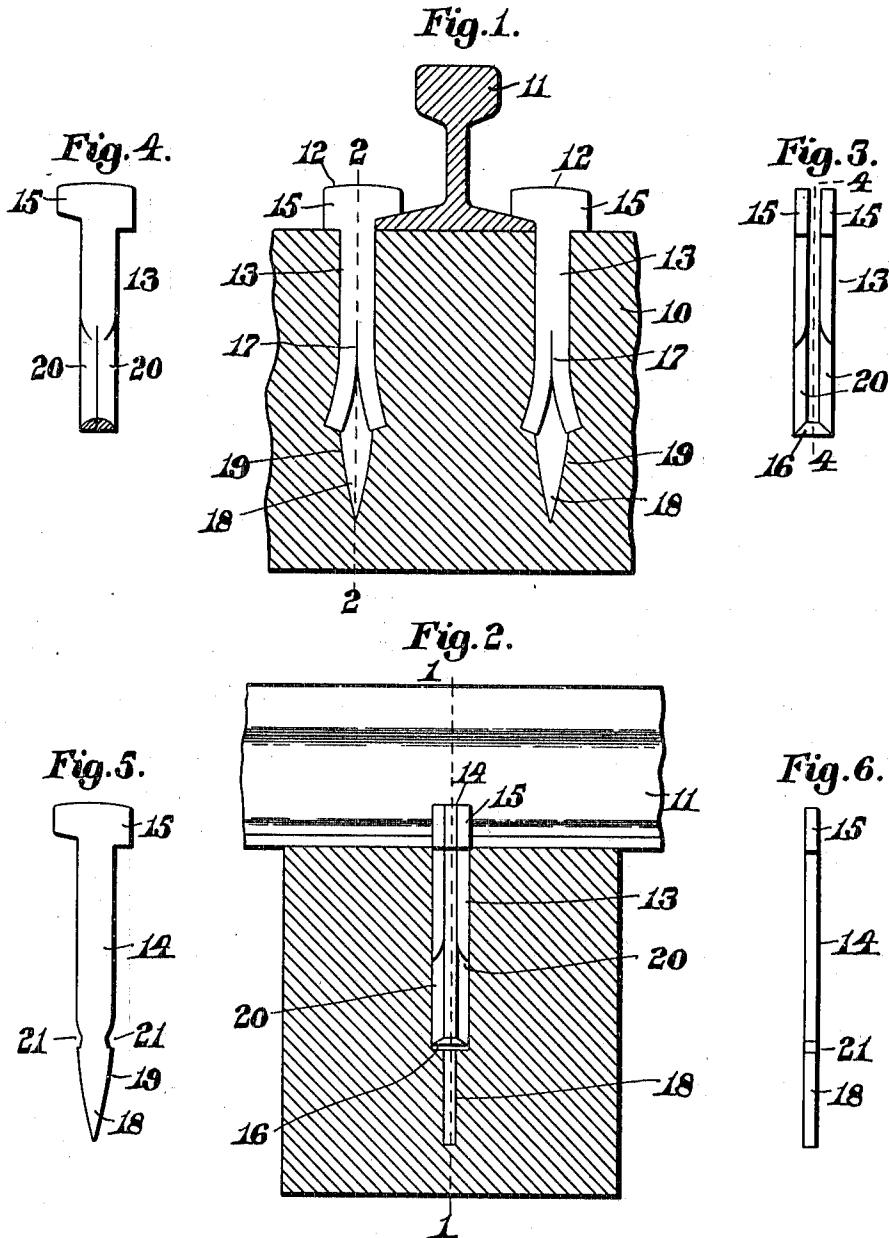


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RAILROAD SPIKE.
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UNITED STATES PATENT OFFICE.

PAUL SZYDLOWSKI, OF BOSTON, MASSACHUSETTS.

RAILROAD-SPIKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PAUL SZYDLOWSKI, a subject of the Emperor of Prussia, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Railroad-Spikes, of which the following is a specification.

This invention relates to spikes particularly adapted for securing rails to cross ties in the construction of railroads.

It consists of a headed U-shaped member having a slit in its lower end adapted to be engaged by the point of a flat wedge-shaped member of greater length than said U-shaped member and interposed between the side portions thereof, this longer member being adapted to be driven relatively to the U-shaped member through the slit portion thereof to force the opposed faces of the lower end of said U-shaped member outwardly into the tie to lock the spike from accidental displacement.

The invention further consists in providing the opposed faces of said slit end of the U-shaped member and the connecting portion thereof with sharp cutting edges inclined inwardly from the outer walls of said member.

The invention further consists in certain novel features of construction and arrangement of parts which will be fully understood by reference to the description of the drawings and to the claims hereinafter given.

