(No Model.)

J. F. McDANIEL.

WAGON JACK.

No. 510,701. Patented Dec. 12, 1893.

Fig. 1.

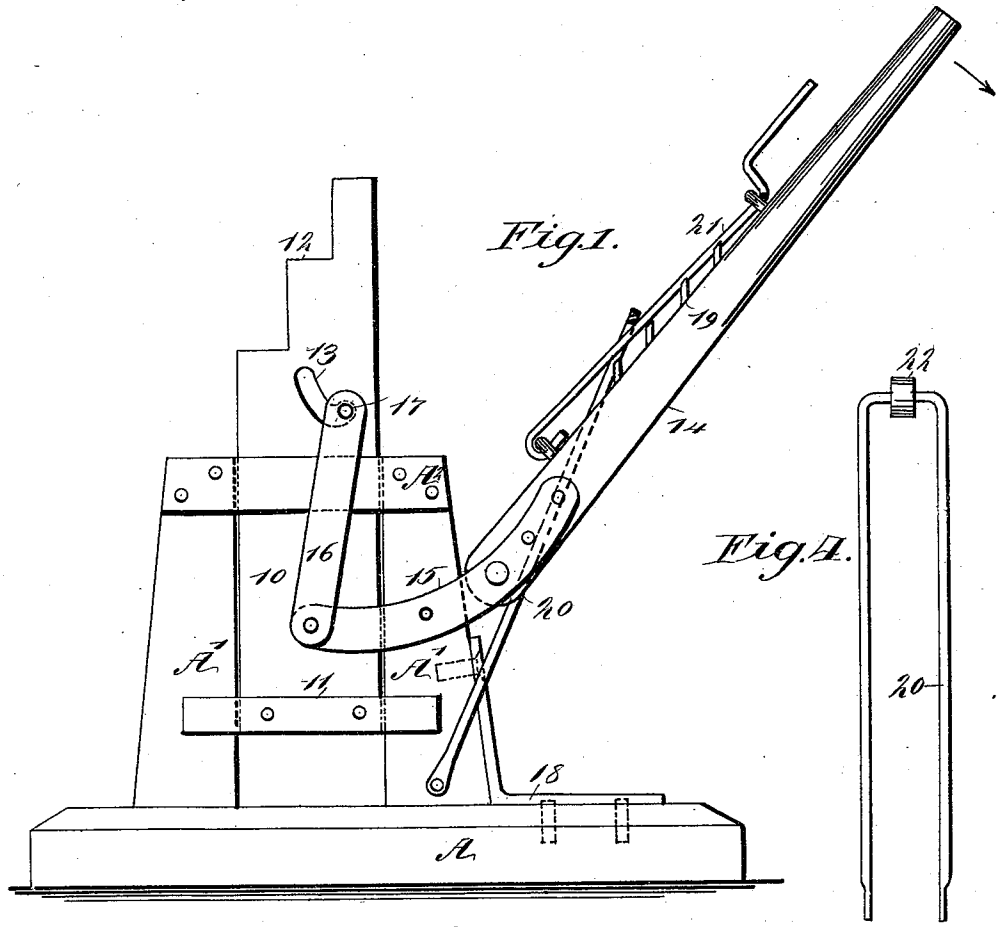


Fig. 4.

Fig. 2.

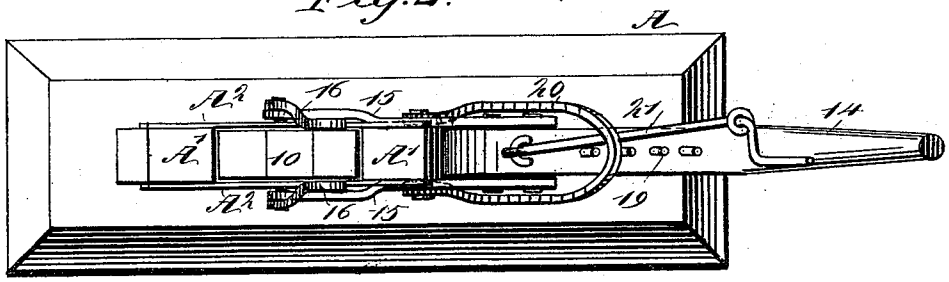
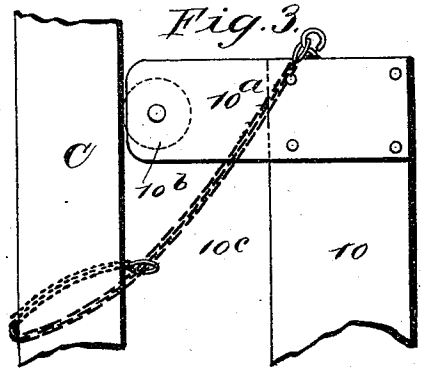


Fig. 3.



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WAGON-JACK.

SPECIFICATION forming part of Letters Patent No. 510,701, dated December 12, 1893.

Application filed September 13, 1893. Serial No. 485,415. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. McDANIEL, of Syracuse, in the county of Hamilton and State of Kansas, have invented a new and Improved Jack, of which the following is a full, clear, and exact description.

My invention relates to an improvement in jacks, and especially to an improvement in wagon jacks, and it has for its object to provide a jack of exceedingly simple, durable and economic construction, and one capable of convenient and expeditious manipulation.

A further feature of the invention is to provide a locking device for the lifting lever, which will act automatically to hold the lifting bar of the jack in whatever position it may be placed, and further to provide a means whereby the locking device may be readily disengaged from the lift lever whenever required.

