Feb. 13, 1923. 1,444,949.

L. P. CHICOINE ET AL.

RAIL UNLOADING BAR.

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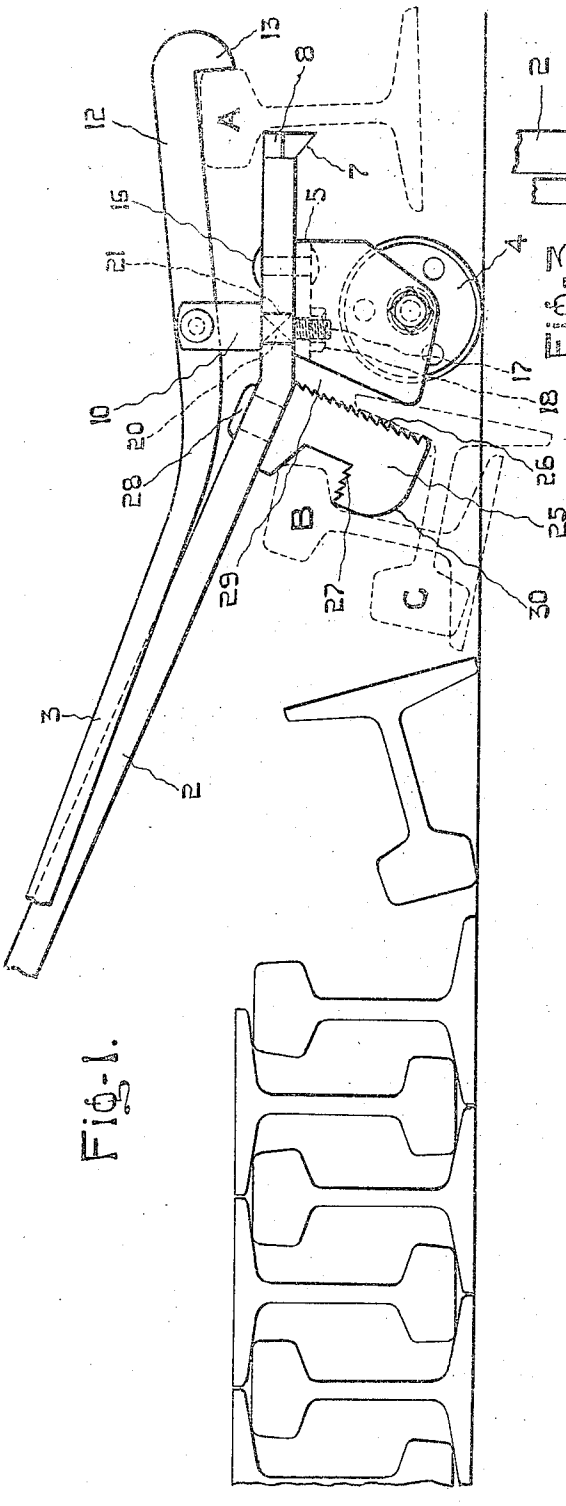


Fig. 1.

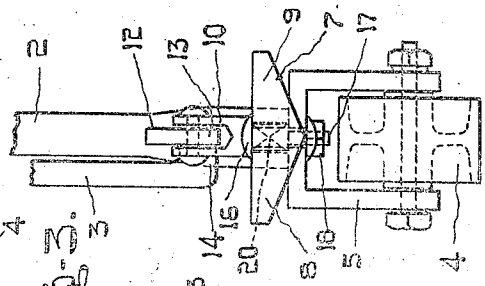


Fig. 3.

