

No. 638,051.

Patented Nov. 28, 1899.

B. C. HANCOCK.
WIRE STRETCHER.

(Application filed May 11, 1899.)

(No Model.)

FIG. 1.

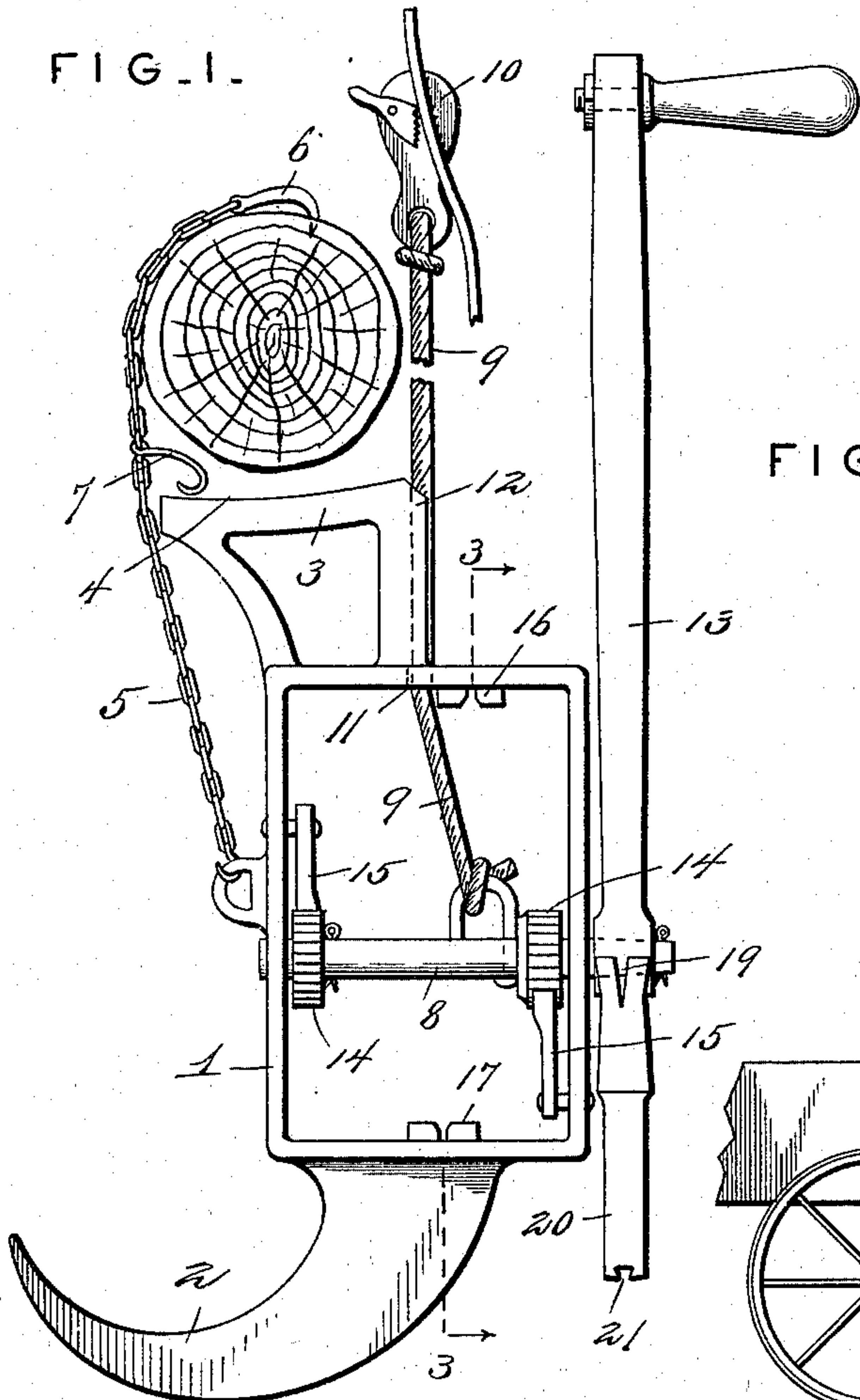


FIG. 2.

