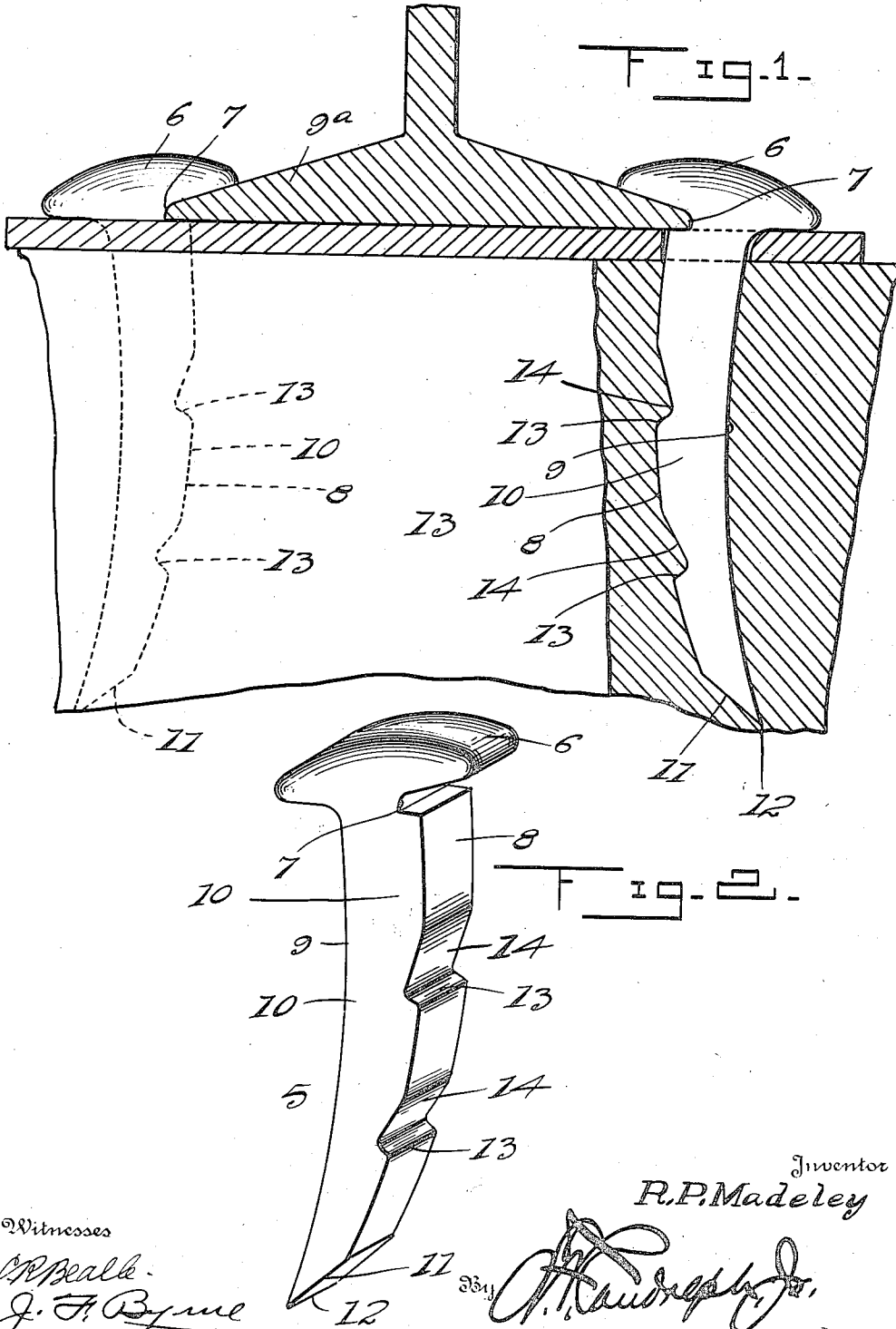


R. P. MADELEY.
RAILROAD SPIKE.
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1,272,071.

Patented July 9, 1918.



Witnesses

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RALPH P. MADELEY, OF SACRAMENTO, CALIFORNIA.

RAILROAD-SPIKE.

1,272,071.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RALPH P. MADELEY, a citizen of the United States, residing at Sacramento, in the county of Sacramento and State of California, 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 railroad spikes, and the invention has for its object to provide a spike of efficient and inexpensive construction including a laterally projecting head and a notch formed in the shank directly below the head and having the shank curved from end to end to automatically spring the headed end of the shank forwardly during driving thereof so as to engage the base flange of the rail within the notch, and thus reliably lock the spike and rail against relative movement in a vertical plane.

Another object is the provision of means located upon the convex front face of the spike designed to cooperate with the cut fibers of the tie or other wood object to reliably anchor the spike against removal.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts as will be hereinafter specifically described, claimed and illustrated in the accompanying drawing, in which:

Figure 1 represents a side elevation of a railway tie, partly broken away, illustrating the spike applied to use, and

Fig. 2 represents a perspective view of the spike removed.

Referring to the drawing in detail, wherein similar reference numerals designate corresponding parts throughout the several views, the numeral 5 indicates generally the spike which includes a shank and a head 6 at one end thereof projecting a distance laterally of the front and rear faces of the shank. A rail base-receiving recess or notch 7 is formed in the front face 8 of the shank directly below the head 6 and is adapted to receive the edge portion of the base flange 9^a of a railway rail.

The spike shank is curved from end to end defining a convex front face 8 and a concave rear face 9, the side faces 10 of the

spike shank being substantially straight. The front face 8 at the end opposite the head 6 is increased in curvature or beveled, as at 11, to define a relatively sharp cutting edge 12 designed to cut the fibers of the tie 13^a as the spike is driven therein.

A plurality of transversely disposed shoulders 13 are formed upon the front convex face 8 of the shank at suitably spaced points to provide anchoring means to reliably secure the spike within the tie. The portions 14 of the front face 8 above or adjacent to the shoulders 13 are cut inwardly or inclined so as to not unduly retard the inward movement of the spike when driven.

In driving the spike, its point or cutting edge 12 is fitted up against the base flange 9^a, and the spike is driven into the tie by blows delivered upon the head 6 with a suitable tool. As the spike is driven into the tie the front convex surface 8 thereof hugs the edge of the base flange, with constantly increasing pressure on account of the peculiar curvature of the spike shank. When the spike is driven home, the upper headed end thereof springs inwardly toward the base flange 9^a, engaging the latter within the recess or notch 7 and thus reliably locking the spike against upward movement relative to the rail. It is clearly evident that the beveled surface 11 at the pointed end of the spike deflects the latter laterally tending to increase the curvature of the shank and simultaneously deflecting the cut fibers of the wood which latter are engaged behind the shoulders 13 and reliably lock the spike against removal. Should the rail base 9^a become disengaged from the recess or notch 7, due to excessive vibration of the rail and tie, the upward or receding movement of the spike relative to the tie will be arrested when the shoulder 13 engages the base flange 9^a. The rearwardly projecting portion of the head 6 rests upon the tie or wear plate positioned thereon, thus reinforcing the head and materially assisting in preventing lateral movement of the rail in the direction toward the spike.

What I claim is:

A spike including a shank, a forwardly projecting head carried by one terminal of the shank, the opposite end of the shank being beveled to provide a cutting edge, said shank being curved from end to end and having the entire portion of the front

face lying between the head and the beveled
end of convex form, said convex front face
having recesses providing anchoring should-
ers lying inwardly of the convex face and
5 facing the headed terminal of the spike
shank.

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

Witnesses:

JOSEPH O'NEIL,
HENRY G. FREY.