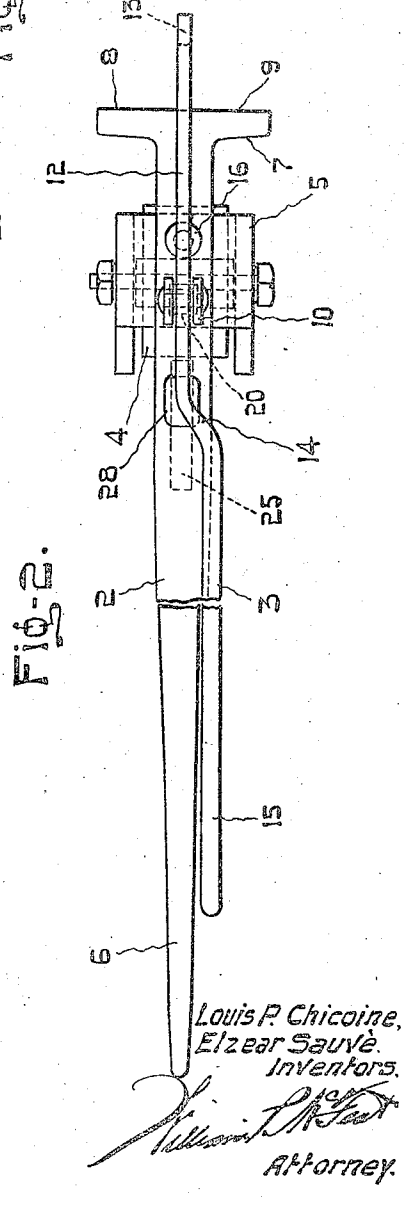


Fig. 2.

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UNITED STATES PATENT OFFICE.

LOUIS P. CHICOINE AND ELZEAR SAUVÈ, OF VAUDREUIL, QUEBEC, CANADA.

RAIL-UNLOADING BAR.

Application filed November 30, 1921. Serial No. 518,909.

To all whom it may concern:

Be it known that we, LOUIS P. CHICOINE and ELZEAR SAUVÈ, of the town of Vaudreuil, in the Province of Quebec, Dominion of Canada, subjects of the King of Great Britain, have invented certain new and useful Improvements in Rail-Unloading Bars; and we do hereby declare that the following is a full, clear, and exact description thereof.

Heretofore in the distribution of track rails, along a road-bed it has been the practice to drop the rails from a flat car one at a time approximately every thirty-three feet which is the length of a standard rail. Owing to the usual manner in which the rails are "bottled in" when loaded upon a flat car ("bottling" being the term applied to the method of inverting the alternate layers of rails when the latter are loaded upon the car), the cumbersome weight of each rail and the lack of portable tools adapted to the manipulation of the rails such unloading has proved laborious, and hazardous work, members of the train crew being frequently injured, and the car was stopped each time a rail was unloaded. In some instances track work of this nature has been facilitated by the employment of cranes but these have the disadvantages that they are costly and are too cumbersome for general use, and in addition also necessitate the stopping of the train each time a rail is unloaded.

The object of the present invention is to overcome these difficulties by providing a handy portable tool the use of which owing to its particular adaptability to the work involved will so expedite the work that the rails may be unloaded at the required intervals while the car is travelling at a moderate speed.

A further object is to provide a tool which is designed for general use in the manipulation of track rails.

For full comprehension, however, of our invention reference must be had to the accompanying drawings in which similar reference characters indicate the same parts and wherein:

Figure 1 is a side elevation of our improved rail manipulator illustrating the different positions in which the rail may be handled by it;

Figure 2 is a plan view thereof; and

Figure 3 is an end elevation.

Describing the illustrated embodiment which we prefer to term a rail unloading bar reference characters 2 and 3 indicate levers constituting a pair of tongs which are supported at their lower end by and adapted to fulcrum upon a roller 4 journalled in a supporting bracket 5 of inverted U-form, the bracket being secured to the underside of the lever 2 and straddling the roller.

The lever 2 is preferably of obtuse angular form in side elevation, its lower portion being disposed substantially horizontally and comparatively short so that the rail may be raised to the position A (Figure 1) with little effort on the part of the operator. Its upper portion is tapered and rounded off to provide a handle 6 while the lower portion is of rectangular cross-section and comparatively heavy and terminates in a jaw 7. The latter is of greater width and depth than the corresponding dimensions of the lever to present large gripping surfaces 8 and 9 forming a sharp angle between them.

The lever 3 is relatively light in weight and fulcrumed adjacent its lower end in a forked bracket 10 secured to the top side of the lever 2.

In order to add to its resisting powers it is flattened as at 12 and positioned edge up and its jaw 13 which is of hook form overhangs the jaw of the other and coacts with the latter in embracing and gripping a rail head. Its upper end is offset as at 14 to clear the other lever and is rounded off to provide a handle 15. For the convenience of the operator this handle is not as long as that of the other lever. The connection between the lever 2 and the supporting bracket 5 consists of a rivet 16 and a bolt 17 with nut 18; the latter also secures the bracket 10 in place being formed integrally with the latter and extending downwardly through openings in the lever and supporting bracket.

To prevent the lever 3 from turning on

the bolt in the event of the nut 18 becoming loose the intermediate portion 20 of the bolt is squared and snugly passes through an opening 21 in the lever 2 which opening is correspondingly squared.