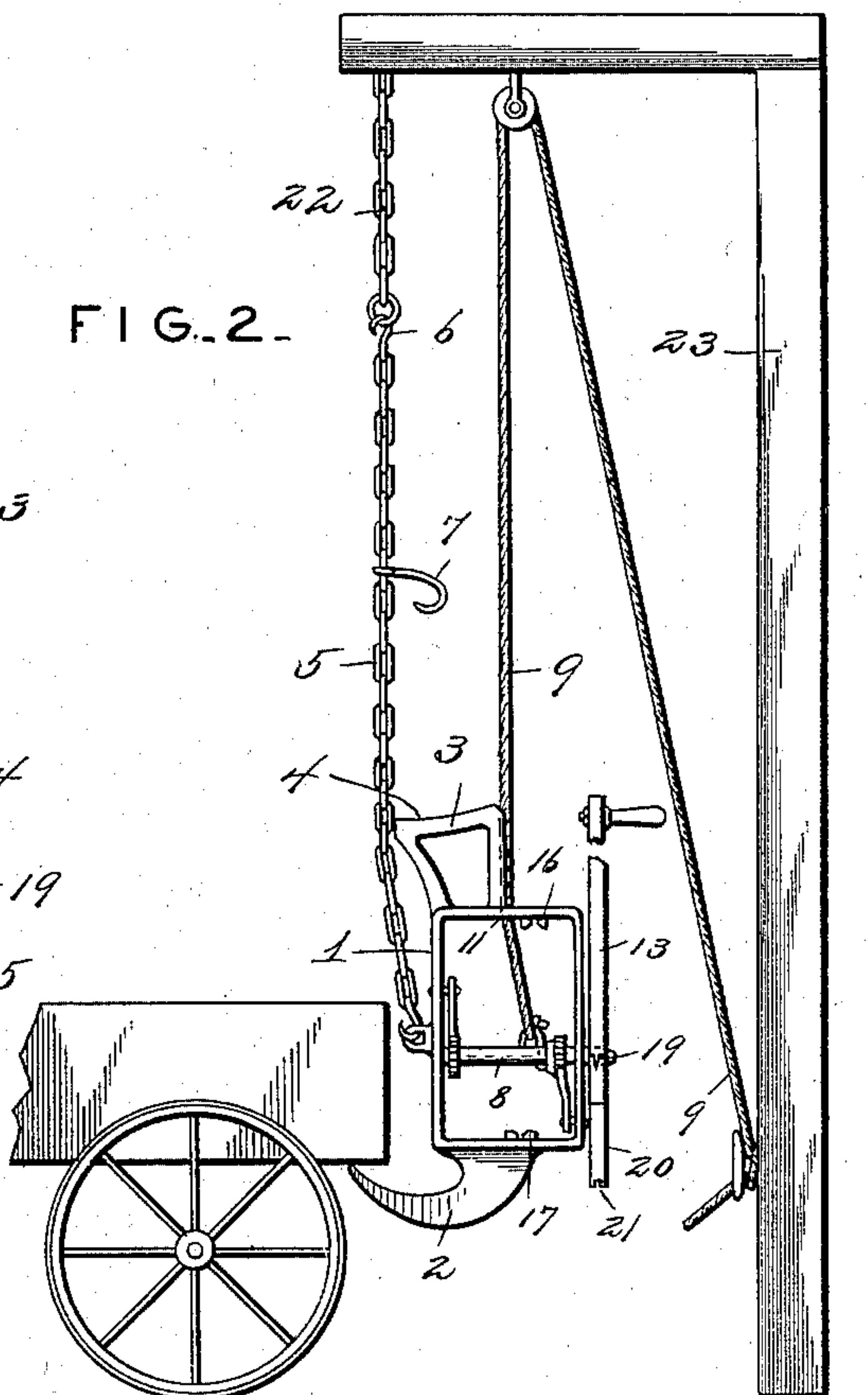


FIG. 3.

