

D. HILTABIDLE.

LIFTING-JACKS.

No. 175,461.

Patented March 28, 1876.

Fig. 1.

Fig. 2.

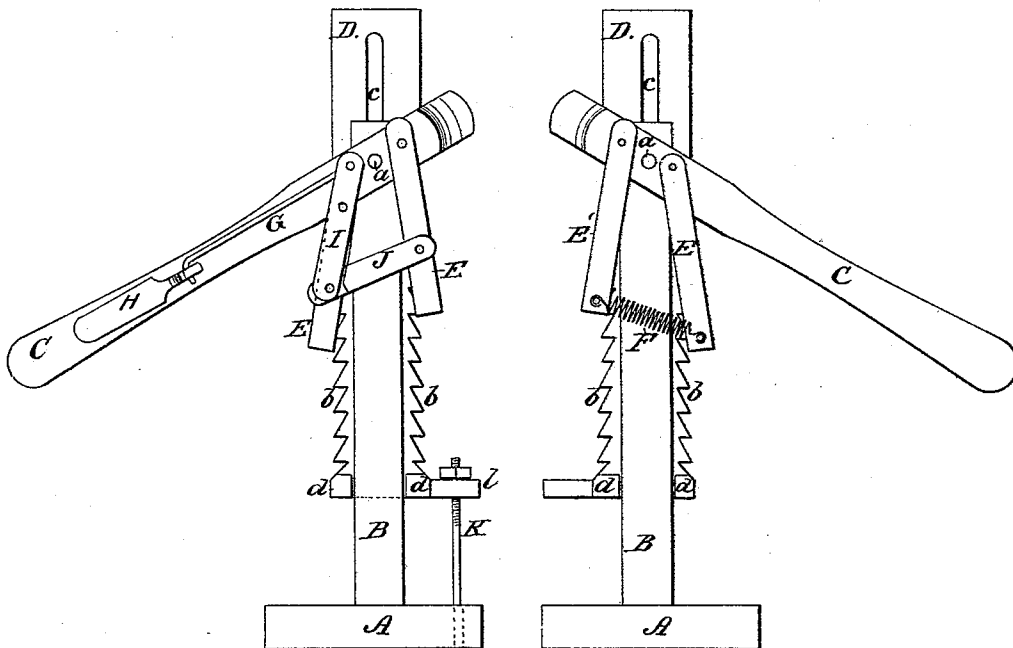
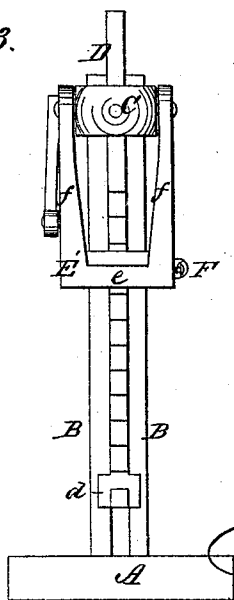


Fig. 3.



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IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. **175,461**, dated March 28, 1876; application filed February 28, 1876.

To all whom it may concern :

Be it known that I, DAVID HILTABIDLE, of York Road, in the county of Carroll and State of Maryland, have invented a new and Improved Lifting-Jack; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a vertical side elevation; Fig. 2, the same view from the opposite side; Fig. 3, an end elevation.

My invention relates to that class of lifting-jacks in which two lifting-links are pivoted to an oscillating lever upon opposite sides of its fulcrum, and are arranged to operate alternately upon opposite sides of a double-ratchet bar to lift the load.

The invention consists in the construction and arrangement of devices operating in connection with the links and ratchet-bars, as hereinafter more fully described.

In the drawing, A represents the base of the jack, upon which is constructed two standards, B B. C is a lever, pivoted at the top of the standards upon a bolt, *a*. This lever may be made either forked and with an open end or it may be slotted and made double, with a handle on both sides for operating the jack when a large expenditure of force is required for lifting heavy loads. D is the movable bar, which is contained between the two standards and provided with ratchet-teeth *b b* upon both sides. Said bar is slotted longitudinally at *c* its entire length, and through this slot passes the central pivot-bolt *a*, upon which the lever is pivoted.

This arrangement serves, together with the lugs *d d* on the lower part of the bar, to guide the bar in its vertical movement.

E E' are two lifting-links, pivoted to the lever C upon opposite sides of its fulcrum, and arranged to operate upon the ratchet-teeth upon the same side of the fulcrum upon which they are pivoted. Said links have an end portion, *e*, which is made to fit the ratchet-teeth, and two branches, *f f*, which are pivoted upon opposite sides of the lever, so as to allow the ratchet-teeth to pass between as they are successively engaged by the portion *e*.

The two lifting-links E E' are held together by a spring, F, so as to engage perfectly the under side of the ratchet-teeth and prevent

slipping. This spring may be of rubber or metal, and permits of the links being pivoted upon the same side of the fulcrum of the lever upon which they operate upon the ratchet-teeth.

By means of the above-described arrangement the central ratchet-bar may be made to rise with its load by simply oscillating the lever in a vertical plane, which motion causes the two links to pass alternately below the ratchet-teeth upon opposite sides of the central bar and elevate the same.

If the device is to be used for lifting very heavy loads, the construction of the jack is correspondingly adapted to this use by pivoting the lifting-links close to the fulcrum. When rapid lifting of light loads is required, the links are pivoted farther from the fulcrum.

To enable the lifting-bar to be readily lowered and the jack removed after it has accomplished its work, I pivot upon the lever C a small hand-lever, H, one end of which is connected, through a rod, G, with a lever, I, pivoted to one of the branches of link E upon the side opposite the spring. The lower end of the lever I pivot to the end of a link, J, which is pivoted at the other end to the other lifting-link E', so that by grasping and pressing the hand-lever H the two links E E' are thrown apart and the bar D may be lowered.

To enable me to use the device as thus described for swinging and transporting heavy logs beneath a set of wheels or a wagon, the lower part of the bar D is provided with an offset, *l*, through which a hooked rod, K, passes, which connects the sling supporting the log with the jack-bar. This enables me, with the use of two jacks in a wagon, to transport heavy logs, the rods K passing through the bottom of the wagon.

Having thus described my invention, what I claim as new is—

1. The combination with the movable bar D, having offset *l*, of the hooked rod K, as and for the purpose set forth.

2. The combination with the lifting-links E E' of the link J, lever I, rod G, and hand-lever H, as and for the purpose described.

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Witnesses :

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