L. T. & T. H. GOOLSBY.

LIFTING JACK, WIRE STRETCHER, AND POST PULLER.

APPLICATION FILED JUNE 20, 1908.

913,281.

Patented Feb. 23, 1909.

2 SHEETS—SHEET 1.

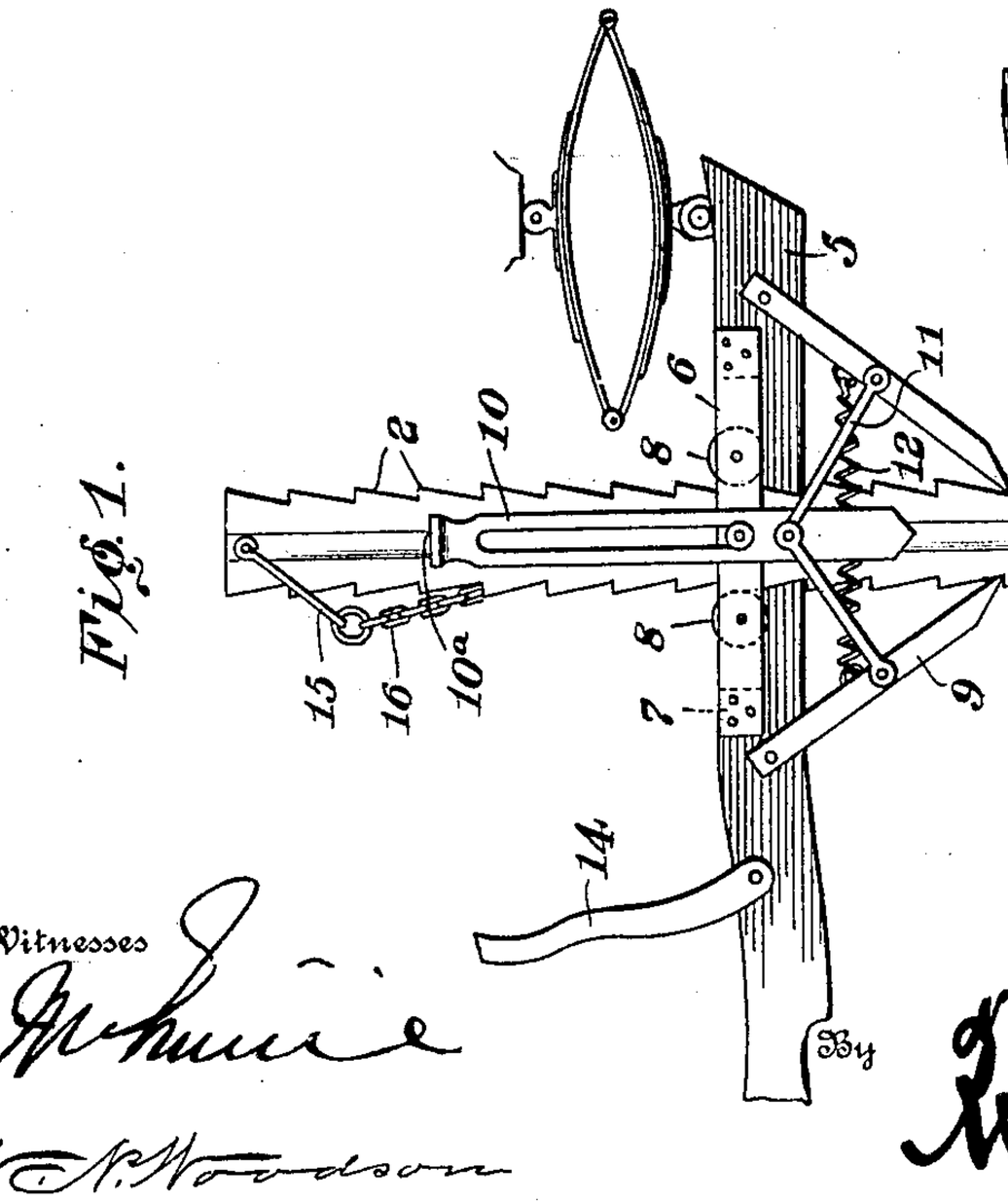

Fig. 1.

