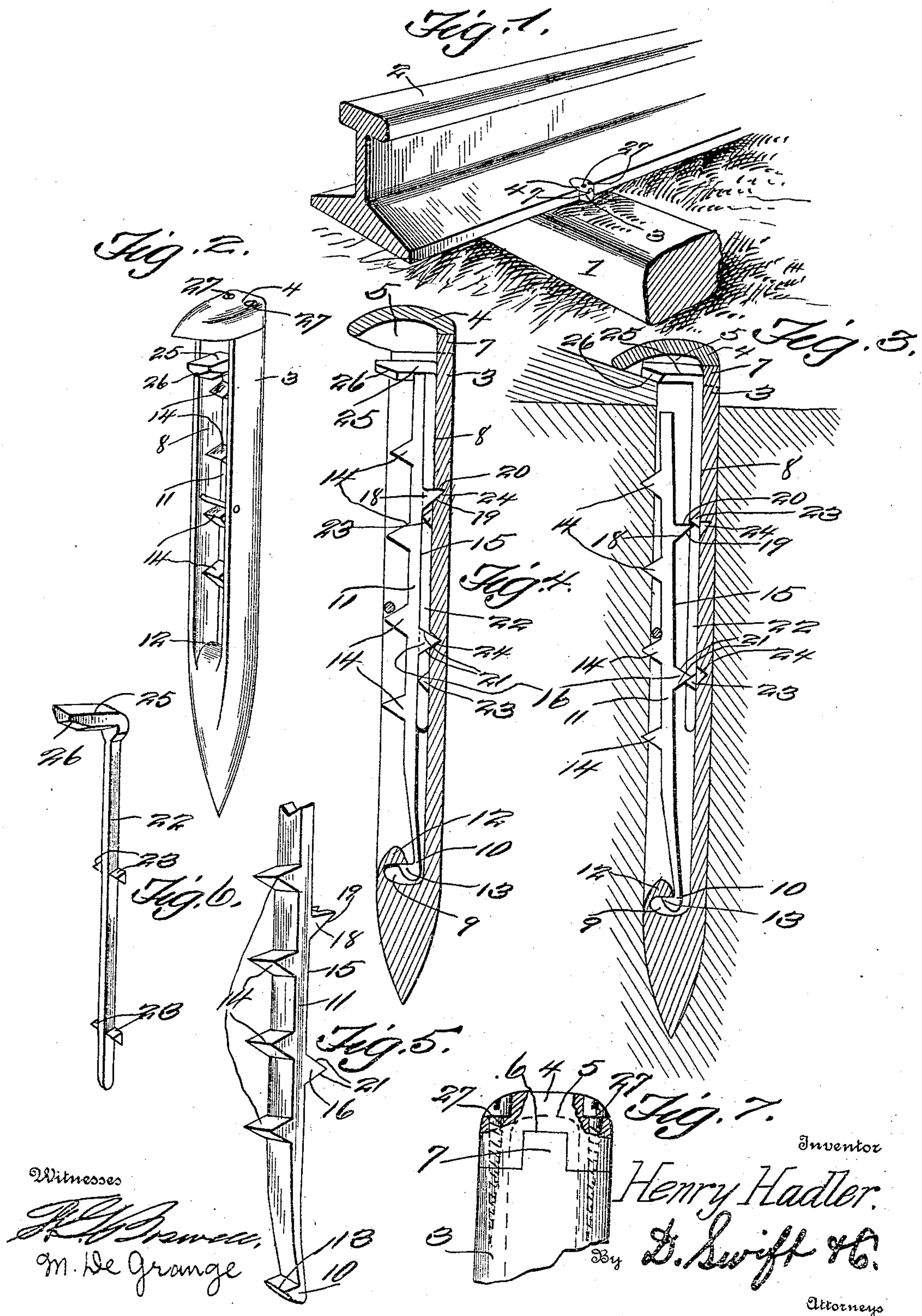


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H. HADLER.  
RAILROAD SPIKE.  
APPLICATION FILED MAY 8, 1909.

Patented Jan. 4, 1910.



Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY HADLER, OF MOORHEAD, IOWA.

## RAILROAD-SPIKE.

.945,452.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed May 8, 1909. Serial No. 494,889.

*To all whom it may concern:*

Be it known that I, HENRY HADLER, a citizen of the United States, residing at Moorhead, in the county of Monona and State of Iowa, have invented a new and useful Railroad-Spike; 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.

The invention, about to be set forth and claimed, belongs to the art of railroading, and it particularly pertains to a new and useful spike, designed primarily for securely fastening the rails to the ties, as is clearly evident.

The invention, in its broadest latitude, has for its essential object the provision of means for securely retaining or anchoring the spike in the tie.

A further object of the invention is to so construct the anchoring means, in order to allow it to be properly operated, as the spike is driven home.

Another object of the invention is to provide a hollow spike, for the containment of the said anchoring means, and a removable top, so that a portion of the anchoring means may be removed, in order to disengage the anchoring means proper, whereby the spike may be withdrawn from the tie.

This invention comprises further objects and combinations of elements which will be hereinafter more fully described, shown in the accompanying drawings, and the novel features thereof will be pointed out by the appended claims.

The features and elements and the arrangement of parts thereof, for accomplishing the objects of this device or apparatus, may be changed and varied, that is to say, in an actual reduction to practice, the understanding, however, is that the changes and variations accruing from the reduction to practice are comprehended by the appended claims.