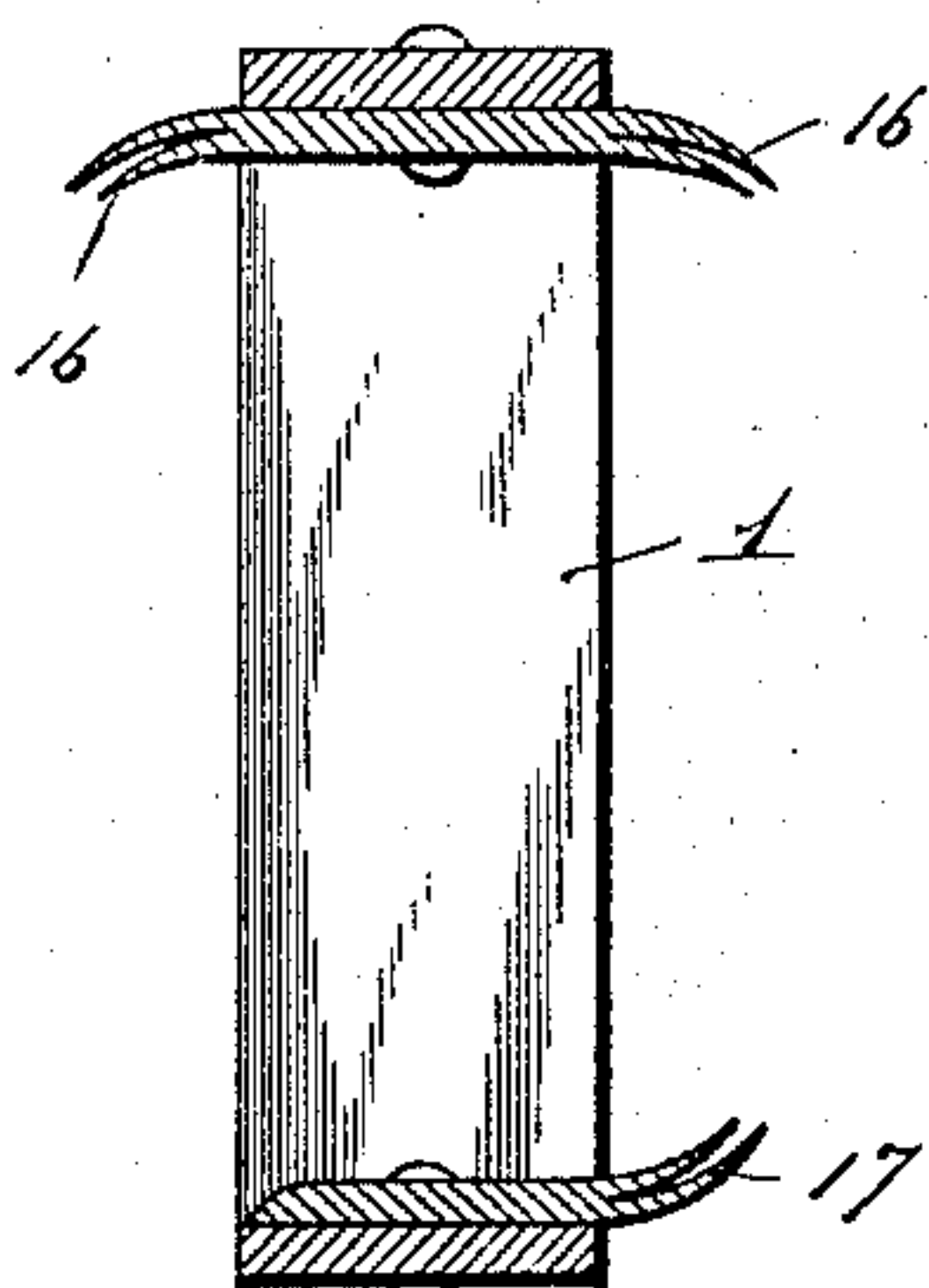


FIG. 4.