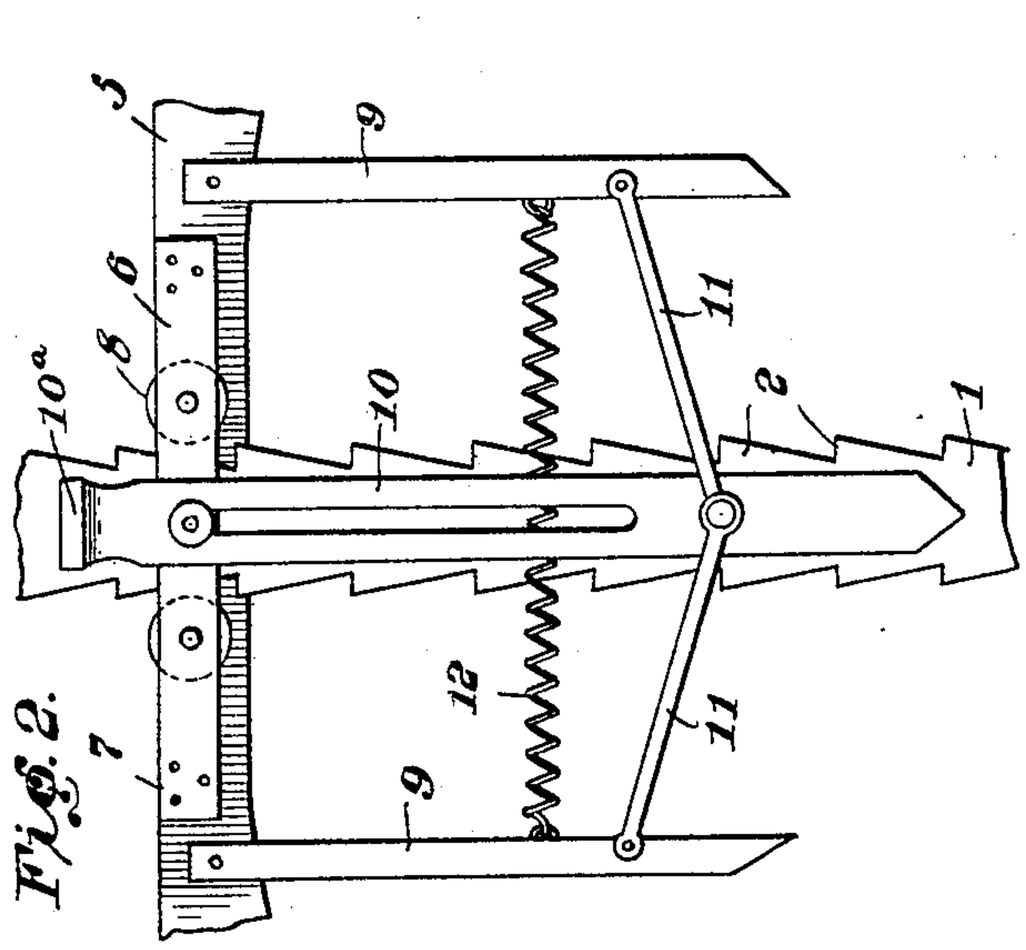

Fig. 2.

