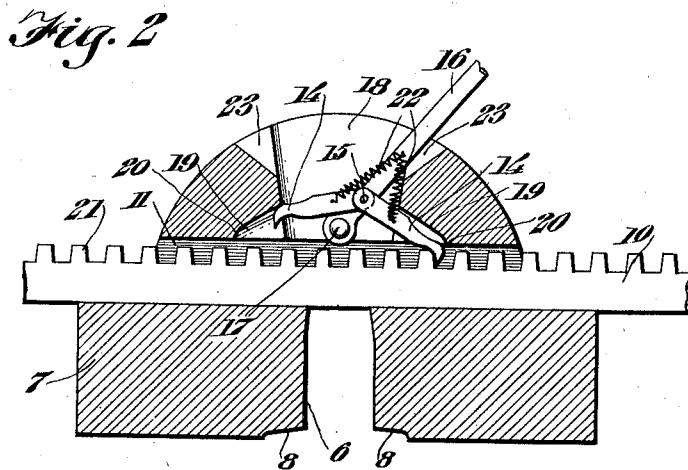
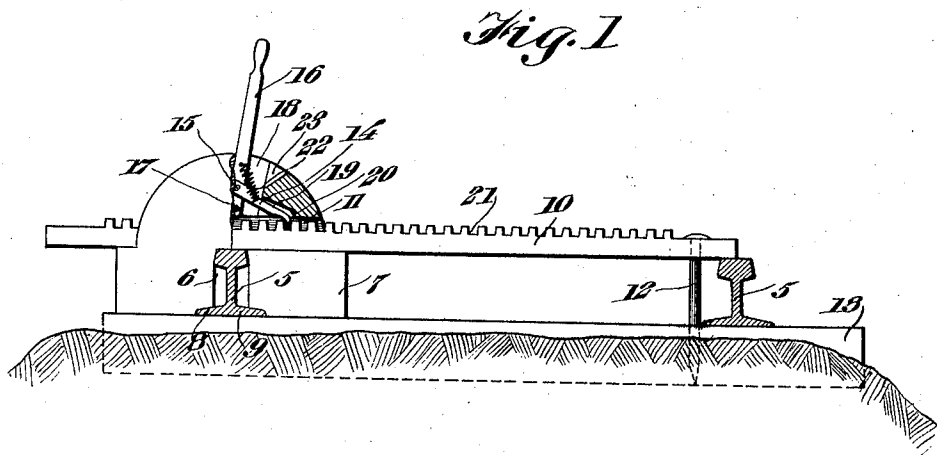


J. C. BURNS.
TIE REMOVER.
APPLICATION FILED MAY 17, 1911.

1,003,399.

Patented Sept. 12, 1911.



Witnesses

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JERRY C. BURNS, OF MUSKOGEE, OKLAHOMA.

TIE-REMOVER.

1,003,399.

Specification of Letters Patent. Patented Sept. 12, 1911.

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To all whom it may concern:

Be it known that I, JERRY C. BURNS, citizen of the United States, residing at Muskogee, in the county of Muskogee and State of Oklahoma, have invented new and useful Improvements in Tie-Removers, of which the following is a specification.

The object of the invention is to remove cross ties from the roadbeds of railways with a minimum of effort on the part of the operator.

The above and other objects will appear and be better understood from the following description taken in connection with the accompanying drawings in which:

Figure 1 is a transverse vertical section of a roadbed showing my improved device partly in section and applied to a cross tie and rail; Fig. 2 is a detail vertical sectional view of the device.

In the embodiment illustrated in the drawing one of the rails 5 is received by a seat 6 formed in the support 7 the latter having portions 8 to bear on the base flange 9 of the rail.

The member 10 for removing or inserting a tie is arranged to slide in a guideway 11 in the support 7 and at its opposite ends are provided with suitable tie engaging means such as pins 12 which are herein shown as adapted to be driven into the opposite end portions of the cross tie 13. The member 10 is moved endwise in either direction by means of pawls 14 suitably connected as by a pivot 15 to an operating handle 16, the operating handle being in turn connected in any suitable manner such as by a pivot pin 17 to the support 7. The support 7 is herein shown as provided in one face with a recess 18 shaped so as to permit movement of the operating handle 16. The recess 18 is shown as communicating with the guideway 11 and suitable cam slots 19 are formed in the sides of the recess and communicate with the said guide way 11. The free ends of the pawls 14 extend into the cam slots 19 and the curved sides 20 of the cam slots are adapted to direct the pawls into engagement with the rack teeth 21 on the member 10 when the operating handle is oscillated. The free end portions of the pawls are yieldingly held bearing on the grooved sides 20 in any suitable manner such as by contractile springs 22 connected to the pawls and operating handle as shown.

When it is desired to remove or replace a

cross tie the support is first positioned on the rail 5 as shown, after which the fastening devices are connected to the cross tie. The operating handle is then positioned medially of the recess 18 and moved to one side of the recess 18. Referring to Fig. 1 it will be seen that slot extensions 23 are provided at the opposite sides of the recess 18 to permit of extended lateral movement of the operating handle with respect to the recess. When the operating handle moves in the direction before described, the curved side 20 of one of the slots directs the free end of one of the pawls into engagement with one of the teeth 21 so that as the movement of the operating handle continues the member 10 will be moved endwise carrying with it the cross tie. When the operating handle reaches the limit of its movement in one direction it is then moved in the opposite direction to the first-named position. It will be seen that during the return movement of the operating handle the opposite pawl will not engage with the teeth 21 unless the operating handle be moved beyond the middle of the recess 18.

With this construction it will be seen that a cross tie may be readily removed or replaced from either side of the roadbed by properly adjusting the support and operating the lever in the required direction as before described.

Although I have shown and described one form of my device it is to be understood that I am not to be limited to the structure shown and described, since various changes may be made within the scope of the claims without departing from the spirit of the invention.

What is claimed as new is:

1. A tie remover comprising a rail engaging member, a tie engaging member, and means carried by the rail engaging member for moving the tie engaging member in either direction.

2. A tie remover comprising a rail engaging member, a tie engaging member, and means carried by the rail engaging member for moving the tie engaging member step by step in either direction.

3. A tie remover comprising a rail engaging member, a tie engaging member, and means cooperating with the rail engaging member and directed thereby into engagement with the tie engaging member for moving the latter for the purpose described.

4. A tie remover comprising a rail engaging member, a tie engaging member, and means cooperating with the rail engaging member and directed thereby into engagement with the tie engaging member for moving the latter in either direction for the purpose described.

5. In a tie remover comprising a rail engaging member, a tie engaging member, 10 movable spring pressed means cooperating

with the rail engaging member and directed thereby into engagement with the tie engaging member.

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

JERRY C. BURNS.

Witnesses:

MICHAEL MIESCH,
ARNOLD VOEGELI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
