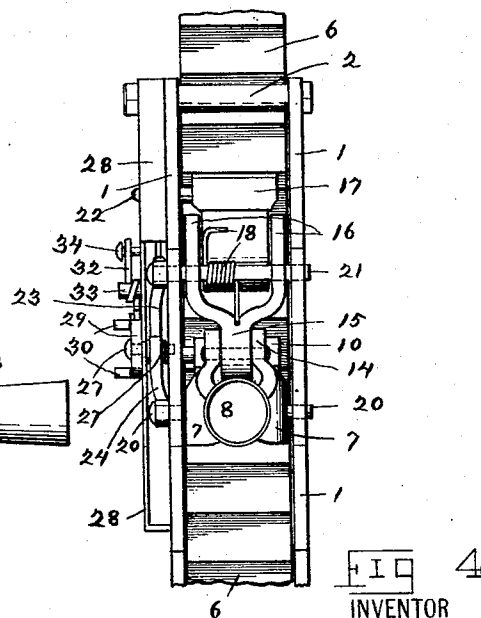
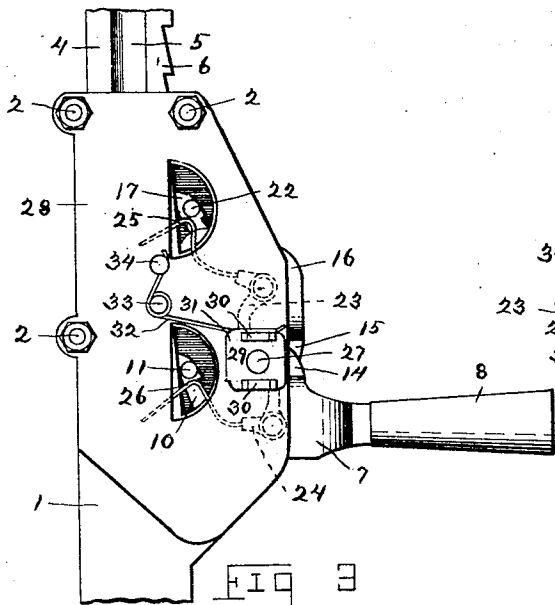
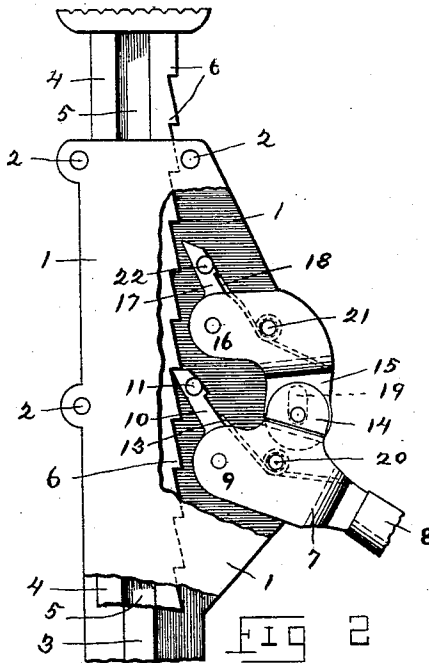
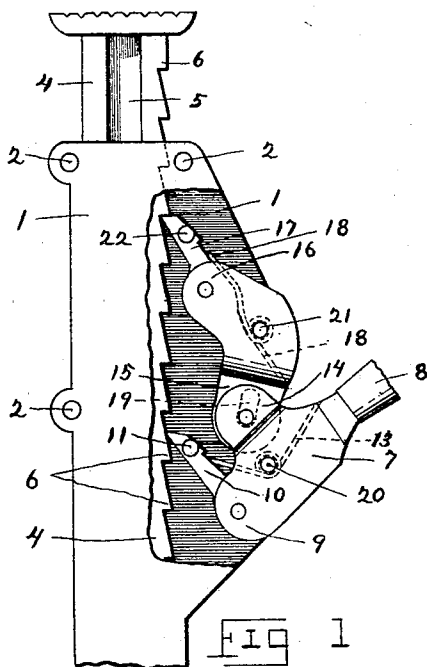


S. M. WENGER.
LIFTING JACK.
APPLICATION FILED OCT. 23, 1909.

968,722.

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WITNESSES:

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LIFTING-JACK.

968,722.

Specification of Letters Patent. Patented Aug. 30, 1910.

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To all whom it may concern:

Be it known that I, SAMUEL M. WENGER, a citizen of the United States, residing at Terre Hill, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to lever-lifting jacks, and more directly to that class in which a step-by-step movement back and forth is obtained, said mechanism being suitably controlled to either raise a load or to lower the load, or the pawls may be both disengaged at the same time, thus allowing the lifting bar to drop to its lowest position.

The objects of the invention are to produce a lifting jack of this class that will be strong, light, capable of great power, and by the arrangement of its pawls and levers be very easily operated.

With these and other objects in view, my invention consists in certain construction and combination of parts as will hereinafter be fully described and claimed in the following specification and illustrated in the accompanying drawings, which form a part of this application and in which like figures of reference refer to corresponding parts in all of the views; but it is fully understood that while I have herewith described my invention as illustrated, I do not confine myself to the exact design as shown, as slight changes may be made in the construction and combination of the several parts without departing from the spirit of the invention.

