation of a metallic tie, a "T" rail being shown in vertical cross section as resting on said tie and held thereto by my rail fasteners. Fig. 2 is a perspective view of the metallic tie with apertures shown in the top in which the outer ends of my rail fastener are adapted to fit, but one end of the tie being shown. Fig. 3 is one form of my rail fastener before it is applied to the tie and rail.

In the several figures of the drawing in which like reference characters designate like parts, (1) is a standard type of "T" rail. (2) is a metallic tie general in appearance "T" shaped, and differing in the present illustration only in having its top portion of less thickness than the usual rail and sloping on the inward side as shown at (2'). It must of course be understood that the tie may be of any form whatever so that the top

of the tie presents flanges in respect to the body portion so that the same may be gripped by the sides of my fastener. On either side of the center of the top of the tie are indentations (3). These indentations are of suitable depth to receive the fastener fingers, and are located at some standard predetermined distance on either side of those portions of the tie on which the rails sit. My fastener comprises a flat portion (4) formed from steel and of sufficient thickness to combine strength with a slight resiliency. The forward portion of the fastener is bent upwardly as shown at (4'), and between the portions (4) and (4') is a tie grip (5) comprising downward and inwardly turned gripping members or lips (5'). The tie grip and fastener plate proper may be either formed from an integral steel plate or by rigidly securing the tie grip to the fastener plate by rivets (6), or by welding or in any other suitable manner. It must be understood that for the successful application and use of my fastener, the tie grip should maintain a constant fixed point on the fastener plate as otherwise there would be a tendency of the tie grip to work toward the rear of the fastener plate and thus allow the rail to become loose. The rear of the fastener plate is provided with fingers (7) which are turned downwardly at right angles to the plane of the portion (4) and are adapted, when the fastener is applied to the rail and tie, to spring into the indentations (3).

In applying my fastener, the rail is seated on the tie, the fastener pushed on the end of the tie so that the lips (5') grip the under portions of the top of the tie. The fastener is then shoved forward toward the rail, the fingers (3) in the meantime causing the rear portion to be slightly elevated and the forward portion (4') to be slightly depressed. When the forward portion strikes the top of the rail base, it is sprung, thus forcing the fingers tightly against the top of the tie, which increases as the forward portion is driven up the rail base. The fastener being driven forward with a sledge, the fingers (7) come to the indentations (3) and are forced therein by the spring of the fastener plate. In the same manner, the other fastener is driven along the tie on the other side of the rail. To remove the fastener, a crowbar is inserted between the fingers (7) and the tie, and the rear end of the plate is

sprung upwardly, and by striking rearwardly against the fingers, the fastener may be withdrawn.

In tie fasteners now patented or on the market, apparently involving an idea similar to mine, a number of disadvantages are obvious. All of them involve the use of a tie of peculiar construction, or one involving many special features, thereby adding to the cost of its production and practically prohibiting the use of the fastener in great numbers. My fastener may be applied to any tie having a flange top, with the necessity only of cutting indentations in the top of the tie for the reception of the fastener fingers (7).

As before mentioned, if the tie grip were adapted to slide along the fastener plate, there would be a tendency on the part of the fastener to work loose. I have found from experiment that in fixing the tie grip on the fastener plate near the upturned portion (4') so that they are immovable relatively to each other, my fastener cannot be loosened when once applied to a rail and tie except by forcibly springing the fingers (7) out of the indentations (3).

In using my fastener, I require no specially constructed seat for the rail but apply a fastener on either side of the rail, thus not only preventing any lateral moving of the rail but also preventing any tendency on the part of the rail to turn over by reason of a strain directed against one side, as in its use on a curve.

While I have shown a preferred embodiment of my invention, it must be understood that I do not limit myself to the identical construction herein shown, but contemplate the application of this principle in such specific forms as the circumstances show to be preferable.

Having thus described my invention, what I claim as new, is;

1. A rail fastener comprising a flat portion, an integral portion at an angle thereto, fingers bent down from the flat portion and at right angles to it, and a member rigidly fixed to the flat portion having downwardly and inwardly bent lips, substantially as shown and described.

2. A rail fastener comprising a flat steel plate having its forward end bent upwardly at a slight angle and its rear end bent down-

wardly at a greater angle, and a gripping member fixed transversely to the plate adjacent its forward angled end, substantially as shown and described.

3. A rail fastener comprising a resilient plate having its forward end bent upwardly at a slight angle and its rear end bent downwardly at a greater angle, and inwardly bent lips fixed to the plate and extending below it, substantially as shown and described.

4. In combination, a tie having a flanged top with indentations therein, a rail upon said tie, rail fasteners on said tie at either side of the rail, said rail fasteners having forward ends sprung upon the upper sides of the rail base, and having downwardly bent fingers at their rear ends entering said indentations and members fixed transversely of the fasteners and embracing the flanged top of the tie, substantially as shown and described.

5. In combination, a metallic tie, a rail seated thereon, indentations in said tie, a rail fastener on said tie, lips extending downwardly and inwardly from the fastener and gripping the tie, one end of said fastener entering the indentations in the tie, and the other end of said fastener gripping the rail, substantially as shown and described.

6. In combination, a metallic tie having a flanged top, a rail having a flanged base, and a rail fastener embracing the flanges of the tie and gripping the flanged base of the rail, whereby the tie and rail are fastened together, substantially as shown and described.

7. In combination, a metallic tie having a flanged top with indentations therein, a rail having a flanged base, and a rail fastener comprising a member entering said indentations at one end and gripping the rail base at the other end, and a member embracing the flanged top of the tie, whereby the tie and rail are locked together, substantially as shown and described.

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

CLYDE BELMONT SCOTT.

Witnesses:

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