To obtain a full and correct understanding of the details of construction, combinations of features, elements and advantages, reference is to be had to the hereinafter set forth description and the accompanying drawings in connection therewith, wherein—

Figure 1 is a perspective view of a railway rail, fastened to a portion of a tie by the improved railroad spike. Fig. 2 is a

perspective view of the spike removed from the tie, showing the hollow portion thereof. Fig. 3 is a sectional view through the portion of the tie and the rail, showing the spike also in section, clearly illustrating the spike retaining means in engagement with the tie, in order to prevent the withdrawal of the spike. Fig. 4 is a sectional view through the spike, showing the relative position of the operating parts of the spike retaining means, before the spike retaining means proper, is thrown in engagement or in coöperation with the tie. Figs. 5 and 6 are detail perspective views of the coöperating parts of the spike retaining means. Fig. 7 is a rear view of the spike, showing the recessed top and the lug carried by the spike proper to be received by the recess of the top.

In regard to the annexed drawings, wherein similar reference characters indicate corresponding parts in the several illustrations, 1 denotes a portion of a railway tie, to which the usual rail 2 is securely fastened, by means of the improved spike 3. This spike is provided with a removable top 4, which is hollowed out, as denoted by the numeral 5. The rear portion of the top is recessed, as shown at 6, which recess merges into the hollowed out portion of the top, as shown clearly in Figs. 4 and 7. The upper portion of the spike proper is provided with an upstanding lug 7, which is received by said recess, as shown clearly in Fig. 7.

The spike proper is hollowed out, as shown in the drawings, and is designated by the numeral 8. The lower portion of this hollowed out portion is provided with a pocket 9, in which the lower extremity 10 of the spike retaining means proper 11 is seated, and is adapted to have a slight play therein. Adjacent to this pocket is a resilient lip 12, which overhangs the pocket for the purpose of retaining the said lower end 10 of the spike retaining means proper in its pocket, through the medium of the lug 13 of said lower extremity 10. The spike retaining means or member 11 is provided upon one of its faces with a plurality of V-shaped lugs 14, which are designed for the purpose of penetrating the tie, as the spike is driven home. The face 15 of the spike retaining means proper is provided with lugs, there being shown as a preferred embodiment of this feature, two lugs 16 and 18. The upper lug



18 is provided with an inclined portion 19 and a horizontal portion 20, which extends directly at right angles to the length of the spike retaining means proper. While the  
 5 lug 16 is provided with two angularly disposed surfaces 21, or in other words, the lug 16 is V-shaped.

In order to cause the lugs 14 of the spike retaining means proper to bury themselves  
 10 into the tie, as the spike is driven home, a movable member 22 is provided, having V-shaped lugs 23, to cooperate with the lugs 16 and 18, which cooperation causes the lugs 14 to perform their functions. The lower lug  
 15 23 of the member 22 does not fully pass the lug 16 during their cooperation, but the upper lug 23 entirely passes the lug 18, that is to say, the apex of the lug 23 fully passes the apex of the lug 18, thereby affording a  
 20 locking relation between the spike retaining means proper and the member 22. The innermost wall of the hollowed out portion of the spike is provided with recesses 24, for the reception of the lugs 16 and 18 when the  
 25 spike retaining means proper is in its normal position. The upper portion of the member 22 is provided with a head 25, the nose 26 of which extends beyond the face of the spike, in order to be engaged by the base of  
 30 the rail, as the spike is driven home, so as to cause the member 22 to be raised, thereby throwing the lugs 16 and 18 and the lugs 23 into cooperation, and causing the lugs 14 to pierce the tie, which is clearly shown in Fig.  
 35 3 of the drawings. When the members 22 and 11 are in the position, as shown clearly in Fig. 3, they are completely locked, there being no possible way of disturbing their locked relation, other than removing the top  
 40 of the spike.

The top 4 of the spike is held properly in position by means of the retaining cap screws 27, and it is clearly apparent that by removing the said screws, the top or closure 4 can  
 45 be raised, in order to have access to the member 22. By applying force to the member 22, it may be extracted, and the member 11

may then be placed in its normal position, as shown clearly in Fig. 4 of the drawings.

From the foregoing, the essential features, 50 elements and the operation of the device, together with the simplicity thereof, will be clearly apparent.

Having thus fully described the invention, what is claimed as new and useful, is:— 55

1. In a railroad spike having a hollowed out portion provided with a pocket, spike retaining means proper operable in said hollowed out portion and having its lower extremity seated in said pocket, means for 60 holding the said extremity in said pocket, and means operated as the spike is driven home for operating the spike retaining means proper.

2. In a railroad spike having a hollowed 65 out portion provided with a pocket, spike retaining means proper operable in said hollowed out portion and having its lower extremity seated in said pocket, means for holding the said extremity in said pocket, 70 means operated as the spike is driven home for operating the spike retaining means, said last named means being so constructed as to lock the spike retaining means in its  
 75 operated position.

3. In a railroad spike having a hollowed out portion provided with a pocket, spike retaining means proper operable in said hollowed out portion and having its lower extremity in said pocket, means operated as 80 the spike is driven home for operating the spike retaining means, said last named means being so constructed as to lock the spike retaining means in its operated position, said spike having a top or closure adapted to be 85 removed in order to have access to the spike retaining means proper.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY HADLER.

Witnesses:

FRED L. OLIVER,  
 NATHAN FLINT.