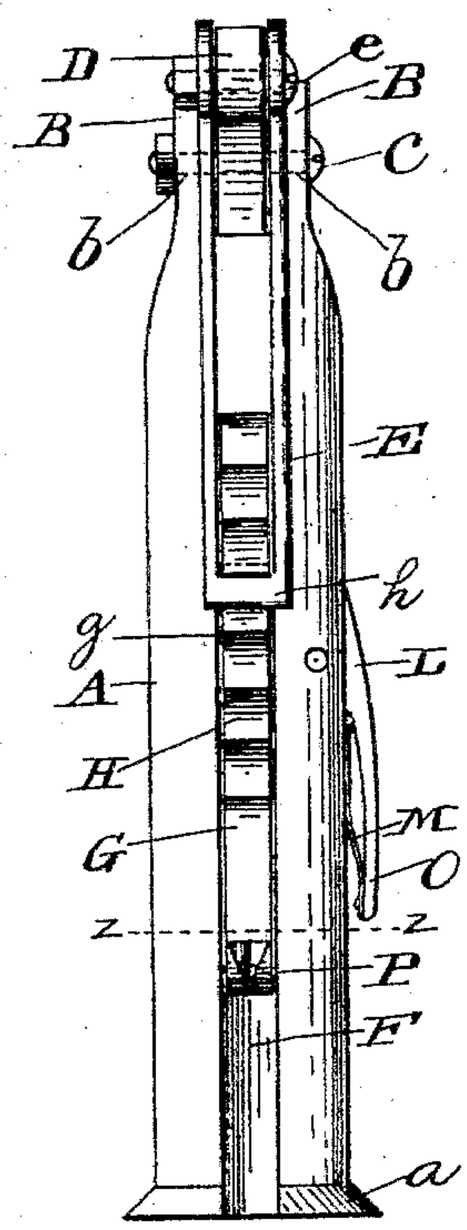
(No Model.)

D. T. HILL.

LIFTING JACK.

No. 597,850. Patented Jan. 25, 1898.

Fig. 1.



