

W. L. VARNER.

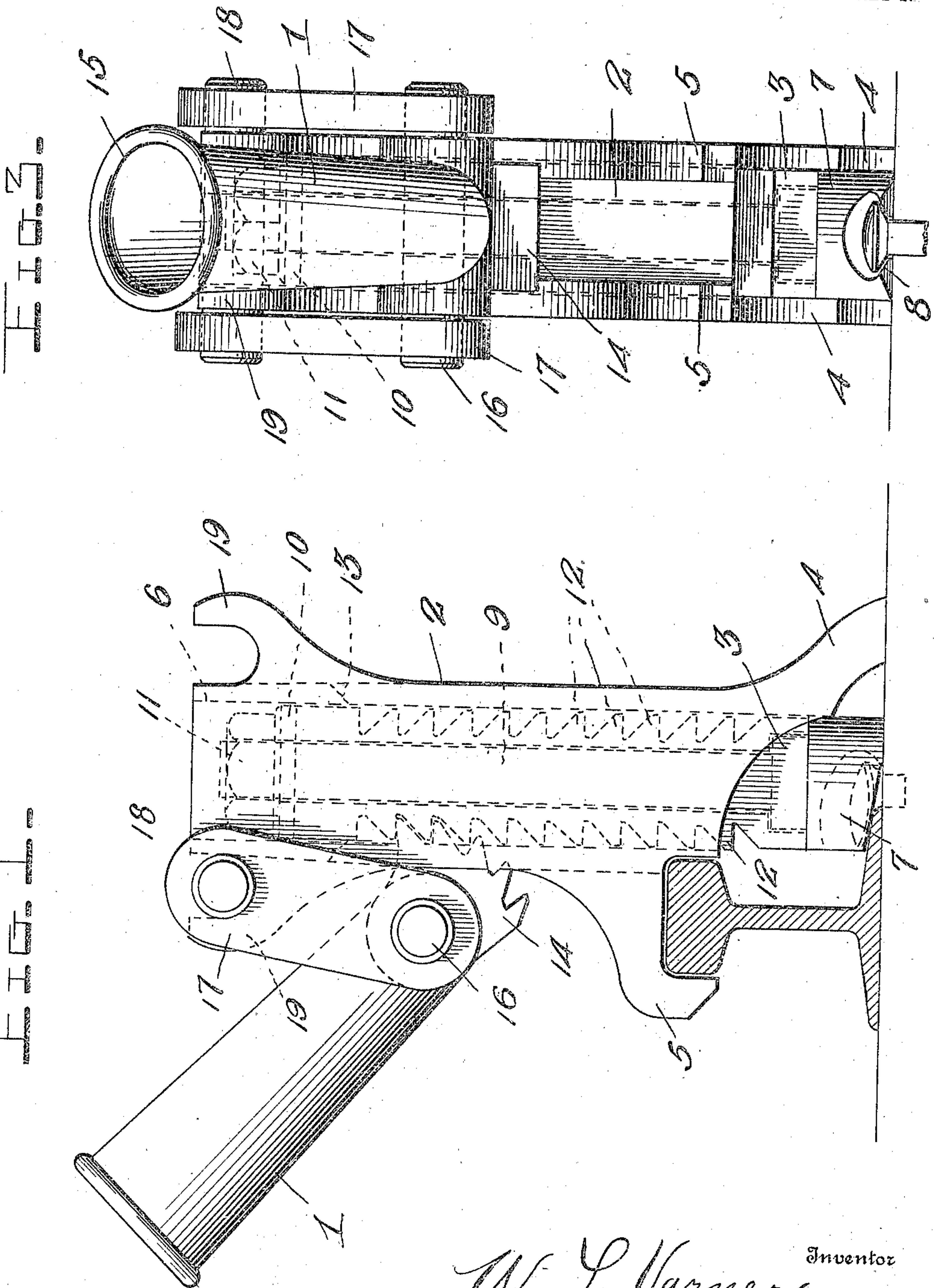
SPIKE PULLER.

APPLICATION FILED MAY 11, 1903.

951,517.

Patented Mar. 8, 1910.

2 SHEETS—SHEET 1.



Witnesses

Chas. L. Griebauer.