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 side elevation of the improved jack. Fig. 2 is a plan view. Fig. 3 is a partial side elevation of a modified form of the lifting jack; and Fig. 4 is a detail view of a modified form of the locking yoke.

In carrying out the invention a base A, is provided with two upright guide standards A′, located at predetermined distances apart, the said guide standards being connected at their upper ends by straps A^2, one located at each side of the standards. Between the straps and the guide standards A′ a lifting block or bar 10, is held to slide vertically, the said block or bar 10, being usually provided with guide straps 11 at its lower end, which engage with the side faces of the guide standards A′; and the upper end of the lifting block or bar 10, is provided with a series of steps 12, in order that it may be used in connection with axles of different heights. The lift bar or block is provided with a diagonally located segmental slot 13 near its upper or stepped surface, and a lift lever 14 is fulcrumed upon one of the guide standards A′ by means of straps 15, which are secured to opposite sides of the heel or lower end of the lever, the straps being fulcrumed at or near the center upon opposite faces of one of the said guide standards, the heel or lower end of the lever facing what may be termed the front edge of the standard. The inner free end of each strap 15, has pivotally connected with it one end of a link 16; these links are carried upward, one at each side of the lift bar or block, and connected at their upper ends by a pin 17, which pin has sliding movement in the segmental slot 13. It may here be remarked that the said segmental slot, at its lower end, is curved upwardly more or less abruptly from the body. The standards may be, and preferably are braced upon the base by means of angular braces 18. A series of pins 19, is located upon the upper surface of the lift lever 14, the pins being given an inclination in direction of the handle end of the lever; and a locking yoke 20, is fulcrumed upon one of the standards A′, the body portion of the yoke being adapted to have engagement with the pins 19 on the lift lever. A shifting bar 21, is fulcrumed upon the lift lever, which bar passes beneath the body of the yoke; and the shifting bar is farther removed from the lever at its inner end than at its upper or outer end, and therefore, when the shifting bar is carried in one direction it will lie flat and permit the body of the locking yoke to engage with one of the pins 19; but when the shifting bar is turned in an opposite direction it will force the yoke out of engagement with the pins. The segmental slot 13 is produced in the lifting bar or block to provide for further adjustment thereof, since the pin 17, may be made to work in connection with either the lower or the upper end wall of the slot.

In operation, the shifting bar being thrown to one side of the lever, when the lever is pressed downward to elevate the lifting block or bar, and the desired elevation is obtained, the locking yoke will automatically engage with one of the pins 19 in the lever, and prevent the lifting bar from dropping. When the shifting bar is thrown up in position to release the locking yoke from the pins 19, the yoke may slide readily over the pins upon the

bar, since the yoke will be at an elevation over the pins; but if in practice it is found desirable the shifting bar may be dispensed with, and a shifting roller 22 be placed upon the body of the yoke, which when carried to one side when the lever is being operated to lift, will not interfere with the engagement of the yoke with the pins 19. When, however, the roller is placed in the line of the pins it will permit the yoke to travel downward over the pin surface.

In Fig. 3 I have shown a slightly modified form of the lift bar or block, the said modified form of bar being especially adapted for use in for example drawing posts or stumps from the ground. The bar in this modified form is straight throughout its length, and is provided at its top with an arm 10^a, extending at right angles from one side, and provided with a friction roller 10^b at its outer end, and a chain 10^c, is secured to the upper main portion of the bar. In practice the bar is substituted for the one shown in Fig. 1, and is raised and lowered in the same manner. The friction roller is placed in engagement with the post C, to be drawn from the ground, and the chain is fastened around the post as shown in Fig. 3. Thus when the lifting bar is forced upward it will act to draw the post from the ground, the extension 10^a of the bar serving to keep the post in a perpendicular position.

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

1. In a lifting jack, the combination, with guide standards and a lifting bar capable of moving between the standards, the said lifting bar being provided with a diagonally located segmental slot sharply curved at one end, of a lift lever fulcrumed upon one of the standards, a link pivotally connected with one end of the lift lever, and a pin projected from the link into the slot of the lifting bar, substantially as shown and described.

2. In a lifting jack, the combination, with a base, guides located thereon, and a lifting bar having sliding movement between the guides, the said bar being provided with a segmental slot near its upper end, diagonally located and having one end sharply curved in an upward direction, of a lift lever, straps projected from the lift lever and fulcrumed at or near the center upon one of the guides, links pivotally connected with the inner ends of the straps, extending up one at each side of the lift bar, a pin connecting the links at the upper ends and passed through the segmental slot in the lift bar, and a locking device, substantially as shown and described, connected with the lever, as and for the purpose set forth.

3. In a lifting jack, the combination, with a base, guides located thereon, and a lifting bar having sliding movement between the guides, the said bar being provided with a segmental slot near its upper end, diagonally located and having one end sharply curved in an upward direction, of a lift lever, straps projected from the lift lever and fulcrumed at or near the center upon one of the guides, links pivotally connected with the inner ends of the straps, extending one up at each side of the lift bar, a pin connecting the links at the upper ends and passed through the segmental slot in the lift bar, pins located upon the lift lever, a yoke pivotally connected with a fixed support, the body portion of the yoke being adapted for engagement with the pins of the lever, and a shifting device whereby the yoke may be disengaged from the pins, as and for the purpose set forth.

4. In a jack, the combination, with a base, guides located thereon, a lift bar having movement between the guides and provided with an arm projected from one side of its body, a friction roller carried by the arm, and a chain carried by the bar, of a lift lever connected with the lift bar, a locking yoke pivoted to a fixed support, projections formed upon the lever, adapted for engagement with the yoke, and a means, substantially as shown and described, for freeing the yoke from the projections of the lever, as and for the purpose set forth.

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