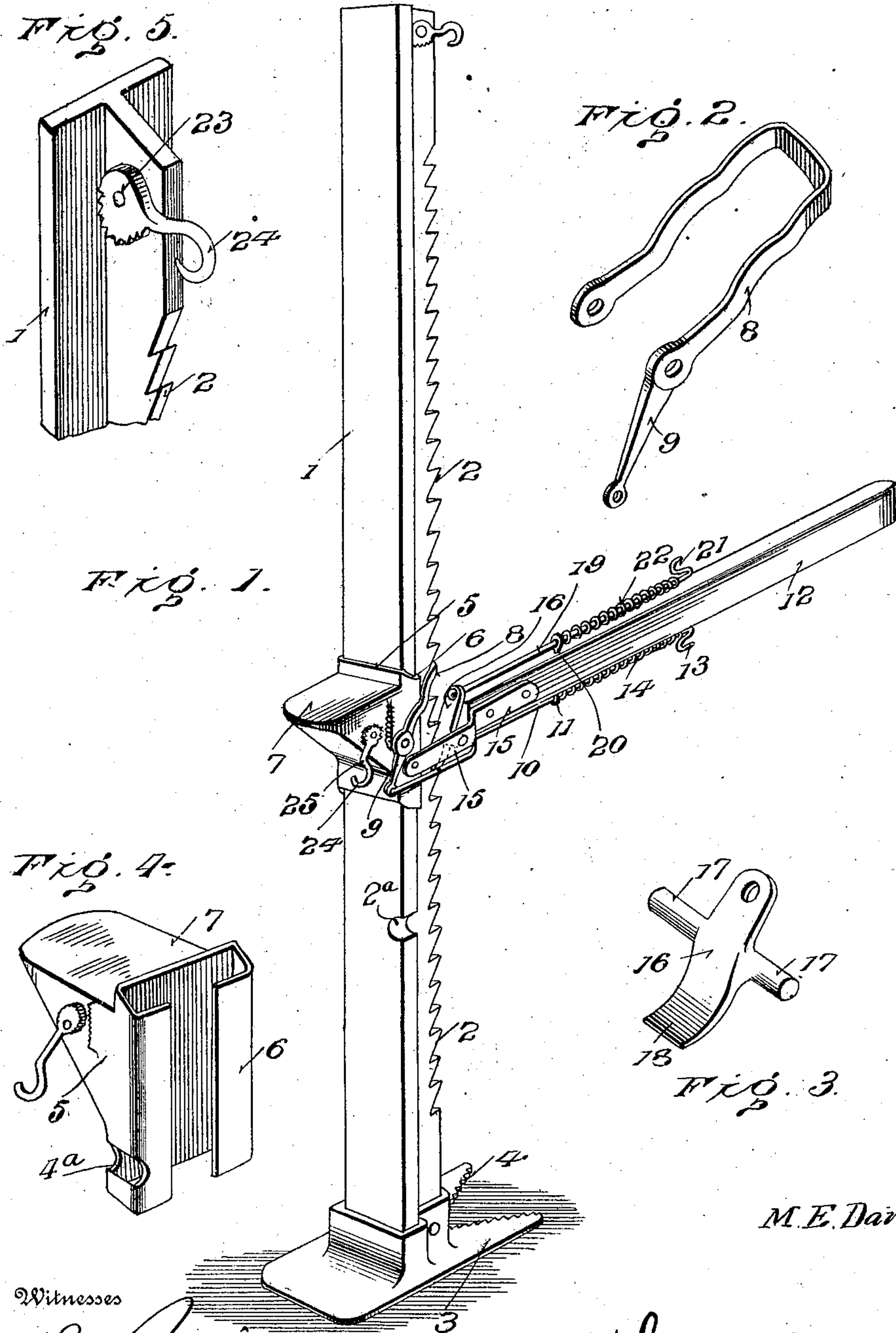


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M. E. DAVIS.
LIFTING JACK.

