

E. A. TOUCEDA & F. CHRYSLER.

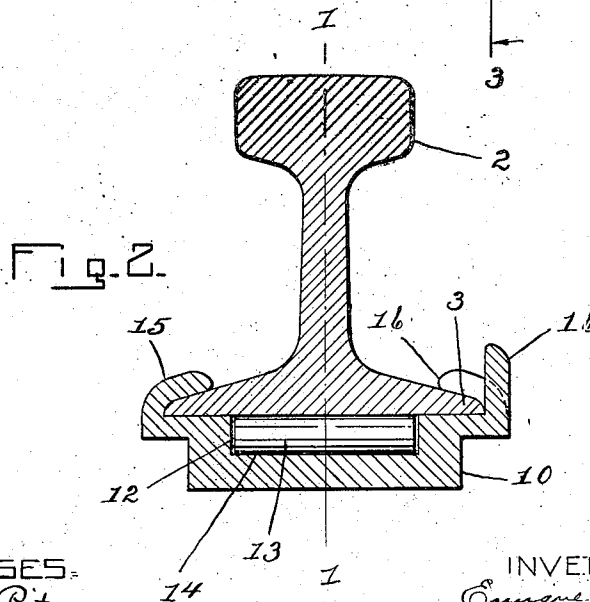
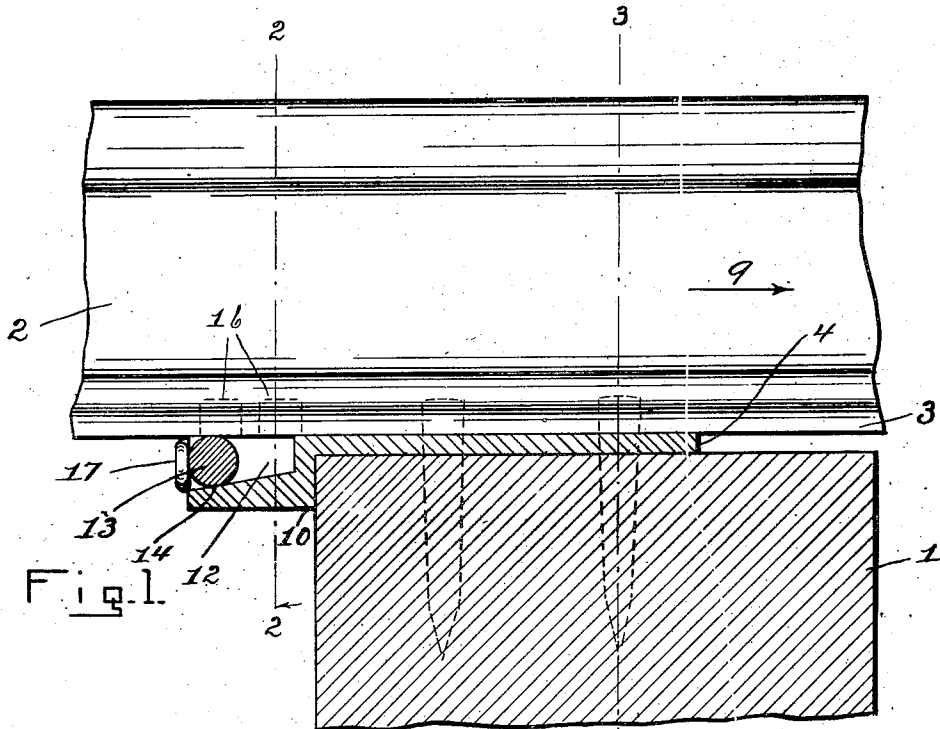
ANTI-RAIL CREEPING DEVICE.

APPLICATION FILED NOV. 6, 1912.

1,069,304.

Patented Aug. 5, 1913.

3 SHEETS-SHEET 1.



WITNESSES:

