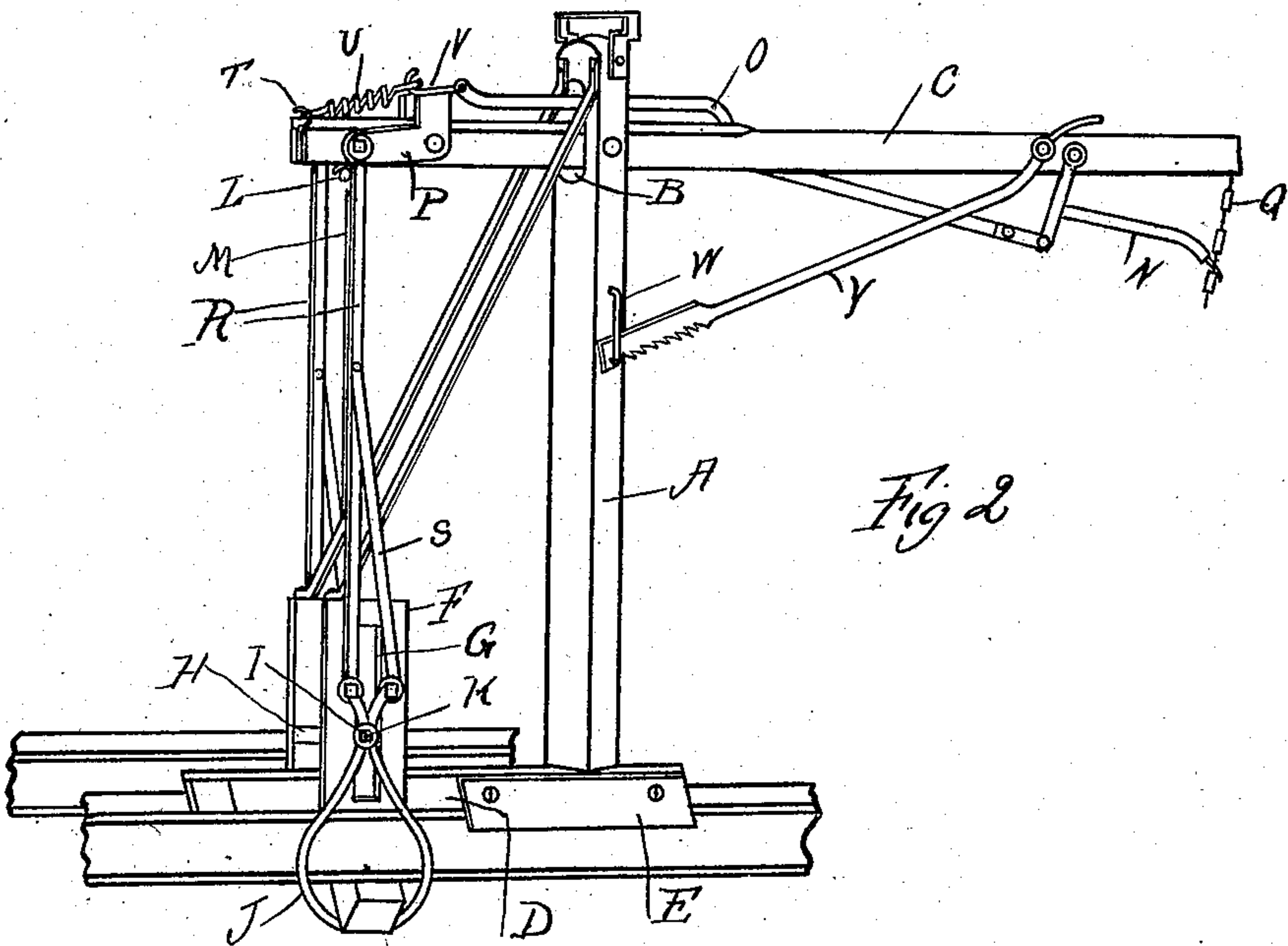
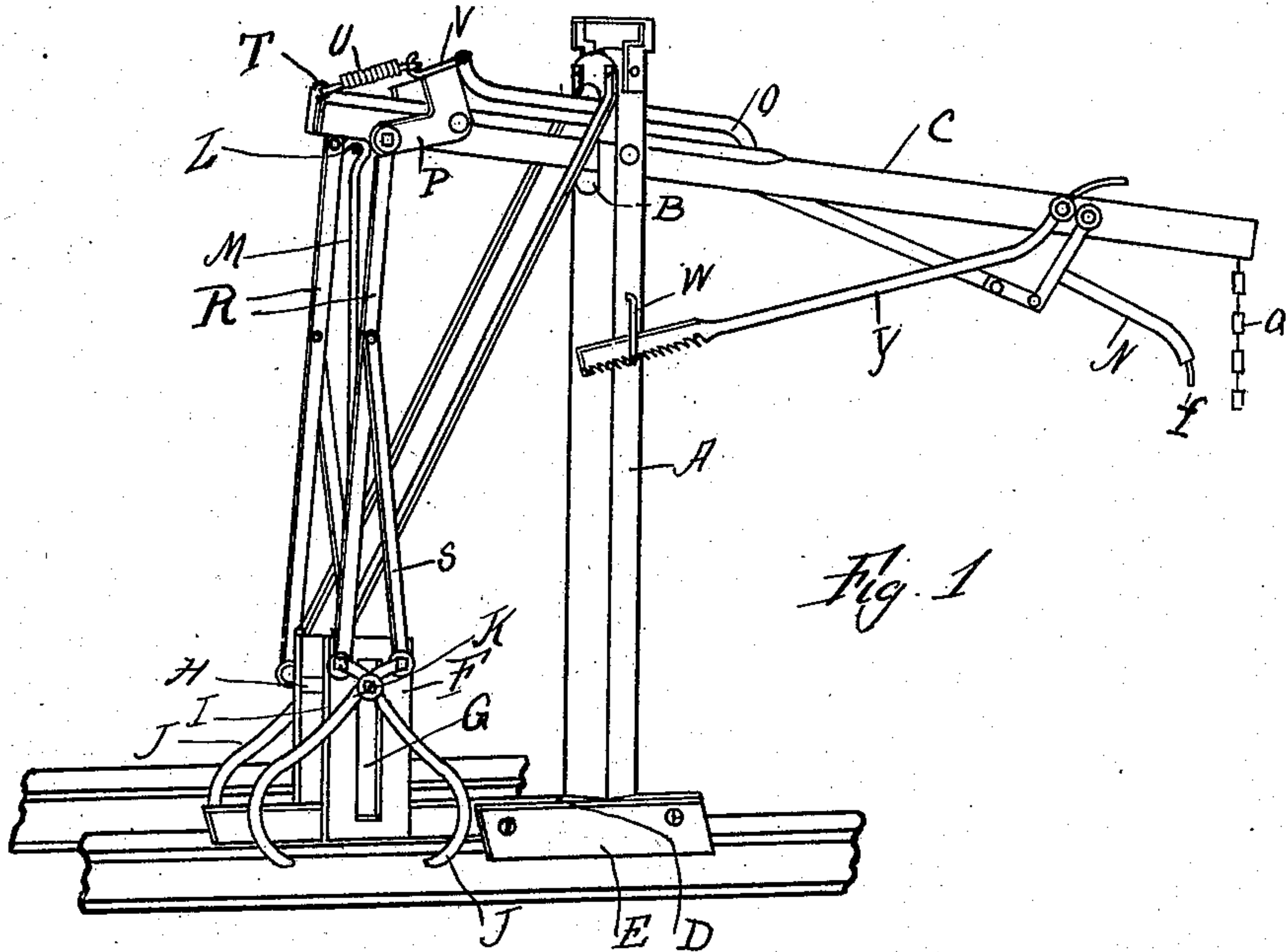