As hereinbefore stated rails when loaded upon a flat car are usually "bottled in" to economize space, the rails of the alternate layers being inverted and positioned with their bases overlapping the heads of the lower layer as indicated at B in Figure 1. This arrangement renders difficult the selection of the individual rails when unloading and we have therefore provided the unloading bar with means particularly adapted to this purpose. This consists of a plate like member 25 of hook-form having serrated edges 26 and 27 and secured as at 28 to the underside of the lever 2 immediately in rear of the fulcrum roller 4.

That this device overcomes the difficulties presented by the "bottled in" arrangement is clearly illustrated in Figure 1. If, for instance, the outside rail is in an upright position it is easily lifted by the hook to a position in which it can be acted upon by the tongs. The second rail being inverted will, of course, topple over on its side (position C) as soon as the first rail is removed in which case the edge of its base is straddled by the member 25 and the bracket 5, the space 29 therebetween being just sufficient to receive the base, and the rail is then easily canted to upright position. The member 25 is rounded off as at 30 to give the rail sufficient clearance as it is canted to upright position.

What we claim is as follows:

1. A tool of the type described and consisting of a pair of tongs and a roller secured thereto and constituting a fulcrum therefor, one of said tongs being substantially of T-form, the other tongs being relatively narrow and hooked towards the first mentioned tong.

2. A tool of the type described consisting of a pair of tongs and a roller secured thereto and constituting a fulcrum therefor, each tong comprising a unitary member having a horizontally disposed gripping portion and an upwardly inclined handle portion, the gripping portion of one tong being of T-form and the gripping portion of the other tong being of uniform width and comparatively narrow and extended beyond the gripping end of the other tong and hooked towards the same.

3. A rail unloading device consisting of a pair of tongs and a roller secured thereto and constituting a fulcrum therefor said device having a pair of spaced members on its underside adapted to receive the base flange of a rail between for the purpose of canting the latter.

4. A rail unloading bar consisting of a pair of levers having jaws adapted to cooperate in gripping a rail, one lever being fulcrumed upon the other lever, a bracket secured to the last-mentioned lever adjacent the lower end thereof, and a roller journalled in said bracket and adapted to support the levers and constitute a fulcrum therefor when moving a rail.

5. A rail unloading bar consisting of a pair of levers, a pair of brackets secured to top and bottom sides of one lever adjacent the lower end thereof, the upper bracket pivotally supporting the other lever and a roller journalled in the lower bracket and adapted to support the levers and constitute a fulcrum therefor.

6. A rail unloading bar consisting of a pair of levers, a pair of brackets secured to top and bottom sides of one lever adjacent the lower end thereof, the upper bracket pivotally supporting the other lever, common means securing the brackets to the said lever and a roller journalled in the lower bracket and adapted to support the levers and constitute a fulcrum therefor.

7. A rail unloading bar consisting of a pair of levers, a bracket secured to one lever and pivotally carrying the other, means detachably securing the bracket to said lever and adapted to prevent a turning movement of the former upon the latter consisting of a bolt formed integrally with the bracket and having a squared portion extending snugly through a squared opening in the lever and a nut screwed upon said bolt, and a roller secured to and adapted to support said levers and constitute a fulcrum therefor.

8. A rail unloading bar consisting of a pair of levers having jaws adapted to cooperate in gripping a rail, a roller secured to said levers and constituting a fulcrum therefor, and a member of hook form carried by one of said levers and adapted to act upon the rail independently of the jaws.

9. A rail unloading bar consisting of a lever a bracket secured to the lever adjacent its lower end, a roller journalled in said lever and adapted to support the same and constitute a fulcrum therefor and a device secured to the lever adjacent the bracket and adapted to co-act with the latter when canting a rail.

10. A rail unloading bar consisting of a lever a bracket secured to the lever adjacent its lower end, a roller journalled in said lever and adapted to support the same and constitute a fulcrum therefor and a device of hook-form secured to the lever in rear of the roller.

11. A rail unloading bar consisting of a pair of levers having jaws adapted to cooperate in gripping a rail, one lever being fulcrumed upon the other lever, a bracket secured to the last mentioned lever adjacent the lower end thereof, and a roller jour-

nalled in said bracket and adapted to support the levers and constitute a fulcrum therefor when moving a rail and a device secured to the lever adjacent the bracket and adapted to co-act with the latter when canting a rail.

In testimony whereof we have signed our names to this specification in the presence of two witnesses.

LOUIS P. CHICOINE.
ELZEAR SAUVÈ.

Witnesses:
B. W. TANNAU,
VIDOR VALAIS.