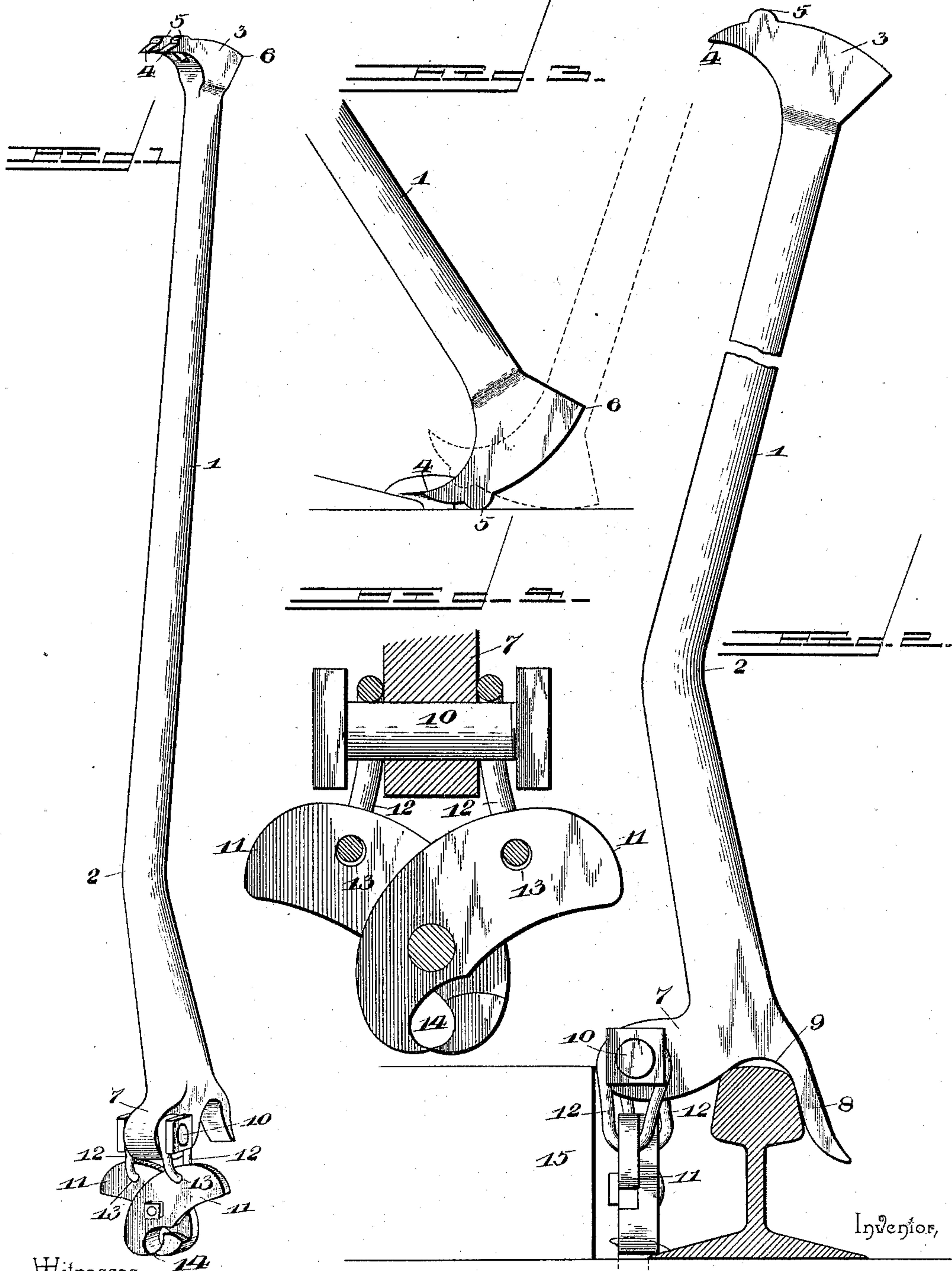


(No Model.)

J. L. McCANN.  
RAILROAD SPIKE PULLER.

No. 565,687.

Patented Aug. 11, 1896.



Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES L. McCANN, OF ROANOKE, WEST VIRGINIA.

## RAILROAD-SPIKE PULLER.

SPECIFICATION forming part of Letters Patent No. 565,687, dated August 11, 1896.

Application filed December 6, 1895. Serial No. 571,297. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES L. McCANN, a citizen of the United States, residing at Roanoke, in the county of Lewis and State of West Virginia, have invented a new and useful Railroad-Spike Puller, of which the following is a specification.

This invention relates to an improved device for extracting railroad-spikes, and has for its object to provide a simple and efficient combination implement, in which provision is made for obtaining a progressively-increasing leverage in the act of drawing a spike, and in which further provision is made for engaging the spike-pulling device with the head of a rail, so that it may not escape therefrom in the act of drawing the spike.

