No. 612,538. Patented Oct. 18, 1898.

D. R. WING.

RAILROAD SPIKE.

(Application filed Jan. 18, 1897.)

(No Model.)

Fig. 1.

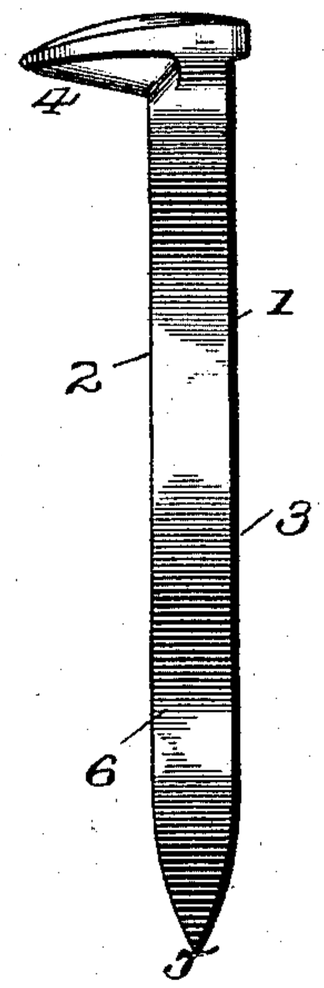
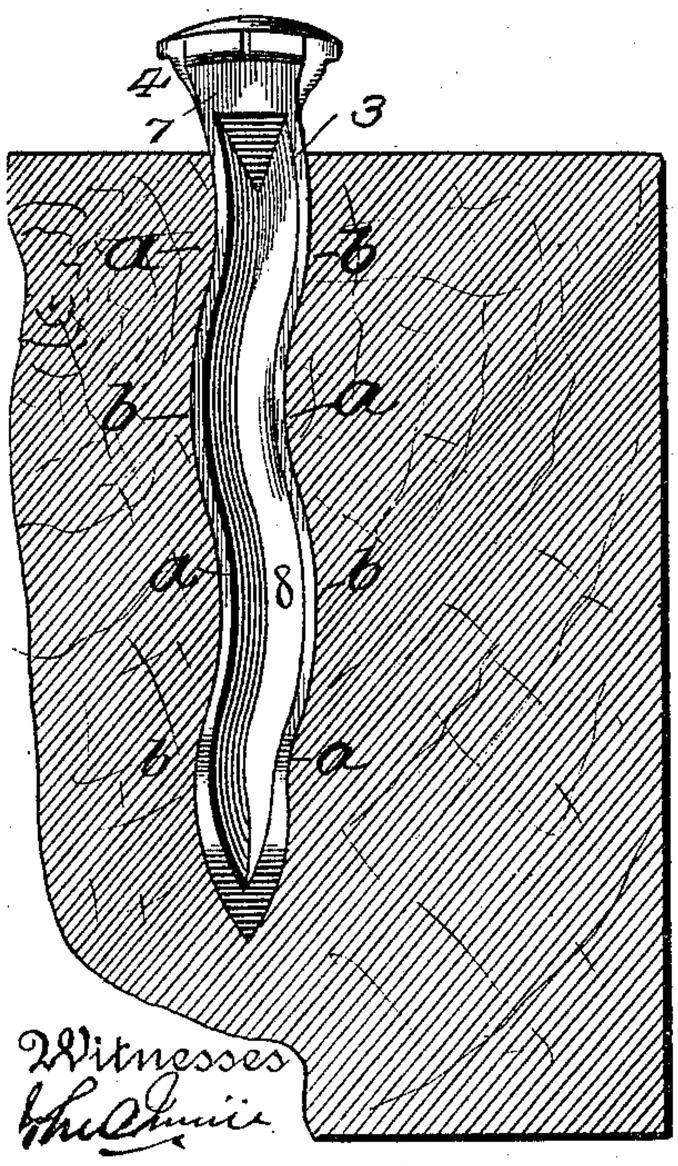


Fig. 2.



Witnesses
[illegible]
Walter A. Williams.

Fig. 4.

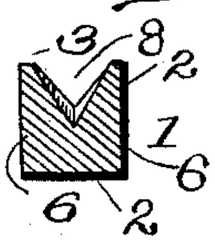
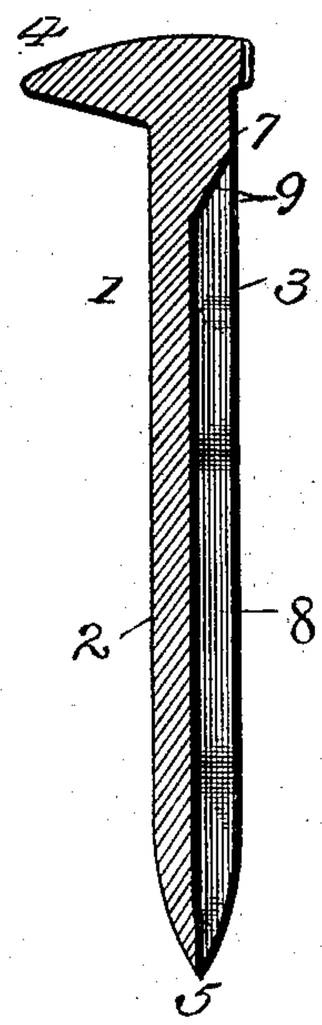


Fig. 3.



