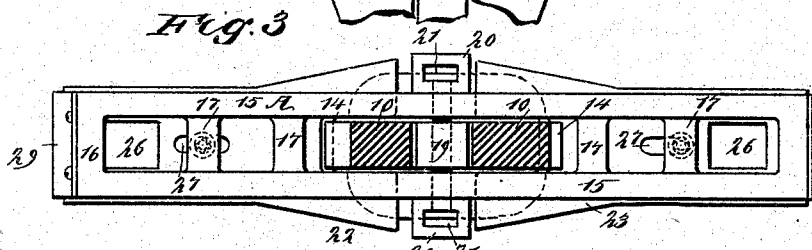
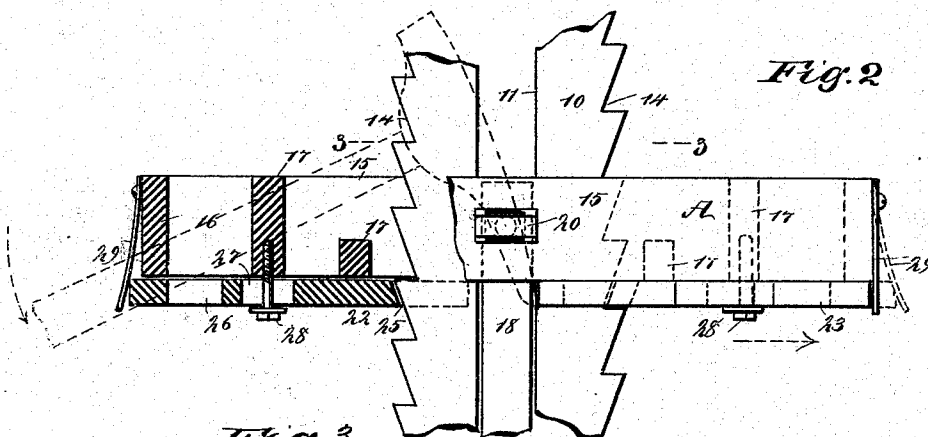
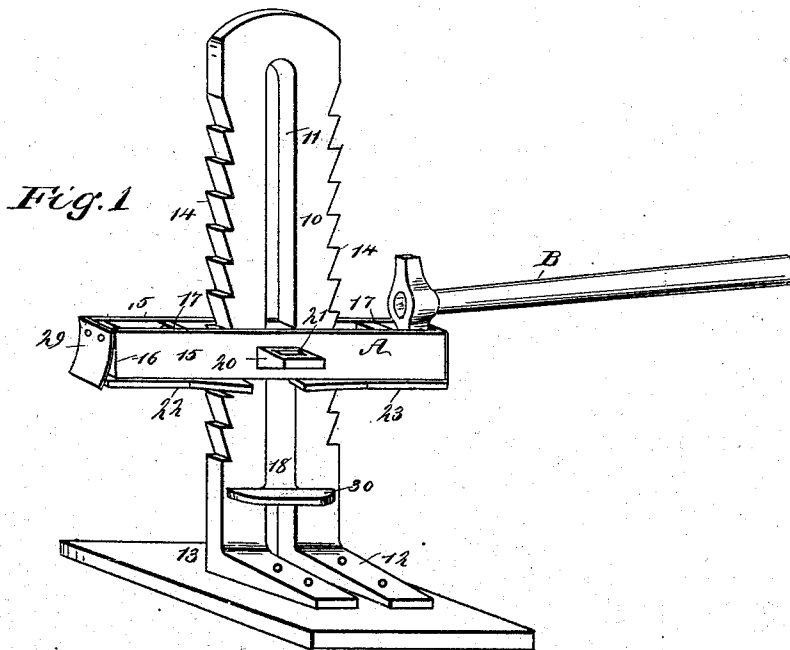


(No Model.)

J. McMURRIN.
TRACK JACK.

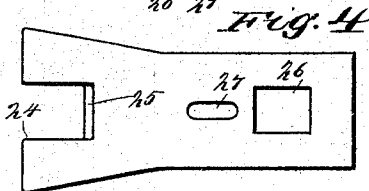
No. 504,935.