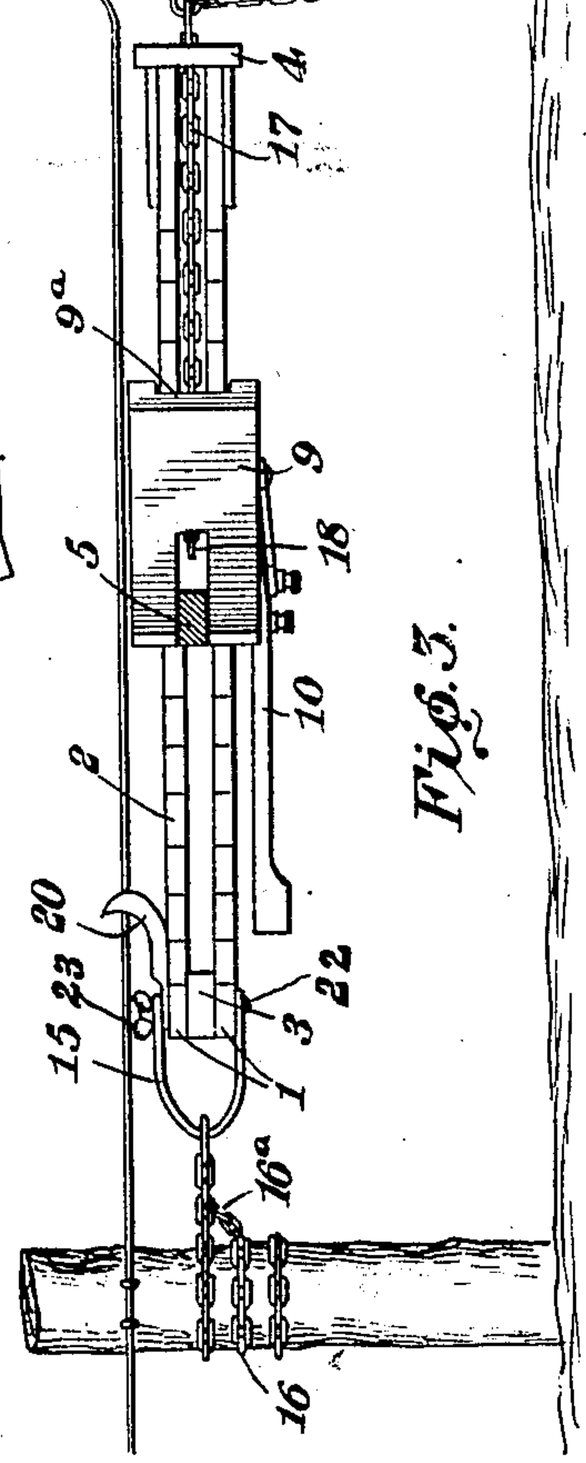

Fig. 3.

Witnesses

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Fig. 4.

