R. F. BRAMSTADT.

SPIKE PULLER.

APPLICATION FILED JULY 29, 1908.

925,557. **Patented June 22, 1909.**

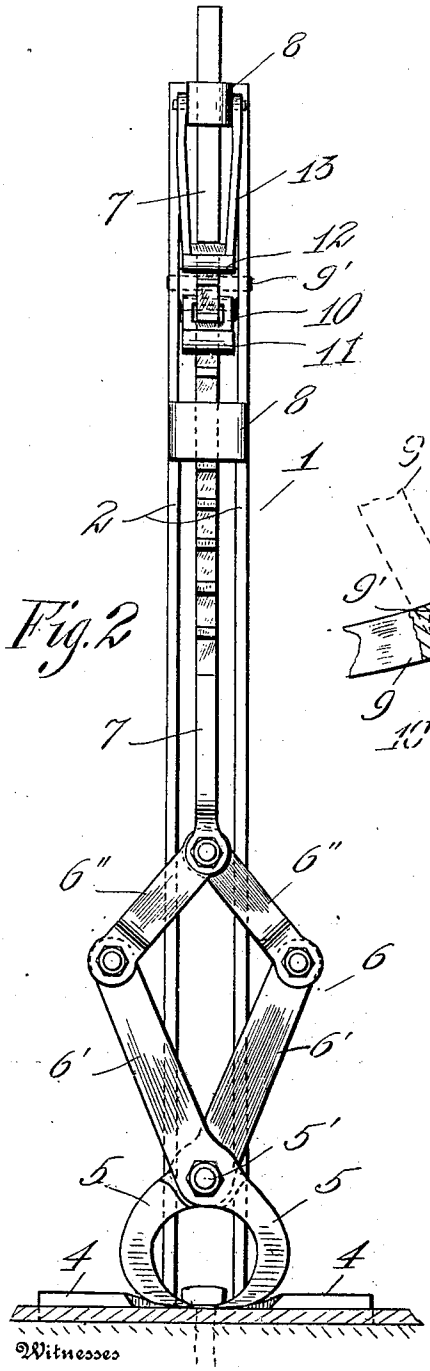


Fig. 2

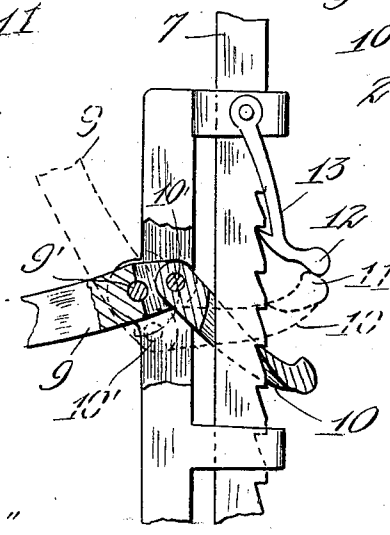


Fig. 3

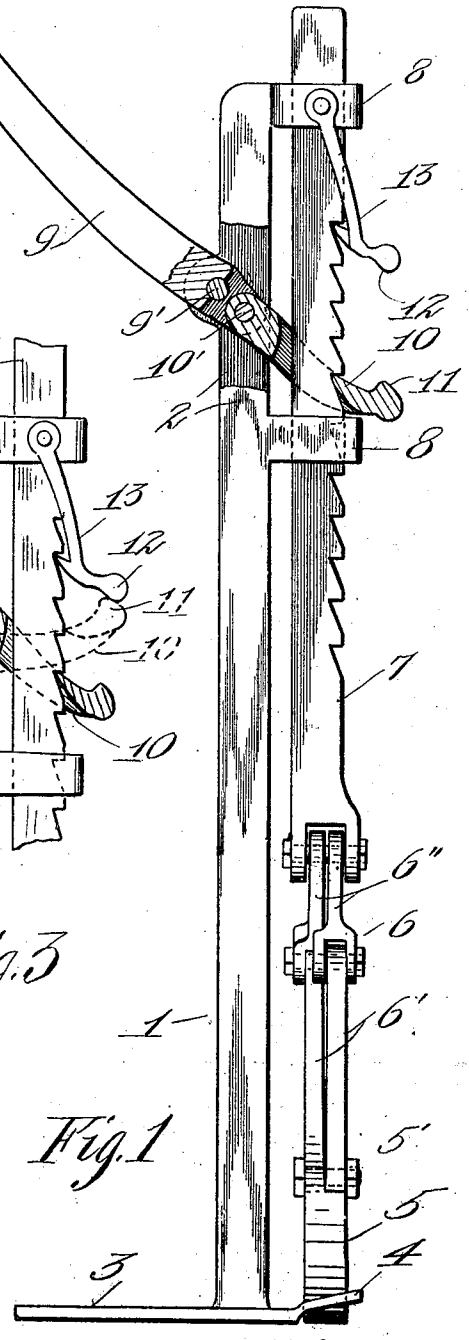


Fig. 1

Witnesses

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UNITED STATES PATENT OFFICE.

