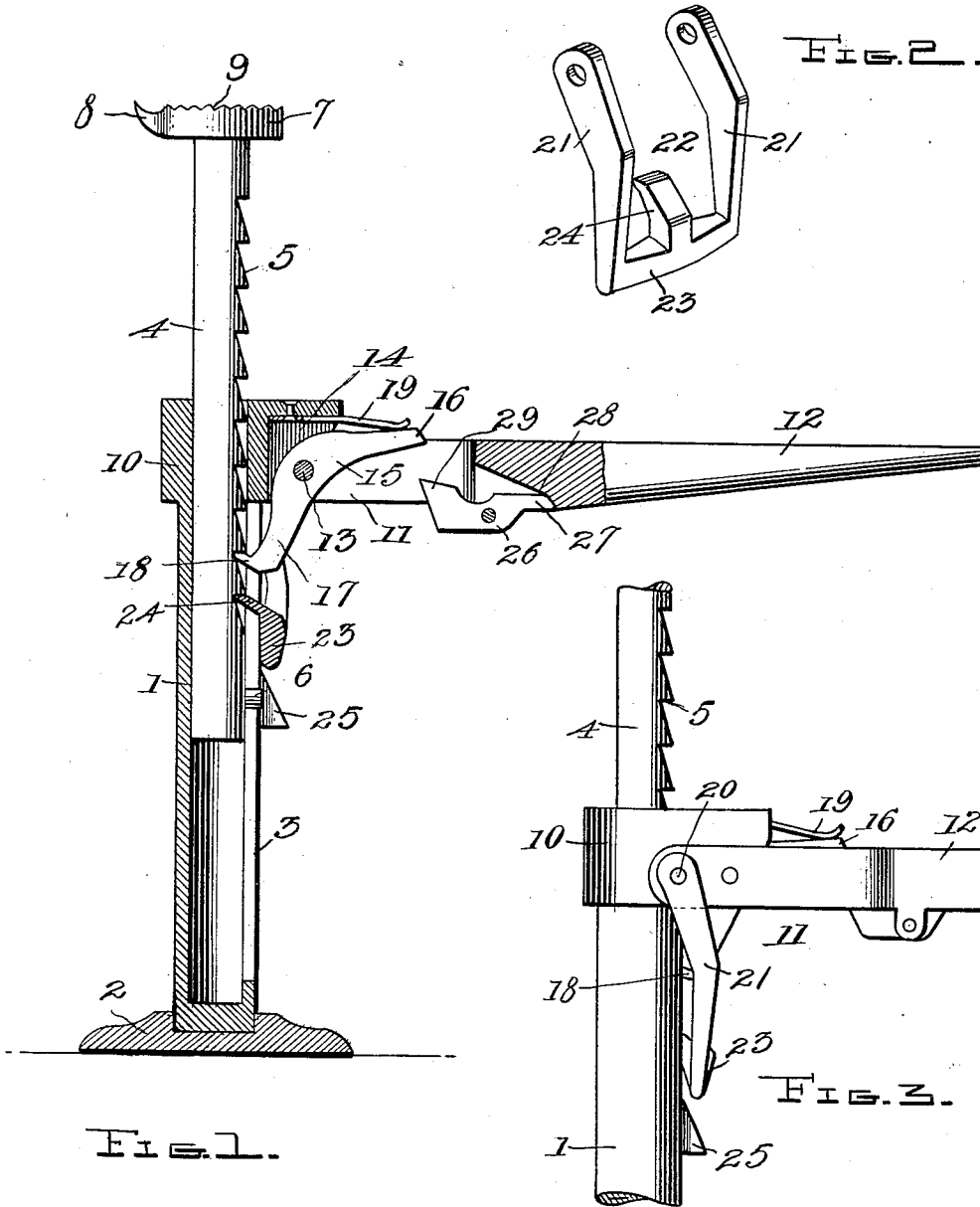


C. SKIDMORE.
LIFTING JACK.
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1,042,161.

Patented Oct. 22, 1912.



Witnesses

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CHARLES SKIDMORE, OF HOMER, NEBRASKA, ASSIGNOR TO F. A. WOOD, OF DAKOTA CITY, NEBRASKA.

LIFTING-JACK.

1,042,161.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES SKIDMORE, a citizen of the United States, residing at Homer, in the county of Dakota and State of Nebraska, have invented new and useful Improvements in Lifting-Jacks, of which the following is a specification.

This invention relates to lifting jacks, and has for an object to provide a device of this character particularly desirable for use in raising carriages or similar objects, and to provide a lever actuated rack bar which can be conveniently and effectively thrown into an inoperative position at the will of the operator and by manipulation of the lever.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claim may be resorted to without departing from the spirit of the invention.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a vertical section through the lifting jack. Fig. 2 is a detail perspective view of the pivoted yoke. Fig. 3 is a detail side elevation of a portion of the jack.