Patented Sept. 12, 1893.



WITNESSES:

J. A. Berghouse
C. Sedgwick



INVENTOR

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BY *Munn & Co*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH McMURRIN, OF SHOSHONE, IDAHO.

TRACK-JACK.

SPECIFICATION forming part of Letters Patent No. 504,935, dated September 12, 1893.

Application filed June 12, 1893. Serial No. 477,319. (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 useful Improvement in Track-Jacks, of which the following is a full, clear, and exact description.

My invention relates to an improvement in jacks, and it has for its object to provide a jack especially adapted for use upon railroad roads, for lifting for example railroad rails, and it has for its object to provide a jack which will be exceedingly simple and durable and will be capable of being readily transported from place to place and readily manipulated by one individual, and in connection with which no other lever need be employed but a railroad pick, or like tool which is always at hand.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

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

Figure 1 is a perspective view of the jack. Fig. 2 is a partial side elevation of the standard or body of the jack, and a partial side elevation and vertical section of the lifting arms and dogs which co-operate with the body. Fig. 3 is a horizontal section taken through the body or standard, practically on the line 3—3 of Fig. 2, illustrating the lifting arm in plan view; and Fig. 4 is a detail plan view of one of the dogs.

In carrying out the invention the body of the jack consists of a standard 10, which may be made of cast or forged metal, and it is provided at its center with a slot 11, extending from the top and preferably through to the bottom, the bottom of the standard being provided with one or two feet 12, whereby it may be secured by means of bolts or rivets or otherwise to a base 13. The standard 10, is further provided with a series of teeth 14, the teeth being given an upward inclination; and the upper surfaces of the teeth are flat or straight. The top surfaces of the teeth on one side of the standard are transversely opposite about the center of the

teeth of the opposite side. Thus the teeth upon the two sides may be said to alternate in location.

A lifting arm or ratchet slide A, is adapted to travel upon the standard; this lift arm or ratchet slide extends across the standard beyond each of its toothed sides, and the said ratchet slide usually consists of a box-like structure, comprising two parallel sides 15, end plates 16 and one or more cross bars 17. Ordinarily the cross bars nearest the ends extend from top to bottom of the box-like structure, while the intermediate cross bars are located at the lower portion of the sides only, as shown in Fig. 2. A lift bar 18, is held to slide in the slot 11 of the standard. This lift bar is connected with the central portion of the ratchet slide through the medium of the bolt 19, as is best shown in Fig. 3, and the said bolt is usually provided with two heads 20, one at each end, and in each head a slot 21, is produced.

The lifting arm or ratchet slide is adapted to carry two dogs, designated respectively as 22 and 23. The dogs are located upon the bottom of the ratchet slide, one at each end. The dogs for the greater portion of their length are of the same width as the ratchet slide, but at one end the dogs are increased in width, and in the wider end of each dog a recess 24, is made, the inner or end wall whereof is preferably beveled, as illustrated at 25 in the said Fig. 4. In the narrower portion of each dog, or what may be termed its shank section, the recess 24 being in the head section. Said shank section is provided with an opening 26, ordinarily of rectangular contour, and with a longitudinal slot 27. When the dogs are placed in position upon the ratchet slide, the recessed portion of the head of each slide will engage with a toothed surface of the standard; the head therefore extends across the front and rear faces of the standard, and each of said heads likewise projects beyond the front and rear faces of the ratchet slide, as shown in Figs. 1 and 3, while the slots 26 in the shank portions of the dogs will be in registry with the spaces between the end projections 17 of the slide and the end wall, as shown in Fig. 2. The dogs are held in connection with the slide A, by passing suitable bolts 28 through the slots 27 in

the dogs, and preferably into the projections 17 of the slides, while the dogs are held normally in contact with the toothed surfaces of the standards by means of springs 29, which are secured upon the upper end portions of the ratchet slide, the lower portions of the springs bearing against and exerting inward tension upon the dogs.

