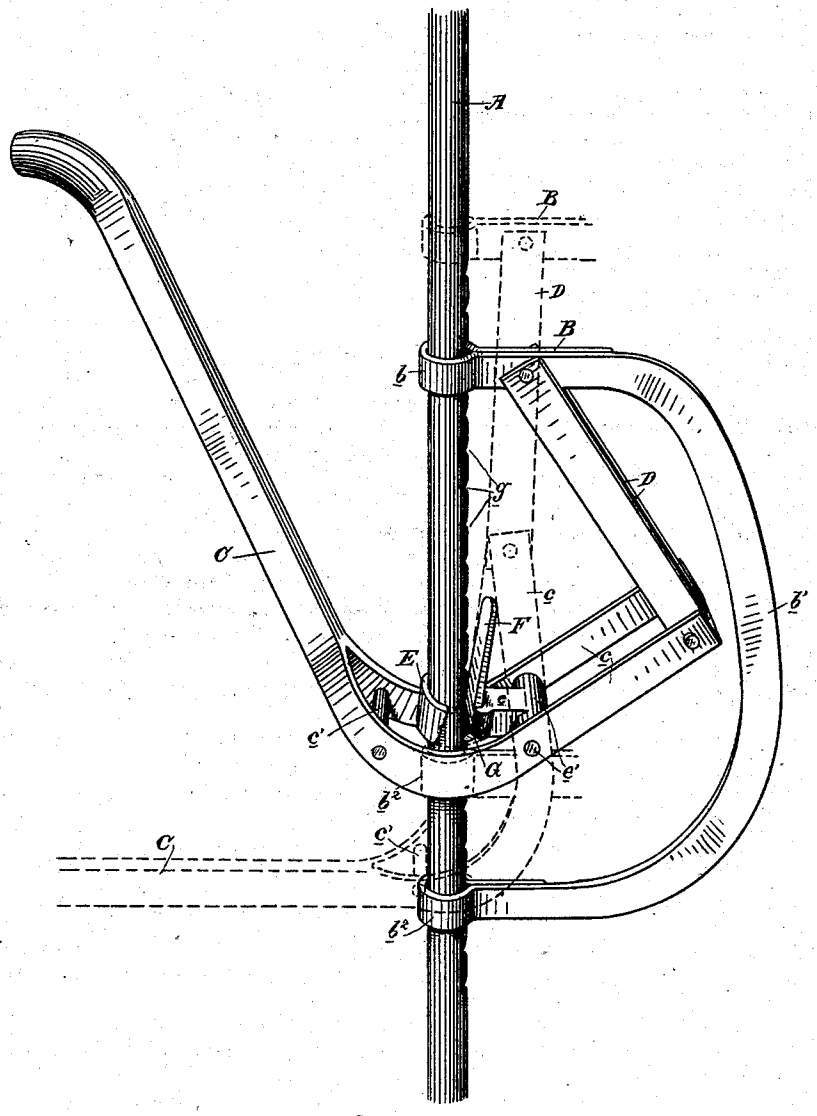
(No Model.)

J. P. HAYS.

LIFTING JACK

No. 406,523. Patented July 9, 1889.



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UNITED STATES PATENT OFFICE.

JAMES P. HAYS, OF NORTH TEMESCAL, CALIFORNIA.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 406,523, dated July 9, 1889.

Application filed January 16, 1889. Serial No. 296,547. (No model.)

To all whom it may concern:

Be it known that I, JAMES P. HAYS, of North Temescal, in the county of Alameda and State of California, have invented an Improvement in Lifting-Jacks; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of lifting-jacks; and my invention consists in the novel construction, combination, and arrangement of standard, lift, lever, clutch, and arm, which I shall hereinafter fully describe.

The object of my invention is to provide a simple and readily-adjustable lifting-jack.

Referring to the accompanying drawing, the figure is a view of my lifting-jack.

A is the standard.

B is the lift, having an eye or socket *b* fitted over the standard, adapting it to be moved vertically. The lift has a downwardly-extended arm *b'*, having a socket or eye b^2 on its end, fitted upon the standard below, and serving as a guide to render the vertical movement of the lift true and accurate and prevent binding on the standard.

C is the operating-lever. The inner end of the lever is forked, and, passing on each side of the standard, has its extremities *c* upturned, as shown. The space between the forks of the lever is large enough to pass by the lower or guide socket b^2 of the lift B.

D are links pivoted to the upturned ends *c* of the lever and to the lift B.

E is the clutch. This consists of a ring fitted freely upon the standard. It has a stem *e*, which is pivoted at *e'* between the forked upturned ends of the lever C.