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SPIKE-PULLER.

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Application filed July 29, 1908. Serial No. 445,993.

To all whom it may concern:

Be it known that I, RICHARD FRAD BRAMSTADT, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Spike-Pullers, of which the following is a specification.

My invention has particular reference to appliances for extracting spikes, and the primary object thereof is the provision of an improved device of the above type whereby rail spikes may be readily gripped and pulled without obtaining a binding effect.

With the above and other objects referred to hereinafter in view, the invention resides in the construction, combination and arrangement of parts as set forth in the following specification and defined in the appended claims.

In the accompanying drawing wherein I have illustrated my invention of such form now preferred by me, Figure 1 is a side view of the device, shown with portions of some of the parts broken away. Fig. 2 is a view of the device in front elevation illustrating the same as applied in pulling a spike from a rail bed the adjacent portion of the rail flange being shown in section, and Fig. 3 is a fragmentary sectional view illustrating by dotted lines the application of the driving pawl to trip the catch pawl.

Similar reference numerals designate corresponding parts throughout the several views.

In practice I provide a suitable standard as 1 preferably comprising parallel members 2, 2 and a foot piece 3 secured to said members and provided with projecting toe pieces 4 suitably undercut or elevated to overlap the flange of a rail with piece 3 resting on the sleeper or bed thereof.

Reference numeral 5 indicates a pair of nippers adapted to fit between the toe pieces 4 for gripping a spike, as clearly illustrated in Fig. 2, the same being pivoted together, as at 5′, and connected by a suitable toggle connection 6 with a rack bar 7, slidably mounted in guides 8, fixed to the standard 1.

The toggle connection 6, as now considered, comprises cross arms 6′, secured to respective nippers, and links 6″ pivotally connected to said arms and to rack bar 7.

The means for elevating rack bar 7 comprises a lever 9, fulcrumed at 9′ between the members 2 of standard 1, and a drive pawl 10, pivotally connected at 10′ to lever 9. Drive pawl 10, is of open formation to permit of the rack bar sliding therethrough and is formed with an outwardly projecting strike lug 11 formed with a cam surface adapted to engage a lug 12 of a catch pawl 13, to swing said catch pawl outwardly and thereby release the rack bar, as will be more fully described hereinafter. Catch pawl 13 is pivotally connected to the upper guide 8 and as arranged will obviously swing by gravity to engage the teeth of the rack bar to hold said rack bar as elevated by power applied to lever 9.

To extract a spike, the device is arranged substantially as illustrated in Fig. 2, then lever 9 is swung to impart step by step movement to rack bar 7 to withdraw the spike, catch pawl 13 preventing lowering of said rack bar when lever 9 is swung upwardly to enable drive pawl 10 obtaining a new hold on the rack bar, as is apparent.

Drive pawl 10 after having been operated by lever 9 to elevate the rack bar the desired distance instead of being lowered into engagement with the next lower tooth of the rack bar, is lowered just enough to allow it when swung on its pivot 10′ to clear the tooth with which it is engaged. The operator then grasps lug 11 and swings the free end portion of drive pawl 10 upwardly until lug 11 engages lug 12, as illustrated by dotted lines in Fig. 3. Lever 9 is now swung downwardly thereby moving pawl 10 forwardly to force pawl 13 from engagement with the rack bar.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is:

1. A device of the character described, a standard, a rack bar slidably supported thereon, a pair of nippers connected to said rack bar to be operated thereby, a lever fulcrumed on said standard, a pawl pivoted to said lever and engaged with said rack bar for elevating the same, and a catch pawl for preventing lowering of said rack bar, said catch pawl being provided with a strike lug arranged in the path of said first named pawl whereby during movement of said first named pawl it will be struck and the catch pawl thereby moved to effect releasing of the rack bar.

2. A device of the character described, a standard, a rack bar slidably supported

thereon, a pair of nippers connected to said rack bar to be operated thereby, a lever fulcrumed on said standard, a pawl pivoted to said lever and engaged with said rack bar for elevating the same, said pawl being provided with an outwardly projecting strike lug, and a pivoted catch pawl normally engaging said rack bar to prevent lowering thereof, said catch pawl being provided with a projection arranged in the path of movement of the strike lug of said first named pawl so as to be engaged thereby to effect swinging of said catch pawl to release said rack bar.

Signed at Seattle, Washington this 18th day of June 1908.

RICHARD FRAD BRAMSTADT.

Witnesses:

HERCHMER JOHNSTON,

ARLITA ADAMS.