P. HOLMBERG.

GRAPPLING TONGS.

APPLICATION FILED MAY 25, 1908.

900,735. Patented Oct. 13, 1908.

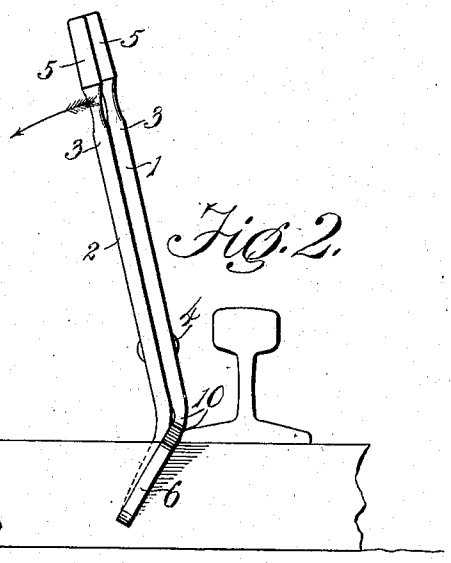

Fig. 2.

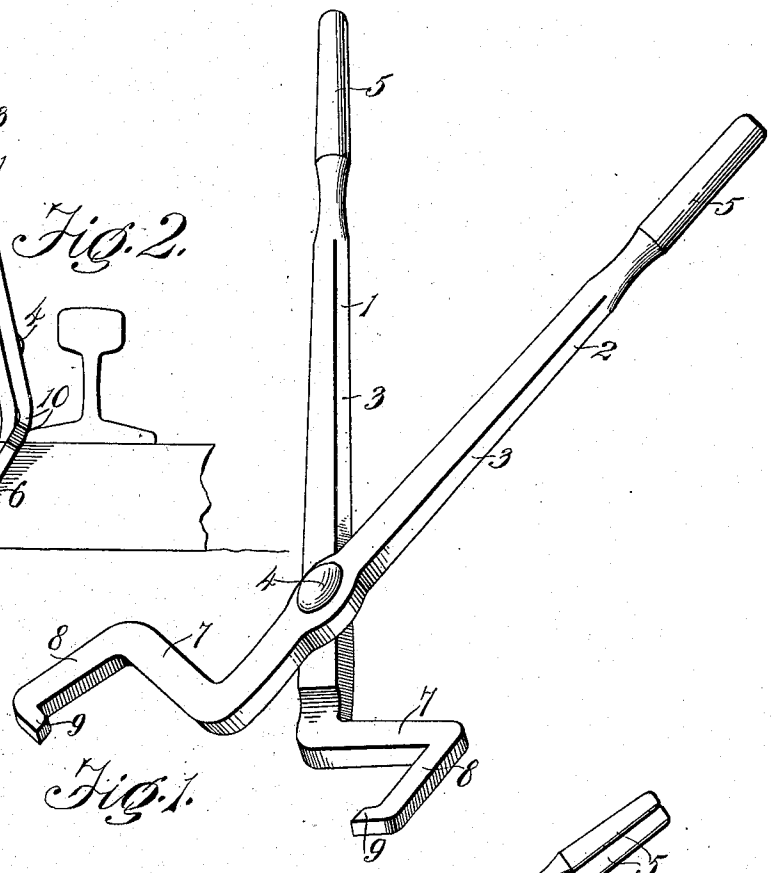

Fig. 1.

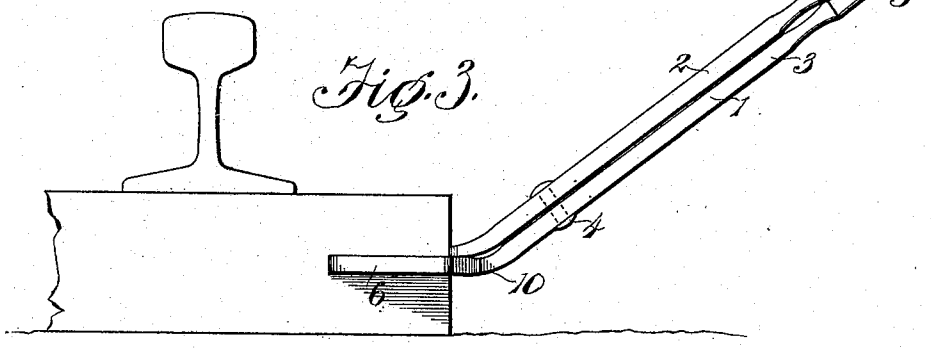

Fig. 3.

