No. 814,525. PATENTED MAR. 6, 1906.

C. L. DURBORAW.

TRACK FASTENER.

APPLICATION FILED MAY 22, 1903.

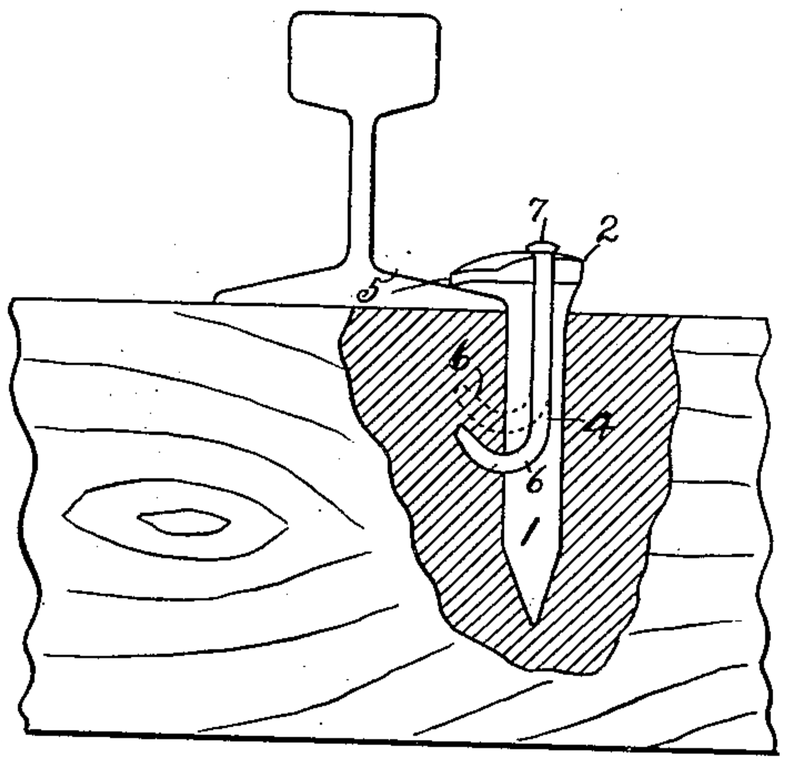

Fig. 1.

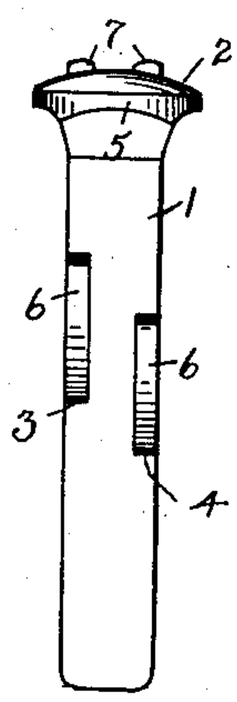

Fig. 2.

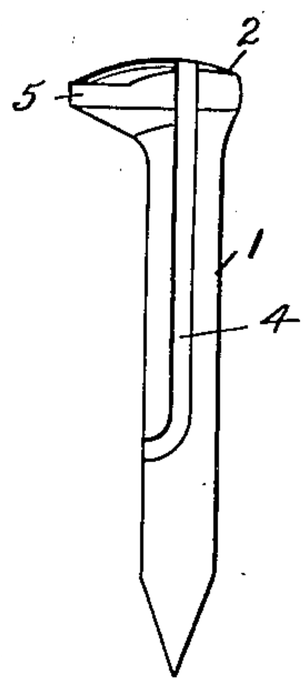

Fig. 3.

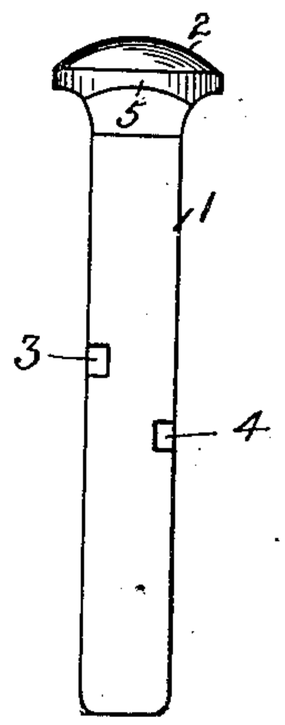

Fig. 4.

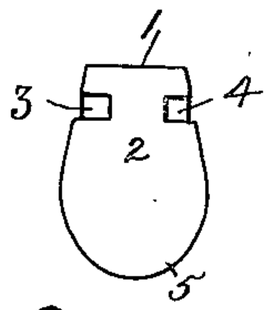

Fig. 6.

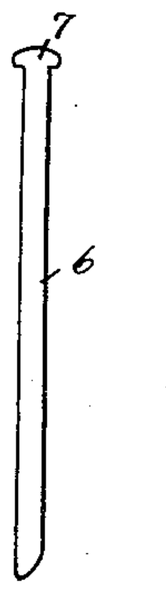

Fig. 5.

