No. 622,512. Patented Apr. 4, 1899.

I. H. MURDICK.

LIFTING JACK.

(Application filed Dec. 20, 1898.)

(No Model.)

Fig. 1.

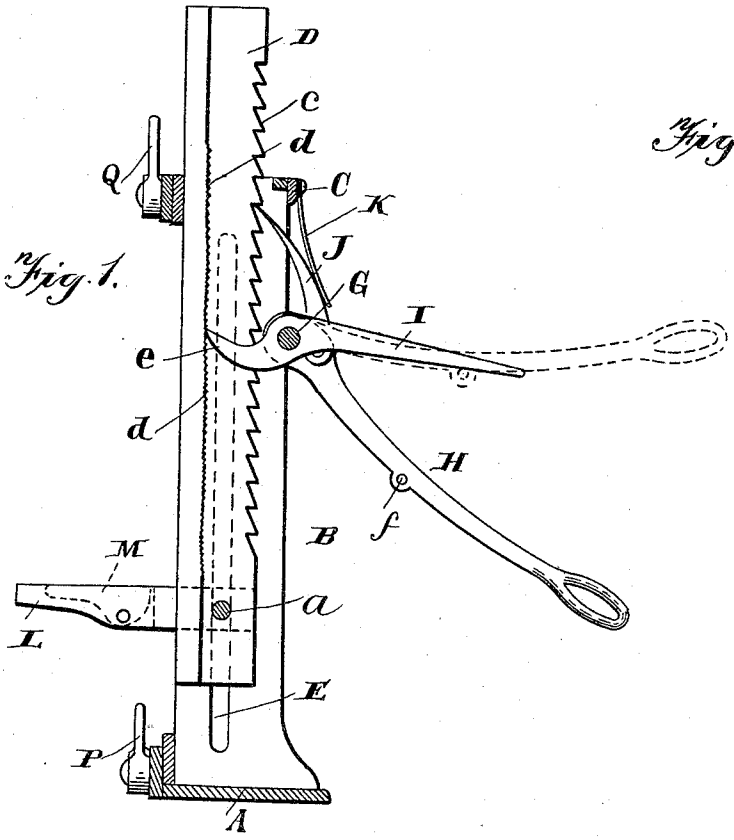


Fig. 4.

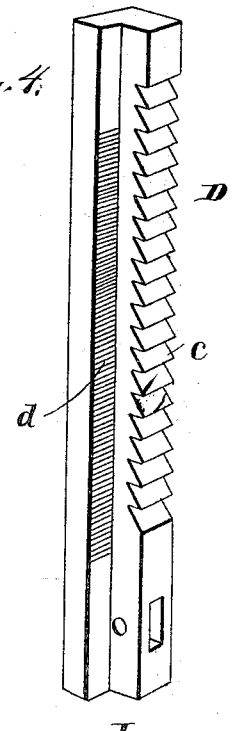


Fig. 2.

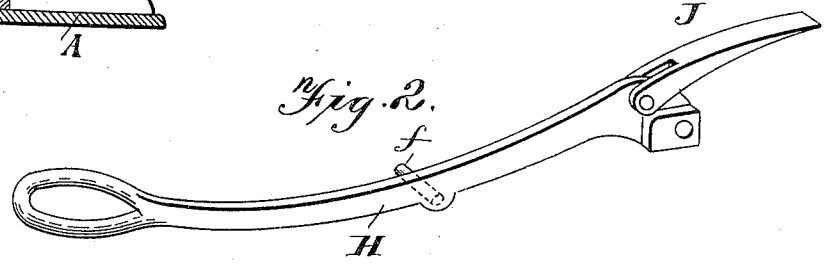
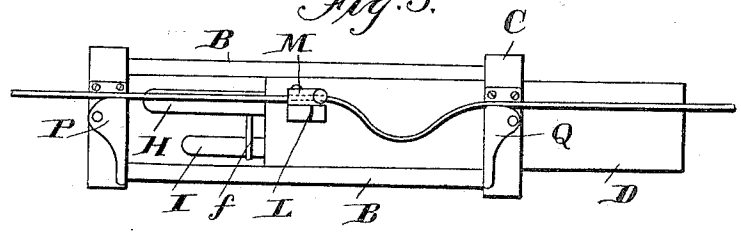


Fig. 3.



WITNESSES

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ISRAEL H. MURDICK, OF HARTFORD, MICHIGAN.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 622,512, dated April 4, 1899.

Application filed December 20, 1898. Serial No. 699,861. (No model.)

To all whom it may concern:

Be it known that I, ISRAEL H. MURDICK, a citizen of the United States, residing at Hartford, in the county of Van Buren and State of Michigan, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification.

My invention relates to improvements in lifting-jacks, and pertains to a construction substantially as hereinafter shown and described, and particularly pointed out in the claims.

The object of my invention is to provide a lifting-jack having a lifting-lever and a locking-lever, the latter adapted to be operated by the lifting-lever for locking the follower in its raised position.

In the accompanying drawings, Figure 1 is a longitudinal sectional view showing the follower partly raised, the locking-lever holding it in its raised position, and the operating-lever lowered in solid lines for a second lifting movement or operation and raised in dotted lines. Fig. 2 is a detached view of the operating-lever and the pawl carried thereby. Fig. 3 is a view showing the jack being used as a wire-stretcher. Fig. 4 is a detached perspective view of the follower.