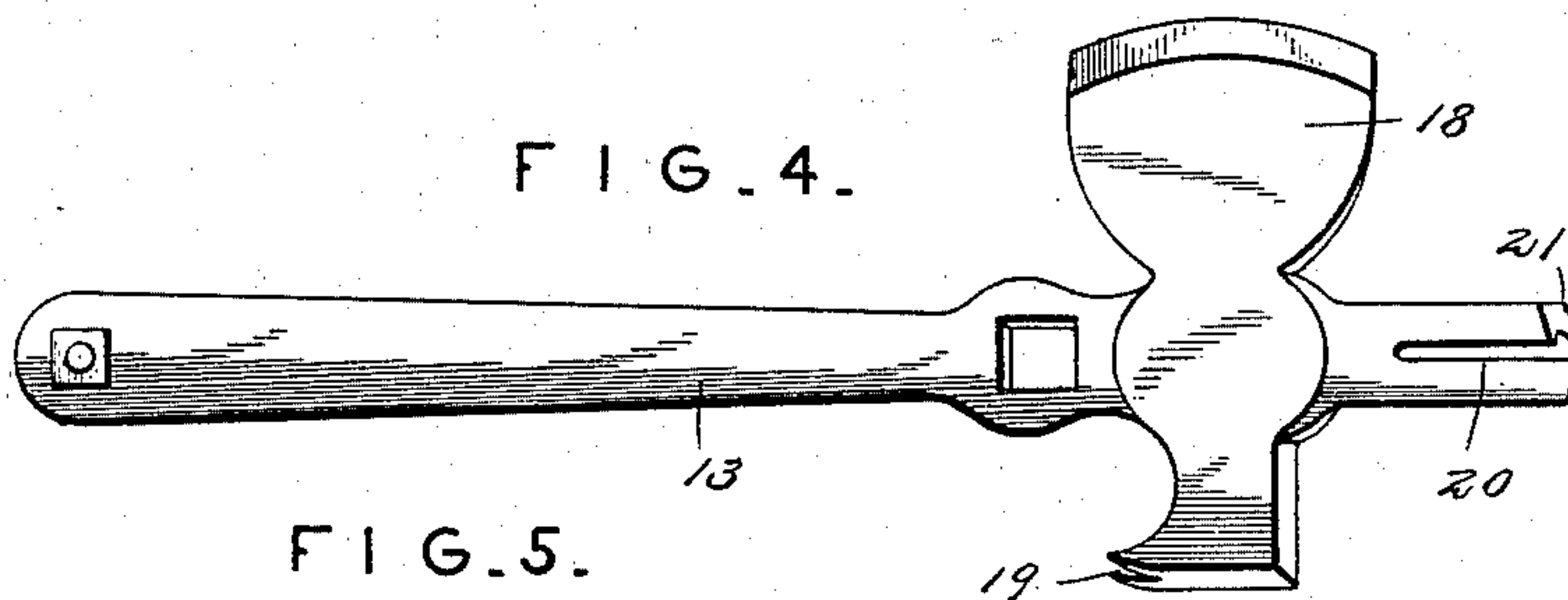
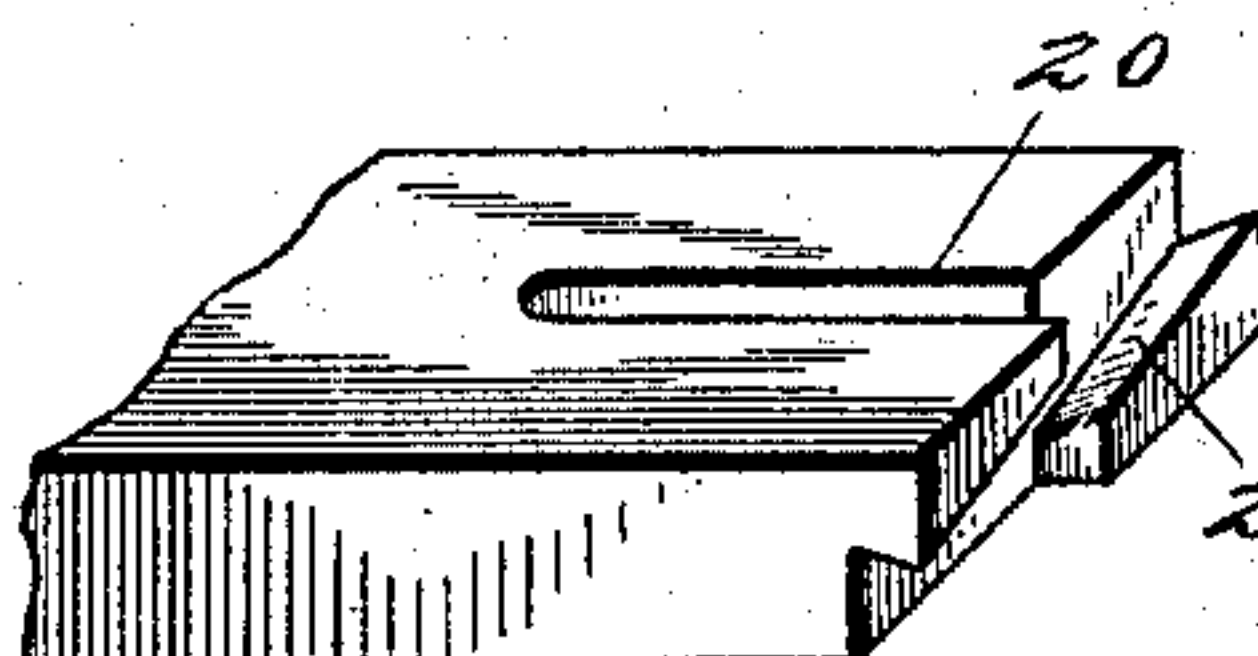


