J. W. BURGESS.

LIFTING JACK.

APPLICATION FILED APR. 30, 1917.

1,293,026. Patented Feb. 4, 1919.

Fig. 1.

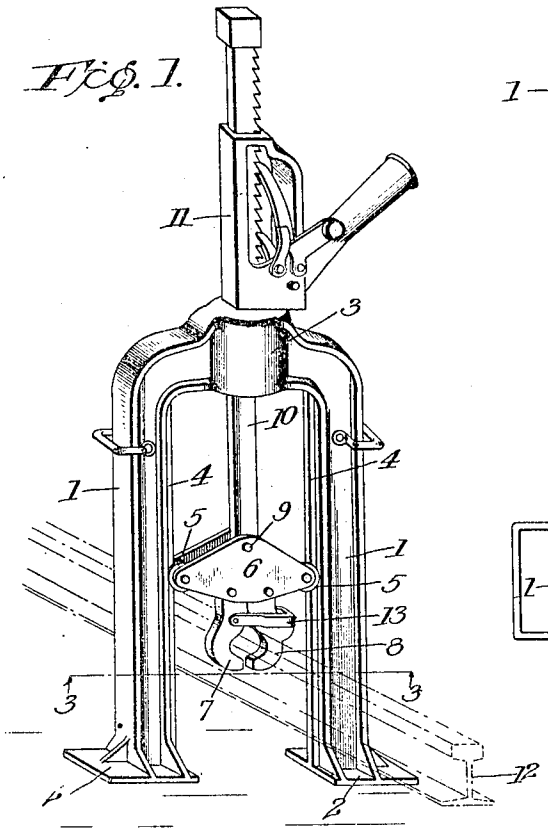
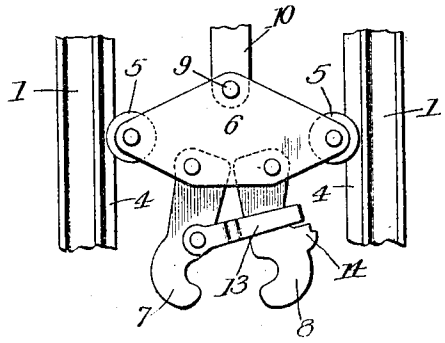


Fig. 2.



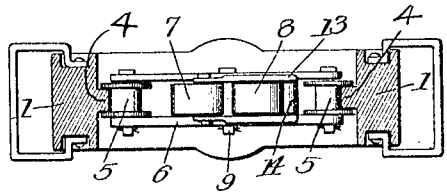


Fig. 3.

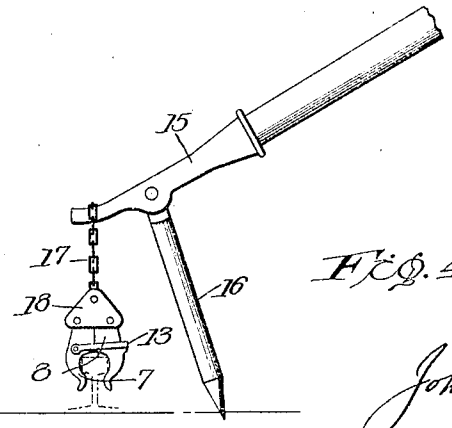


Fig. 4.

Witness

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LIFTING-JACK.

1,293,026. Specification of Letters Patent. Patented Feb. 4, 1919.

Application filed April 30, 1917. Serial No. 165,509.

To all whom it may concern:

Be it known that I, JOHN W. BURGESS, a citizen of the United States, residing at Palermo, Butte county, State of California, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification.

The present invention relates to improvements in devices for lifting railroad rails for the purpose of permitting replacement of ties, or leveling roadbed, etc., and has for its object to provide a strong and simple structure which may be more readily and easily manipulated than devices heretofore proposed or employed for the same purpose.

In the accompanying drawing,

Figure 1 is an elevation of an apparatus constructed in accordance with the present invention showing the parts engaging with a rail and partly elevated;

Fig. 2 is a view in elevation on an enlarged scale of the rail engaging jaws and support therefor, the jaws being shown in open or disengaged relation;

Fig. 3 is a view on the line 3—3 of Fig. 1 on the same scale as Fig. 2 and

Fig. 4 illustrates a slightly modified form of the invention.