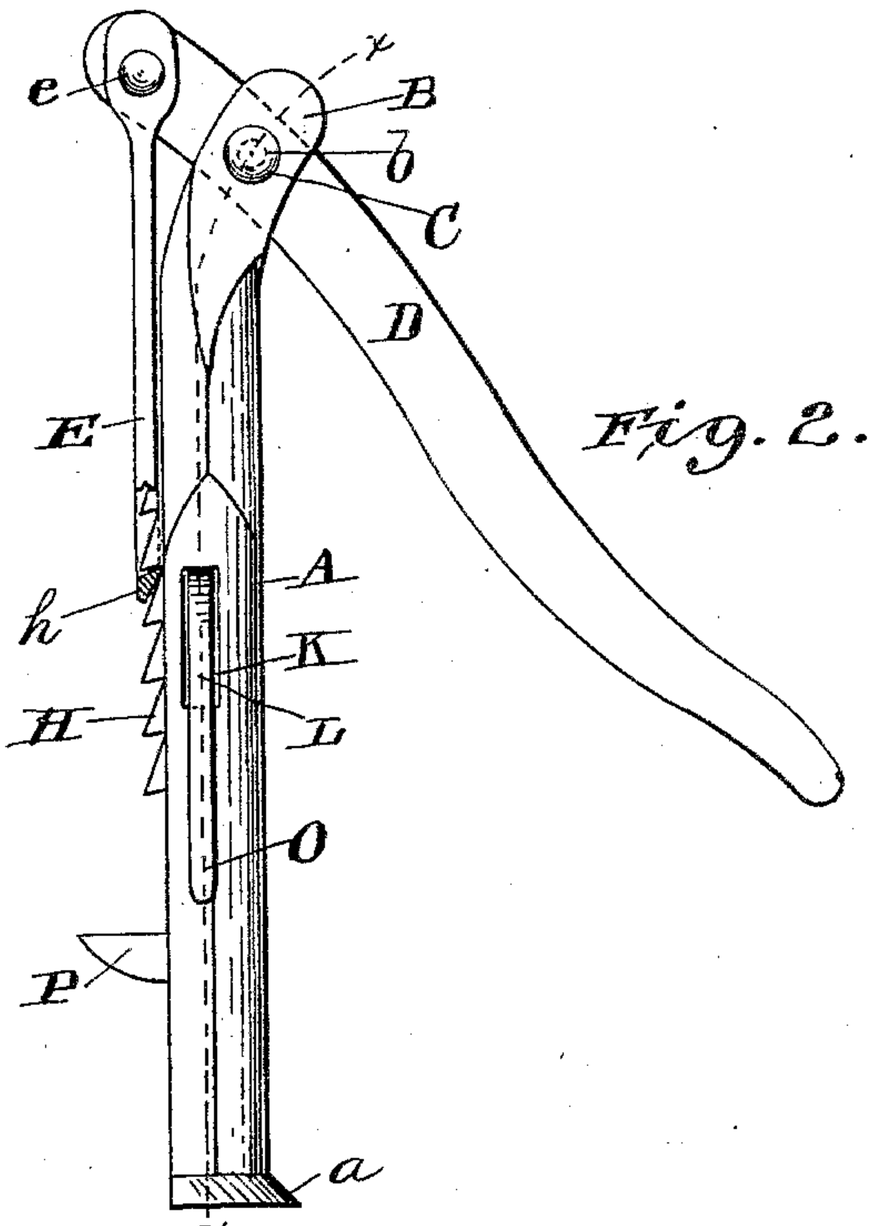


Fig. 2.

Fig. 3.

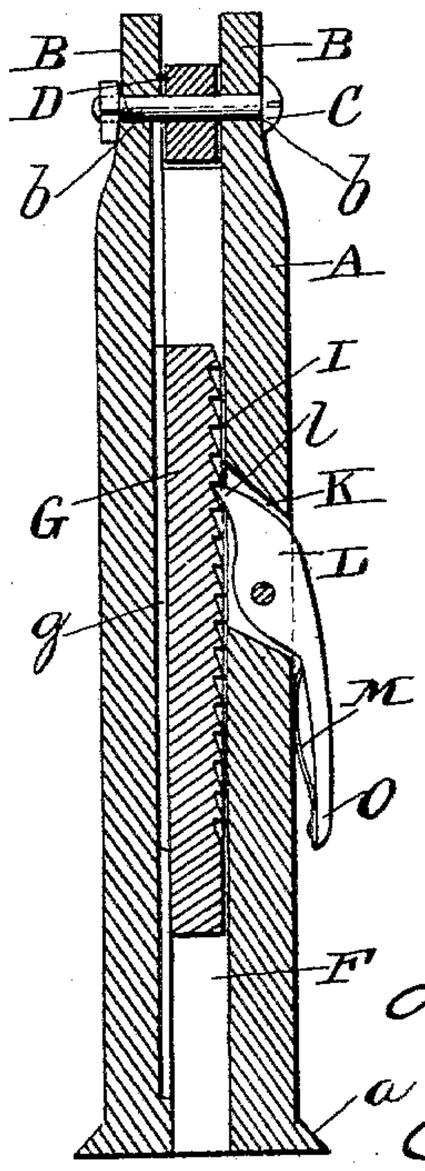


Fig. 4.

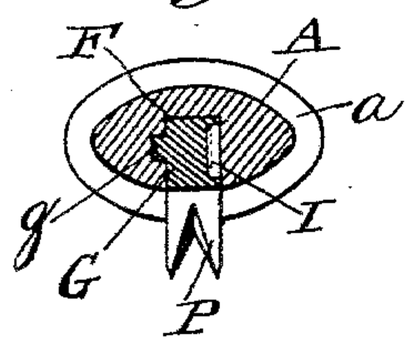
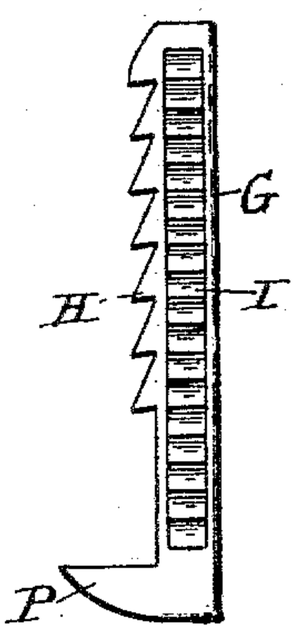


Fig. 5.



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UNITED STATES PATENT OFFICE.

DAVID T. HILL, OF SYRACUSE, NEBRASKA.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 597,850, dated January 25, 1898.

Application filed February 23, 1897. Serial No. 624,606. (No model.)

To all whom it may concern:

Be it known that I, DAVID TURPIE HILL, a citizen of the United States, residing at Syracuse, in the county of Otoe and State of Nebraska, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification.

My invention relates to lifting-jacks, and more particularly to jacks for drawing nails and railroad-spikes and lifting railroad-rails, railroad-tracks, cars, corners of buildings, large stones, or timbers, and has for its object to provide a device of simple construction having few parts, which may be manufactured cheaply and operated quickly and successfully.

I accomplish the object of my invention in the manner and by the means hereinafter more particularly pointed out and described in detail, reference being made to the drawings accompanying this specification, in which the same letters of reference indicate the same parts in all the figures of the drawings.

Figure 1 is a front elevation of my improved lifting-jack. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical section on the line *x x* of Fig. 2. Fig. 4 is a cross-section on the line *z z*, Fig. 1; Fig. 5, a detail of lifting-bar.