The invention also has for its object to provide a spike-puller which may be used in circumscribed places, for instance, where a guard-rail is employed.

With the above objects in view the invention consists in certain novel features and details of construction, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the improved spike-puller. Fig. 2 is a side elevation of the same enlarged and applied to a cross-section of a rail and in engagement with a spike. Fig. 3 is a detail side elevation showing the manner of starting a spike. Fig. 4 is a detail section through the forked foot, showing the gripping-jaws in elevation.

Similar numerals of reference designate corresponding parts in the several figures in the drawings.

Referring to the drawings, 1 designates a lever or stock, formed intermediate its ends with a bend 2 and provided at one extremity with a triangular claw-foot 3. This claw-foot is slotted or bifurcated upon one side of the stock to form spaced claw members 4, which are brought to a point and adapted to be inserted beneath the head of the railroad-spike and upon opposite sides of the shank of such spike. The lower or outer faces or edges of the claw members are rounded or struck on the arc of a circle and the outer or lower surface of the claw-foot 3 is correspondingly rounded or struck on the arc of a circle, sub-

stantially coincident with the first-named arc, thus forming a rocker surface and establishing a shifting fulcrum, which affords a progressively-decreasing leverage and a progressively-increasing throw of the points of the claw members. Located at a point in proximal relation to the points of the claw members, and upon the outer rounded surfaces thereof, are semicircular projections 5, forming oppositely-disposed fulcrum-points, which are brought into use in primarily starting the spike, as indicated in full lines in Fig. 3. In the upward progress of the spike these fulcruming projections 5 clear the ground or tie and the fulcrum-point gradually changes to the heel 6, thereby giving increased throw to the points of the claws.

The lever or stock is provided at its other end with a bifurcated or forked foot comprising the main or foot member proper 7 and an elongated heel member 8, the two being combined and disposed in such manner as to leave a U-shaped recess or concavity 9 immediately thereof, which recess or concavity is adapted to approximately fit the head of a railroad-rail, as shown in Fig. 2.

The foot 7 is transversely perforated to receive a bolt 10, upon which is pivotally suspended a pair of gripping-jaws 11, through the medium of a pair of links 12, the said links extending around the shank of the bolt 10 between the head or nut thereof and the foot 7, and also through perforations 13 in the gripping-jaws 11, intermediate the ends of the latter. These gripping-jaws are hinged together intermediate their ends, as shown in Fig. 1, and are provided at their lower extremities with gripping-edges 14, which are adapted to pass beneath the head of a spike in the manner illustrated in Fig. 2 preparatory to the extraction of such spike. The gripping-jaws are extended at their upper ends beyond their pivotal connection with the links 12, the object being to afford sufficient weight to nearly counterbalance the weight of the operative ends of the jaws, so that the latter will open automatically when they strike against the upper surface of the head of the spike and not require to be opened by hand.

In operation the stock or lever is caused to stride the rail, as shown in Fig. 2, the operator



standing between the rails. The lever is pushed outward until the gripping-jaws open over and close beneath the head of the spike. The lever is now vibrated inward to draw the spike, the heel 8 serving as an efficient guard for obviating the accidental disengagement of the lever with the rail. As previously stated, the claw-foot 3 may be used to primarily start the spike upward. The spike-puller herein described is especially useful on bridges and trestles, enabling the workman to stand between the rails, thus avoiding danger incident to the necessity of having to work on the outside of the rails. The device is also particularly useful where, in crossing bridges or in other places, it is necessary to employ guard-rails or an analogous device, as indicated at 15 in Fig. 2. In the latter event the pendent gripping-jaws pass between the rail and guard and automatically engage the head of the spike in the manner above explained. The bifurcated foot with the gripping-jaws being ordinarily used for the purpose of extracting the spikes, it is necessary to resort to the claw-foot only when the spike is particularly difficult to start, or in the event of the gripping-jaws getting out of order.

It will be apparent that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. A lever formed in its end with a U-shaped recess or concavity adapting the lever to embrace the head of a railway-rail upon each side, in combination with two gripping-jaws pivotally connected intermediate their ends and having a linked connection with the lever, the said jaws being extended in opposite directions beyond their point of support and weighted to counterbalance the weight of the engaging ends of the jaws, whereby the automatic opening of the jaws is facilitated, substantially as described.

2. A railroad-spike puller, comprising a lever provided at one end with an integral extension or foot running forward at an angle and also provided at the same end with an integral longitudinal heel extension, the said extensions forming between them a recess or concavity by which the end of the lever is adapted to partially embrace the head of a rail and slide upon said head as the lever is vibrated, in combination with spike-gripping jaws connected to the foot of said lever, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES L. McCANN.

Witnesses:

J. M. FOSTER,

GERARD J. STACK.