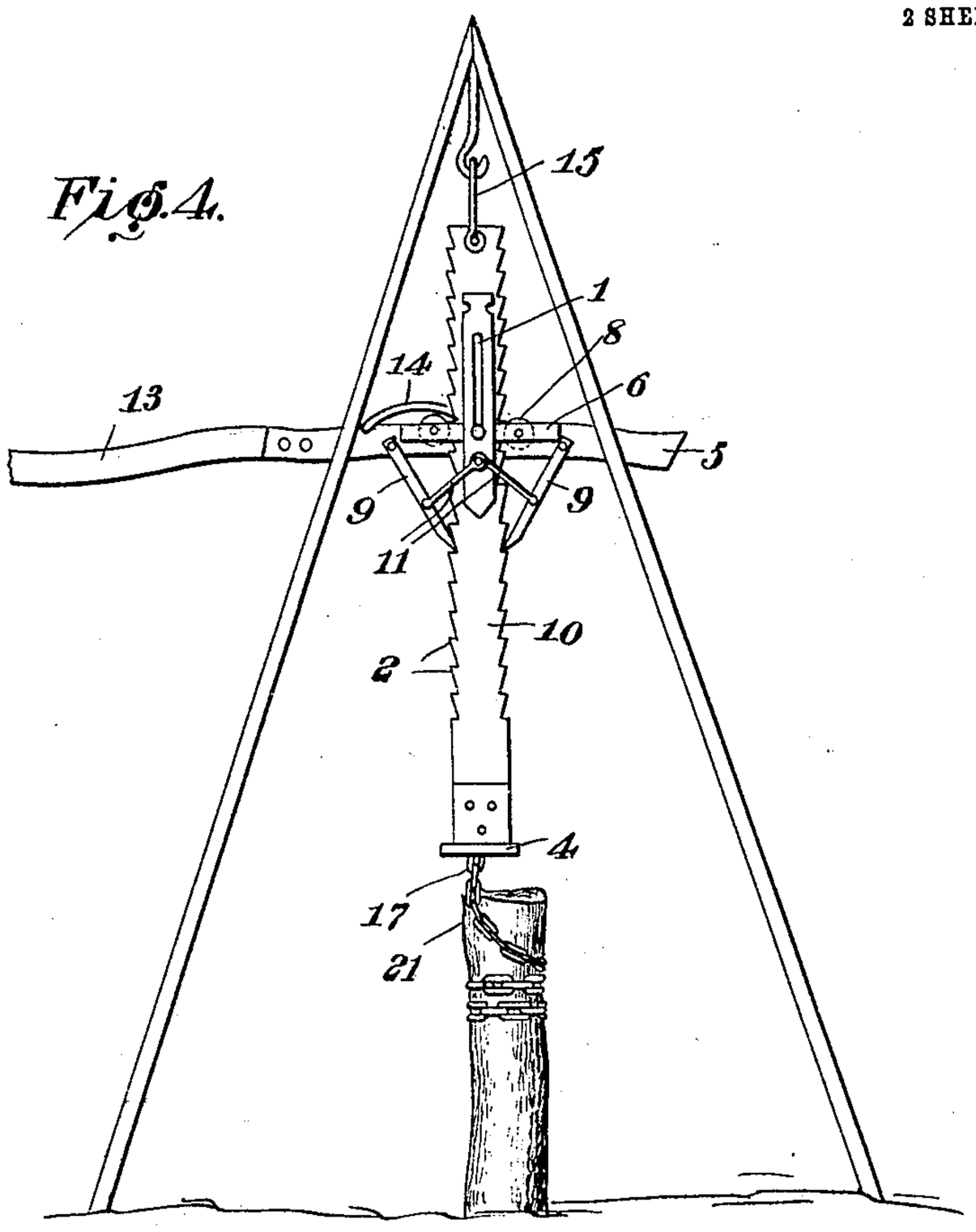
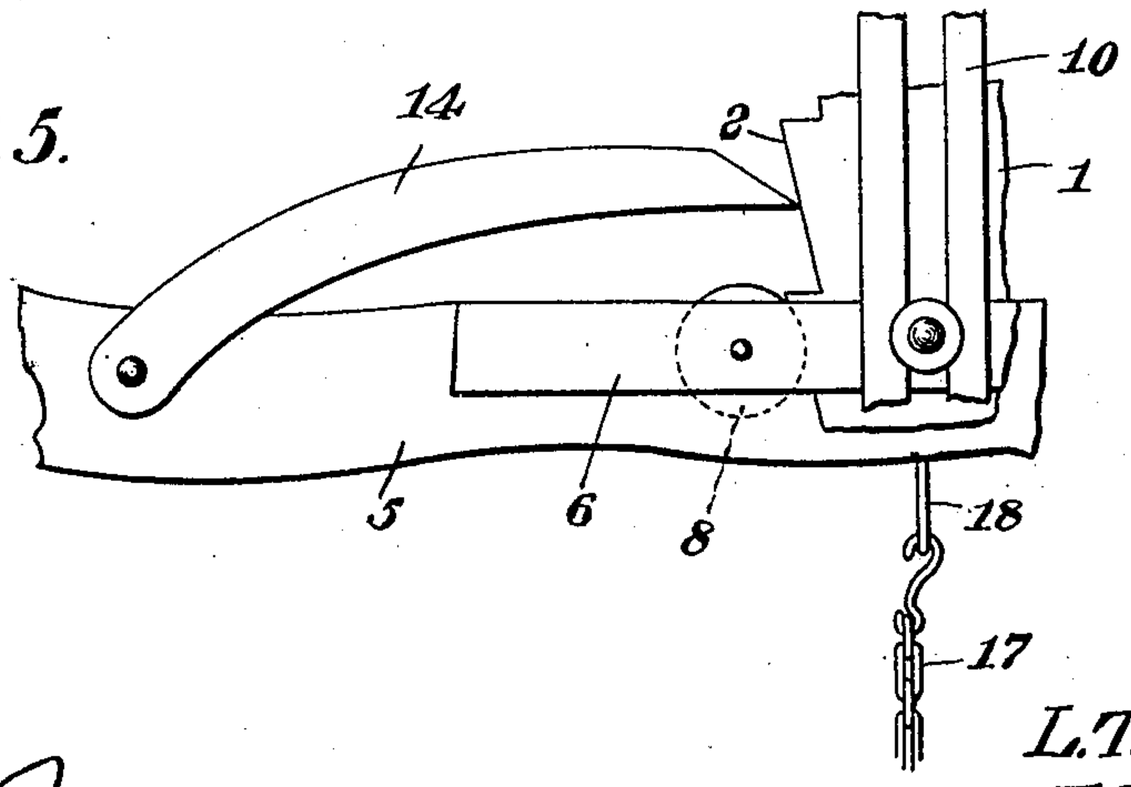