In carrying out my invention I provide a vertical standard A, provided with a flared base *a*, formed integral therewith or rigidly attached to the end thereof to form a suitable support. The upper end of the standard is inclined backward and is provided with two arms or lugs B, having eyes or apertures *b* therethrough to receive a pin or bolt C, on which is fulcrumed between the arms or lugs B a lever D. The pin or bolt C may be provided with a head on one of its ends and have its opposite end threaded to receive a nut to hold it in place, or it may have an eye through one end to receive a key, the opposite end being provided with a head. When the lifting-jack is of considerable weight, a removable pin or bolt is preferable in order to separate the parts, whereby they may be handled more readily in moving it from place to place. Pivotally connected to the end of the short arm of the lever D is a depending loop E, the arms of which rest on each side of the short arm of the lever and are secured thereto by a pin or bolt *e*, passing through eyes in the ends of both arms and lever.

The standard A is provided throughout its length and in the face thereof with a deep rectangular recess or groove F to receive the lifting-bar G, fitted therein. The lifting-bar is provided on one side with a feather *g*, and the corresponding wall of the recess F is provided with a groove to receive the feather *g* and guide and retain the bar in the recess. The groove terminates a distance above the bottom of the standard to prevent the bar G from dropping out of the recess when the standard is lifted up when in an upright position. The lifting-bar G has formed on its face a series of spurs or notches H, equidistant from each other, the lower side of the spur or notch extending at a right angle from the bar, the latter being cut away gradually from the end of the projecting spur to a depth to form the next spur above it in the series. The yoke *h*, which connects the arms of the loop E, is long enough to permit the arms of the loop to rest on each side of the face of the lifting-bar G, and the rear side of the yoke *h* is cut away at an acute angle corresponding to the angle at which the face of the lifting-bar is cut away between the spurs or notches H, this construction permitting the yoke to move readily downward over the notched face of the lifting-bar and quickly and securely engage with the notches or spurs thereon when drawn up by the lever D. The side of the lifting-bar G is provided with a series of notches I, formed in the surface thereof at equal distances from each other and at about one-half the distance apart that the notches or spurs H are formed on the face of the bar. A slot K is formed through the side of the standard midway of its length, and pivotally secured therein is a spring-pressed dog L, the nose *l* of which projects within the recess or groove F and engages in the notches I in the lifting-bar. A leaf-spring M is secured to the tail of the dog L at its outer end and rests at its inner end against the side of the standard at the termination of the slot K and presses the nose of the dog against the lifting-bar. As the lifting-bar is drawn up the nose of the dog is pressed into the notches therein and prevents the bar from being pulled down. The tail of the dog is of sufficient length to

provide a lever O, with which the nose may be thrown out of the notches in the bar when desired. The lower end of the lifting-bar is provided with a foot or with a claw P, formed integral therewith or attached thereto in any suitable manner.

Two bars may be provided, one with claws and the other with a foot, one for drawing nails or spikes and the other for lifting. The lifting-bar is placed in the groove or recess by inserting it at the upper end of the standard, the lever-handle being first removed.

My lifting-jack is simple and strong and its parts are not liable to get out of order, and it is so constructed that great power may be quickly applied without loss by reason of friction of the parts, and the lifting-bar may be rapidly raised. The upward movement of the bar is produced by a vertical pull, and at the same time the bar is held near the center of the standard.

I am aware that it is not new to raise the lifting-bar of a jack by means of a loop secured at its upper end to the short arm of a lever-handle and engaging with notches on the lifting-bar. Lifting-jacks of this kind have usually been so constructed that the rear side of the lifting-bar is drawn against the standard and a considerable percentage of the lifting force thereby wasted, such construction also tending to rock the standard on its base and cause the foot or bracket attached to the bar to lose its hold. In my device the vertical pull avoids this serious loss of lifting force by reason of friction and the tendency to rock the standards, and is in that a great improvement.

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

A lifting-jack consisting of a standard provided with a supporting-base and having a longitudinal recess in its face, said recess having in one of its side walls a groove extending from the top of said standard to a short distance from the bottom of said standard, a lifting-bar slidable in said recess, said lifting-bar having spurs on its face, a feather on one side adapted to move in said groove and notches on the side opposite said feather, a spring-pressed dog pivotally secured in the side of said standard and adapted to engage said notches, a spring secured to said dog and adapted to press the nose of said dog into supporting contact with said notches, a lever-handle pivotally fulcrumed at the top of said standard, and a loop having its arms pivotally attached to the short end of said lever-handle and its yoke end engaging said spurs, substantially as shown and described.

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

DAVID T. HILL.

Witnesses:

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S. J. CARPENTER.