W. F. ARMSTRONG.

ANTICREEPING RAIL FASTENER.

APPLICATION FILED APR. 5, 1909.

986,121. Patented Mar. 7, 1911.

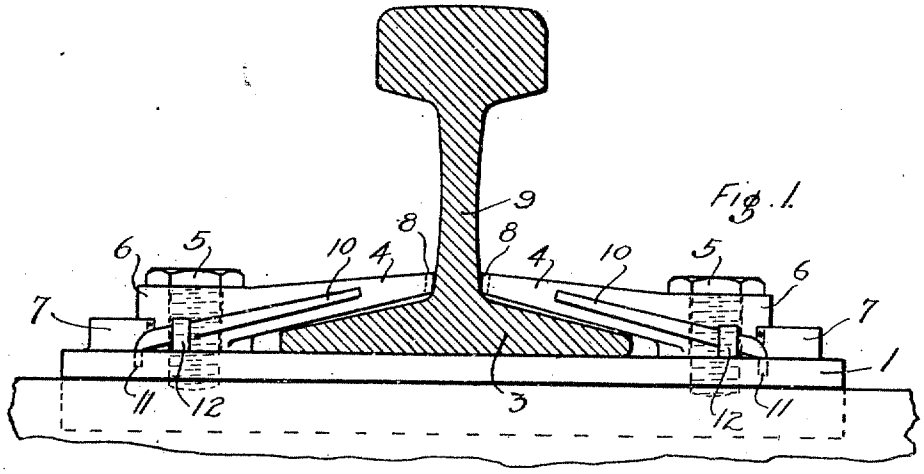

Fig. 1.

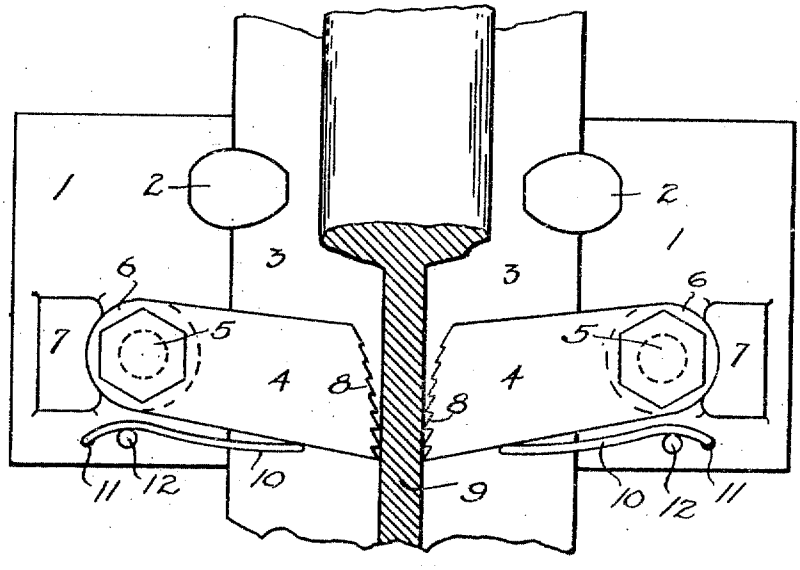

Fig. 2.

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WILLIAM F. ARMSTRONG, OF SUMNER, WASHINGTON.

ANTICREEPING RAIL-FASTENER.

986,121. Specification of Letters Patent. Patented Mar. 7, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM F. ARMSTRONG, a citizen of the United States of America, residing at Sumner, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Anticreeping Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to rail fastenings and especially to those adapted to prevent the longitudinal motion or creeping of the rail and has for its objects to provide means which shall automatically prevent the rail from creeping in one direction by clamping it against such motion, without throwing it out of gage or otherwise straining it, and which shall be cheap to make and simple to apply. I attain these and other objects by the devices illustrated in the accompanying drawing in which,

Figure 1 is an elevation of my improved anti-creeping device showing the rail to which it is applied in section; and Fig. 2 is a plan thereof showing the head of the rail broken away to reveal the clamp.

Similar numerals of reference refer to similar parts throughout the several views.

This invention consists of a plate 1, in form similar to the usual tie-plate, fastened to the tie by means of the two spikes 2 which also engage on each side of the base 3 of the rail. The cam-shaped clamp pieces 4 are pivotally secured to the plate 1 by means of the screws 5 which pass through the bosses 6 thereof and screw into the plate 1. The two clamp pieces 4 are similar but complementary to each other in form and engage the rail on both sides thereof. The bosses 6 of the clamp pieces 4 are semi-cylindrical and engage against the curved surfaces of the lugs 7 extending above the surface of the plate 1 on which they are formed or secured. These lugs 7 take the strain of the clamp pieces 4 away from the pivot screws 5 to prevent injury to the said pivots. The clamp pieces 4 are formed with a series of teeth 8 formed on their outer curved surfaces, said curved surfaces being eccentric from the pivots 5 as shown in Fig. 2. The clamping parts on which the teeth 8 are formed, are raised above the base 3 of the rail and are adapted to engage on both sides of the web 9 thereof. Springs 10 engage the sides of the clamp pieces 4 and are secured by having their ends downturned into the holes 11 in the plate 1 and by engaging the side of the pins 12 secured to the plate 1.

My improved device is applied to a rail by first slipping the plate 1 under the base 3 of the rail and securing it in place on the tie by the spikes 2, in such position that it is approximately symmetrical with the rail. Then the clamp pieces 4 are secured thereto by means of the screw pivots 5 and are held against the web 9 by means of the springs 10 which are next put in place. It is evident that as soon as the rail starts to creep in one direction it will draw the clamp pieces 4 with it and will be tightly clamped by them as they turn on their pivots 5; the greater the creeping, the tighter the rail will be gripped and a point is quickly reached at which the rail cannot creep any farther and is held firmly in place. If a rail tends to creep in both directions the device may be turned in each alternate position so as to firmly hold it from creeping in either direction. In practice I propose to use one of these clamps on every third or fourth tie in places where the tendency to creep is at all appreciable.

Having described my invention, what I claim is:

1. In an anti-creeping rail fastener, the combination of a tie plate securely fastened to the tie; cam-shaped clamp pieces pivotally secured to the tie plate and extending over the rail base and engaging on each side of the rail web; and spring pieces engaging said clamp pieces and holding them in position against said rail web.

2. In an anti-creeping rail fastener, the combination of a tie plate securely fastened to the tie; cam-shaped clamp pieces pivotally secured to the tie plate and extending over the rail base and engaging on each side of the rail web; lugs formed on the tie plate and each engaging one of said clamp pieces to brace it on the tie plate; and spring pieces engaging said clamp pieces and holding them in position against said rail web.

3. The combination with the rail, of a plate adapted to underlie the rail, a bar pivoted to the plate on each side of the rail and adapted to engage the side of the rail with its free end, said bars being inclined with respect to the rail and converging toward their free ends and engaging the rail at approximately opposite points.

4. The combination with the rail, of a bar on each side thereof, said bars each being

pivoted at one end and engaging the rail with the other end, said bars being inclined toward the rail, and diverging from their engaging ends.

5. The combination with the rail, of means for preventing creeping thereof, comprising a pair of bars, the bars being on opposite sides of the rail, each bar having one end engaging the rail and having the other end inclining outwardly away from the rail in the direction toward which the rail is inclined to creep, said last mentioned end being pivoted to a fixed support.

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

WILLIAM F. ARMSTRONG.

Witnesses:
J. M. CROW,
L. R. CRIPPEN.