Inventor
Dwight R. Wing,
by J. Fred. Reily,
his Attorney.

UNITED STATES PATENT OFFICE.

DWIGHT R. WING, OF LITTLE ROCK, ARKANSAS, ASSIGNOR OF ONE-HALF TO KATE FLEMING, OF SAME PLACE.

RAILROAD-SPIKE.

SPECIFICATION forming part of Letters Patent No. 612,538, dated October 18, 1898.

Application filed January 18, 1897. Serial No. 619,649. (No model.)

To all whom it may concern:

Be it known that I, DWIGHT R. WING, a citizen of the United States, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented certain new and useful Improvements in Railroad-Spikes; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention is an improvement in railroad-spikes, the object of the same being to provide an improved article of this character possessing peculiarities of construction that serve to greatly increase its holding capacity when driven into a tie or beam, preventing the said spike from working either upward or backward under the considerable strain to which it is subjected during the passing of a train over the rails secured thereby.

In carrying out my invention, to produce a spike which shall be cheap in construction and have the required holding capacity to attain the above objects the body of the spike is waved laterally from shoulder to point and the rear face provided with a groove following the wave of the spike, having a serpentine course, commencing at the point and terminating at the shoulder in an upwardly and outwardly inclined surface which serves to form a congested mass of fiber at a point where it will assist in preventing the spike working either upward or backward.

The following specification enters into a detail description of my improved spike, and what I claim as my invention is particularly set forth in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of the spike. Fig. 2 is a rear elevation showing the application of the spike. Fig. 3 is a longitudinal sectional view. Fig. 4 is a transverse sectional view.

The spike (designated by the numeral 1 in the drawings) is provided at its sides 6 6 with transverse corrugations *a a*, those at one side being on different horizontal planes from those at the other in order that the body of the spike will be waved laterally from one end to the other. The front face 2 is plain from the head 4 and at its lower end is curved in to form the point 5, the sides 6 and rear face 3 being also curved, as shown, to complete the tapering point. In the rear face of the spike is formed a longitudinal groove 8, which is preferably V-shaped in cross-section, as shown in Fig. 4, and is nearly the full width of said rear face to form edges which cut into the wood. This groove follows the lateral wave of the spike, giving to it a serpentine course or compound curve from the point 5 to the shoulder 7, the upper end wall of said groove forming an outwardly and upwardly inclined surface 9. It will be noted that the groove commences at the point of the spike and in its serpentine course forms a series of inclined shoulders *b* at opposite sides thereof, the upper shoulder being located slightly below the inclined surface 9. It will also be noted that the projecting portion of the head, which is adapted to engage the base-flange of a railroad-rail, (not shown,) overhangs the front or plane surface of the spike.

The spike hereinbefore described is especially adapted for use in securing railroad-rails to the wooden cross-ties, as the grain of the wood runs in the direction of the length of the tie or at right angles to the rails, and when my improved spike is driven into place the transverse corrugations of the sides are parallel with the grain, while the broken fiber in the rear of the spike is wedged or compressed into the curved groove and fills the same. The inclined surface 9 at the upper end of the groove forms a congested mass of fiber in the rear of the spike at the shoulder and effectually prevents said spike working backward and also causes the wood to make a tighter joint with the spike and exclude water. By having the corrugations in the sides of the spike or parallel with the grain of the wood the fiber will be displaced laterally and therefore more readily close into said corrugations than if they were located in the front and rear faces. After the spike has become set the fiber that has closed in upon the waved sides and that which has become wedged and compressed into the serpentine groove will act to effectually prevent

a working of the spike by giving to it a considerable holding capacity.

Numerous attempts have been made to produce a spike that will not work upward or backward under the strain to which a railroad-spike is usually subjected, and it will be seen that with the spike shown and described herein the inclined shoulders or surfaces at the sides and in the longitudinal groove will oppose the upward movement of the spike, while the congested fiber at the upper end of the groove reinforces the hold of the spike at a point where it is specially desired.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An improved railroad-spike having a body portion provided with transversely-corrugated sides, a tapering point, and a groove in the rear face; the said groove extending from the point in a serpentine course or compound curve to near the head terminating in an upwardly-inclined surface; the projecting portion of the head of the spike overhanging the front face of the body, substantially as shown and for the purpose set forth.

2. An improved railroad-spike having a body portion provided with transversely-corrugated sides, the corrugations in one side being at different horizontal planes than those in the other side forming a body waved laterally from one end to the other, a V-shaped groove in the rear face of nearly the full width of said face and extending from the point in a serpentine course or compound curve following the wave of the body, and an upwardly and outwardly inclined surface forming the upper end wall of the groove; the head of the spike overhanging the front face of the body portion, as shown and for the purpose set forth.

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

DWIGHT R. WING.

Witnesses:
W. M. DICKINSON,
JNO. H. MARTIN.