Referring now more particularly to the drawing, there is shown a lifting jack comprising a vertically disposed tubular member or support 1 preferably provided at its bottom with a base 2 which latter may be of any desired construction that will readily afford means for holding the tubular member 1 in its correct position. The member 1 is provided with a vertically extending slot 3, and the said member has slidably mounted therein a rack bar 4 having at one side a vertical series of rack teeth 5. The bar 4 carries a horizontally extending pin 6 disposed in the slot 3 and adapted to move vertically therein. The purpose of the pin is to prevent casual rotation of the bar 4, thus holding the teeth 5 in such position that they will be effectively engaged at all times with the mechanism to be hereinafter more fully described. The bar 4 carries at the upper end thereof a head 7 pronged at one end as shown at 8, and as clearly illustrated the said head is serrated upon its upper face as at 9 to provide an effective gripping surface as will be appreciated.

The member 1 is provided at the upper

end thereof with a head 10, and the arms 11 of an actuating lever 12 straddle two sides of the said head 10 as shown, and the said arms receive the ends of a pivot bolt or the like 13 passed through the walls of the head 10 and through a slot 14 in the head. The bolt 13 has loosely mounted thereon a dog 15 having a rearwardly directed tail 16 and a downwardly extending leg 17 which latter is provided with an outwardly extending nose 18. The head 10 has secured thereto in any suitable manner one end of a spring or similar elastic element 19, the other end of which is yieldingly engaged with the tail 16 of the dog 15 so as to normally hold the nose 18 engaged with the teeth of the rack bar 4.

The arms 11 of the lever 12 have pivotally connected thereto as shown at 20 the arms 21 of a yoke 22. The arms 21 are connected to each other at their lower ends by a horizontal portion 23 disposed at one side of the member 1 and across the slot 3. The portion 23 has an inwardly directed dog 24 which is disposed through the slot 3 and in line with the teeth 5 of the bar 4. The member 1 is provided at the sides of the slot 3 with cam members 25 disposed directly beneath the portion 23 of the yoke 22. The lever 12 is provided with a pivotally mounted trip element or pawl 26 having a tail 27 for engaging a shoulder 28 upon the lever 12, and forwardly of the pivot point of said dog and formed integral with the latter is a nose 29 which is normally disposed directly beneath the tail 16 of the dog 15. The engagement of the tail 27 of the pawl 26 with the shoulder 28 of the lever 12 is such that said dog is normally held in a horizontal position, the nose 29 being free for upward pivot movement but effectively held against downward swinging movement as will be fully understood.

In operation of the lifting jack herein-described, the head 9 is correctly positioned beneath the article to be raised or hoisted, and the dog 15 is engaged with the teeth of the lifting bar as is customary in the operation of the lifting jacks of this character. In view of the fact that the yoke 22 is pivoted to the arms 11 of the lever 12 it will be seen that during movement of the dog 15 the dog 24 of the former will be engaged with the teeth of the bar 4, and upon movement of the lever 12 downwardly the arms 11 will be moved upwardly which operation,

in view of the fact that the dog 24 is positioned to engage the teeth 5 will conveniently and in a rapid manner elevate the bar 4 to the desired point. It may be mentioned
5 that the portion 23 of the yoke 22 is somewhat heavy and provides gravity falling means for holding the yoke in its operative position. When it is desired to release the
10 dog 24 from the teeth 5 of the rack bar 4, the outer end of the lever 12 is raised upwardly to the extent that the nose 29 of the element 26 is engaged with the tail 16 of the dog 15 so as to move the nose 18 out of engagement with the teeth of said rack bar.
15 In this operation of the lever, and incident to the fact that the arms 21 of the yoke 22 are pivoted in the manner previously described to the arms 11 of the lever 12, the portion 23 will descend and ride the inclined
20 faces of the cam members 25 at the sides of the slot 3, thus causing the dog 24 to be disengaged from the teeth 5 and allowing free downward movement of the rack bar 4.

I claim:—

25 A lifting jack comprising a tubular standard having a longitudinal slot and a head provided with a recess, a locking dog piv-

oted in the recess and having a nose movable in the slot of said standard, a toothed bar movable in said standard and adapted to be
30 engaged by the nose of said locking dog, a spring secured at one end in said recess normally holding said locking dog in engagement with said bar, a lever pivoted to said head and provided with a slot to receive the
35 upper end of said locking dog, a pawl pivoted to said lever in said slot and having a limited movement in one direction and adapted to engage said locking dog when
40 elevated to hold said locking dog in an operative position, a cam member secured to said standard below the head thereof, and a yoke pivoted to the inner end of said lever and provided with a nose movable in the slot
45 of the standard to engage the teeth of said bar and with a lower end adapted to engage the cam member and be held thereby in spaced position from said bar.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES SKIDMORE.

Witnesses:

W. H. RYAN,
GEORGE ASHFORD.