J. T. MOORE.

TIE HOLDING DEVICE.

APPLICATION FILED OCT. 6, 1910.

978,618. Patented Dec. 13, 1910.

Fig. 1.

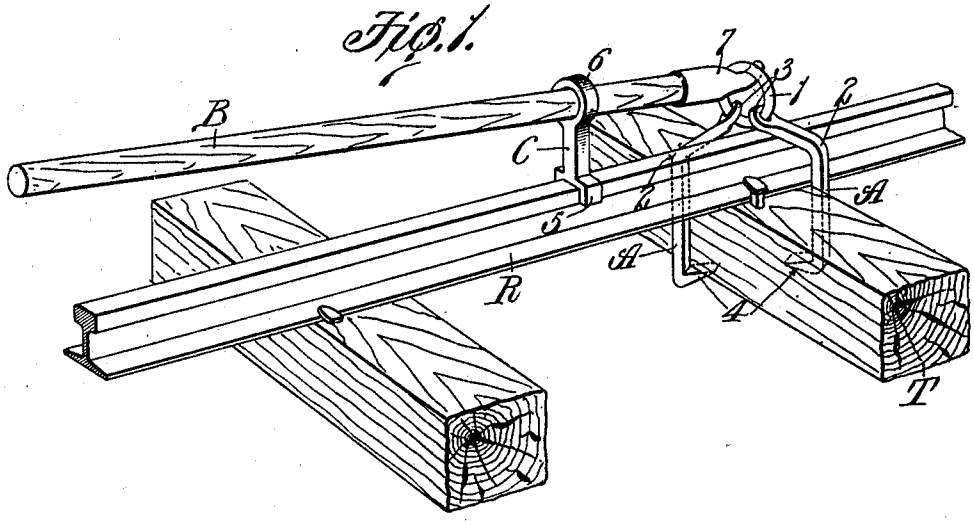


Fig. 2.

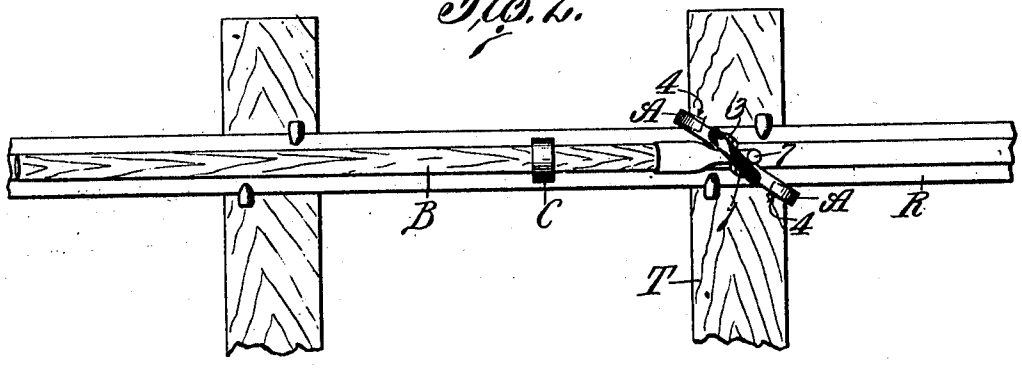
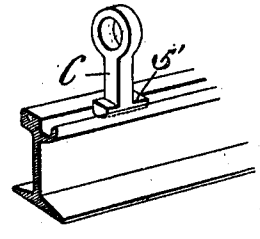


Fig. 3.



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JOHN T. MOORE, OF ST. LOUIS, MISSOURI.

TIE-HOLDING DEVICE.

978,618. Specification of Letters Patent. **Patented Dec. 13, 1910.**

Application filed October 6, 1910. Serial No. 585,664.

To all whom it may concern:

Be it known that I, JOHN T. MOORE, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Tie-Holding Devices, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices that are used for holding a railroad tie against the base flange of a track rail during the operation of spiking the rail to the tie.

The main object of my invention is to provide a practicable and efficient device of the character described that provides for inequalities in railroad ties and which is so designed that one workman can hold a tie tightly against the base flange of a rail while the rail is being spiked to the tie.

Another object is to provide a tie-holding device of novel construction that can be used with different-sized rails and shifted easily from one tie to another.

Another object is to provide a tie-holding device which can also be used for springing the rail upwardly from a tie and thus enable the tie to be driven endwise from under the rail without removing the ballast of the track. And still another object is to provide a tie-holding device that can also be used as a rail tongs for carrying a rail.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 is a perspective view illustrating my improved tie-holding device arranged in operative position; Fig. 2 is a top plan view of said device; and Fig. 3 is a perspective view of a fulcrum member adapted to be used with grooved rails.

Referring to the drawings which illustrate the preferred form of my invention, A designates a pair of hook-shaped tie-engaging members which are pivotally connected at their upper ends to a ring 1. B designates a lever that is adapted to be inserted in said ring so as to exert upward pressure on the members A, and C designates the fulcrum member for said lever which is adapted to be placed upon the head of a track rail R. Each of the hook-shaped members A consists of a heavy iron shank bent laterally at 2, as shown in Fig. 1, and provided at its upper and lower ends, respectively, with an eye 3 through which the ring 1 passes and a hook or prong 4 that is adapted to engage the under side of a track tie T. Said tie-engaging members are so proportioned that when they are arranged astride of a tie, one member A lying on one side of the rail, and the other member A lying on the other side of the rail, as shown in Figs. 1 and 2, the ring 1 will be located directly above the rail and thus insure a direct and even upward pull on said members when the outer end of the lever B is depressed. The fulcrum member C consists of an iron standard provided at its lower end with an approximately yoke-shaped portion 5 which straddles the head of the rail, and at its upper end with an integral ring-shaped portion 6 through which the lever B passes, and said lever is provided with a hook or goose-neck 7 which receives the ring 1 and thus prevents said ring from slipping off the lever when the device is in use.

