Sept. 1, 1925. 1,552,220

A. METTRAS

JACK AND LIKE TOOL

Filed Feb. 14, 1924

Fig. 1

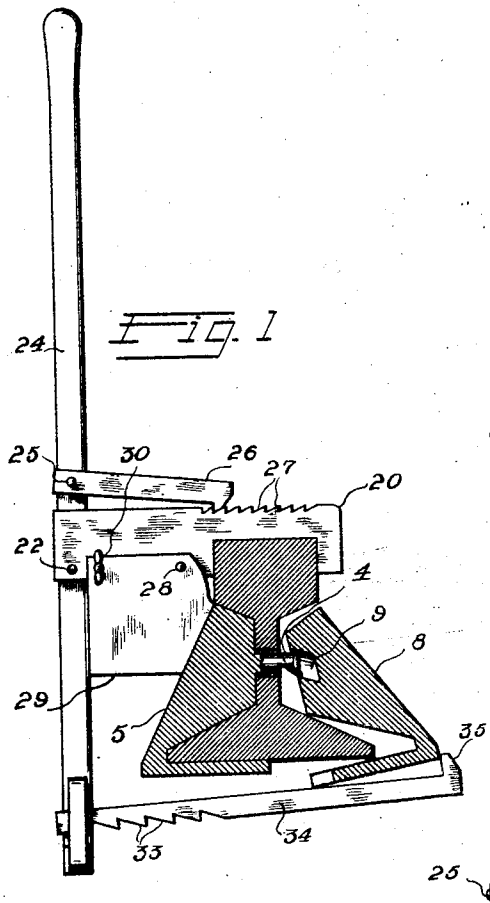


Fig. 2

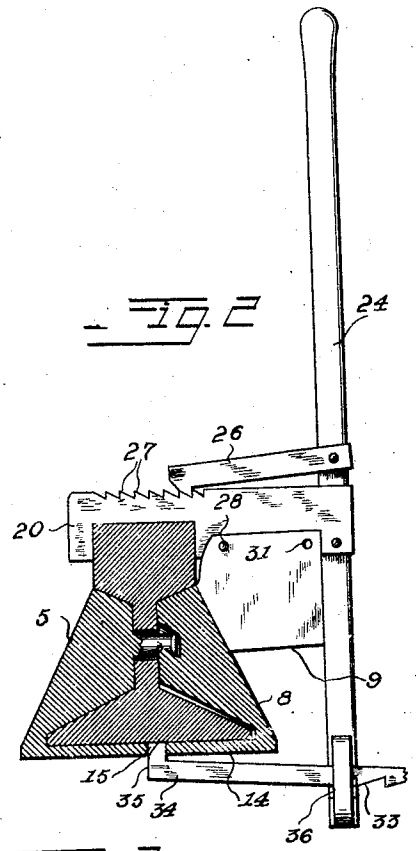


Fig. 3

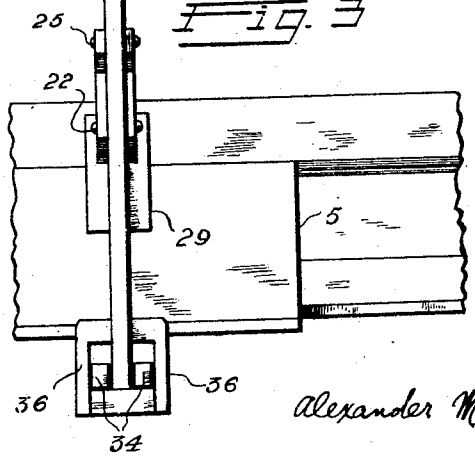
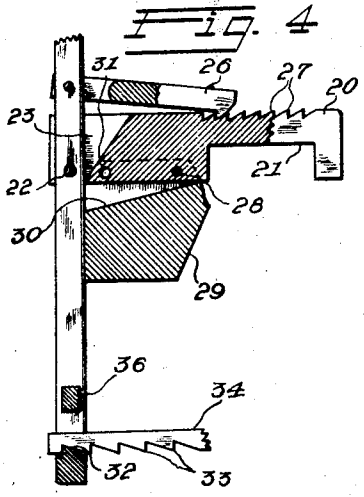


Fig. 4



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UNITED STATES PATENT OFFICE.

ALEXANDER METTRAS, OF DE BEQUE, COLORADO.

JACK AND LIKE TOOL.

Application filed February 14, 1924. Serial No. 692,814.

To all whom it may concern:

Be it known that I, ALEXANDER METTRAS, a citizen of the United States, residing at De Beque, in the county of Mesa, State of Colorado, have invented certain new and useful Improvements in Jacks and like Tools, of which the following is a specification.

The present invention relates to a special form of jack or like tool.