Referring to the drawings, the apparatus as shown in Figs. 1 to 3 comprises a supporting frame including parallel uprights or legs 1 which are provided with enlarged foot portions 2 and are connected at their upper ends by a suitable top 3. The inner faces of the uprights 1 are provided with guide ribs 4 with which engage rollers 5 on a head piece or body 6, by which the rail engaging jaws 7, 8 are carried.

As shown the head piece or body 6 is formed of two parallel plates between which the rollers 5 are mounted and said plates are pivotally connected as at 9 to the lower end of the draft bar or rod 10 of a lifting jack 11, which is mounted on the top 3 of the supporting frame.

The shanks or stems of the hook-like jaws 7, 8 extend between the plates forming the head or body 6 and are pivotally connected thereto. The inner faces of said jaws are given such form that they are adapted to so engage the head of a railroad rail 12 as to support and lift the same when properly positioned and secured in closed relation. To retain said jaws in such closed relation a latch 13 is provided. This, as shown, is in the form of a loop or yoke which extends about the jaw 8 and is pivotally connected with the jaw 7. When the jaws are in open position, as shown in Fig. 2, the latch lies above a shoulder 14 formed on the outer edge of the jaw 8. When the jaws are brought into engaging relation with the head of a rail, or closed, as shown in Fig. 1, the latch drops over the outer face of said shoulder 14 and secures the parts in operative position. When in this operative position the bail-like latch rests on a second shoulder on the jaw 8. By a slight blow with a hammer or other tool the latch may be shifted from the position shown in Fig. 1 to that in Fig. 2 and as soon as it is lifted from the outer face of the shoulder 14 the weight of the rail 12 will rock the jaws about their pivotal connection with the body 6 into the open position shown in Fig. 2. The fact that the device may be so expeditiously and easily released from a rail is of great importance, especially in work on roads where trains are frequently passing and operating at high speeds. It will be seen from Fig. 2, that the pivotal connections between the jaws and head are relatively near the outer edges of the jaws so when a rail has been dropped the lower ends of the jaws tend to retain their separated position.

The flexible connection between the jaw carrying head and the lifting jack and the fact that the rolls 5 are interposed between said head and the guide rails or surfaces on the uprights 1 renders the device operable in situations where the frame cannot be positioned vertically or mounted on a level surface. In fact, the standards 1 may be positioned several degrees out of exact upright position without interfering with the operation of the device.

In Fig. 4 there is illustrated a slight modification which is adapted for lifting relatively light rails such as employed in street railways. In this form of the invention the lifting device is a lever 15 which is fulcrumed on a post 16 and the short arm of which is connected by a chain 17 with the jaw-carrying head 18. The jaws shown in this embodiment of the invention differ slightly from those illustrated in Figs. 1 and 2, being so shaped that they tend automatically to engage the head of a rail when dropped upon it.

Having thus described the invention,

what is claimed and desired to be secured by Letters Patent is:

1. A railroad rail lifting jack, comprising a suitable support, a lifting means mounted thereon, a head supported from the lifting means, two jaws pivotally connected with and depending from the head, the inner adjacent edges of said jaws being recessed, to receive the head of a rail road rail, and one of the jaws having a shoulder formed on its outer edge, and a latch extending across the outer edge of the last said jaw and pivotally connected to the other jaw, said latch being supported above said shoulder when the jaws are separated.

2. A railroad rail lifting jack comprising a support, a lifting means mounted on the support, a head connected with the lifting means and including two spaced plates, two jaws having their upper ends extending between and pivotally connected to said plates, and a U-shaped latch extending about one of said jaws and having its limbs pivotally connected with the other jaw, said latch being supported in an upwardly inclined position when the jaws are open and adapted to fall into position to retain the jaws in closed relation when they are turned about their pivots from said open position.

In testimony whereof I affix my signature.

JOHN W. BURGESS.

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