The operation of these parts is as follows: When in a state of rest, the parts are all held up at any position on the standard to which they may have been adjusted by the clutch-ring E, which, under the weight of said parts, turns on its pivot *e'*, so as to cramp upon the standard by getting out of a horizontal plane. The clutch thus fixed serves as a fixed fulcrum, about which the lever C may now be moved, in order to bring its upturned ends and the links D into alignment, which thereby elevates the lift up to the weight to be raised, and continued movement under the same conditions raises the weight upon the lift until the lever ends and links, passing the vertical, are stopped by a cross-pin *c'* in the fork of the lever coming in contact with the standard, and the parts are held in this position, the clutch-ring still engaging the standard and serving as a support for the lift and weight.

In order to allow the parts to be readily moved down on the standard to primarily adjust them, I provide the stem *e* of the clutch-ring E with an upwardly-extending arm F. By pressing upon this arm, so as to bring it parallel with the standard, the clutch-ring E is brought to a horizontal, and thus ceases to bind or cramp upon the standard, so that all the parts may be allowed to descend. The arm F also serves the further purpose of a limiting-stop for the clutch-ring when by means of the lever C all the parts are bodily run up on the standard to adjust them primarily in the neighborhood of the weight to be raised. It serves this purpose by coming in contact with the standard, and thereby preventing the clutch-ring from cramping in the wrong direction, which it has a tendency to do when lifted by the lever C.

I may, if desired for greater security, provide the stem *e* of the clutch-ring E with a fixed pawl G, which is adapted to engage notches or teeth *g*, formed on the standard when the clutch cramps under the weight of the load, as heretofore described; but when the arm F is pressed inwardly the pawl G is thereby thrown out from its engagement.

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

1. In a lifting-jack, the combination of a standard, a lift vertically movable thereon, a lever connected with the lift, and a clutch connected with the lever and engaging the standard, said clutch forming the fulcrum for the lever and support for the lift, substantially as described.

2. In a lifting-jack, the combination of a standard, a lift vertically movable thereon, a lever connected with the lift, and a clutch fitted to and vertically movable upon the standard, said clutch being connected with the lever and forming, when engaging the standard, the fulcrum for the lever and support for the lift, substantially as described.

3. In a lifting-jack, the combination of a standard, a lift vertically movable thereon, a lever connected with the lift, and a clutch-ring pivoted to the lever and fitting over the standard, whereby it is adapted to cramp thereon and form a fulcrum for the lever and support for the lift, substantially as described.

4. In a lifting-jack, the combination of a standard, a lift vertically movable thereon, a lever having an upturned inner end, a link connecting said end with the lift, and a clutch-ring pivoted to the upturned end of the lever and fitting over the standard, whereby it is adapted to cramp thereon and form a fulcrum for the lever and support for the lift, substantially as described.

5. In a lifting-jack, the combination of the standard, the lift having an eye or socket fitted on the standard, and an extension with guide eye or socket fitted on the standard below, whereby said lift is adapted to move vertically on the standard and is guided in its movement, the lever having forked upturned ends passing on each side of the standard, the links connecting said ends with the lift, and the clutch-ring pivoted in the upturned ends of the lever and fitting over the standard, whereby it is adapted to cramp thereon and form a fulcrum for the lever and support for the lift, substantially as described.

6. In a lifting-jack, the combination of a standard, a lift vertically movable thereon, a lever connected with the lift, a clutch-ring pivoted to the lever and fitting over the standard, whereby it is adapted to cramp thereon and form a fulcrum for the lever and support for the lift, and the arm fixed to the clutch-ring for relieving it from the standard, substantially as described.

7. In a lifting-jack, the standard having the notches or teeth, the lift fitted to and vertically movable on the standard, the lever connected with the lift, the clutch-ring pivoted to the lever and fitting over and engaging the standard, as described, and the fixed pawl on the clutch-ring for engaging the notches or teeth of the standard, substantially as described.

8. In a lifting-jack, the standard having the notches or teeth, the lift fitted to and vertically movable on the standard, the lever connected with the lift, the clutch-ring pivoted to the lever and fitting over and engaging the standard, as described, the pawl on the clutch-ring for engaging the notches or teeth of the standard, and the arm on the clutch-ring for relieving it, substantially as described.

9. A lifting-jack consisting of the combination of the notched standard, the sliding lift with guide-extensions fitted on said standard, the forked lever passing on each side of the standard, the links connecting said lever with the lift, the clutch-ring pivoted to the lever and fitting over the standard, and the pawl and arm of said clutch-ring, substantially as described.

In witness whereof I have hereunto set my hand.

JAMES P. HAYS.

Witnesses:
S. H. NOURSE,
H. C. LEE.