(No Model.)

J. M. FENNERTY.

RAILROAD SPIKE.

No. 354,116. Patented Dec. 14, 1886.

Fig. 1.

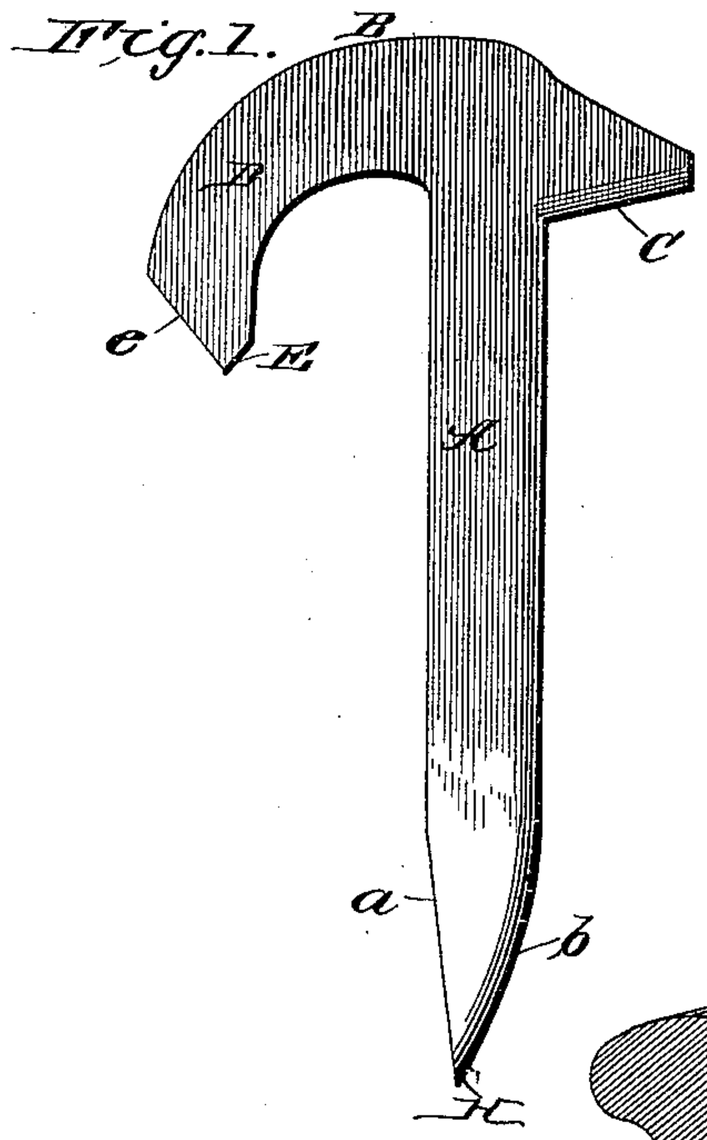
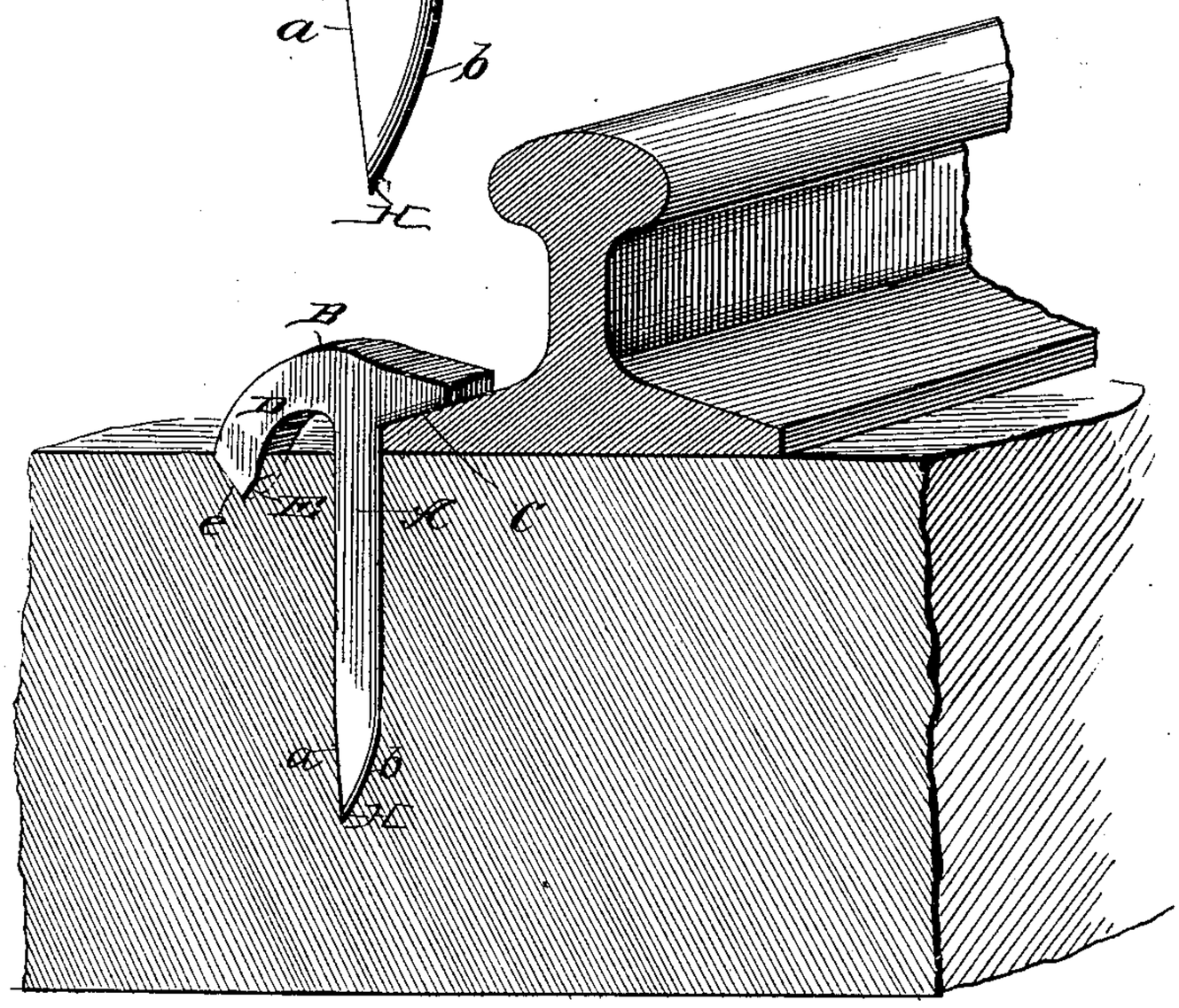