More particularly the invention relates to a new and improved tool especially adapted for use in connecting and disconnecting rail joints or connectors of the type disclosed in U. S. Patent Number 1,499,836, issued July 1, 1924.

The objects of the invention are to provide a new and improved tool and mechanism of the character described, and such other objects as may be attained by use of the device and principles thereof as set forth in the following disclosure of a preferred embodiment of the invention, of which:

Fig. 1 is a view showing the jack applied to use in assembling the rail joint as disclosed in the copending case.

Fig. 2 is a view showing the jack as applied for disconnection of the said joint.

Fig. 3 is an end elevation, and

Fig. 4 is a fragmental view partially in section showing the details of construction.

As fully described in the copending case, the rail joint is made up of rail sections with abutting ends held in position by connectors 5 and 8. The connectors are forced from the position shown in Fig. 1 to the position shown in Fig. 2 with lugs 4 and depressions 9 interlocking, when assembling, and are forced from the position shown in Fig. 2 to that shown in Fig. 1 when disconnecting. As applied in the preferred embodiment, the function of the present invention is to provide a convenient tool to perform the assembling and disconnecting operations as set forth.

The tool is made up of an anchoring member 20 having a slot 21 formed therein which is deep enough to seat on and firmly grip the head of the rail. Pivotally mounted on 20 by means of a pin 22 and guided in slot 23 is an arm or handle 24. Pivoted to handle 24 by means of pin 25 is a locking pawl arm 26 arranged to coact with teeth 27 formed on the upper edge of member 20. Pivoted to member 20 by means of a pin 28 is a fulcrum block 29. A slot 30 formed in 29 is arranged to permit free pivotal movement of block 29 about pin 28, and a pin 30, adapted to fit through holes 31 formed for registration in block 29 and member 20, is provided to prevent this pivotal movement of 29. Block 29 is formed to fit against connector 5 as shown in Fig. 1, when the tool is in assembling position, and against connector 8 when in disconnecting position.

At the lower end of handle 24, lugs 32 are formed in a manner to co-act with teeth 33 formed on hook members 34. At the other end of members 34, projections or lugs 35 are formed. Guide members 36 are provided for maintaining members 34 in proper relation during the use of the tool.

To assemble the joint, the tool is applied, as shown in Fig. 1, with block 29 resting against connector 5 and with pin 30 in place to prevent pivotal movement of 29. Members 34 are placed with teeth 33 hooked over lugs 32, connector 8 is positioned at an angle as shown in Fig. 1 so that lugs 4 will start into depressions 9 and projections 35 are hooked over the edge of connector 8, as shown. A pull is then applied on handle 24 to move it about pin 22 to force connector 8 into the position shown in Fig. 2. As the lower end of 24 moves to the left in Fig. 1, pawl 26 will move to the right, and will serve as a lock to assist a single operator in handling the joint. If difficulty is experienced in forcing the parts together the pawl will lock the parts in stressed position and this will permit the operator to release his hold on handle 24 while he taps on connector 8 to force it into assembled position. After assembly, a supporting tie is preferably placed beneath the joint.

To disconnect a joint, the tie underneath is removed and the tool is then applied as shown in Fig. 2 with pin 30 removed and with lugs 35 inserted in slots 15 of connector 8. By applying a pull to arm 24, connector 8 will bear against block 29 and the connector and block will tend to move about pin 28 as a fulcrum into the position shown in Fig. 1. If difficulty is experienced in the removal, pawl 26 can be utilized to lock the parts in stressed position and hammer blows or prying may be resorted to by the operator to complete the disconnection.

Having described a preferred embodiment and application of the invention, what is desired to be secured by Letters Patent and claimed as new is:

1. A tool comprising an anchoring member; a handle pivoted to said anchoring member; a detachable hook member adapted to be engaged and stressed by said handle; and a locking pawl pivoted to said handle and adapted to engage said anchoring member to lock said hook member in stressed position.

2. A tool for rail joints embodying a pair of connectors comprising an anchoring member adapted to fit over the rail head; a handle pivoted to said anchoring member; a fulcrum block pivoted to said anchoring member and adapted to bear against one of the connectors; a locking pawl pivoted to said handle and adapted to engage said anchoring member; and a hook member engaged by said handle and adapted to engage the other one of the connectors.

3. The combination as set forth in claim 1 together with means for preventing pivotal motion of said fulcrum block during assembling operation of the tool, and for permitting pivotal movement of said block during disconnecting operation thereof.

4. The combination as set forth in claim 1 together with means for adjusting the operating length of said hook member to accommodate different operations of said tool.

5. The combination as set forth in claim 1 in which said hook member has a plurality of teeth formed therein together with a lug on said handle arranged to engage said teeth.

In testimony whereof, I affix my signature.

ALEXANDER METTRAS.