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MARSHAL E. DAVIS, OF BLOOMFIELD, INDIANA.

LIFTING-JACK.

No. 859,924.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MARSHAL E. DAVIS, a citizen of the United States, residing at Bloomfield, in the county of Greene and State of Indiana, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification.

This invention contemplates certain new and useful improvements in that class of lifting jacks in which a runner or bracket is caused to climb up and down a standard by a pump handle like motion of an operating lever, and the invention has for its object a very simple, durable and efficient construction of jack of this character, as will be hereinafter specifically described and claimed.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of my improved lifting jack. Fig. 2 is a detail perspective view of the clevis detached. Fig. 3 is a similar view of the pawl employed. Fig. 4 is a detail perspective view of the runner detached. Fig. 5 is a detail perspective view of the upper end of the standard.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The standard 1 of my improved jack is a T-bar, as shown, and is provided along one edge with a series of comparatively closely grouped notches or teeth 2. It is secured at its lower end by a detachable bolt or similar fastener within the T-shaped socket of a base or foot 3 which is preferably formed at one end with serrated jaws 4, so that the foot, when detached, may be used as a wrench or like tool.

5 designates a runner or shoe which is provided with overhanging flanges 6 that are adapted to take around the opposite side edges of the standard 1, as shown, in order to slidably mount the runner upon the standard. The runner 5 is formed with the lifting bracket or support 7, preferably integral therewith. An actuating yoke or clevis 8 is pivotally mounted upon the runner 5 upon opposite sides of the same and in normal position extends upwardly and rearwardly as shown, and embraces the standard and is adapted to engage with its cross bar in the respective notches 2 of the ratchet surface of the standard 1. One arm of the yoke 8 is extended below the fulcrum point, as indicated at 9, and is pivotally connected to the front end of a releasing rod 10, which is mounted to slide through a screw eye or similar device 11 secured to the lower side of the actuating handle 12. The rod 10 is formed at its rear end with a finger piece 13 by which it may be manipulated or slid against the tension of the spring 14 which bears against the finger piece and also against the screw eye

or like loop 11. The operating handle or lever 12 embodies at its front end a forked portion 15 which is composed of two straps, as shown, that are riveted or otherwise secured to the opposite sides of the wooden portion 60 of the operating lever, the front ends of said yoke or straps being journaled upon the runner 5 below the fulcrum points of the loop 8, as clearly illustrated in the drawing. Within this fork 15 a lifting pawl 16 is journaled, preferably by means of two small wrist pins 17 65 projecting in opposite directions and fitting within apertures formed for them in the straps which constitute the yoke portion of the operating lever. The pawl 16 projects both below and above the wrist pins 17 and its operative lower end 18 is adapted to rest in the several 70 notches of the ratchet edge 2 of the standard, while its upper end is formed with an aperture in which the front end of a second releasing rod 19 is received. This rod 19 is guided by means of a loop or screw eye 20 on the upper side of the operating lever, it is formed at its outer 75 end with a finger piece 21, and it has the spring 22 encircling it between the said guide and the finger piece.

The upper end of the standard 1 carries an eccentric wire clamp 23 which is pivoted thereon and is adapted to co-act with one of the flanges of the T-bar 80 of which the standard is composed to constitute a wire clamp device. The end of this eccentric 23 is preferably formed into a hook 24, by which it may be engaged in a chain or the like for various purposes for which these farm tools are designed. Co-acting 85 with the wire clamp 23 is a second wire clamp 25 of similar hook-shape mounted upon the runner 5.

