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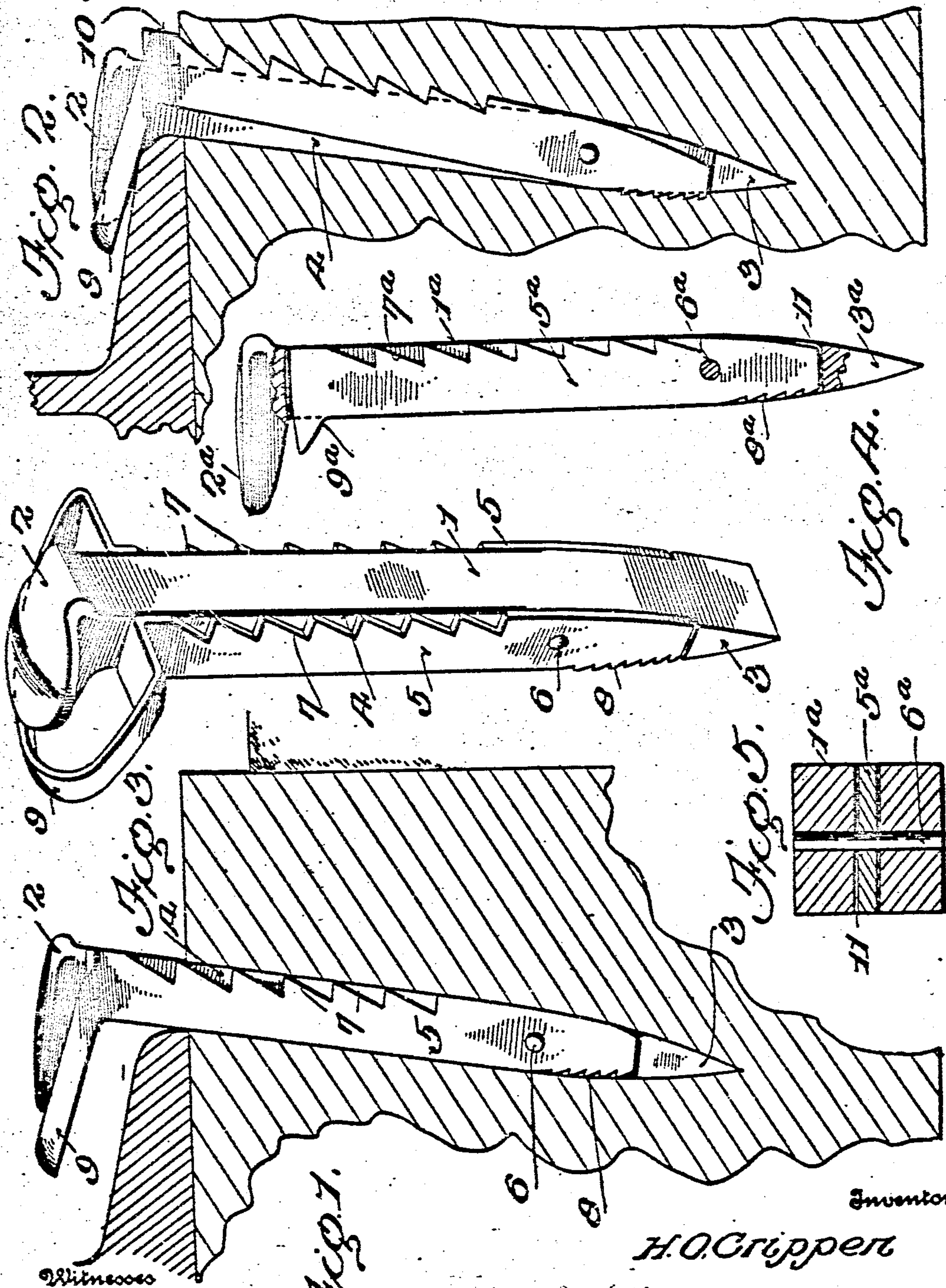
H. O. CRIPPEN.

TOOTHED SPIKE.

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Patented July 5, 1910.

963,280.



Witnesses
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Fig. 1.

By

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UNITED STATES PATENT OFFICE.

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TOOTHED SPIKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERBERT O. CRIPPEN, citizen of the United States, residing at Sanford, in the county of Orange and State of Florida, have invented certain new and useful Improvements in Toothed Spikes, of which the following is a specification.

This invention comprehends certain new and useful improvements in spikes designed particularly for use in securing railway rails to ties, and the invention has for its primary object, a simple, durable and efficient construction of railway spike, the parts of which are so arranged that the spike may be easily driven into the tie, and effectually prevented from becoming loosened accidentally, while at the same time permitting it to be retracted whenever desired.