E. L. BARTON.
RAILROAD CROSS TIE LIFT.
APPLICATION FILED MAY 1, 1908.

899,373.

Patented Sept. 22, 1908.



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EDWARD L. BARTON, OF BLOOMSBURG, PENNSYLVANIA.

RAILROAD-CROSS-TIE LIFT.

No. 899,373.

Specification of Letters Patent.

Patented Sept. 22, 1908.

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To all whom it may concern:

Be it known that I, EDWARD L. BARTON, a citizen of the United States, residing at Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented a certain new and useful Improvement in Railroad-Cross-Tie Lifts, of which the following is a specification.

My invention relates to a new and useful improvement in railroad cross tie lifts, and has for its object to provide an exceedingly simple and effective device by means of which the cross ties may be lifted up to and held against the bottom flange of the rail while the spikes are being driven into the cross ties and while the earth is being tamped beneath the ties, a further object of my improvement is to so construct a tie lifter which one man can readily operate thus doing away with the services of one or more men.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same I will describe its construction in detail referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1, is a perspective view of my improved railroad cross tie lifter the tongs being shown open. Fig. 2, is a perspective view showing the tongs closed about the cross tie.

In carrying out my invention as here embodied A represents an upright post having a slot B cut in the upper portion thereof, through which passes the handle C; the upright post A is fastened to a base D which is adapted to rest upon the head of the rail when the machine is to be used. On the side of the said base D is fastened a plate E which overlaps the side of the rail thus letting the user know when his machine is true and also to prevent it from slipping over the rail, to the base D is also secured the guides F having slots G cut therein.

