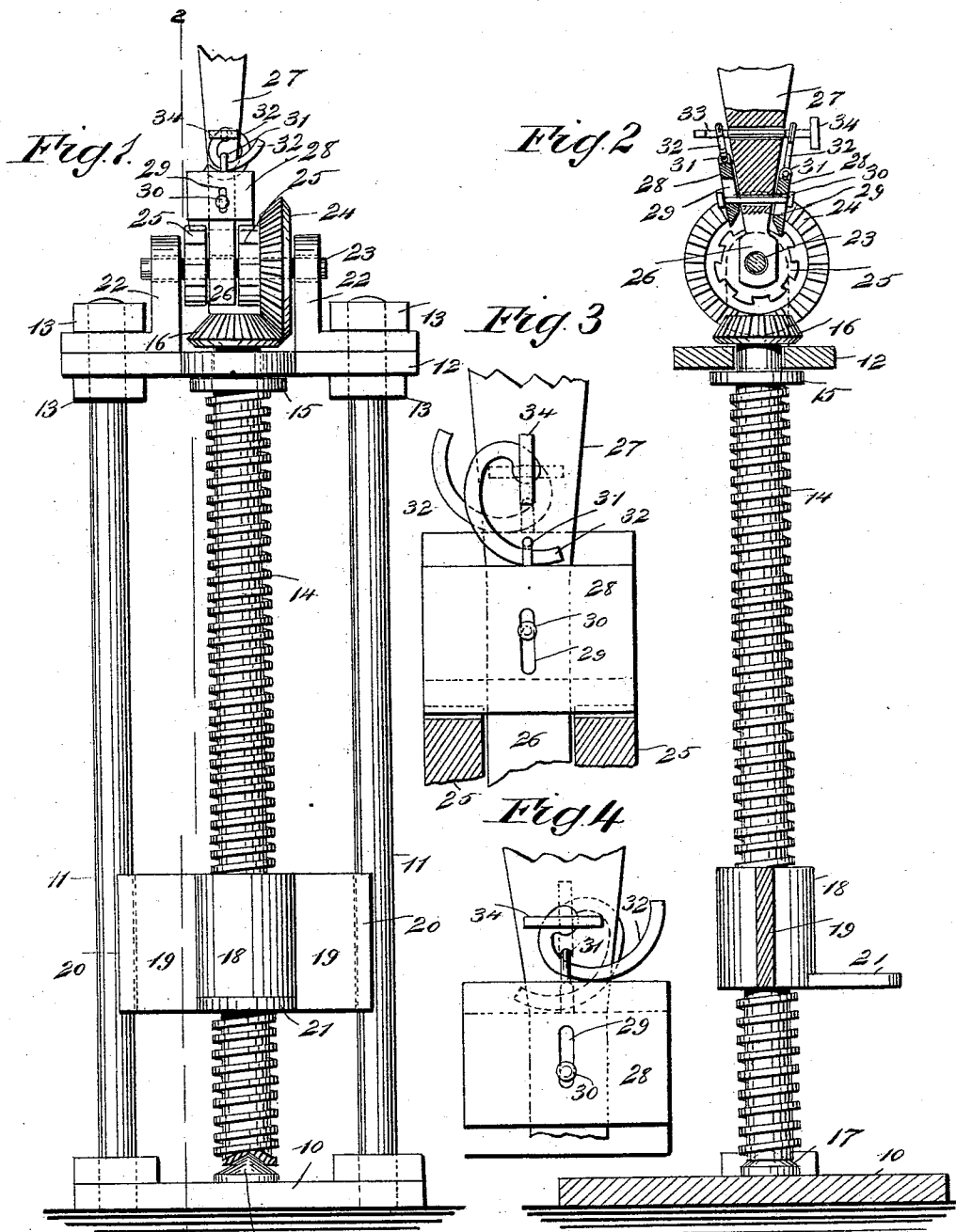


(No Model.)

J. McMURRIN.
TRACK JACK.

No. 529,935.

Patented Nov. 27, 1894.



WITNESSES:
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JOSEPH McMURRIN, OF SHOSHONE, IDAHO.

TRACK-JACK.

SPECIFICATION forming part of Letters Patent No. 529,935, dated November 27, 1894.

Application filed February 8, 1894. Serial No. 499,513. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH McMURRIN, of Shoshone, in the county of Logan and State of Idaho, have invented a new and Improved Track-Jack, of which the following is a full, clear, and exact description.

My invention relates to improvements in track jacks such as are used for lifting railroad rails; and the object of my invention is to produce a very strong and easily operated jack, which is of the greatest simplicity, may be cheaply made, is very durable, and by which a track rail may be quickly and easily arranged.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken front elevation of the track jack embodying my invention. Fig. 2 is a vertical section on the line 2-2 of Fig. 1. Fig. 3 is an enlarged detail sectional view, showing the manner in which the operating pawls are hung and adjusted on the main lever; and Fig. 4 is a detail side elevation, showing the arrangement of the lever and pawls with relation to the ratchet wheels.