Referring now to the drawings, in which A indicates the base of the jack, B two parallel standards extending therefrom, and C a top cap which unites the upper ends of the standards, D is a follower which is situated between the said standards B and has its upper end guided by passing through a correspondingly-shaped opening in the end of the cap C and its lower end guided by a pin *a*, which passes through and into longitudinal slots E of the standards B. This follower D is provided with a longitudinal series of ratchet-teeth *c* and at one side thereof with a longitudinal locking-surface *d*. This locking-surface is preferably roughened, as here shown, though it may be left smooth, if desired.

Passing transversely through the standards B, near their upper ends, is a pivotal pin or bolt G, and pivotally supported upon this bolt is an operating-lever H and a locking-lever I. This operating-lever H carries a lifting-pawl J, which is pivoted at its outer end to the lifting or operating lever H at a point outside of its pivotal point, as clearly illustrated. Secured at its upper end to the standards is a leaf-spring K, the lower end thereof engaging the pawl J, which serves to hold the said pawl in engagement with the ratchet-teeth of the follower when the lever is lifted for the purpose of raising the follower, as will be readily understood.

The inner end of the locking-lever I is provided with a cam-surface *e*, adapted to engage the locking-surface of the follower, as illustrated in Fig. 1, for the purpose of holding the follower in its raised position after being lifted through the movement of the operating-lever. Projecting laterally from the operating-lever H is a pin or projection *f*, adapted to engage the under side of the locking-lever when the lifting or operating lever is raised, whereby the outer end of the locking-lever is correspondingly lifted and its inner cam-shaped end carried in engagement with the locking-surface of the follower. In this way the locking-lever is carried in its locking position at each operation of the elevating or operating lever, whereby the follower is locked at each upward movement thereof through the medium of the operating-lever. When the follower is lifted by the operating-lever, the shape of the cam-shaped end of the locking-lever causes it to release the follower, whereby it can be raised; but the relative arrangement of the locking-lever and the elevating-lever is such that when the elevating-lever has reached its upward limit of movement the locking-lever is carried in engagement with the locking-surface of the follower and holds it in its raised position.

Projecting from the lower end of the follower is a step L, as is usual in lifting-jacks, for the purpose of lifting any desired object; or if the conditions are such as to make it desirable the upper end of the follower may be used for that purpose, as is also usual in devices of this character.

In order to adapt my lifting-jack for stretching wires of fences, the step L is provided with a locking lever or cam M, which is adapted to grasp the wire, as illustrated in Fig. 3, and by the movement of the operating-lever the follower is moved longitudinally

between the standards B, thus drawing the wire as clearly illustrated, and when the follower has reached its limit of movement the locking-cam P, carried by the base of the jack or lower end of the standards B, serves to grip and hold the wire against slipping while another bite is being taken by the locking-cam of the follower. In this way the wires of a fence can be readily and conveniently stretched and when stretched secured in the usual way to the posts by staples.

The opposite or upper end of the jack is provided with a clamp Q, similar to the clamp P, only it operates to clamp the wire in the opposite direction. When it is desired to stretch the wire of a fence, the jack is placed longitudinally the wire and the clamps Q and P are fastened thereto. The follower is then placed in its lowest position and the clamp M turned to secure the wire to the step of the follower. Then by the movement of the operating-lever the follower is moved to the opposite end of the standards B, thus stretching the wire between the clamps P and Q. When the follower has reached its limit of movement, the clamp P is again made to secure the wire, and the follower then again moves to its lowest position and the wire again grasped by the clamp M and the follower moved to the opposite end of the jack, and this operation repeated until the wire is stretched to the desired tension, the slack of the wire being between the clamps P and Q at opposite ends of the jack, as illustrated. By the operation just described the wire can be stretched in both directions, if desired; but should it be desired to stretch the wire in one direction the clamp P alone can be used and the lower end of the jack placed against a support or other brace.

From the above description it will be seen that I have produced a simple and effective lifting-jack adapted for the ordinary purposes of devices of that character and at the same time have provided a means whereby the lifting-jack may be used for stretching the strands of a wire fence.

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

1. A lifting-jack comprising a frame, a follower longitudinally movable therein and provided with ratchet-teeth, an operating-lever carrying a pawl adapted to engage the said ratchet-teeth, and a locking-lever adapted to lock and release the follower, the operating-lever constructed to operate the locking-lever for carrying it in locking engagement with the follower, substantially as described.

2. A lifting-jack comprising a supporting-frame, a follower longitudinally movable therein and provided with a longitudinal series of ratchet-teeth and at one side thereof a longitudinal locking-surface an operating-lever carrying a pawl for engaging the ratchet-teeth of the follower, a locking-lever adapted to engage said locking-surface, the outer ends of the locking-lever and operating-lever interlocking for the purpose of causing the locking-lever to engage the follower when the operating-lever is lifted, substantially as described.

3. A lifting-jack comprising a frame, a follower longitudinally movable therein, and provided with ratchet-teeth, an operating-lever carrying a pawl for engaging the teeth, a locking-lever intermediately pivoted at one side of the operating-lever, the inner end of the locking-lever being cam-shaped and its opposite end extending parallel the operating-lever, and the operating-lever having a projection or stud adapted to engage the under side of the locking-lever, the parts adapted to operate substantially as described.

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

ISRAEL H. MURDICK.

Witnesses:
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GEORGE H. PARKS.