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UNITED STATES PATENT OFFICE.

CHARLES L. DURBORAW, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-FOURTH TO WILLIAM F. SEIM, ONE-FOURTH TO ABRAHAM LEHMAN, AND ONE-FOURTH TO LOUIS B. BERNEI, ALL OF BALTIMORE, MARYLAND.

TRACK-FASTENER.

No. 814,525. Specification of Letters Patent. Patented March 6, 1906.

Application filed May 22, 1903. Serial No. 158,320.

To all whom it may concern:

Be it known that I, CHARLES L. DURBORAW, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Track-Fasteners, of which the following is a specification.

This invention relates to improvements in track-fasteners for railroads, and is especially adapted for use on curves and other parts of the road where there is a tendency to spread the rails.

One object of the invention is to provide a device that can be driven into the cross-tie in the same manner as the spike now in general use and which when driven therein will be securely held by means of keys, which latter will prevent the device from being forced upward or drawn out from the cross-tie without first removing the keys, whereby the rails will be securely held and prevented from spreading.

The details of construction of the invention will be hereinafter more fully described, and what I regard as new will be defined in the claim.

In the accompanying drawings, Figure 1 is a view of my improved fastener applied to a cross-tie and rail and showing the position of the keys when they are driven into the cross-tie. Fig. 2 is a front elevation of my fastener, showing the ends of the keys projecting through the grooves and turned up. Fig. 3 is a side elevation showing one of the grooves in which the keys rest. Fig. 4 is a front elevation of the spike, the keys being removed. Fig. 5 is a side elevation of one of the keys; and Fig. 6 is a top plan view of the spike, showing the two grooves extending downwardly on either side.

Similar reference-numerals designate like parts throughout the several views of the drawings.

Referring to the accompanying drawings, forming part of this specification, 1 designates a spike having the usual head 2, which rests upon the rail when applied to the cross-tie, as shown in Fig. 1. The spike 1 is provided with two grooves 3 and 4 diametrically opposite each other, which extend downwardly from the head parallel with the sides thereof and turn off to the front of the spike directly under the projecting part 5 of the head 2. The groove 3 extends downwardly for about one-half and the groove 4 for about three-fourths the length of the spike, and both of said grooves terminate at the front of the spike one above the other. By having the grooves terminate one above the other the spike is not weakened at the terminals, as it would be if said grooves terminated on the same plane. Keys 6 are provided to fit the grooves 3 and 4 and have their outer surfaces flush with the sides of the spike, the keys for each groove being identical in construction. The keys 6 are square or nearly square in cross-section and are provided with heads 7 to afford a grip for a suitable instrument for removing them. The lower ends of the keys 6 are rounded to conform to the rounded lower portion of the grooves 3 and 4 and to form a sharp cutting edge for cutting into the cross-tie when being driven into the spike 1. By having the keys 6 project out of the grooves directly under the projecting part 5 of the head 2 the point of greatest resistance will be directly under the point where the greatest strain is upon the fastener.

When it is desired to secure the rail to the cross-tie, the spike 1 is driven into the latter until the head thereof rests upon the lower flange of the rail. The keys 6 are then placed into the grooves 3 and 4 one at a time and driven down by striking on the heads 7, whereby the lower points will be forced out of the lower curved ends of the said grooves into the cross-tie. As the keys 6 are driven through the said grooves 3 and 4 the lower ends striking against the lower curved portion of said grooves will be curled up as they pass into the cross-tie and assume the position shown in Fig. 1 The keys 6 are provided with heads 7, by means of which they may be withdrawn from the spike. It will be seen that when the keys are driven into the spike 1 and cross-tie they project into the latter one above the other and prevent any tendency of the points striking together when curling and also afford a better resistance to the spike. When it is desired to remove the spike for the purpose of replacing the rail with a new one, the keys 6 are first withdrawn by means of a suitable tool placed under the head 7 thereof. After the keys have been removed the spike 1 can then be withdrawn in the usual manner.

Having thus described my invention, what I claim is—

A track-fastener for railroads consisting of a spike having a head, and two grooves diametrically opposite each other which extend downwardly on a true vertical line from the upper surface of the said head parallel with the sides of the spike and turn off at right angles and terminate one above the other at the front directly under the projecting part of the head, said grooves being approximately square in cross-section; and an independent key fitted within each of said grooves and having their outer surfaces flush with the sides of the spike and their lower ends projecting from the said spike one above the other directly under the projecting part of the head of the spike, said keys being approximately square in cross-section and each having a head at one end which rests upon the head of the spike and a pointed end rounded on one side to conform to the curvature of the groove and to cut into the cross-tie.

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

CHARLES L. DURBORAW.

Witnesses:

CHAPIN A. FERGUSON.

HOWARD HABERCAM.