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

LEE T. GOOLSBY AND THOMAS H. GOOLSBY, OF TALMAGE, MISSOURI.

LIFTING-JACK, WIRE-STRETCHER, AND POST-PULLER.

No. 913,281. Specification of Letters Patent. Patented Feb. 23, 1909.

Application filed June 20, 1908. Serial No. 439,638.

To all whom it may concern:

Be it known that we, LEE T. GOOLSBY and THOMAS H. GOOLSBY, citizens of the United States, residing at Talmage, in the county of Wright and State of Missouri, have invented certain new and useful Improvements in Lifting-Jacks, Wire-Stretchers, and Post-Pullers, of which the following is a specification.

The present invention relates to a novel device which is adapted to be employed either as a lifting jack, a wire stretcher, or a post puller, and the object of the invention is the provision of a simple and inexpensive tool of this character which will operate in an effective manner in any of the above mentioned capacities.

The invention further contemplates a tool which is light and compact in its construction so as to be readily transported from place to place and which can be readily set up in an operative position or removed therefrom.

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 side elevation showing the device when employed as a lifting jack. Fig. 2 is an enlarged detail view of a portion of the device, the releasing slide being moved downwardly to throw the pawls into an inoperative position. Fig. 3 is a side elevation showing the device when used as a wire stretcher. Fig. 4 is a similar view showing the device as employed for pulling a post. Fig. 5 is an enlarged detail view showing the latch for locking the lever against movement.

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 stock of the tool comprises a pair of spaced side pieces 1 formed upon their opposite longitudinal edges with the beveled teeth 2, the side pieces being connected at one end by a block 3 and at the opposite end by a stand 4. One end of a lever 5 is loosely received between the side pieces 1 of the stock to admit of the lever moving longitudinally upon the stock. Carried by the lever 5 and arranged upon the outside of the stock is a bar 6, the said bar having a spaced and parallel relation to the lever and being connected thereto at its ends by the blocks 7. Journaled between the bar and the lever upon each side of one of the side pieces of the stock is a roller 8, the two rollers serving to engage the stock to guide the lever in its movements thereon. A pawl 9 is pivotally connected to the lever 5 upon each side of the stock and these pawls engage the beveled teeth 2 and as the lever 5 is reciprocated each pawl operates alternately to form a fulcrum point for the lever and permit of the opposite pawl being moved into engagement with the next tooth upon the stock.