G. M. Ritz
P. A. Leduc

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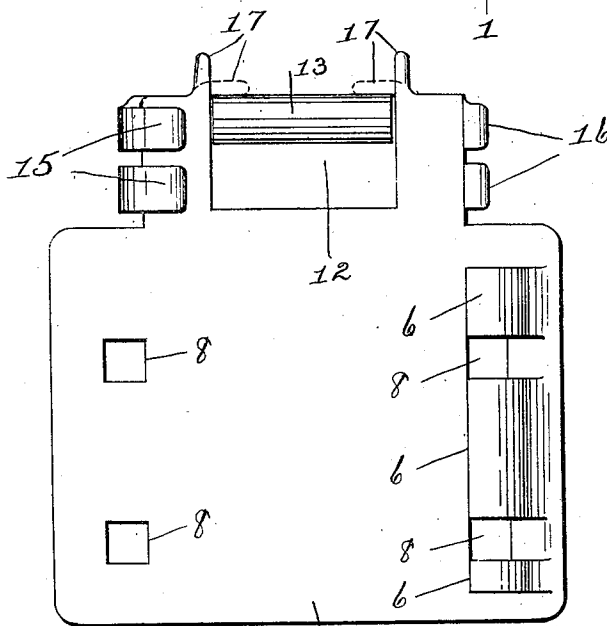
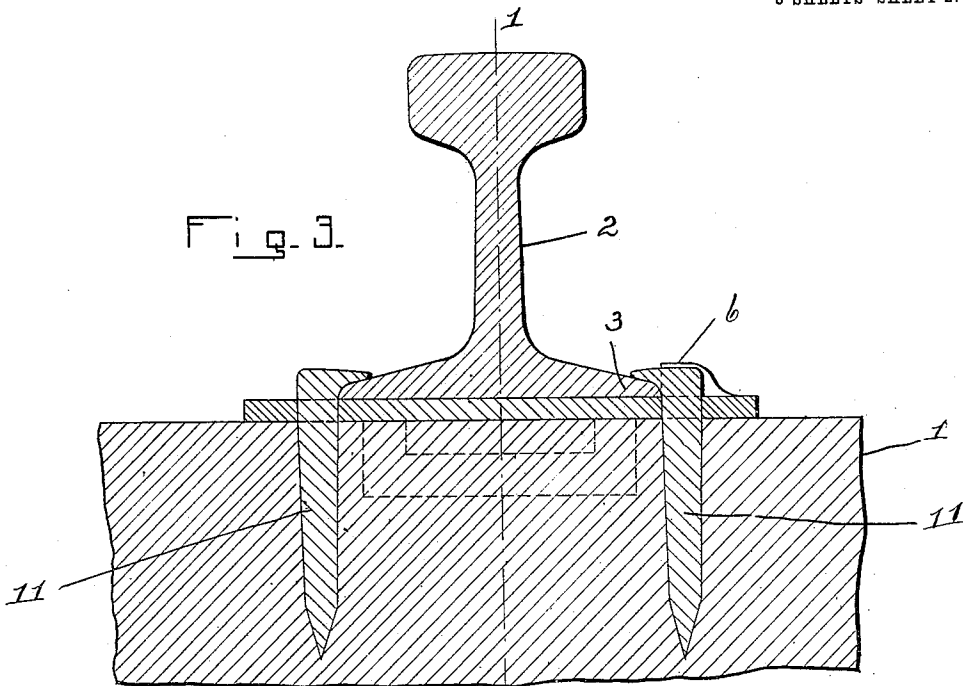
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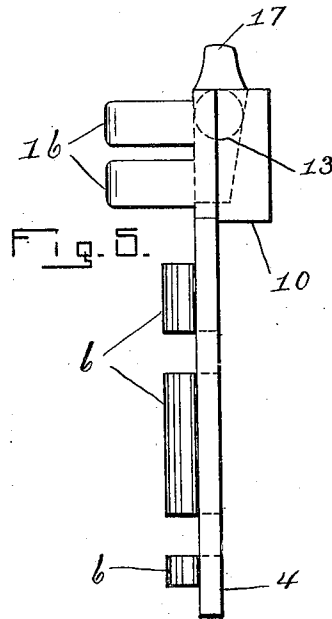
Patented Aug. 5, 1913.

3 SHEETS-SHEET 2.



WITNESSES:
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Fig. 4.