With this and other objects in view as will more fully appear as the description proceeds, the invention consists essentially in a spike embodying a body portion with a penetrating toe or point and head, and a locking member pivotally connected to the body portion of the spike and so arranged that when the spike has been about driven "home," the upper end of the locking member will be engaged with the base flange of the rail and thereby impart a tilting movement to the locking member so as to force the toothed portion thereof outwardly into firm engagement with the tie, the teeth of such portion of the locking member being upwardly beveled as shown so as to effectually prevent the retraction of the spike without first tilting the locking member to a position where its toothed edge or edges will lie flush with the side edges of the body portion of the spike. And the invention also consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a side elevation of a spike constructed in accordance with my invention, the same being shown partly driven into the tie; Fig. 2 is a similar view with the spike locked in the tie; Fig. 3 is a perspective view of the spike; Fig. 4 is a side elevation, partly broken away of a modified form of spike; and, Fig. 5 is a transverse sectional view of such modified form.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The body portion 1 of the spike is formed with the usual head 2 and with a penetrating toe or point 3. The main body portion 1 of the spike is recessed in its side edges as indicated at 4, from a point near the toe 3 to a point near the head 2, for the reception of side bars 5 of a locking member, said side bars embracing the body portion of the spike and being pivotally connected thereto intermediate of their ends by a rivet 6 or similar fastening device. The side bars 5 of the locking member are of a width equal to or less than the width of the body portion 1 so that the side edges of said side bars will not project beyond the margin of the body portion when the locking member is arranged with its side bars in longitudinal alinement with the body portion of the spike. The side bars 5 of the locking member are formed above the pivot 6 and on corresponding edges with relatively large upwardly facing and preferably beveled teeth 7 and may also be provided below the pivot 6 and on correspondingly opposite edges with relatively small corresponding teeth 8, both sets of teeth being designed to embed themselves into the wood of the tie when the locking member is tilted relative to the body portion 1. In the inoperative position of the locking member, the lower ends of the side bars 5 preferably lie close to the lower end walls of the recess 4, flush with the shoulders formed by the upper end of the toe 3.

The locking member includes in addition to the side bars 5, a part or portion which is preferably formed integral therewith and which in the invention now being described is in the form of a bail or loop 9 which is designed to partially encircle the head 2 of the spike which is normally offset therefrom as clearly illustrated in the drawing. When the side bars 5 lie flush with the side edges or margins of the body portion 1, the bail or loop 9, which is angularly disposed to the side bars 5 preferably lies in a plane just slightly below the plane of the head 2 whereupon when the spike is driven nearly "home," the bail will engage the adjacent base flange of the rail and will consequently rock the locking member in a position to project the toothed edges thereof, the teeth

being firmly embedded in the tie and effectually prevent the accidental withdrawal of the spike.

In that form of the invention illustrated in Fig. 4 1^a designates the body portion of the spike, the same being formed with a longitudinal slot 11 extending therethrough from front to rear, and the locking member embodies a single bar 5^a pivotally mounted intermediate its ends as indicated at 6^a in said slot. The opposite edges of the bar 5^a are toothed or notched as indicated at 7^a and 8^a respectively and the upper end of the bar 5^a is formed with a projecting portion in the form of a tongue 9^a designed to extend underneath the head 2^a, and thereby adapted to rock the locking member.

From the foregoing description of the construction and operation of that form of the invention which was first above described, together with the accompanying drawing, the operation or practical use of the last described form will be apparent.

While I have shown or described two forms or embodiments of the device, it is obvious that my invention is not limited thereto, but that various changes or modifications may be made in the construction, arrangement and proportion of the parts without departing from the spirit of the invention as defined in the appended claims.

As the locking member in each instance, is, in the preferred construction of parts, pivotally connected intermediate of its ends to the body portion of the spike it will act in the manner of a lever, so that when its upper end is tilted in one direction, its lower end will be tilted in the opposite direction and the toothed edges will be firmly embedded in the tie on the opposite sides of the main or body portion of the spike, thereby serving to hold the spike securely in place much more effectually than if the locking member were to lie in its operative position, entirely to one side of the spike. It is of course, immaterial just where the pivot point shall be relative to the locking member. It might be located at the approximate point illustrated in the accompanying drawing, or at any other desired point. Manifestly the rivet may be of any desired size, so as to effectually brace the locking member and strengthen the parts and prevent them from becoming accidentally separated.

In that form of the invention illustrated in Figs. 1, 2, and 3, it is to be particularly noted that the recesses in the side edges of the body portion form upwardly facing shoulders at the tapered point or toe to produce a barbed point. Hence not only does the rivet which pivotally connects the lock-

ing member with the body portion of the spike tend to prevent the spike from being withdrawn by breaking the connection between the two parts, but the barbed point also assists in securely holding the spike in the tie, even should the connection between the locking member and body portion of the spike be broken.

Having thus described the invention, what is claimed as new is:

1. A spike, comprising a body portion, a locking member pivotally connected thereto and formed with a tooth, and means carried by said locking member adapted to engage a base flange of a rail, whereby the locking member may be rocked to an inclined position relative to the body portion.

2. A spike comprising a body portion and a locking member pivotally connected thereto intermediate of its ends, said locking member being toothed on its edges and embodying means at its upper end designed to engage the base flange of a rail for the purpose specified.

3. A spike, comprising a body portion, a locking member pivotally connected thereto and provided at its upper end below the head of the spike with means adapted to engage the base flange of a rail for the purpose specified, the locking member being formed with oppositely facing toothed edges adapted to be projected beyond the body portion of the spike by and upon the engagement of such means with the flange.

4. A spike, comprising a body portion and a locking member pivotally connected thereto and adapted to lie flush with the margin thereof and formed with a toothed edge and also at one end with a portion adapted to effect the rocking of the locking member, said part extending underneath the head of the spike, as and for the purpose set forth.

5. A spike, comprising a body portion, a locking member pivotally connected thereto and provided at its upper end below the head of the spike with a forwardly projecting portion adapted to engage the base flange of a rail, the locking member being formed with a tooth adapted to be projected beyond the body portion of the spike by and upon the engagement with said flange, the locking member being formed at its upper end opposite the projecting portion with a lug, for the purpose set forth.

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

HERBERT O. CRIPPEN. [L.S.]

Witnesses:

W. N. WOODSON,
FREDERICK S. STITT.