Loosely mounted upon the bar 6 and having a pin and slot connection therewith is a releasing slide 10 one end of which has a toggle connection with the pawls 9 through the medium of links 11 while the opposite end is formed with a finger-piece 10^a. This slide 10 is normally held in an elevated position with the pawls 9 held in a yielding engagement with the teeth 2 of the stock. However, when it is desired to lower the lever upon the stock or to move it toward that end of the stock provided with the stand 4 the slide 10 is moved downwardly and the links 11 then operate to spread the pawls 9 away from the stock. When the releasing slide 10 has reached the limit of its downward movement the point at which the links 11 are pivoted thereto will have been moved beyond the line connecting the points at which the links are pivoted to the pawls and the tension in the springs 12 connecting the pawls will tend to hold both the slide and pawls in such position. As soon however as the slide 10 has been moved upwardly and the links 11 brought into a position slightly out of alinement with each other the springs 12 will draw the pawls inwardly against the stock and hold them yieldingly in an operative position. More specifically describing the pawls 9 it will be observed that they are somewhat wider than the stock so as to project upon opposite sides thereof and have their lower ends notched at 9^a for engagement with the beveled teeth 2. The springs 12 are arranged upon opposite sides of the stock and connect the edge portions of the pawls.

When the device is utilized as a lifting jack the stand 4 at the lower end of the stock is placed against some rigid support and the projecting end of the lever 5 brought into position under the member to be lifted. The opposite end of the lever 5 which may have an extension 13 applied thereto is then

reciprocated so that each of the pawls 9 operates alternately to form a fulcrum for the lever while the opposite pawl is being lifted into engagement with the next beveled tooth 2. In this manner the lever is moved upwardly upon the stock and the member under which the end of the lever has been placed will be elevated in the required manner. A latch 14 which is pivoted upon the lever 5 is then swung into engagement with the stock to prevent the long end of the lever from swinging upwardly due to the weight upon the short end of the lever.

For the purpose of enabling the device to be utilized as a wire stretcher a clevis 15 is pivotally connected to that end of the stock provided with the block 3 and secured to this clevis is a cable 16 which is designed to be looped around a post or similar member. In the present instance this cable 16 is in the form of a chain and is provided at its extremity with a hook 16[a] which may be caused to engage one of the links of the chain after the chain has been drawn around the post. Passing loosely through an opening in the stand 4 at the opposite end of the stock is a second cable 17 which is detachably connected to a hook 18 upon the lever 5. The free end of this cable 17 is connected to a wire clamp 19 which is designed to grip the fence wire to be stretched. As shown on the drawing this wire clamp comprises a pair of complemental members pivotally connected at an intermediate point to form coöperating jaws and handles, the ends of the handles being connected by the links 19[a] so that any tension in the chain will tend to draw the handles together and force the jaws into a firm engagement with the wire. In the operation of the device as a wire stretcher the cable 16 is looped about a post and the clamp 19 caused to grip the fence wire which it is desired to stretch. The lever 6 is then reciprocated as in the previous instance and moved longitudinally upon the stock so as to produce tension in the cables and stretch the wire. A take up hook 20 is applied to the stock for engaging the fence wire should it be desired to take a new grip thereon with the clamp 19. This take up claw 20 is pivoted upon a bolt 22 which also serves as a means for securing the clevis 15 to the stock. A thumb nut 23 is threaded upon the bolt 22 and when it is desired to use the tool for splicing a wire the thumb nut is loosened and the claw 20 turned around so as to project beyond the end of the stock. One end of the wire may then be engaged by this take up claw while the opposite end is engaged by the wire clamp.

