L. KIRKUP.

RAILROAD SPIKE.

No. 51,897. Patented Jan. 2, 1866.

Fig. 5.

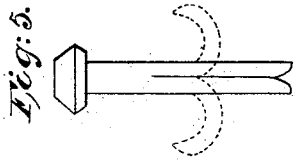


Fig. 4.

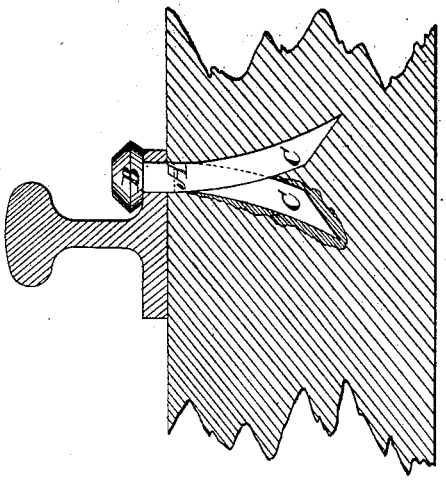


Fig. 3.

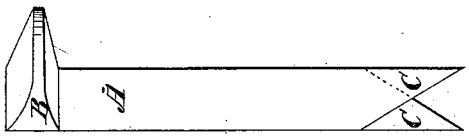


Fig. 2.

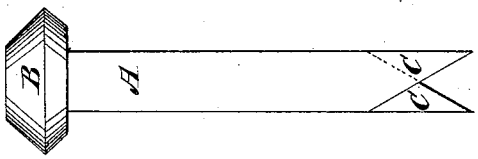
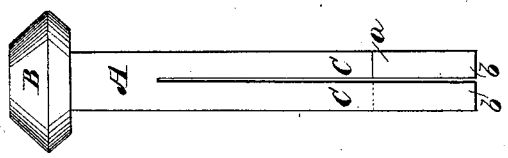


Fig. 1.



Witnesses:
Francis D. Laycock
M. M. Livingston

Inventor:
Lancelot Kirkup

UNITED STATES PATENT OFFICE.

LANCELOT KIRKUP, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF, FRANCIS D. TAYLOR, AND CHARLES A. SCOTT, OF SAME PLACE.

IMPROVED SPIKE.

Specification forming part of Letters Patent No. **51,897**, dated January 2, 1866.

To all whom it may concern:

Be it known that I, LANCELOT KIRKUP, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Railroad-Spike; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention consists in constructing a split spike in such manner that each half or prong of the spike (on being driven into the wood) will diverge or turn outward in a plane parallel with the split in the spike, whereby the spike is strong in every respect and takes a very firm hold.

In the accompanying drawings, Figure 1 is a side view of a spike made according to my invention. Fig. 2 is a front view of the same. Fig. 3 is a similar view of a snake-headed spike. Fig. 4 is a view, showing the position of the spike after it has been driven into the tie. Fig. 5 (in red) is a view of an ordinary split spike.

A represents the body of the spike, B the head, and C C the two prongs thereof, all of which are made of any suitable metal, such as wrought-iron or steel; and the spike may be of any desired shape, either square, round, or polygonal.

I have shown a spike with a snake head in Fig. 3, and this is intended to be driven outside the rails, the head resting upon the same in the usual manner; but I prefer a spike having a head which is beveled downward on the sides, as shown in Fig. 2, and driven through a hole in the flange of the rail, the compression of such spikes on the rail being far greater than with a snake-headed spike.

In splitting my spikes I use a number of circular saws revolving upon a spindle, and am thus enabled to obtain the necessary division of the spike, whether the metal of which it is composed be hot or cold; but the spikes may be made of two pieces welded together down to the point where it is desired to have the split terminate, and the head formed in the usual way. The two halves of the spike thus split have their ends or edges beveled from the inside outward, as shown at *a*, Fig. 1, the bevel being long or short, as found best adapted to the timber used for the ties. Thus it will be noticed that the points or edges of the spike are inclined in opposite directions and that the inclination terminates in flat edges *b*. These edges operate like chisels, cutting the way for each prong as the spike is driven into the wood. The position of the spike in the wood is shown clearly in Fig. 4. I will here state that these spikes can be driven into the tie irrespective of the direction of the grain, and the desired effect upon the spikes—that of throwing outward the prongs—be produced. By this means of forming the spike I obtain greater strength than can possibly be obtained in a spike constructed as shown in red in Fig. 5 of the drawings, which is the ordinary split spike, and to insert which it is necessary, first, to bore a hole for a certain distance in the tie, or else the prongs would immediately turn up on entering the wood, so as to be useless, they not having sufficient strength to force their own way; but not so with my spike. It is strong enough to force its own way, and can be driven anywhere along the rail without a hole being previously made, and as quickly as an ordinary solid railroad-spike; and the advantages of such a spike can be readily seen. Again, my spike can be drawn out of the wood and through the eye of the rail readily, the prongs being closed together as the spike emerges from the hole, and this enables the spike to be used over and over again, its qualities being in no wise impaired by the frequent bending back and forth of the prongs. With the ordinary split spike its position in the tie makes it "iron-bound," so to speak, and after it has been started the prongs, by means of having been diverted so very much from a vertical position, are distorted in shape, and it is with great difficulty that they can be drawn through the eye of the rail, and in nearly every case they require to be rehammered before the spike can be used again.

My spike comes out of the wood in as perfect a shape as it was when it went in, and is therefore ready for immediate use.

What I claim as new, and desire to secure by Letters Patent, is—

A split spike so constructed that the two halves or prongs will diverge or turn outward (on being driven into the wood) in planes parallel with the split in the spike, substantially as described.

LANCELOT KIRKUP.

Witnesses:

FRANCIS D. TAYLOR,
M. M. LIVINGSTON.