(No Model.)

J. B. & A. CLEVELAND.

LIFTING JACK.

No. 421,552. Patented Feb. 18, 1890.

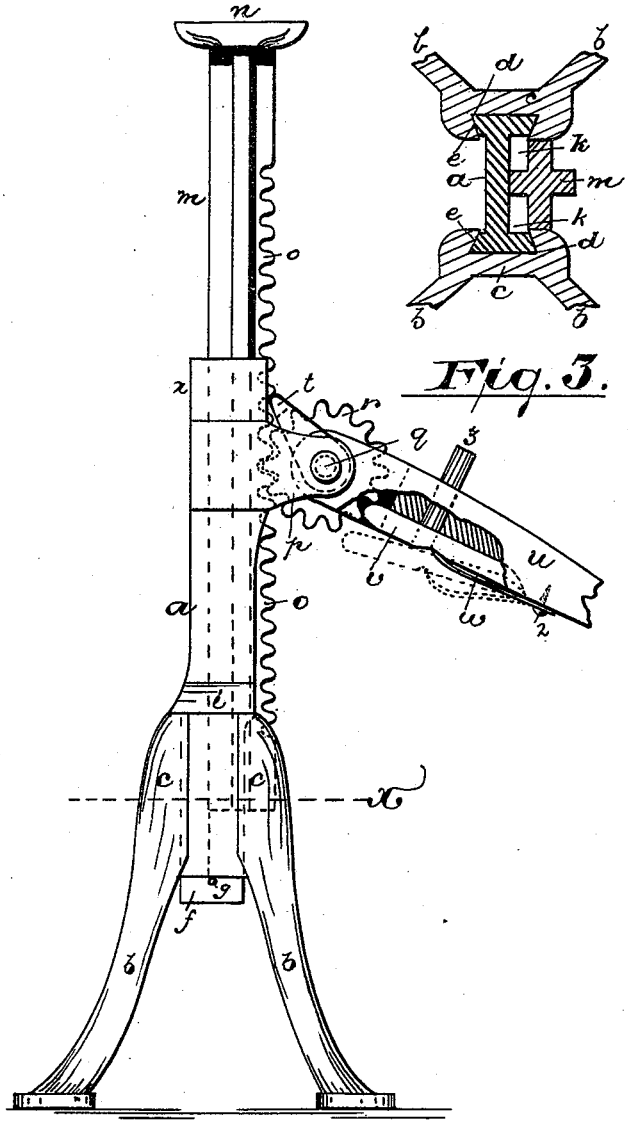

Fig. 1.

Fig. 3.

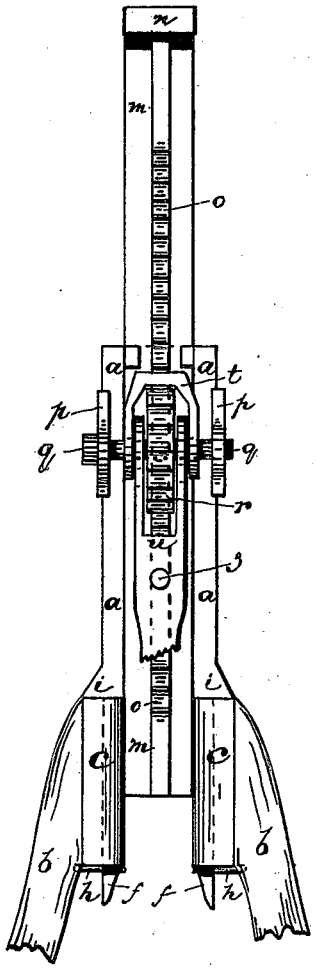

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES B. CLEVELAND AND ARTHUR CLEVELAND, OF LYONS FARMS, NEW JERSEY.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 421,552, dated February 18, 1890.

Application filed August 3, 1889. Serial No. 319,659. (No model.)

To all whom it may concern:

Be it known that we, JAMES B. CLEVELAND and ARTHUR CLEVELAND, citizens of the United States, residing at Lyons Farms, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Lifting-Jacks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

The object of this invention is to provide increased power in a lifting-jack, simplify its construction, and render it adjustable by interchangeable standards or supports.

The invention consists in the improved lifting-jack and the combination and arrangement of parts thereof, substantially as will be hereinafter set forth, and finally embodied in the claims.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a side view of a lifting-jack embodying our improvement with a portion of the operating-lever broken away. Fig. 2 is a front view of the same, and Fig. 3 is a section through line *x*, Fig. 1.

In the drawings, *a* represents the standard or frame, provided with adjustable supports *b b*. These supports are preferably joined in pairs at *c c*, provided on their inside with dovetailed slots *d d*, corresponding with dovetailed projections *e e*, as shown more clearly in Fig. 3. At the bottom of the standard and opposite the upper part of the supports are downwardly-extending lugs *f f*, provided with central openings *g g* to receive pins *h h*. These pins keep the supports *b b* firmly in position on the standard *a* by holding them firmly against lugs *i i*, arranged on the side of the standard or made integral therewith. The front of the standard is formed with a longitudinal slot *k* extending upward through its entire length. This slot is shown in Fig. 3. Within this slot slides in ordinary bearings a rack-bar *m*, provided at its top with a supporting-plate *n* and with rack-teeth *o*.

Near the top of the standard *a* and projecting from the sides are lugs *p p*, which furnish bearings and supports for a pin or stud *q*. Upon this pin or stud revolves a toothed wheel *r*, arranged and adapted to mesh into the rack-teeth *o* on the rack-bar. Upon this pin is also pivoted a bifurcated pawl *t* and an outwardly-extending operating-lever *u*, the lever being slotted so as to allow of free action of the toothed wheel on the pin.

A slot is made preferably in the under side of the handle, in which is fitted a pawl *v*, one end of which is adapted and arranged to engage with the teeth of the toothed wheel *r*, the other end being held in position by a spring *w*, secured at one to the lever by a screw 2.

From the top of the slot and extending through the handle is an opening, in which is fitted a pin 3, one end resting upon the pawl *v* and the other end extending out beyond the handle, so as to allow the manipulation of the pawl, as will be readily understood from an examination of Fig. 1.

When it is desired to release the rack-bar, the pawl *t* is thrown backward out of contact with the teeth on the rack-bar. The pin 3 is then pressed upon, thus releasing the pawl *v* from contact with the wheel *r*, and then the rack-bar will immediately fall to the ground, as will be manifest.

By having the supports of the standard made removable and adjustable the jack can be made available for varying height without requiring a separate jack, as other supports can be substituted at any time without changing or disturbing the lifting mechanism, thus enabling one lifting mechanism to be used with various supports.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a lifting-jack, a lifting mechanism consisting of a lever pivoted to the standard, a pin secured in lugs on the standard, a toothed wheel separate from the lever and loosely revolving on said pin, and a pawl piv-

oted on said pin and adaped to engage rack-teeth on the rack-bar, all said parts being arranged as described, and for the purposes set forth.

2. In a lifting-jack, a securing and releasing mechanism consisting of a pawl v, secured at one end in a slot in the lever u by a spring, the other end being adapted to engage the toothed wheel r, a spring w, secured at one end to the lever and adapted to hold the pawl v in position, and a releasing-pin 3, all said parts being arranged as described, and for the purposes set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 18th day of June, 1889.

JAMES B. CLEVELAND.
ARTHUR CLEVELAND.

Witnesses:
OLIVER DRAKE,
E. L. SHERMAN.