When the device is employed as a post puller the cable 16 is caused to engage some suitable support such as may be readily formed of three or four poles having their upper ends inclined toward each other and securely connected to provide a tripod arrangement. The cable 17 at the opposite end of the stock is looped around the post, the cable being provided with a hook 21 for that purpose. A reciprocating movement of the lever will then operate as in the previous instance to draw the cable 17 upwardly and pull the post.

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

1. In a device of the character described, the combination of a stock provided upon opposite sides with teeth, a lever mounted upon the stock to move longitudinally thereon, rollers carried by the lever for engaging the stock to guide it in its movements thereon, a pair of pawls pivotally connected to the lever and engaging the teeth upon opposite sides of the stock, the pawls coöperating with each other to move the lever upon the stock when the lever is reciprocated, and means for moving the pawls into an inoperative position.

2. In a device of the character described, the combination of a stock provided upon opposite sides with teeth, a lever loosely mounted upon the stock for longitudinal movement thereon, pawls pivotally connected with the lever and engaging the teeth upon opposite sides of the stock, the said pawls coöperating with each other to move the lever upon the stock when the lever is reciprocated, means for moving the pawls into an inoperative position, and a latch mounted upon the lever and designed to be swung into engagement with the stock to prevent one end thereof swinging upwardly due to the weight upon the opposite end.

3. In a device of the character described, the combination of a stock provided upon opposite sides with teeth, a lever mounted upon the stock to move longitudinally thereon, pawls carried by the lever and coöperating with the teeth upon the stock to move the lever when the latter is reciprocated, a slide bar carried by the lever, and links producing a toggle connection between the slide bar and the pawls whereby the pawls may be moved into an inoperative position through the medium of the slide bar.

4. In a device of the character described, the combination of a stock formed with spaced side pieces provided upon their opposite edges with teeth, a lever received loosely between the side pieces and movable longitudinally upon the stock, a bar carried by the lever and arranged on the outside of the stock, rollers journaled between the bar and the lever and engaging the stock to guide the lever in its movements thereon, and a pair of pawls pivotally connected to the lever and engaging the teeth upon the stock to move the lever upon the stock when it is reciprocated.

5. In a device of the character described,

the combination of a stock formed with spaced side pieces provided at their opposite edges with teeth, a lever loosely received between the side pieces, a bar carried by the lever and arranged upon the outside of the stock, rollers journaled between the bar and the lever and engaging the stock to guide the lever in its movements thereon, pawls carried by the lever and coöperating with the teeth upon the stock to move the lever when the latter is reciprocated, a slide bar mounted upon the before-mentioned bar, and links connecting the slide bar and the pawls whereby the latter may be moved into an inoperative position through the medium of the slide bar.

6. In a device of the character described, the combination of a stock formed with spaced side pieces provided upon their opposite edges with teeth, a lever loosely received between the side pieces and movable longitudinally upon the stock, a bar carried by the lever and arranged on the outside of the stock, pawls carried by the lever and coöperating with the teeth upon the stock to move the lever when the latter is reciprocated, a slide bar mounted upon the before mentioned bar carried by the lever, and links connecting the slide bar and the pawls whereby the latter may be moved into an inoperative position through the medium of the slide bar.

7. In a device of the character described, the combination of a stock formed with spaced side pieces provided upon their opposite longitudinal edges with beveled teeth, a lever loosely received between the side pieces, rollers carried by the lever for engaging the stock to guide it in its movements thereon, the said pawls coöperating with each other to move the lever upon the stock when the lever is reciprocated, means for moving the pawls into an inoperative position, a cable connected to one end of the stock, and a cable having a sliding connection with the opposite end of the stock and passing between the side pieces of the stock, the said cable being connected to the lever.

In testimony whereof we affix our signatures in presence of two witnesses.

LEE T. GOOLSBY. [L. S.]

his

THOMAS H. × GOOLSBY. [L. S.]

mark

Witnesses:

M. L. ELLIS,

CHESTER G. NEWTON.