The lifting bar 18 connected with the lifting arm or ratchet slide is provided at its lower end with a rail rest 30, which rest is preferably made to extend beyond one side of the standard at right angles thereto, the article to be lifted or to be lowered being located upon said rest. Any form of handle is attached to the back of the standard 10, preferably near the base, to facilitate carrying the jack from place to place.

It will be observed that no lever is connected with the machine, as an ordinary railroad pick B, or any equivalent tool is adapted for use as a lever. The ratchet slide is elevated by rocking said slide endwise, alternately raising and lowering it, and this is accomplished for example by passing one point of the pick down through the end opening in the slide and through the registering opening 26 in one of the dogs. In canting the pick outward at its lower end by engaging with the outer wall of the opening 26 in the dog, it will draw the dog outward against the tension of the spring, as shown in dotted lines in Fig. 2, and thereby disengage said dog from the tooth upon which it may rest. Now by alternately raising the ends in which the dogs are located to engage with another tooth and then bearing down upon that end, using the tooth as a fulcrum, the opposite end of the ratchet slide will be rocked upward until it engages with a tooth upon the opposite side, when the lifting operation of the side of the slide in which the dog is located is again repeated, to be followed by the depression of that end to raise the opposite end of the slide farther if the article upon the rest 30 is to be lifted higher. The opening 26 allows the pick point to pass through but does not touch it; in raising, the dog is pushed back by the ratchet tooth. When the ratchet slide is to be lowered, the pick is placed in one of the slots 21 of the bolt heads 20, and by carrying the pick, as shown in dotted lines in Fig. 2 to an engagement alternately with the projecting inner ends of the dogs, the dogs will be alternately carried out of engagement with the teeth of the standard, and at each disengagement, when downward pressure is exerted upon the ratchet slide, it will drop the distance of one tooth.

A jack of the above described character is not only exceedingly simple, involving but few parts, but it is exceedingly strong, and it is capable of being manipulated by one person with any tool of the nature of a railroad pick that may be at hand. Furthermore the

device may be readily carried from place to place, and there is nothing in its construction that will be affected by inclement weather, nor will the teeth wear out unduly, since the pressure of the dogs is always inward, and the dogs only tend to cut the teeth deeper in the standard.

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

1. A jack for the purpose described, comprising a standard toothed on opposite sides, the teeth being pitched in one direction and alternately located, a ratchet slide having movement upon the standard, and spring-controlled dogs carried by the ratchet slide and engaging with the teeth of the standard, said ratchet slide and the dogs being provided with registering openings for the reception of a railroad pick or like tool, as and for the purpose specified.

2. A jack for the purpose described, the same consisting of a standard having alternately arranged teeth at opposite sides, all the teeth having the same pitch, a lifting arm or ratchet slide capable of rocking movement upon the standard, spring controlled dogs carried by the lifting arm or ratchet slide, said dogs being normally in engagement with the teeth of the standard, the dogs being further provided with openings registering with the openings of the lifting arm or slide and adapted to receive a lever, and a platform connected with the lifting arm or ratchet slide and adapted to be raised or lowered by the rocking movement of the slide, substantially as shown and described.

3. In a jack for the purpose described, the combination, with a standard having a slide-way produced therein, and teeth formed alternately upon opposite edges, the teeth having the same slant, of a lifting arm or ratchet slide capable of rocking movement upon the standard, a guide bar provided with a platform, having movement in the slide way of the standard and pivotally connected with the lifting arm or ratchet slide, dogs having sliding movement upon the bottom of the lifting arm or ratchet slide, spring-pressed at their outer ends and bearing at their inner ends against the teeth of the standard, said dogs at their inner ends extending beyond the front and rear faces of the slide, both the slide and the dogs being provided with registering openings for the reception of a lever, and slotted projections located upon the sides of the slide, between the inner ends of the dogs, the slots being likewise adapted for the reception of a lever, as and for the purpose set forth.

JOSEPH McMURRIN.

Witnesses:

M. M. BURDICK,
J. E. BURKE.