Witnesses

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GRAPPLING-TONGS.

No. 900,735. Specification of Letters Patent. Patented Oct. 13, 1908.

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To all whom it may concern:

Be it known that I, PETER HOLMBERG, a citizen of the United States, residing at Parkston, in the county of Hutchinson and State of South Dakota, have invented certain new and useful Improvements in Grappling-Tongs, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in grappling hooks or tongs especially designed for use in replacing cross ties beneath track rails.

The object of the invention is to provide a device of this character by means of which a wooden tie may be quickly and easily slipped into position beneath track rails without injury to the tie, and by means of which the rotten or worn out ties may be quickly drawn out from beneath the rails without materially disturbing the road bed.

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

Figure 1 is a perspective view of my improved tongs; and Figs. 2 and 3 are detail side elevations showing two different ways in which the tongs are used for applying and removing cross ties.

My invention comprises two levers 1, 2 having straight portions 3 which are crossed and pivotally connected by a rivet, bolt, or other pivot pin 4. Said straight portions 3 of the levers are preferably enlarged at their point of pivotal connection and their outer portions taper outwardly and have their extremities shaped to provide cylindrical handles 5. The short inner or lower arms 6 of the straight portions 3 of the levers are bent outwardly in opposite directions or at right angles, as shown at 7, then forwardly at right angles, as shown at 8, so as to provide substantially right angular jaws which oppose each other and have their extremities formed with comparatively blunt inwardly extending projections or prongs 9. By shaping the jaws in this manner, they may be readily engaged with a substantially rectangular wooden cross tie and the prongs or teeth 9 on them will not materially injure the tie.

The portions or arms 6 of the levers 1, 2 between the pivot 4 and the inner portions 7 of the jaws are curved longitudinally so as to throw the jaws in a plane at an angle with respect to the plane of the straight portions 3 of said levers. By constructing said portions 6 of the levers in this manner their curved outer faces 10 may be engaged with the track rail, as shown in Fig. 2, so as to cause the rail to serve as a fulcrum in forcing the tie transversely beneath the same. A further advantage of this curvature or offset of the portions 6 of the levers is that it allows the jaws to be disposed in a substantially horizontal plane while the handles are inclined upwardly so that they can be conveniently grasped and the tool used without the operator stooping when it is engaged with a tie, as shown in Fig. 3.

The invention may be effectively used in applying or removing cross ties beneath track rails in either of the two ways illustrated in Figs. 2 and 3 of the drawings. In Fig. 2 the jaws are shown as extending over the top of the tie with the curved or cam faces 10 of the portions 6 of the levers bearing against the track rail so that when the handle ends of the levers are swung downwardly, as indicated by the arrow in said figure, the jaws will force the tie transversely beneath the rail, as indicated. This angular disposition of the jaws and handles of the levers permits the handles to be disposed in substantially vertical positions so that when they are swung downwardly the oppositely disposed prongs or teeth 9 on the jaws will swing downwardly and laterally in a curved path so that the tie will move easily beneath the rail and may be quickly positioned for spiking. In Fig. 3 of the drawings the jaws of the tongs are shown disposed over one end of the tie with the handles of the levers inclined upwardly at an angle which permits them to be conveniently grasped without the operator stooping or bending over. When the tool is thus engaged with a tie it may be either pulled or pushed longitudinally or in a direction transversely of the rail and it may also be conveniently shifted longitudinally of the rail to properly position it, it being seen that owing to the angular shape of the jaws the tongs will not shift laterally when engaged with the tie, as shown in Fig. 3.

Having thus described my invention what I claim is:

The herein described gripping tongs comprising a pair of levers having straight portions crossed and pivoted intermediate their

ends, said levers having handles at one end and their other ends being curved longitudinally, then bent angularly to provide the outwardly projecting portions 7 and then again at right angles to provide the forwardly projecting portions 8, said portions 7, forming angular jaws disposed in a plane at an angle to the handles of said levers owing to the curvature in the latter, the outer extremities of the portions 8 being formed with the inwardly projecting spurs 9, substantially as and for the purpose set forth.

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

PETER HOLMBERG.

Witnesses:

H. G. REMPFER,

LYDIA TIEDE.