Of the drawings: Figure 1 represents a section of a portion of a tie and a rail thereon secured to said tie by two spikes embodying the features of the present invention, the cutting plane being on line 1—1 on Fig. 2. Fig. 2 represents a section through the tie, the cutting plane being on line 2—2 on Fig. 1. Fig. 3 represents a front elevation of the shorter member of the spike. Fig. 4 represents a vertical section of the same, the cutting plane being on line 4—4 on Fig. 3, and Figs. 5 and 6 represent respectively a side elevation and an edge elevation of the longer member of the spike.

Similar characters designate like parts throughout the several figures of the drawings.

In the drawings, 10 represents a portion of a cross tie having mounted thereon a rail 11 secured to said tie by means of the two-part spikes 12. Each spike 12 consists of a shorter U-shaped member 13 and a longer

central operating member 14. Each of these members is provided with a head 15 having greater depth at one end than at the other end as indicated in Fig. 4 of the drawings. The connecting portion 16 and the side members of the member 13 are provided with the slit 17 extending upwardly from the bottom of said member 13 for quite a distance and the outer edges of the lower parts of said side members and the connecting portion 16 are made sharp, as shown in the drawings. Normally the pointed end 18 of the lower end of the member 14 is inserted into the slit 17 so that when the longer member is driven through the slit 17 the inclined faces 19 thereof will act against the connecting portion 16 to force the sharp edges thereof and the lower portions of the member 13 in opposite directions into the wood of the tie. The outer faces of the member 13 at the lower end are provided with sharp cutting edges 20 inclined upwardly as indicated in Figs. 3 and 4 of the drawings. These sharp edges facilitate the spreading apart of the lower ends of the member 13 when the central member 14 is driven relatively thereto. Each edge of the member 14 is provided with a notch 21 in which the inner face of the cross member 16 is adapted to engage to lock the two members 12 and 14 together when the member 14 has been driven to its seat.

When the spikes are to be used holes are bored into the tie 10 and the two-part spike is driven therein. In doing this it is preferable to use a special tool which bears upon the upper surfaces of the side members of the U-shaped portion 13 and the upper face of the intermediate wedge-shaped plate 14 and retains said members in proper relative position to each other during the first portion of the driving operation. When the two parts have been driven in sufficiently far to position the outer member the tool is removed and the inner member is driven farther through the slit 17 spreading the lower end thereof and forcing the knife edges 20 into the wood effectually locking the spike in position and preventing its accidental displacement. The narrower portion of the head 15 bears upon the flange of the rail while the wider portion thereof bears upon the upper face of the tie. This is a very simple form of spike, being adapted to be made out of flat sheet metal, but one which is very effectual in operation, se-

curely locking the rail to the tie and preventing any movement thereof, the spikes when once driven being firmly locked in position so that it is impossible to accidentally displace them.

It is believed that the operation and many advantages of this invention will be fully understood from the foregoing description.

Having thus described my invention, I claim:

1. In a spike, the combination of a headed U-shaped member having its lower end provided with sharp edges in opposed faces and a slit parallel to and interposed between said faces; and a headed flat-sided member fitted between the arms of said U-shaped member and having a wedge end adapted to be driven into said slit to force the said sharp edges outwardly.

2. In a spike, the combination of a headed U-shaped member having its lower end provided with sharp edges in opposed faces and a slit parallel to and interposed between said faces; a headed central member fitted to said U-shaped member having a wedge end adapted to be driven into said slit to force said sharp edges outwardly; and locking notches in the edge of said central member.

3. In a spike, the combination of a headed U-shaped member having its lower end provided with sharp edges in opposed faces inclined inwardly from the outer walls and a slit parallel to and interposed between said faces; and a headed flat-sided member fitted between the arms of said U-shaped member and having a wedge end adapted to be driven into said slit to force said sharp edges outwardly.

4. In a spike, the combination of a U-

shaped member having head forming projections at one end and a vertical slit in its lower end; and a flat-sided member of greater length than said U-shaped member and interposed between the arms thereof having a wedge-shaped lower end adapted to be driven in said slit to spread the lower ends of the U-shaped member.

5. In a spike, the combination of two members of different lengths, the shorter member at its lower end being split and provided on its outer faces parallel with said split with sharp laterally extending transverse cutting edges and the longer member being adapted to be driven relatively to said shorter member to separate said cutting edges and embed them into the material into which said spike is driven.

6. In a spike, the combination of a flat sided member formed U-shape with head forming projections at the outer ends of both arms and with its connecting portion provided with a sharp edge interposed between said arms, said member having a slit through said connecting portion and extending longitudinally a short distance in both arms toward the headed portions thereof; and a flat headed bar provided with a wedge end for insertion in said slit, and adapted to be driven with its faces in contact with the inner faces of said arms until the headed portions of said arms and central bar coincide.

Signed by me at 4 Post Office Sq., Boston, Mass., this 16th day of May, 1913.

PAUL SZYDLOWSKI.

Witnesses:

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