In the drawings:—Figure 1, is a side elevation of my improved jack, having part of the stand or case broken away, and the guard plate removed, and showing the proper position of the levers and pawls for lifting. Fig. 2, is a view of the same, showing the position of the levers and pawls for lowering. Fig. 3, is a partial side elevation of the jack with the guard plate in position. Fig. 4, is a rear elevation of Fig. 3.

Referring to the drawings, 1, indicates the frame or case plates which are spaced apart and secured together by the studs 2; while their inner and adjacent surfaces are provided with guide strips 3, upon which slides the lifting bar 4, which is formed with the

engaging grooves 5, upon its side faces and the rack teeth 6, upon its rear face.

The lower ends of the case plates 1, are secured in the usual way in any suitable base-plate (not shown). Within the rear part of the case 1, is pivoted on the stud 20, a bifurcated main lever 7, which is formed with a handle socket 8, on the rear end thereof; while within the bifurcated end 9, is pivoted a pawl 10; said pawl being formed with a horizontal pin 11, which projects outwardly through an orifice 12, provided in the case side; said pawl 10, being normally held in engagement with the rack teeth 6, by the action of the spring 13, mounted on the stud 20. The main lever 7, is further provided with the bifurcated portion 14, within which is linked the lower arm 15, of a supplemental lever, which is pivoted on the stud 21, and which is formed with a bifurcated end 16, within which is pivoted a pawl 17, which is also held in normal engagement with the rack teeth 6, by the action of the spring 18, mounted on the stud 21, and said pawl 17, is formed with an extending pin 22, projecting through the case 1.

To compensate for the different positions assumed by the lever 7, and supplemental lever, the arm 15, is linked through a slot 19, to the portion 14, of the lever 7.

Upon the outer surface of the side of the case 1, are mounted upon the extending ends of the studs 20, and 21, the arms 23, and 24, which carry the curved springs 25, and 26, which control the action of the pawls 10, and 17, by engaging the pins 11, and 22.

The arms 23, and 24, being held by the tension of the springs 25, and 26, in engagement with the opposite sides of a rectangular headed stud 27, which is pivoted in the guard plate 28, in such a manner that by a quarter turn of said stud 27, the position of said arms 23, and 24, may be changed, and thus in one position allowing the pawls to assume a position for raising the lifting bar 4, and in the other position for lowering said bar 4, or the pawls may be disengaged from the rack-teeth by pressing the pins 11, and 22, toward the rear of the jack by the operator's fingers.

Upon the outer end of the headed stud 27, and in contact with the outer face of the guard plate 28, is secured a plate 29, which

is formed with the finger studs 30, and also a projecting face 31, extending beyond two of its adjacent sides for the purpose of retaining the arm of the spring 32, in place; 5 said spring 32, being mounted upon the studs 33, and 34, and designed to retain said plate 29, in either position.

The operation of the several parts and the device as a whole is so simple and will 10 be so clearly understood from the foregoing description of the parts and combination that further explanation is deemed unnecessary.

Having thus described my invention what 15 I claim as new and desire to secure by Letters Patent is:—

1. In a lifting jack, in combination with a frame, a rack-edge lifting bar, slidably mounted in said frame, a main hand-lever 20 pivoted within said frame to the rear of and adjacent to said rack, a pawl carried by said hand-lever and in normal engagement with said rack, a supplemental lever pivoted within said frame above said hand-lever, and linked thereto, a pawl carried 25 by said supplemental lever and in normal engagement with said rack, adjustable spring levers mounted upon said case and adapted to limit and reverse the action of 30 said pawls, and means for adjusting said spring levers.

2. In a jack, in combination with a case formed with orifices in one side thereof, 35 a lifting bar having rack teeth formed in the rear face thereof, and slidably mounted in said case, of a hand-lever pivoted within said case, a pawl carried by said hand-lever,

a pin projecting from one side of said pawl and extending through one of the orifices 40 in the side of said case, a spring mounted in said hand-lever and adapted to normally retain said pawl in engagement with said rack, a supplemental lever pivoted within 45 said case above and linked to said hand-lever, a pawl carried by said supplemental lever, a pin extending from one side of said pawl and projecting through one of the orifices in the side of said case, a spring mounted 50 in said supplemental lever and adapted to normally retain said pawl in engagement with said rack, arms pivoted upon the outer surface of said case, semi-flexible curved extensions carried by said arms and adapted 55 to engage and guide the projecting ends of the pin extensions of said pawls, a guard plate spaced from and secured to the outer face of said case for the purpose of covering said arms, a stud pivoted within and to said guard plate, a rectangular head 60 formed on the inner end of said pivot-stud and in engagement with said arms and adapted to change the tension thereof, and thereby reverse the action of said pawls, a finger nut secured upon the outer end of said pivot-stud, without said guard plate, and 65 a spring mounted upon said guard plate and in engagement with said finger nut for limiting the action of the same.

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

SAMUEL M. WENGER.

Witnesses:

H. B. BECKER,
A. B. BECKER.