H indicates a block which is adapted to move up or down between the guides F through this and the slots G passes a rod I the two ends of which are threaded, on these ends are placed the tongs J then the nuts K are threaded on these ends thus holding the tongs J securely in position. On the under side of one end of the handle C is fastened the

eyelet L on which a hook on the upper end of the rod M is placed. The opposite end of the rod M is secured to the block H thus it will be seen that when the hook C is moved up or down, the block H is moved likewise, thus also moving the tongs in those directions. To the opposite end of the handle is movably secured a T shaped lever N and to this is secured one end of the rod O the opposite end of said rod being secured to the end of the bell crank lever P, said bell crank lever being secured to the outer end of the handle C, to the opposite end of the bell crank lever is fastened one end of the rods R, the other ends of these rods being secured to the upper end of one of the members which go to make up the tongs. S indicates a short rod one end of which is secured to the rod R, a suitable distance below the point where it is connected to the bell crank lever and the opposite end of this rod S is secured to the top of the other member which helps to make the tongs.

On the outer end of the handle C is fastened a hook T to which is secured one end of the spring U the other end being fastened to the hook V, which is secured to the bell crank lever P. The handle or free end of the lever N has a small hook formed therewith which is adapted to fit in one of the links of the chain Q when it is desired to lock the tong and to close the tie, as will be hereinafter described.

On the side of the upright post A is secured a catch W with which the ratchet teeth of the lever Y are adapted to engage, the lever Y being secured to the handle C so that the said handle will be held in different positions by means of the handle Y.

In practice when it is desired to fasten the rails to the cross ties then tamp the earth between said cross ties, the lever N is released when the spring U will contract pulling the top of the bell crank lever towards the end of the handle C which will open the tongs J through the medium of the rods R and S. After the tongs have been opened the handle of the lever Y is pressed down thus disengaging the ratchet teeth and allowing the handle C to be raised which will lower the tongs until they are in a position to grasp the cross ties, when the lever N would be raised thus closing the tongs about the cross tie and the chain Q passes over the hook of the end of the lever N in this way holding the tongs locked. The handle N is then pressed downward thus

pulling the tie up to the rail and when in this position the lever Y by means of the ratchet teeth and the catch W would hold the handle C stationary and the work of pressing the spikes in the tie and tamp the earth between it could be then readily done by the same man who had operated the machine.

Having thus fully described my invention, what I claim as new and useful is—

10 1. In combination, a base, a plate secured on the side thereof, an upright post having an opening cut in its upper end secured to said base, a handle adapted to pass through the opening in said upright post, movably
15 secured thereto, a bell crank lever secured to one end of said handle, a T shaped lever secured to the opposite end thereof, a rod connecting said T shaped lever with the bell crank lever, a spring, one end of which
20 is secured to the top of the bell crank lever, the opposite end being secured to the outer end of the handle so that the tension is always brought to bear upon the upper end of said bell crank lever, guides having slots cut
25 therein attached to the base, a bolt adapted to move up and down in said guides, means for securing said bolt to the handle, a rod having threads cut upon either end thereof passing through said bolt and slot, tongs ad-
30 justably secured to the ends of said rods, a rod one end of which is secured to the top of one of the tong members the opposite end being secured to the bell crank lever, a second rod secured to the top of the other tong mem-
35 ber its opposite end being secured to the other rod a considerable distance from the point where it is connected to the bell crank lever, a chain secured to the handle the links of which are adapted to engage with the

handle of the T shaped lever, a catch secured 40 to the side of the upright post of the lever having ratchet teeth formed thereon, which are adapted to engage with said catch, substantially, as described.

2. The herein described combination of a 45 base, an upright post having an opening cut in the top thereof secured to said base, a handle adapted to pass through said opening and movably secured to the base, a bell crank lever secured to one end of said handle, means 50 for operating said bell crank lever, guides secured to the base, tongs adjustably secured to the guides, rods the ends of which are secured to the bell crank lever and the tongs for the operation of said tongs and means for 55 holding the handle in any desired position.

3. In a device of the character described a base, an upright post having an opening cut therein, secured thereto, a handle secured to said post, guides also secured to the base, a 60 bolt adapted to move up and down in said guides, a rod one end of which is secured to said bolt the opposite end being secured to the handle, a bell crank lever also secured to the handle, tongs secured to the bolt, rods for 65 securing the upper ends of the tongs to the bell crank lever, means for operating said tongs, a lever having ratchet teeth cut thereon, said ratchet teeth adapted to engage the catch on the side of the upright post, as and 70 for the purpose set forth.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

EDWARD L. BARTON.

Witnesses:

J. C. RUTTER, Jr.,
J. E. ZEIGLER.