

O. J. McKNIGHT.
RAILWAY SPIKE.
APPLICATION FILED AUG. 18, 1909.

963,312.

Patented July 5, 1910.

Fig. 1.

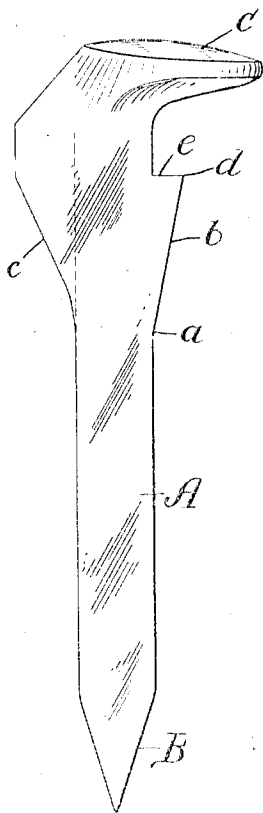


Fig. 2.

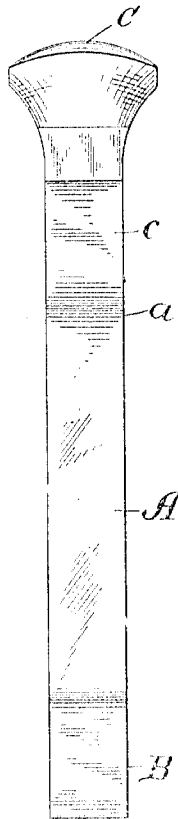
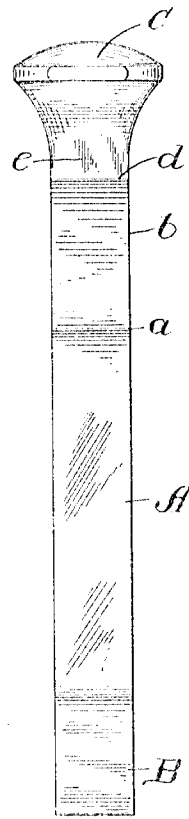


Fig. 3.



ATTEST.

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UNITED STATES PATENT OFFICE.

OTEE J. MCKNIGHT, OF DALHART, TEXAS.

RAILWAY-SPIKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OTEE J. MCKNIGHT, a citizen of the United States, residing at Dalhart, Texas, have invented certain new and useful Improvements in Railway-Spikes, of which the following is a specification.

My invention is an improved railway spike, and its purpose is the production of a spike approaching as closely as possible the ordinary spike, so that it may be made by the same processes and machinery now utilized, but presenting certain features of novelty lacking in the spikes now being used, and of which I have knowledge, the object of these novel features being to make the spike self-locking and prevent its detachment under the ordinary strain to which these spikes are subjected.

I am aware that prior to my invention it has been proposed to form a railway spike with a recess beneath the head, forming a shoulder adapted to engage the lower flange of the rail, and I do not claim this feature broadly as of my invention. My invention, however, while including this feature, provides means in a very simple manner for assuring engagement between the shoulder and the edge of the lower flange of the rail, and maintaining it without danger of detachment and without requiring any material change in the spike as ordinarily made and used.

In the accompanying drawing, I have shown my invention in side elevation in Figure 1; Fig. 2 is a rear view, and Fig. 3 a front view.

The spike, in its body portion, is of the ordinary construction, rectangular in cross section, as shown at A, terminating in a tapering end B. The ordinary head is shown at C projecting forwardly to engage with the rail flange, and having overlapping side portions, as usual. At the point *a*, the upper front and rear walls of the spike begin to flare, forming an inclined wall *b* on the front, and an inclined wall *c* on the rear. These inclined walls are of different pitch, as shown. The front wall inclines upwardly to the point *d*, where it ceases abruptly to

form a shoulder, a recess *e* being made in the metal for this purpose, and the shoulder is such a distance from the head as to provide for a snug fit over the edge of the rail flange so as to directly engage therewith, and not permit of any lost motion or free play as would otherwise occur. The rear incline, at the point of the shoulder, is approximately a distance from the rear wall of the spike proper about double the width of the shoulder. Thus I provide a long, inclined wall at the rear which, while beginning at the same point as the front incline, and gradually penetrating the wood therewith, continually exerts a greater pressure toward the front to force the shoulder in beneath the flange as soon as this shoulder clears the edge of the flange. The width of the rear incline and its extent is sufficient to assure the forcing of the shoulder beneath the flange of the rail, and to maintain it there. Further than this, the incline is so gradual that there is no tendency to bruise the wood of the tie or cause a rupture of the fiber of the wood, which would all tend to permit a loosening of the spike and its disengagement with the edge of the rail. The difference in the inclination of the front and rear walls I have found to be of the greatest importance, and particularly where the incline begins at the same point in that there is no tendency for the spike to get out of its true alinement, and there is just sufficient additional pressure on the rear to force the shoulder into locking and permanent contact with the edge of the rail.

What I claim is:—

A railway spike having a body portion with parallel walls and a pointed end, the front and rear walls near the top flaring outwardly from the same point to form inclines, a shoulder on the front formed by recessing the front incline directly beneath the flange of the head, said shoulder being relatively arranged to directly engage the lower face of the rail edge, the rear incline having a pitch approximately twice that of the front incline so that it extends beyond the line of the rear face of the spike an

extent approximately double the width of the shoulder, whereby a relatively long incline is presented to gradually force the shoulder into engagement with the rail end, 5 said rear incline ending in a vertical portion arranged opposite the recess in the front incline and the rear wall having a portion sloping inwardly from the vertical

portion to the head, substantially as described. 10

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

OTey J. McKnight.

Witnesses:

HENRY E. COOPER,
EWD. L. TOLSON.