The jack has a suitable base 10, on opposite sides of which are mounted vertical posts 11 which support a top plate 12, this being held in place by nuts 13 arranged above and below it, but the plate may be fastened in any other suitable manner. The plate is perforated centrally so as to receive and support the upper end of a screw 14 which is arranged vertically between the posts 11 and which has, near the top, a collar 15 turning just below the plate 12, while on the extreme upper end of the screw and just above the plate 12 is a beveled pinion 16 meshing with a gear mechanism to turn the screw, which mechanism will be hereinafter described.

The screw 14 has its lower end concaved and stepped on a conical bearing 17 to enable it to turn easily. The screw carries a lifting sleeve 18 which is threaded to fit the screw, and this sleeve has side webs or wings 19 which, at their outer ends, fit the posts 11 and

thus prevent the sleeve from turning, so that when the screw is turned, the sleeve is moved vertically, its direction of course depending on which way the screw is turned.

On the front side of the lower edge of the sleeve 18 is a lifting foot or flange 21, which projects horizontally and is adapted to be placed beneath the rail to be lifted. On opposite ends of the top plate 12 are arranged hangers or supports 22 which, as illustrated, are of angle iron and supported on the ends of the posts 11 by means of the nuts 13, these hangers supporting a shaft 23 which extends horizontally above the screw 14 and at right angles to it, the shaft having thereon a beveled gear wheel 24 which meshes with the beveled pinion 16 on the screw.

On the shaft 23 are ratchet wheels 25, between which is fulcrumed one end 26 of the operating lever 27, which is adapted to be worked up and down like a pump handle when operating the jack, and on the upper and lower sides of the lever are pawls 28 which are slotted, as shown at 29, to receive a guide bolt 30 which projects through them and through the lever, as shown clearly in Fig. 2, and thus provision is made for sliding either of the pawls longitudinally so that either may be placed in engagement with the ratchet wheels. It will be observed, by reference to Figs. 1 and 3, that each pawl is wide enough to simultaneously engage both ratchet wheels and thus the device is made very strong.

Each pawl has on its upper edge an eye 31 which engages a spring cam 32, the cams being arranged on opposite sides of the lever, and each spring cam is secured to a thumb bolt 33 which projects through and turns in the lever, the thumb bolt having at its ends handles 34 by means of which it may be turned. The spring cams are arranged in relation to each other in such a way that when one cam is in position to press its pawl into engagement with the ratchet wheels, as shown in Fig. 3, the other will be in position to lift its pawl from the ratchet wheels and thus the position of the pawls may be changed by simply giving the thumb bolt 33 a quarter turn. When the jack is to be used, the foot 21 is placed beneath the rail to be lifted and the jack is then worked so as to raise the sleeve 18 and foot 21, thus lifting the rail.

It will be seen that by throwing one of the pawls into engagement with the ratchet wheels and then working the lever up and down, the screw is turned in one direction, and that by throwing the other pawl into engagement with the ratchet wheel and moving the lever in the same way, the screw is reversed.

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

1. A track jack, comprising a supporting frame, a revoluble screw arranged vertically therein, a lifting sleeve carried by the screw, and a vertically swinging lever mounted above the screw and operatively connected therewith to turn it, substantially as described.

2. A track jack, comprising a supporting frame, a vertical screw thereon, a lifting sleeve carried by the screw, gearing connecting with the screw, a ratchet arranged horizontally on a gear shaft, and a pawl lever fulcrumed on said shaft and adapted to oscillate vertically, to operate the ratchet, substantially as described.

3. A track jack, comprising a suitable frame, a vertical screw therein having a pinion at its upper end, a lifting sleeve carried by the screw, a shaft journaled transversely to the screw, a ratchet and gear connection between the shaft and the pinion on the screw, and a

lever fulcrumed on the shaft and adapted to turn the gear mechanism thereon, substantially as described.

4. A track jack, comprising a supporting frame, a screw shaft arranged vertically therein, a lifting sleeve carried by the shaft, a pinion on the upper end of the screw, a shaft journaled above the pinion, a gear wheel on the shaft to engage the pinion, a pair of ratchet wheels on the shaft, a lever fulcrumed on the shaft between the ratchet wheels, and pawls above and below the lever to alternately engage the ratchet wheels, substantially as described.

5. The combination, with the supporting frame, the lifting screw, the shaft journaled above the screw and geared thereto and the ratchet wheels on the shaft, of the lever fulcrumed on the shaft between the ratchet wheels, the pawls slidably mounted above and below the lever to engage the ratchet wheels, a revoluble bolt adjacent to the pawls, and means, as the spring cams, for oppositely sliding the pawls by the movement of the bolt, substantially as described.

JOSEPH McMURRIN.

Witnesses:

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