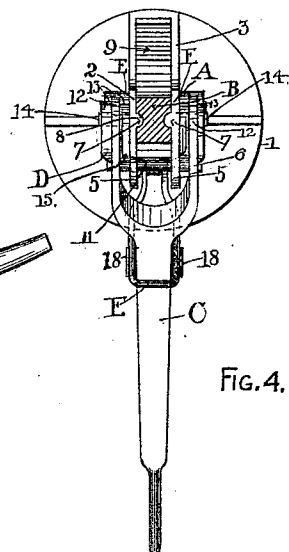
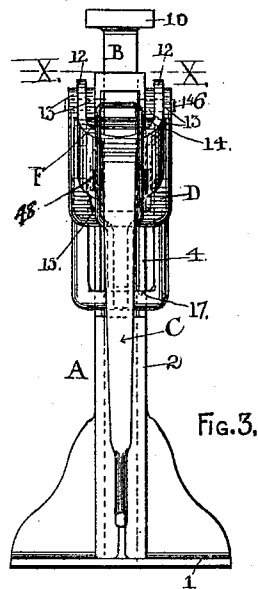


L. J. KELLY.  
LIFTING JACK.

Patented May 16, 1893.



INVENTOR:

Luke J. Kelly,

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Attorney.

# UNITED STATES PATENT OFFICE.

LUKE J. KELLY, OF ALBANY, NEW YORK.

## LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 497,409, dated May 16, 1893.

Application filed January 3, 1893. Serial No. 457,106. (No model.)

*To all whom it may concern:*

Be it known that I, LUKE J. KELLY, of the city and county of Albany, in the State of New York, have invented new and useful Improvements in Lifting-Jacks, of which the following is a specification.

My invention relates to improvements in jacks for raising heavy articles, and the object of my invention is to improve the construction, and to afford facilities for lowering a heavy article automatically. This object I attain by the means illustrated in the accompanying drawings, which are herein referred to and form part of this specification.

In said drawings, Figure 1 is a side elevation of my lifting-jack with lifting-bar in its depressed position, with the operating-lever depressed. Fig. 2 is a like elevation with the operating-lever raised into position to effect the releasement of the lifting-bar. Fig. 3 is a rear elevation of Fig. 1; and Fig. 4 is a horizontal section of Fig. 3 at the line X X.

As represented in the drawings, A designates the standard for my jack, and it consists of a base, 1, on which is erected a rectangular box-shaped column, 2, whose foremost side is open and has at its lower end an open box-like receptacle, 3, for a purpose hereinafter explained. The upper portion of said column is open at its rearmost side from about mid-height nearly to the top of said column, so as to leave a depression, 4. In the rearmost edge of the sides of the column, near the top of the latter, at the rearmost side, lugs, 5, or a suitable boss, is formed to operate as a device for holding a fulcrum, 6, for a lever by which the jack is operated. The inner faces of the side walls of the column 2, are each provided with a tongue, 7, which serves as a guide for the lifting-bar that slides vertically in said column.

B designates the lifting-bar which is fitted to slide loosely in the column 2 and is provided on its opposite sides with grooves, 8, which are fitted to slide loosely on the tongues 7. The lower end of said lifting-bar is provided with a foot, 9, which projects horizontally from the foremost side of said lifting-bar. Said foot is designed for engaging under a "low-down" load, when the latter is required to be lifted. The upper end of said lifting-bar is provided with a head, 10, which may be engaged under a weight or load when the lat-

ter is at a sufficient height to permit it. The rearmost side of said lifting-bar is provided with a series of ratchet teeth, 11, which afford the means for applying power to, and retaining, the lifting-bar when applied to raising a weight.

C designates the operating-lever for operating the lifting-bar B. Said lever is fulcrumed, as at 6, to the column 2, its fulcrumed end being bifurcated to form jaws, 12, which span the column 2.

D designates an engaging-clevis made in the form of an open-top loop whose side limbs are bifurcated to form jaws, 13, which pass onto both sides of the jaws 12 of the lever C so as to support both ends of pivots, 14, which joint the clevis to the lever C. The cross-bar, 15, of said clevis is fitted to engage in the ratchet-teeth 11 of the lifting-bar B in such manner that by imparting a vibratory motion to the lever C, the clevis D will be depressed to allow its cross-bar 15 to take under a different tooth from that with which it has previously been engaged, the re-engagement of of said clevis with a different tooth being indicated by dotted lines in Fig. 1.

E designates a bifurcated detent which is pivoted, as at 16, to the column 2. Said detent has a cross-bar, 17, which is fitted to take against the successive teeth 11 below the point reached by the cross-bar 15, so that, as the lifting-bar B is raised by the clevis D, said detent will take against a corresponding ratchet tooth 11 and retain the lifting-bar B in the position it has attained.

For the purpose of simultaneously withdrawing the clevis D and detent E from their engagement with the ratchet-teeth of the lifting-bar B, so as to allow any weight supported by the jack to descend quickly, the detent E is provided with a loop, F, which is jointed thereto and passes loosely over the upper side of the lever C, so that the latter will be left free to make its ordinary vibrations, as when raising the lifting-bar B, without taking against said loop, but when said lever is raised to a point exceeding its ordinary vibrations, as shown in Fig. 2, the lever C will take against the cross-bar of said loop and effect a dislodgment of the cross-bar 17 from the ratchet-tooth 11 with which it is at the time engaged. A continued rising movement of the lever C

will move the detent E to carry the clevis D out of its engagement with the ratchet-teeth 11, thereby releasing the lifting-bar B from all restraint and permitting it to sink down under the weight of its superimposed load. The lever C is provided with stops, or lugs 18 formed between the handle of said lever and the loop F, and stops, 48, formed between said loop and the fulcrum 6, which prevent the displacement of the loop F during the manipulations of the lever C in the ordinary operations of using my jack.

What I claim as my invention, and desire to secure by Letters Patent, is—

15 The combination, with a standard or column, a lifting-bar fitted to slide in said column and provided with ratchet-teeth, a loop-

shaped detent pivoted to said column and fitted to take into said ratchet-teeth, and a loop loosely jointed to the lower part of said detent, of an operating-lever pivoted to said column, and a loop-shaped clevis pivoted to said lever and fitted to take into the ratchet-teeth of said lifting-bar; said lever being arranged to pass through said loop below its cross-bar in such manner that it can effect the disengagement of the detent and clevis from the ratchet-teeth of said lifting-bar, as and for the purpose herein specified.

LUKE J. KELLY.

Witnesses:

WM. H. LOW,  
S. B. BREWER.