J. M. KENT.

Railroad-Spike.

No. 163,208. Patented May 11, 1875.

Fig 1

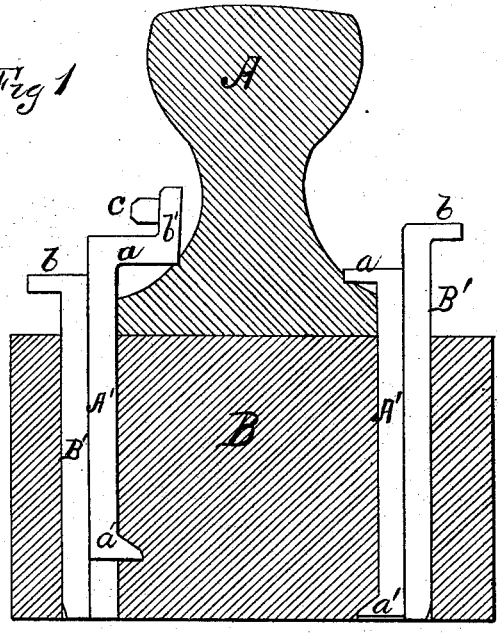


Fig 2

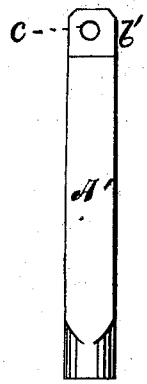


Fig 3

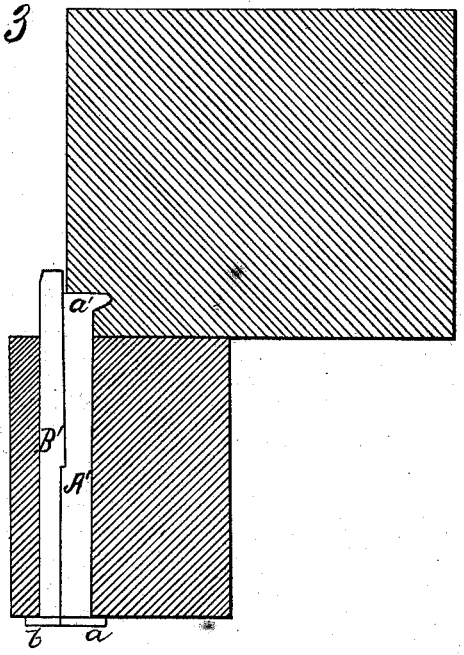


Fig 4

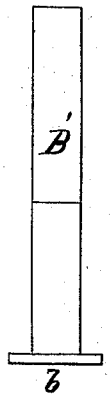
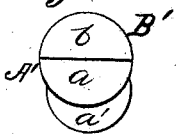


Fig 5



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES M. KENT, OF CAMPBELL, NEW YORK.

IMPROVEMENT IN RAILROAD-SPIKES.

Specification forming part of Letters Patent No. **163,208**, dated May 11, 1875; application filed October 24, 1874.

To all whom it may concern:

Be it known that I, JAMES M. KENT, of Campbell, in the county of Steuben and State of New York, have invented a new and valuable Improvement in Railroad-Spikes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

The figures of the drawings are representations of my spike as used in securing railroad-ties.

This invention has relation to devices which are especially designed for rigidly securing railroad-rails to the ties.

The object of the invention is to prevent the spikes from being casually withdrawn from the ties, thereby releasing the rails, and yet to allow them to be readily removed with little labor, when desired.

My invention consists in the employment of a semi-cylindrical holding-spike having a half-head on its upper end and a projecting hook on its lower end, the holding-spike being also rounded opposite the hook, and the diameter of the latter being equal to that of the hole in which it is inserted, and into which a semi-cylindrical key is driven after the holding-spike has been inserted into the hole, thus forcing the hook into the wood and securely retaining it in position, and at the same time, from the peculiar shape of the hook, drawing the holding-spike downward upon the flange of the rail.

In the annexed drawings, A designates an ordinary T-rail, and B the usual tie. It has been heretofore customary to use an ordinary spike for securing the former to the latter, which use is liable to the objection that, owing to the leverage of the rails acting under the pressure of a passing train, they were frequently withdrawn, creating the necessity of frequent inspection.

With a view to obviating this defect, I construct my holding-spike A′ as follows: An examination of the drawings will show them to be of semi-cylindrical form, and that they are provided with a head, *a*, and a projecting lip or hook or penetrating-point, *a′*. The back face of the holding-spike A′ (see Fig. 2) is made rounding at its lower end, so that when it is inserted into the hole in the tie, bored for that purpose, the hook and holding-spike will entirely fill up the hole. The upper face of the hook is inclined downward on the holding-spike when the key, hereinafter described, is driven home. The key B′ is also of like form, except the hook, and is of the same diameter in cross-section throughout, and has also a head, *b*.

In using my spike I make a perforation at proper intervals along and at each side of rails in the cross-tie, the said perforation being of slightly less diameter than that of the combined spike and key, and preferably of circular form. Into this perforation I first introduce the spike, with its penetrating-point downward, until the head *a* rests upon the flange of the rail, the hook, with its rounded back, filling up the entire lower end of the hole. The semi-cylindrical key B′ is then placed in the same perforation and driven home by a few strokes of the hammer, forcing the hook *a′* of the holding-spike into the tie, the downwardly-inclined upper face of the hook, as it is driven into the wood, drawing the half-head *a* down upon the flange of the rail and securely holding it in position.

It will be evident that it will be necessary to withdraw the key B′ before the holding-spike can possibly be started, and, as there is no strain on the former, it will remain in place until taken out by a workman, when it will be found that the removal of the spike A′ can be easily accomplished.

As was before stated, my invention is designed more especially for securing rails to cross-ties, but it may be used as a means of rigidly securing stone to wood, wood to wood, and other analogous purposes.

By forming on its head a shoulder, *b′*, and a stud, *c*, it may be used as a supporting-spike for the ordinary strap-hinge, for supporting gates.

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

The half-headed semi-cylindrical holding-spike A′, provided at its lower end with the hook *a*′, having its upper face downwardly inclined and its back, or flat face, rounded opposite the hook, in combination with the semi-cylindrical half-headed key B′, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES M. KENT.

Witnesses:
J. S. ROBINSON,
S. O. MASTERS.