Dec. 15, 1931. C. McMANUS 1,836,082

TIE REMOVER

Filed Oct. 7, 1929

Fig. 1.

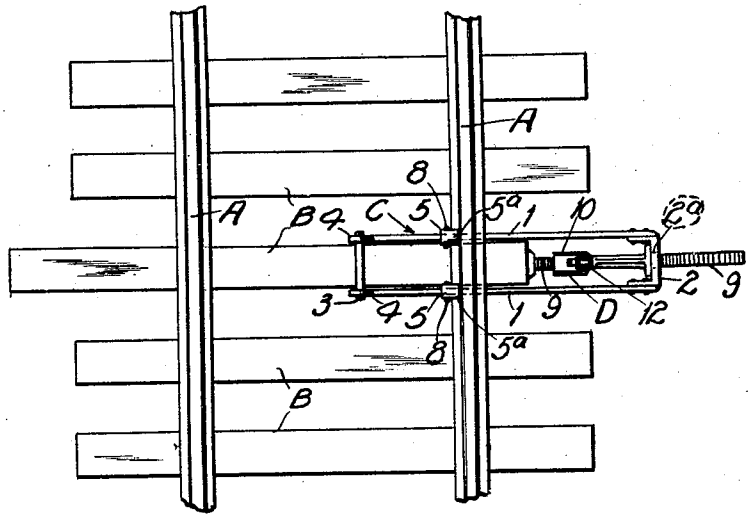


Fig. 2.

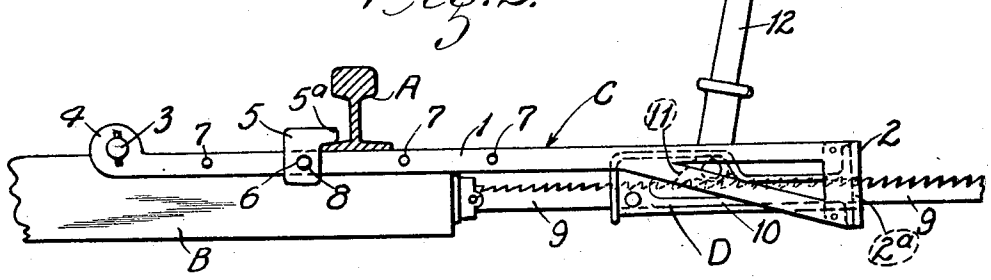
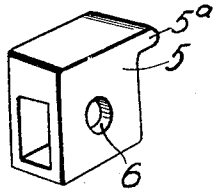


Fig. 3.



INVENTOR:
Charles McManus
by Cornell Cornell Crowley
HIS ATTORNEYS

Patented Dec. 15, 1931 1,836,082

UNITED STATES PATENT OFFICE

CHARLES McMANUS, OF BELLEVILLE, ILLINOIS, ASSIGNOR OF ONE-THIRD TO CLAUDE C. SCHROTT, OF ST. LOUIS, MISSOURI, AND ONE-THIRD TO JOHN H. WEARE, OF LITTLE ROCK, ARKANSAS

TIE REMOVER

Application filed October 7, 1929. Serial No. 397,855.

This invention relates to devices for removing ties from railway tracks. It has for its principal object to produce a simple, inexpensive and lightweight tie remover which can be quickly and easily attached to the track to force the tie from beneath the rails thereof. Other objects are ease of operation, reduced cost of manufacture and compactness of design. The invention consists in the tie remover and in the construction, combinations and arrangements of parts hereinafter described and claimed. In the accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a plan view showing a tie remover embodying my invention in operative position on a section of railway track,

Fig. 2 is a side elevation of the tie remover and the tie engaged thereby, the adjacent rail being shown in vertical cross-section; and

Fig. 3 is a perspective view of one of the slidably mounted rail engaging members of the tie remover.

Referring to the accompanying drawings, my invention is shown in connection with a section of a railway track comprising parallel rails A connected by cross-ties B. The present tie removing device comprises a frame C having parallel side frame members 1 that are deepest at the outer end of said frame where they are permanently connected by a crosspiece 2 whose depth corresponds substantially to the depth of a railway tie. The side members of the frame C are connected at the inner end of said frame by a removable cross bar or pin 3 adapted to fit within alined holes provided therefor in upstanding bosses or ears 4 formed on said side frame members at the inner end of said frame.