In the practical operation, to cause the runner or shoe 5 to climb the standard, an up and down movement of the operating lever 12 is all that is necessary. 90

From the foregoing description in connection with the accompanying drawing, it is evident that when the handle is depressed at its outer or free end, the pawl 16 will be the fulcrum and support the load, while the opposite end of the operating lever 12 will 95 cause the runner 5 to slide upwardly on the standard, the clevis or yoke 8 sliding upwardly along the ratchet edge in this movement. Upon the upward or return movement of the operating handle 12, it is evident that the yoke 8 will catch and support the load and 100 the runner 5 be stationary with respect to the standard 1, while the handle 12 is raised about its front end as a pivot, the pawl being thereby carried bodily upward and sliding along the teeth or notches of the ratchet edge, so as to obtain a fresh hold upon the 105 standard at a higher elevation. In order to operate the lever or handle, it is again lowered to effect a further raising of the runner. In this manner the runner may be caused to climb the standard step by step. In order to effect a downward climbing of the runner 110 upon the standard, the operating handle 12 will first be slightly raised and at the same time the operator

will push inwardly upon the upper releasing rod 19 until the pawl 16 shall have become completely disengaged from the ratchet edge 2, whereupon the operator will depress the operating lever 12 while the pawl is held disengaged from the ratchet edge of the standard. This will obviously lower the pawl as a whole until it comes to rest at a lower elevation with respect to the standard 1, and the operator may then, by actuating the other releasing rod 10, throw the yoke 8 into and out of engagement with the ratchet edge 2, and hold it clear from such engagement, while the lever is again raised at its outer end to allow the runner 5 to lower. This operation is repeated until the runner shall have been lowered to the proper or desired elevation. It is obvious that the wire clamps may be used in effectively tightening wire fences, and that the hooks of the said clamps may be used as efficient means for pulling up stumps or for similar uses, to which devices of this character are put.

It will thus be seen that I have provided a lifting jack of the climbing runner type, which may be easily controlled to lift or lower a load, and which is durable in construction as well as simple and composed of comparatively few parts that may be easily manufactured, assembled and disassembled.

If desired, the side of the standard may be formed with a notch 2^a and the runner 5 with a similar notch 4^a. Then by working the runner up or down until the two notches register, a wire may be placed in the coinciding notches and sheared off by the runner.

Having thus described the invention, what is claimed as new is:

1. A lifting jack, comprising a ratchet standard, a runner slidably mounted on said standard, an operating lever fulcrumed on the runner, a spring pressed pawl journaled on said operating lever and adapted to engage the

ratchet of the standard, a clevis fulcrumed on the runner and arranged for engagement with the ratchet, and spring pressed rods secured to said clevis and pawl respectively, and adapted to release the same from engagement with the ratchet.

2. A lifting jack, comprising a ratchet standard, a runner slidably mounted on said standard, an operating lever fulcrumed on said runner, a pawl journaled on said lever and provided with a downwardly facing end arranged for engagement with the ratchet of the standard, a clevis fulcrumed on said runner and extending rearwardly and upwardly therefrom and arranged to engage the ratchet above the pawl, and spring pressed rods mounted to slide longitudinally on said operating lever and secured to the pawl and clevis, respectively.

3. A lifting jack, comprising a ratchet standard, a runner slidably mounted on said standard, an operating lever fulcrumed on said runner, a pawl journaled on said operating lever and arranged for engagement with the ratchet of the standard, a clevis fulcrumed on said runner and extending rearwardly and upwardly therefrom and arranged for engagement with the ratchet, said clevis being provided with a downward and forward extension below its fulcrum points, and spring pressed releasing rods carried by the operating lever and connected, respectively, to the pawl and to the said extension of the clevis.

4. A lifting jack, comprising a ratchet standard, a runner slidably mounted on said standard, a clevis fulcrumed on said runner and arranged for engagement with the ratchet of the standard, an operating lever provided with a forked front end embracing the standard and said runner and fulcrumed on the latter, a pawl journaled within the forked end of the operating lever and projecting above the same into engagement with the ratchet of the standard, and a spring pressed rod carried by the operating lever and connected to the upwardly extending end of the said pawl.

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

MARSHAL E. DAVIS. [L. S.]

Witnesses:

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