E. M. Ricketts

W. L. Varner

Inventor

By

Watson Coleman

Attorney

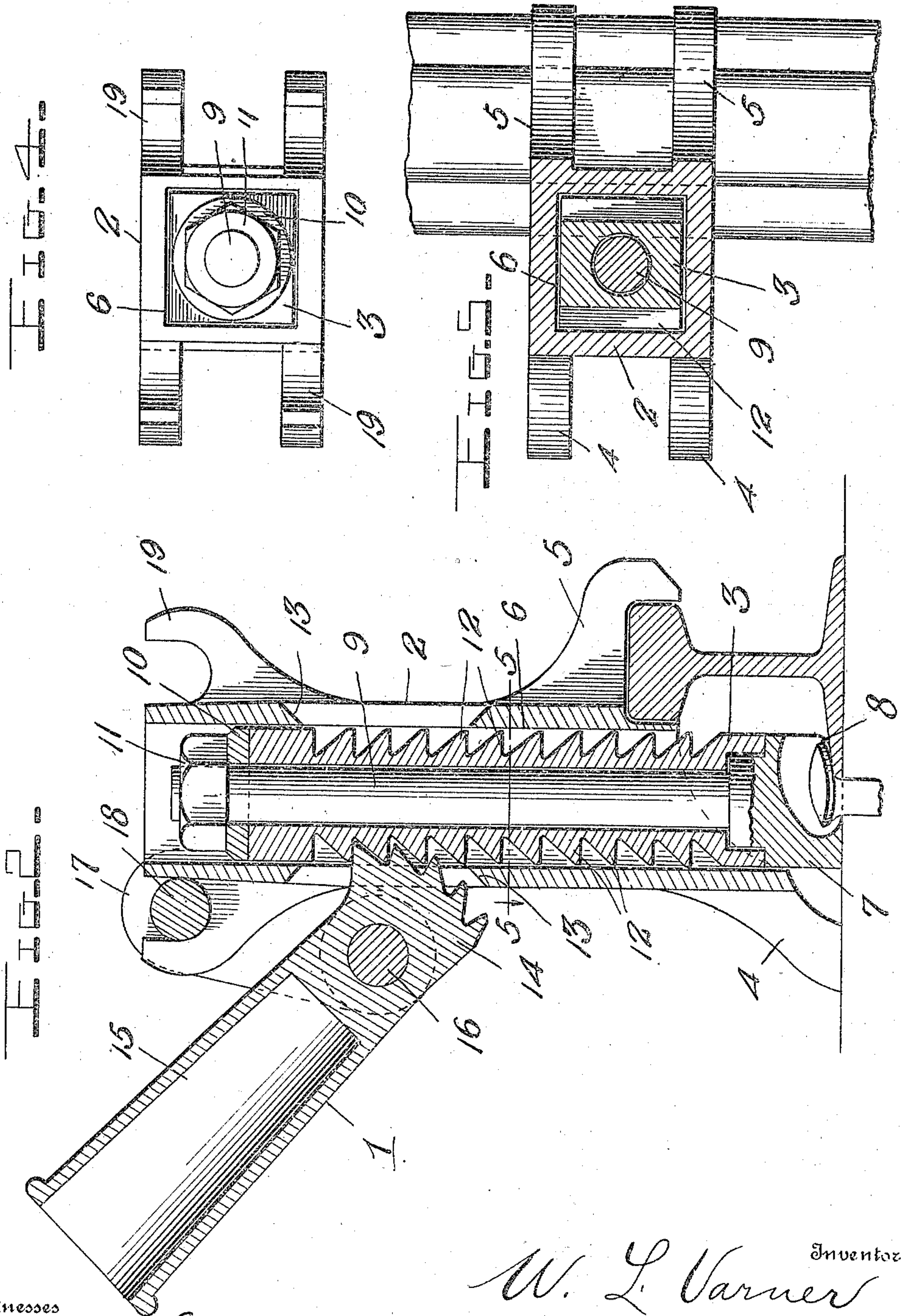
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UNITED STATES PATENT OFFICE.

WILLIAM L. VARNER, OF GARNSEY, ALABAMA, ASSIGNOR OF ONE-THIRD TO JOHN R. PILL, OF BIRMINGHAM, ALABAMA.