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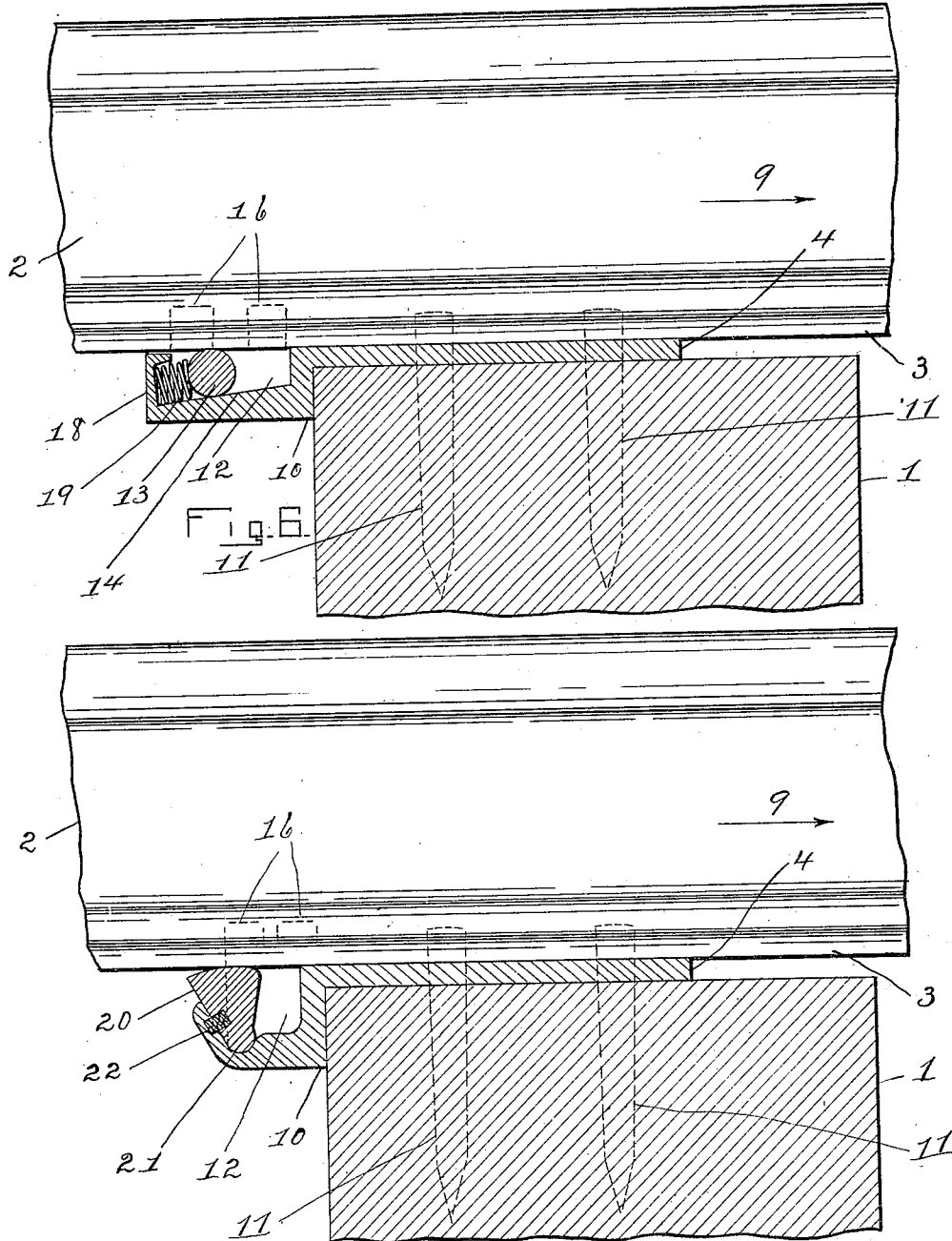
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3 SHEETS-SHEET 3.



WITNESSES:
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Fig. 7.

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UNITED STATES PATENT OFFICE

ENRIQUE A. TOUCEDA AND FRANK CHRYSLER, OF ALBANY, NEW YORK, ASSIGNORS
TO SAID TOUCEDA.

ANTI-RAIL CREEPING DEVICE.

1,069,304.

Specification of Letters Patent.

Patented Aug. 5, 1913.

Application filed November 6, 1912. Serial No. 729,721.

To all whom it may concern:

Be it known that we, ENRIQUE A. TOUCEDA and FRANK CHRYSLER, citizens of the United States, residing at Albany, county of Albany, and State of New York, have invented certain new and useful Improvements in Anti Rail-Creeping Devices, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification. Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a central vertical longitudinal section taken on the broken line 1-1 in Figs. 2 and 3 of our improved anti-rail-creeping device applied to a railway rail and railway tie. Fig. 2 is a vertical cross-section of the same taken on the broken line 2-2 of Fig. 1. Fig. 3 is a vertical cross-section of the same taken on the broken line 3-3 of Fig. 1. Fig. 4 is a top plan view of the tie-plate of our device. Fig. 5 is a side view of the same. Fig. 6 is a view similar to Fig. 1, showing a coil spring for holding the roller to its work. Fig. 7 is a view similar to Fig. 1, showing a rocker-cam instead of a roller for holding the rail from creeping.

The principal object of the invention is to prevent a railway rail from creeping upon the ties along the road-bed.

Other objects are to render the device highly effective; to facilitate its application to the rail; and to simplify the manufacture, and minimize the cost of the device.

In carrying out our invention, we employ a member extending beneath the foot of the rail and fixed against movement in the direction in which the rail tends to creep, and a member engageable with the bottom surface of the rail movably mounted upon said fixed member with its path of movement, in the direction in which the rail tends to creep, intersecting the bottom surface of the rail.

Referring to Figs. 1 to 5 inclusive, 1 is a railway tie, which may be of any known form, and 2 is an ordinary railway rail, hav-

ing the base or foot, 3, adapted to rest upon the ties.

The tie-engaging member of our device is shown in the form of a tie-plate, 4, adapted to rest upon a tie between the tie and the rail, as shown in Figs. 1 and 3.

