(No Model.)

H. H. CLEVER.

LIFTING JACK.

No. 393,358. Patented Nov. 27, 1888.

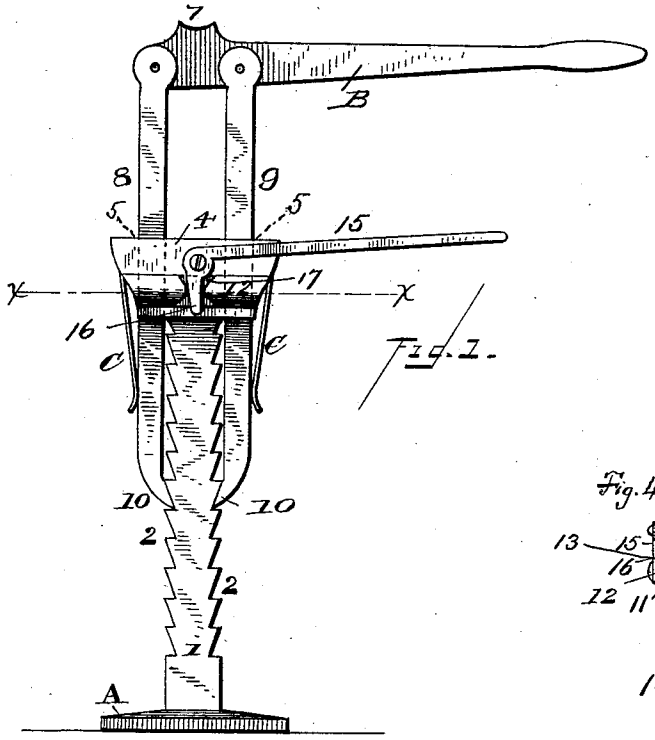


Fig. 1.

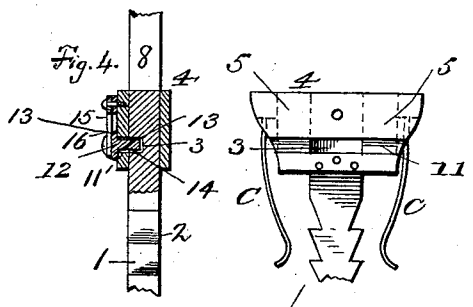


Fig. 3.

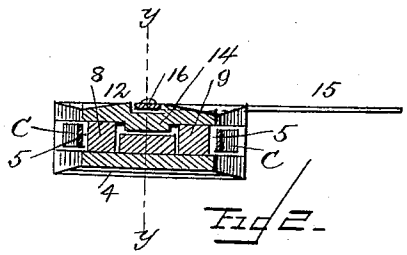


Fig. 2.

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LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 393,358, dated November 27, 1888.

Application filed May 18, 1888. Serial No. 274,273. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. CLEVER, a citizen of the United States of America, residing at Cleversburg, in the county of Cumberland and State of Pennsylvania, have invented certain new and useful Improvements in Lifting-Jacks; and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to improvements in lifting-jacks of that kind operated by a lever fulcrumed to two depending rods, the free ends of which engage the teeth or steps of a rack-standard, as will be hereinafter more fully described.

In the accompanying drawings, Figure 1 is a side view in elevation. Fig. 2 is a transverse sectional view taken on the line *x x* of Fig. 1 and looking from the bottom. Fig. 3 is a detail side view of the housing on top of the rack-standard with the spreading slide removed, the channels through the housing being indicated by dotted lines. Fig. 4 is a vertical sectional view of the housing, taken on the line *y y* of Fig. 2, showing the rack-standard and one of the lifting-rods broken off.

Reference being had to the drawings, A designates a base-piece, made of such dimensions as to meet the uses to which the machine may be designed. In this base-piece is rigidly secured the end of a standard, 1, having on its side edges racks or teeth 2, having inwardly-inclined side faces and straight end faces, substantially as seen in the drawings, to permit the depending lifting-rods to easily travel on the racks, and to lodge on the seats formed by their upper or end faces. The standard is extended above the rack part, with its side edges flush of the points of the racks, and has formed across its side face a groove, 3, in which the broad flange on the spreading slide engages and operates to move the depending rods from engagement with the racks.

On the upper end of the rack-standard is rigidly mounted a housing or casing, 4, having vertical channels 5 formed through it, in which the depending lifting-rods are arranged. These channels are made broader than the width of the lifting-rods, in order that these rods may have a limited outward movement sufficient to permit them to be thrown out of engagement with the racks. On the housing are secured springs C, the free ends of which press inward on the face of the depending rods and force them into engagement with the racks on the standard.

B designates a lifting-lever, formed with a weight-seat, 7, on its upper face between the points of connection to the depending rods, on which the weight is laid or engages. To the lever B, at points in line with the channels in the housing, are pivotally connected two depending lifting-rods, 8 9, having their lower ends turned inward, as at 10, the points of the turns setting on the ends of the racks with the inner faces of the turns against the inclined portions thereof. As stated heretofore, the ends of the springs C bear on the faces of the depending lifting-rods and keep them in engagement with the racks.

In the face of the housing is a transverse groove, 11, which aligns with the groove 3 across the standard, and in the groove is fitted the spreading slide 12, which has formed on its inner face an inwardly-projecting tongue, 13, having its middle portion, 14, broadened to project in the groove 3 across the standard and engage the faces of the depending lifting-rods.

To operate a spreading slide, a lever, 15, is pivoted on the face of the housing, and has an arm, 16, which extends downward and engages in a vertically-arranged slot, 17, made in the face of the spreading slide. By reciprocating the lever the spreading slide is in turn reciprocated, bringing the edges of the projecting part 14 alternately in contact with the inner faces of the lifting-rods and disengaging the lower ends from the racks.

My improved lifting-jack may be used to advantage not only for the purposes to which such implements are usually put, but it can be utilized as a log-lifter, a stump-puller, or as a means for forcing together the platens of a cider-press. A log may be lifted by making connection about the log and the lever, and the same arrangement will pull a stump. To

use it in a cider-press, a frame would be necessary and the lifting-jack operated in reverse position from that in which it usually stands.

Generally the operation is as follows: To lift the weight, it is arranged on the seat in the lever and the lever alternately reversed and lowered, which movements carry the lifting-rods upward on the racks, each lifting-rod becoming in alternation a fulcrum. To lower the weight, the levers are alternately operated, the movements of the lower lever thus throwing the lifting-rods to be thrown out of engagement in alternation and allowing them to be lowered by the movement of the lifting-lever. If it be desired to simply lower the lifting mechanism, the lifting-rods may be drawn from engagement with the rack and carried down to the point desired.

What I claim is—

The combination, with a base-piece, A, provided with a standard, 1, formed with racks 2 on its side edges and having a transversely-arranged groove, 3, across its upper part, and provided with a housing, 4, on its upper end, formed with vertical passages 5 to receive the lifting-rods, and having a transversely-arranged groove, 11, across its side face opening into the groove of the standard, of a lifting-lever, B, formed with a weight-seat on the upper edge, two depending lifting-rods, S 9, pivotally connected to the lifting-lever and arranged in the vertical passages of the housing, with their free ends to engage the teeth of the rack, springs C on the housing arranged to press the lifting-rods in engagement with the racks, a lever, 15, fulcrumed on the housing and formed with a depending arm, 16, and a spreading slide, 12, having a tongue, 13, formed with a broadened middle part, 14, to engage the grooves of the housing and standard, substantially as described, and for the purpose specified.

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

HENRY H. CLEVER.

Witnesses:

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