SPIKE-PULLER.

951,517.

Specification of Letters Patent.

Patented Mar. 8, 1910.

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To all whom it may concern:

Be it known that I, WILLIAM L. VARNER, a citizen of the United States, residing at Garnsey, in the county of Bibb and State of Alabama, have invented certain new and useful Improvements in Spike-Pullers, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in spike pullers and to one more particularly adapted for pulling or extracting spikes from railroad cross ties.

15 One object of the invention is to provide a simple and practical spike pulling device which will enable the operator to pull the spikes on both the outside and inside flanges of a track rail without changing his position.

20 Another object of the invention is to provide a spike puller which will effectively engage the head of the spike regardless of the angle at which the spike is driven.

25 Another object of the invention is to provide a spike puller which will extract the spike without bending it and rendering it useless.

30 A further object of the invention is to provide a spike puller which is simple and practical in construction and which will be easy to manipulate and powerful and effective in operation.

35 With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

40 Figure 1 is a side elevation of the improved railroad spike puller showing it in use; Fig. 2 is a vertical sectional view showing the lever reversed; Fig. 3 is a front elevation; Fig. 4 is a top plan view; and Fig. 5 is a horizontal section taken on the plane indicated by the line 5—5 in Fig. 1.

45 The present embodiment of the invention comprises a lever 1, a support 2 and a spike engaging and lifting member 3 arranged within the support and actuated by the lever, the lever being reversibly fulcrumed whereby it may be used upon either side of the support. The support 2 is in the form of an upright tubular housing preferably square in cross section, as shown in Fig. 3,

and having at its lower end a projection or foot 4 to rest upon a cross tie or other base and also one or more laterally projecting hook-shaped lips 5 which take over the head of a track rail and serve to anchor the support or housing 2 thereon, as will be seen upon reference to Fig. 1. The spike extracting member or draw bar 3 is arranged for vertical sliding movement in the square or other flat faced bore 6 of the housing or support 2, said member or bar 3 being of similar-shape in cross section so that it cannot rotate. Carried by the lower end of the member 3 is a claw head 7 adapted to engage the head of a spike, said claw head having a swiveled or rotatable connection with the member 3, whereby it may be turned to any angle to engage the head of a spike. The claw head 7 may be of any suitable form and construction, but as illustrated, it is circular and has on one side an opening with undercut walls 8, whereby the head of the spike may be effectively gripped, as shown in Fig. 2 of the drawings. The swiveled connection between the head 7 and member 3 is preferably effected by providing the head 7 upon the lower end of a cylindrical bar 9 which extends through and rotates in a cylindrical opening or bore formed in the member 3. Upon the projecting end of the bar 9 is a washer 10 and a nut 11, whereby said bar 9, and hence the claw head 7, is rotatably connected to the member 3.

Formed in the opposite or front and rear faces of the member 3 are rows of teeth 12 which are disposed opposite vertical slots or openings 13 formed in the front and rear walls of the housing or support 2 and which are adapted to be engaged by teeth 14 upon the inner end of the lever 1. Said lever has its outer end formed with a socket 15 for the reception of a removable section or handle and its intermediate portion provided with a transverse pivot or fulcrum pin 16 on which latter are arranged the lower ends of a pair of suspending links or arms 17. The opposite ends of said links 17 are connected by a pin 18 which may be removably engaged with recessed bearing brackets 19 formed in pairs in the front and rear sides of the top of the support or housing 2. By providing this link connection upon the lever and providing the bearing or supporting brackets for it on opposite sides of the ful-

crum support or housing 2, it will be seen that the lever may be used upon either side of the latter so that the operator can extract the spikes on both the inner and outer base flanges of the rails without changing his position on one side of the rail.