The tie-plate, 4, is fixed against movement in the direction in which the rail tends to creep, indicated by the arrow, 9, as by means of a depending flange, 10, on the plate, engaging the side of the tie, as shown in Fig. 1, or by spikes, 11, driven through apertures, 8, in the plate into the tie, as shown in Fig. 3.

The tie-plate may be formed with lugs or flanges, 6, against which the outer edge of the foot of the rail bears. The depending flange, 10, is formed with a recess, 12, in its upper surface directly beneath the bottom of the rail, the bottom of which recess is upwardly inclined in the direction in which the rail tends to creep. A roller, 13, is confined within the recess, 12, between the bottom wall thereof and the bottom surface of the rail in contact with the bottom surface of the rail and adapted to be rolled along the upwardly inclined bottom, 14, of the recess by any movement of the rail in the direction of the arrow, 9. The rail is supported against the upward thrust of the roller, 13, by means of lugs, 15, overhanging the foot of the rail on one side, and lugs, 16, overhanging the foot of the rail on the opposite side, said lugs being formed on the opposite edges of the portion of the plate, 4, which contains the recess, 12.

To facilitate the application of the plate to the rail, we preferably make the plate of malleable cast-metal with one or both sets of lugs, 15 and 16, cast upright, as shown at the right-hand side of Fig. 2, and bend said lugs over upon the top of the foot of the rail after the plate has been applied to the rail. In like manner we cast lugs, 17, projecting from the outer end of the plate, 4, at opposite sides of the deeper end of the recess, 12, permitting the roller to be inserted within the recess after the plate has been applied to the rail, the lugs, 17, being thereafter bent over to the position indicated by dotted lines in Fig. 4 to retain and confine the roller within the recess. In bending over the lugs, the roller is preferably driven by means

of these lugs far enough into the recess and up the inclined surface, 14, to support a substantial part of the weight of the rail, so that the rail cannot move in the direction of the arrow, 9, without operating the roller.

As shown in Fig. 6, the plate, 4, is formed with an outer end-wall, 18, for the recess, and a coil-spring, 19, is interposed between said wall, 18, and the roller, 13, to hold the roller to its work.

In the construction shown in Fig. 7, the recess, 12, contains a rocker-cam, 20, the lower end of which is convexed and adapted to occupy a concaved seat, 21, on the bottom of the recess, 12. This rocker-cam is adapted to engage the bottom surface of the rail and its higher points are movable in the direction in which the rail tends to creep along a path intersecting said bottom surface of the rail, making it impossible for the rail to creep in the direction of the arrow, 9, without rocking said cam in the same direction, and increasing its contact-pressure upon the under side of the rail until the creeping movement is arrested.

A coil-spring, 22, may be interposed between the rocker-cam and the outer end-wall of the recess, 12, to hold the cam to its work if desired.

By the term "roller" we mean to include both a cylindrical member and a spherical member.

What we claim as new and desire to secure by Letters Patent is—

1. An anti-rail-creeping device comprising a tie-engaging member adapted to overhang the foot of the rail and having a portion extending beneath the rail, and a member adapted to be confined between said tie-engaging member and the bottom surface of the rail adapted to engage said bottom surface of the rail and movable about an axis in the direction in which the rail tends to creep along a path intersecting said surface.

2. An anti-rail-creeping device comprising a tie-engaging member adapted to overhang the foot of the rail and having a recessed portion extending beneath the rail, and a member adapted to be confined with-

in said recess adapted to engage the bottom surface of the rail and movable about an axis longitudinally of the rail along a path intersecting said bottom surface of the rail.

3. An anti-rail-creeping device comprising a tie-engaging member adapted to overhang the foot of the rail and having a portion extending beneath the rail formed with an upper surface upwardly inclined in the direction in which the rail tends to creep, and a roller adapted to be confined between, and in contact with, said inclined surface and the bottom surface of the rail.

4. An anti-rail-creeping device comprising a tie-engaging member having a downwardly offset portion adapted to extend beneath the rail and having portions adapted to overhang the foot of the rail, and a member adapted to be confined between said offset portion of the tie-plate and the bottom surface of the rail movable in the direction in which the rail tends to creep along a path intersecting the bottom surface of the rail.

5. An anti-rail-creeping device comprising a tie-plate having portions overhanging the foot of the rail, and a downwardly offset portion adapted to extend beneath the rail formed with an upper surface upwardly inclined toward the body of said plate, and a roller adapted to be confined between said inclined surface and the bottom surface of the rail.

6. The combination with a railway rail, of a member adapted to be fixed against movement in the direction in which the rail tends to creep and having a surface upwardly inclined toward the bottom surface of the rail in the direction which the rail tends to creep; and a roller confined in engagement with said inclined surface and the bottom surface of the rail.

In testimony whereof, we have hereunto set our hands this 30th day of October, 1912.

ENRIQUE A. TOUCEDA.
FRANK CHRYSLER.

Witnesses:

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GERTRUDE M. FITZ.