Slidably mounted on each of the side members 1 of the frame C is a rail engaging member or block 5 provided at one of its upper corners with an outstanding lug 5*a* which extends longitudinally of said side members towards the outer end of said frame. As shown in the drawings, each slide block 5 is provided with a horizontal hole 6 which extends transversely therethrough from side to side thereof that is adapted to be brought into register with any one of a series of horizontal holes 7 that extend through the side member 1 from side to side thereof and are spaced apart longitudinally thereof. When the hole 6 in a slide block 5 is brought into register with any one of the holes 7 in the side member on which it is mounted, said block may be locked to said side member by means of a lock pin 8. The remaining element of the tie remover comprises a tie forcing or pushing member D adapted to be interposed between the end member 2 of the frame C and one end of the tie B. Said member D preferably comprises an ordinary lifting jack having a longitudinally slidable rack bar 9 mounted in a main supporting frame or housing 10 and actuated by a pawl or rack segment 11 mounted in said frame and operated by the usual hand lever 12. As shown in the drawings, the end member 2 of the frame is provided with an opening 2*a* through which the outer end of the rack bar 9 may extend.

When it is desired to remove one of the ties B from beneath the rails A of the railway track, the members that secure the rails to said tie are first removed and the frame C of the tie remover is then slid beneath one of said rails with the side members 1 of said frame positioned on opposite sides of the adjacent end portion of said tie. The inner ends of the side members 1 of the frame C are then connected together above the tie by means of the cross-pin 3 which rests on the top surface of said tie. The slide blocks 5 are then positioned on the side members 1 of the frame with the holes 6 thereof in register with the holes 7 nearest the inner end of said frame, after which said slide blocks are locked to the side rails by engaging the lock pins 8 with the registering holes 6 and 7. The frame is then pulled outwardly until the lugs 5*a* of the slide blocks 5 engage the inner side edge of the base flange of the adjacent rail A, and the jack D is then positioned in the frame C between the end of the tie and the cross-member 2 at the outer end of said frame. With parts thus positioned, the jack is operated by means

of the handle 12 to impart a step by step movement of the rack bar 9 relative to the cross-member 2 of the frame and in the direction of the tie and thus force the same crosswise of the track. When the rack bar has reached the limit of its travel, the frame is then moved inwardly and slide blocks adjusted thereon and locked thereto by engaging the pins 8 with the proper holes 7 in said frame, and the jack D is then again operated to force the tie endwise. In practice, it is desirable to make the rack bar 9 of a length which will require but two adjustments of the slide blocks. When, however, jacks with short rack bars are employed, several adjustments of the slide blocks will be necessary to push the tie clear of the rails.

What I claim is:

1. A tie remover comprising a frame having spaced side members connected at the ends of said frame by cross-members, rail engaging means mounted on said side members, and a pushing element separate from said frame and adapted to bear against the cross-member at one end of the frame for exerting an endwise pressure on the tie that is to be removed.

2. A tie remover comprising a frame having spaced side members connected at the ends of said frame by cross-members, means permitting one of said cross-members to be removed from said frame, rail engaging members mounted on said side members, and a separate lifting jack adapted to bear against the other cross-member of said frame and the tie that is to be removed.

3. A tie remover comprising a frame having spaced side members connected at the ends of said frame by cross-members, means permitting one of said cross-members to be removed from said frame, rail engaging members mounted on said side members for adjustment longitudinally thereof, means for locking said rail engaging members to said side members in the desired position of adjustment, and removable tie forcing means adapted to bear against the other cross-member of said frame and the tie that is to be removed.

4. A device for removing ties from railway tracks, said device comprising a frame having spaced side members connected at the ends of said frame by cross-members, means permitting one of said cross-members to be removed from said frame, whereby said frame is adapted to be assembled beneath one of the rails of the track with its side members disposed on opposite sides of the tie that is to be removed and with said removable cross-member resting on said tie and with the other cross-member disposed opposite the adjacent end of said tie, means mounted on said side members adapted to engage the inner side of said rail, and means adapted to be positioned within said frame in engagement with said last mentioned cross-member and said tie for exerting endwise pressure on the latter.

5. A device for removing ties from railway tracks, said device comprising a frame having spaced side members connected at the ends of said frame by cross-members, means permitting one of said cross-members to be removed from said frame, whereby said frame is adapted to be assembled beneath one of the rails of the track with its side members disposed on opposite sides of the tie that is to be removed, rail engaging members mounted on said side members and adapted to engage the inner edge of said rail, means permitting adjustment of said rail engaging members longitudinally of said side members, means for locking said rail engaging members to said side members in the desired position of adjustment, and a pushing implement adapted to engage the other cross-member of said frame to operate against the adjacent end of said tie.

Signed at St. Louis, Missouri, this 3 day of October 1929.

CHARLES McMANUS.