In operation, the member, 3 which is removable from the housing 2, is placed in an upright position on one side of the track rail and the claw head 7 at its bottom is engaged with the head of the spike to be extracted. The housing 2 is then slipped over the top of the member 3 and anchored to the track rail by engaging its hook-shaped lips 5 with the head of the rail and its foot 4 with the cross tie or other beam from which the spike is to be extracted. The pin 18 of the suspending link connection for the lever is then engaged with the brackets 19 on either side of the housing or support 2 and after the teeth 14 on the lever are engaged with the teeth 12 on the member 3, the handle in the end or socket of the lever 1 is depressed, whereupon, the member 3 will be moved vertically and the spike will be withdrawn from the tie or beam in a straight or unbent condition so that the spike can be used again. After the spike on one base flange of the rail has been extracted, the operator may, without changing his position, remove the spike on the other base flange of the rail, by placing the member 3 and housing or support 2 on the opposite side of the rail and then mounting the lever on the opposite side of said housing, as will be readily understood upon reference to Fig. 1 of the drawings.

Among the many advantages of the construction set forth, the following may be noted. By mounting the lever or other operating device for the spike lifting member so that it may be used on either side of the latter, the operator may pull the spikes on both the inside and outside of the rail without changing his position. This feature is exceedingly advantageous where the device is used on trussel or bridge work, tunnel work, station yard work and the various other places where it is difficult or impossible to use a claw bar or other long implement. Owing to the swiveled connection between the spike lifting or retracting member and the claw head, the device may effectively pull spikes which are driven at an angle or which have their body portions or heads bent; and this feature, in connection with the peculiar construction of the housing or support, whereby it is anchored in a perpendicular position on the rail, insures the pulling of the spikes in a straight condition so that they can be used again. The direct pull also renders it comparatively easy to draw the spike and insures the effective operation of the device. The simple construction of the device renders it comparatively inexpensive to produce and also exceedingly strong and

durable in use. Its simplicity also enables it to be properly and effectively used by unskilled labor.

While the preferred embodiment of the invention has been shown and described in detail, it will be understood that I do not limit myself to the form, proportion and arrangement of parts or the details of construction set forth, since various changes may be made without departing from the spirit and scope of the invention.

Having thus described the invention what is claimed is:

1. A spike puller comprising a support having upon its opposite sides bearings, a spike-extracting member slidable in said support and having teeth upon its opposite sides, a lever having teeth at one end to coact with the teeth on said member and a link connection for suspending the fulcrum of the lever, said link connection being adapted to be engaged with the bearing on either side of said support.

2. A spike puller comprising a support having at its bottom a rail engaging lip whereby it will be prevented from turning when applied to a rail, a vertically slidable member in said support, a claw head having undercut walls to engage the head of a spike, a swivel connection between said claw head and said member, and means mounted on the support for actuating said member.

3. A spike puller comprising a support having at its lower end a rail engaging lip, a member vertically slidable but non-rotatably arranged in said support, a spike head engaging member swiveled upon the first mentioned member for rotary movement in a horizontal plane, and means upon said support for actuating the first mentioned member.

4. A spike puller comprising a hollow upright support having openings in its opposite sides, bearings on opposite sides of its top, and a rail engaging lip at its bottom, a member removably non-rotatably arranged in said support for vertical sliding movement and having upon its opposite sides teeth, the latter being disposed opposite the openings in said support, a spike head engaging claw swiveled upon said member and rotatable in a horizontal plane, a lever having teeth to engage those on said member, and a link connection for suspending the fulcrum of the lever, said link connection being adapted to be engaged with the bearing on either side of said support.

5. A spike puller comprising a support having upon its opposite sides bearings, a spike extracting member, a lever for actuating said member and a link connection for suspending the fulcrum of the lever, said link connection being adapted to be engaged with the bearing on either side of said support.

6. A spike puller comprising a housing having in its lower end a base engaging foot and a track rail engaging lip and at its upper end on its opposite sides bearing brackets, a spike extracting member slidable in the housing and having means at its lower end to engage the head of a spike, the opposite sides of said extracting member being provided with teeth, a lever having teeth at one end to engage the teeth on either side of said extracting member and a link hanger for the fulcrum of said lever adapted to be engaged with the bearing brackets on either side of the top of said housing.

7. A spike puller comprising a support or housing having means to engage a rail, a

vertically slidable extracting member non-rotatably arranged in said housing, and having a central opening or bore, a claw head having a bar projecting upwardly from it and through said opening in the member, said bar being rotatable and having its projecting end screw threaded, a retaining nut upon said threaded end of the bar and means for actuating said member.

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

WILLIAM L. VARNER.

Witnesses:

J. E. PENHALL,

W. J. COWDEN.