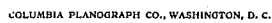


Patented Sept. 17, 1912.



UNITED STATES PATENT OFFICE.

HERMAN H. LANGE, OF MASON CITY, ILLINOIS.

RAILROAD-SPIKE.

1,038,905.

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To all whom it may concern:

Be it known that I, HERMAN H. LANGE, a citizen of the United States, residing at Mason City, in the county of Mason, State of Illinois, have invented certain new and useful Improvements in Railroad-Spikes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in railway spikes and more particularly to that class adapted for use in retaining railway rails upon their supporting ties.

An object of this invention is the provision of a spike of such construction that when positioned in the usual manner in a tie or the like it will be securely held against displacement.

Another object of this invention is the production of a spike having a vertical slot formed in one side and in which is loosely pivoted a serrated keeper for engagement with a locking wedge having serrations located in one of its faces for engagement with the serrations upon said keeper, whereby the wedge will force the keeper outwardly beyond the side of the spike and lock the same in such position.

A further object of this invention is to improve and simplify devices of this character rendering them comparatively simple and inexpensive to manufacture, reliable and efficient in use and readily operated.

With the above and other objects in view, this invention resides in the novel features of construction, formations, combinations and arrangements of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my improved spike applied. Fig. 2 is a front view thereof. Fig. 3 is horizontal sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 2. Fig. 5 is a detail perspective view of the locking wedge removed.

Referring to the accompanying drawings by similar characters of reference throughout the several views, the numeral 10 designates generally, my improved spike illustrated in connection with a rail 11 and tie 12 and consisting of a body portion 13 preferably rectangular in cross section and hav-

ing a head 14 provided at one end thereof and a point 15 located at its opposite end.

A groove 16 is formed in one side of the body portion 13 and extends vertically through the head 14. A pivoted barb or keeper 17 is retained in the lower extremity of the groove 16 and is formed with a beveled terminal 18 and a plurality of teeth or serrations 19 which slant downwardly and inwardly extending into the said groove 16. When the barb or keeper 17 is moved to a vertical position its outer face will lie flush with the adjacent side of the body portion 13, while the points of the serrations or teeth 19 will be in contact with the bottom of the groove 16 while the beveled portion 18 will slant from the bottom of said groove upwardly and outwardly to the exterior thereof.

The numeral 20 designates a locking wedge which comprises a rectangular body portion 21 of a size to slide vertically through the groove 16 while the lower extremity of this wedge 20 is beveled as indicated by the numeral 22 and formed with a plurality of serrations or teeth 23 formed at an opposite angle to the before mentioned teeth 19 for interlocking engagement therewith.

The improved spike is used as follows: The spike is driven into the tie or other support with its head in engagement with the base flanges of a rail or the like in the customary manner. The wedge 20 is next inserted in the groove 16 until its lower beveled end 20 engages the bevel end 18 of the keeper 17. The wedge is then driven downwardly through said groove which obviously forces the keeper or barb 17 outwardly into the tie while the teeth 22 and 19 will be forced into interlocking engagement with each other thereby locking the keeper 17 in its outermost position and consequently the spike against displacement.

From the foregoing disclosure taken in connection with the accompanying drawing it will be manifest that a spike is provided for which will fulfil all the necessary requirements of a device of this class.

Having thus described this invention, what I claim as new and desire to protect by Letters Patent is;

The combination with a spike, having a channel opening through one side of the head thereof, the said channel extending for a greater portion of the length of said spike,

of a locking member pivoted in said channel near the inner end thereof, ratchet teeth formed on the inner edge of said member, a wedge of corresponding shape with respect
5 to the channel and of considerably less length than the same, the said wedge being provided with a tapering inner end, and ratchet teeth formed on the outer side of the tapered end of said wedge and reversely
10 disposed with respect to the ratchet teeth on the locking member for positive engagement therewith for preventing retraction of

the wedge when inserted in the channel, the said ratchet teeth being disposed throughout the area of one side of the tapered end thereof for engagement with all of the teeth
15 on the locking member when the outer end is flush with the outer end of the spike.

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

HERMAN H. LANGE.

Witnesses:

ALEXANDER D. CULLINAN,
HENRY G. PFETZING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