To use the device for holding a tie tightly against the under side of the base flange of a rail during the operation of spiking the rail to the tie, the operator first arranges the various elements of the device in the manner shown in Fig. 1, the members A straddling the rail and tie and engaging the under side of the tie, the fulcrum member C resting on the head of the rail a foot or so away from the tie, and the lever B extending longitudinally of the rail through the ring-shaped portion of said fulcrum member and engaging the ring 1 which connects the upper ends of the members A together. The operator then depresses the outer end of the lever, preferably by sitting on said lever, and he remains in this position while the spikes on each side of the rail are being driven into the tie.

As the workman who operates the device is located at the upper end of the lever B he is in no danger of being struck by the hammers used to drive the spikes into the tie, and as the fulcrum member C enables him to obtain a great leverage on the members A he can hold the tie so firmly against the under side of the rail that there is no possibility of the tie slipping.

The device is particularly well-adapted for use in tunnels, on bridges, and in places where the space at the sides of the track is limited, and as the workman who operates the device is located above the rail he is not in danger of being struck by passing trains on a parallel track.

The device provides for inequalities in

railroad ties and can be used with different-sized rails owing to the fact that the fulcrum member C can be shifted toward and away from the tie and as the device comprises only a few heavy metal members it forms a practicable and efficient device for holding a tie while the rail is being spiked thereto. The hooks or prongs 4 on the members A project only a short distance under the tie so that said members can be removed quickly and easily without disturbing the bed of the track, and as said members lie on opposite sides of the rail and tie they are not apt to be struck by the hammers of the workmen who drive the spikes.

A tie-holding device of this construction permits the ties to be lined up accurately owing to the fact that the members A merely project under or support the tie so that it can be driven endwise, and as none of the elements of the device are permanently attached to the rail or tie the device can be shifted quickly from one tie to another, the workmen who drive the spikes unhooking the members A from the tie and dragging the device to the next tie with the aid of the operator of the device who slides the fulcrum member C longitudinally of the rail.

A device of the construction above described can also be used for springing the rail upwardly from a tie so as to permit the tie to be driven endwise from under the rail. When used for this purpose the prongs of the members A are arranged in engagement with the rail and the fulcrum member C is adjusted into such a position that the operator can exert sufficient upward pressure on the members A to spring the rail upwardly away from the tie.

Still another desirable feature of my device is that it can be used for carrying a rail for the pivotally mounted members A and ring 1 form a pair of tongs with which the rail can be grasped, the lever B being pushed through the ring 1 and used as a cross-piece or handle.

The device shown in Fig. 1 is adapted to be used on T-rails but by substituting a fulcrum member of the kind shown in Fig. 3 the device can be used on grooved rails, the fulcrum member shown in Fig. 3 being provided with a foot-piece 5′ that fits in the groove of the rail.

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

1. A tie-holding device comprising tie-engaging members which are adapted to be arranged astride of a tie and rail, a fulcrum member separate and distinct from the tie-engaging members and adapted to rest upon the head of the rail, and a lever adapted to be arranged in engagement with said fulcrum member and tie-engaging members for exerting upward pressure on said tie-engaging members.

2. A tie-holding device comprising a pair of approximately hook-shaped members that are adapted to be arranged astride of the tie and rail, means for pivotally connecting the upper ends of said members together, a lever for exerting upward pressure on said members, and a vertically disposed fulcrum member adapted to be arranged on the head of the rail to form a bearing for said lever.

3. A tie-holding device comprising a fulcrum member that is adapted to be mounted upon the head of a rail, means for preventing said member from moving laterally relatively to the rail, a lever bearing upon said member, and a pair of pivotally connected tie-engaging members supported by one end of said lever and adapted to be arranged astride a rail and tie.

4. A tie-holding device comprising a pair of members provided with prongs or hooks that engage the under side of a tie, a device for pivotally connecting the upper ends of said members together, a lever which projects into said device, and a fulcrum member for said lever resting upon the rail being operated on and provided with means for preventing it from moving laterally relatively to the rail.

5. A tie-holding device comprising a pair of approximately hook-shaped members that are adapted to engage the under side of a tie, a ring to which the upper ends of said members are pivotally connected, a lever engaging said ring, and a fulcrum member resting upon the head of the rail and provided with a ring-shaped portion through which said lever passes.

6. A tie-holding device comprising a fulcrum member which consists of a vertically disposed standard provided at its lower end with an integral rail-engaging portion and at its upper end with an approximately ring-shaped portion, a lever passing through said ring-shaped portion and provided at one end with a hook, a ring resting in said hook, and a pair of tie-engaging members pivotally connected to said ring and provided with prongs which engage the under side of the tie.

In testimony whereof I hereunto affix my signature in the presence of two witnesses. this first day of October 1910.

JOHN T. MOORE.

Witnesses:
WELLS L. CHURCH,
GEORGE BAKEWELL.