Fig. 2.



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JOHN M. FENNERTY, OF WASHINGTON, DISTRICT OF COLUMBIA.

RAILROAD-SPIKE.

SPECIFICATION forming part of Letters Patent No. 354,116, dated December 14, 1886.

Application filed August 3, 1886. Serial No. 209,840. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. FENNERTY, a citizen of the United States, residing at Washington, in the District of Columbia, 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.

My invention relates to an improvement in railway-spikes, and more particularly to an improvement of the construction of such spikes for which Letters Patent No. 345,423 were issued to me on July 13, 1886.

In the use of the railway-spike of the form in common use, it is the practice of the workmen to place the point of the same near the flange of the rail, with its head inclined outwardly from the rail, and when they have driven the spike nearly home they frequently strike it a blow or blows upon the outer side of the head of the spike to overcome this inclination and cause the head to come to and rest on the rail-flange. It will be readily seen that such blows upon the outside of the spike tend to increase the diameter of the hole in the tie, making the same greater than the diameter of the spike, and permitting the rails, by lateral pressure against the spikes, to press the same outwardly, resulting more or less in the spreading of the rails. It is also found that water settles in these enlarged spike-holes, causing the rotting of the tie around the spikes, and the consequent loosening of the same and displacement of the rails, all of which is obviated by the use of a spike formed as hereinafter described.

The elongated head is such that in driving the spike home all the blows of the hammer will fall directly on the head of the spike, whereby the battering of the rail-head is avoided. The spike is more easily driven and withdrawn, as the space of arch formed by the arm D is of such shape that the draw-bar fits closely to the main stem of the spike, whereby the spike readily yields to the leverage of the draw-bar, and when the spike has been driven home its head fits the rail closely and becomes anchored, leaving no space round the spike in the tie for water or moisture to enter.

The object of my invention is the production of a spike of such form as will permit the placing of the point of the spike about one-half inch from the edge or base of the rail, and held in a straight vertical position in driving it into the tie, and which will, by reason of its particular construction, incline its upper part or head slightly inwardly toward the rail as it is being driven into the tie, automatically adjusting itself snugly and securely up to and over the flange of the rail, and which will hold itself rigidly in such position, thus obviating all necessity of the workmen placing it at an angle preparatory to driving it into the tie, and striking it upon the outside of the head to overcome such inclination, which is frequently necessary with the common tie-spike.

In the accompanying drawings, Figure 1 is a side view of my improved spike, and Fig. 2 is a perspective view thereof.

Similar letters denote like parts in both views.

A represents the body or shank of the spike, upon the upper end or head B of which is formed the shoulder or chin C, which may be rounded or beveled on its under side to conform to the flange of the rail, and adapted to fit and rest closely on the same when the spike is in position. From the opposite side of the spike-head an arm, D, projects, which is curved downwardly and terminates in a spur, E, adapted to be driven into the tie, and forming an anchor or brace against lateral displacement of the rail. I bevel or cut away the outer edge of such shank in chisel-shaped form *a*. The opposite side of the shank I form with an outwardly-inclined cut-away or rounded portion, *b*. Both the inclined sides of the shank A terminate at the bottom in a cutting or chisel point, H, which cuts the fiber of the tie and avoids tearing such fiber in driving the spike. I round off the inner sides or corner edges of the spike in order to avoid all unnecessary tearing of the fiber of the tie.

In driving my improved spike into the tie, the same is placed near the rail-flange, and the outwardly-inclined and rounded portion *b*, near the end or point of the shank A, will cause the

lower part of the spike to incline outwardly in the tie as it is being driven down, and causing the shoulder or chin C to fit closely down npon the flange and close up against the edge of the same.

The spur E, formed on the arm D, may be made of any desired length, so as to sink in the wood or tie to a greater or less depth, as may be desired, and it is sharpened at its point somewhat similar to the shape of a chisel-point, but having its rear or outer side cut away at an angle forming a shoulder or knee, *e*, which presses against the upper surface of the tie and serves to resist any lateral movement of the rails against the shank of the spike, and anchors the spike solidly against the rail and keeps it in position firmly.

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

A railroad-spike having the inner edge of its shank or body portion rounded or smoothed off and provided near its lower end with the inclines *a b*, and head B, formed with the projection or shoulder C, and curved arm D, terminating in the spur E, and said spur having its rear or outer side cut away at a greater angle than its front edge to form a shoulder or knee adapted to resist lateral movement of the spike, substantially as described.

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

JOHN M. FENNERTY.

Witnesses:

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A. W. BACON.