FIG. 5.



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UNITED STATES PATENT OFFICE.

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WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 638,051, dated November 28, 1899.

Application filed May 11, 1899. Serial No. 716,418. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN COLUMBUS HANCOCK, a citizen of the United States, residing at Mexia, in the county of Limestone and State of Texas, have invented a certain new and useful Wire-Stretcher, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to fence-wire-stretching and hoisting machines.

The purpose of my invention is to provide a portable device for convenient use in putting up, taking down, and mending fences, as well as for hoisting purposes generally.

The invention consists in a special construction of the windlass-frame and in the combination, with such frame and windlass, of devices hereinafter fully described and claimed.

In the drawings, Figure 1 is a plan showing my invention applied to stretching wires in the process of building a fence. Fig. 2 is a side elevation of the invention as applied to hoisting purposes. Fig. 3 is a cross-section on the line 5 5 of Fig. 1. Fig. 4 is an elevation of the operating-crank. Fig. 5 is a detail perspective of one extremity of the crank-arm, showing claws and slot for tying wires.

1 is a windlass-carrying frame conveniently formed as a casting or made from heavy plate metal, as may be desired. This frame is rectangular in form and has attached to one extremity and extending laterally to one side of the frame a hook or horn 2, which serves when in use for fence-building as a handle through which the operator holds and steadies the frame. From the opposite end of the frame there projects for some distance ten inches, more or less, an extension or bolster 3. This bolster also projects laterally to some extent on the same side that the claw or hook 2 projects. The outer face of the bolster is concaved, as shown at 4, so as to afford a good bearing against either a round or a square post when in use. Connected with one side of the frame 1 is a chain or cable 5, carrying at its extremity a grappling-hook 6 for engagement with a fence-post and, as shown in Fig. 1, for supporting the frame when in use against a tendency to swing around the post during the process of tightening or stretching a wire. This chain is provided with an

open link or ring 7, so that the chain may be readily lengthened or shortened to accommodate the apparatus to posts of different dimensions. Mounted in the frame, as clearly shown in the drawings, is a windlass-shaft 8, with which is connected a rope or cable 9, and when used for stretching wires the rope is provided with or has connected to its extremity a wire-grip 10 for grasping and holding a wire in the process of stretching the same. The rope 9 passes through a hole or perforation 11 midway of one end of the frame, and the bolster is concaved or grooved to partially embrace and guide the rope, as shown at 12. The windlass-shaft is operated through the means of a crank-arm 13. On opposite ends of the windlass-shaft, inside the frame, I provide reversely-arranged ratchet-wheels 14 14 and co-operating pawls 15 15. By reason of this arrangement of ratchet and pawls I am enabled to automatically lock and hold the windlass under tension at any point whichever side up or direction the windlass may be operated. In this way I am enabled to reverse the position of the frame and the direction of the operation of the windlass-shaft. Secured to the end of the frame by rivets or otherwise adjacent to the hole or perforation 11 are claws 16 16, projecting laterally from both sides of the frame. These claws are for gripping and holding a wire while taking a fresh hold on the same at a point to pull its end past the post. The two claws are arranged so as to provide one for use whichever side up the apparatus is used. At the other end and about midway of the frame is also attached a claw 17 for a purpose similar to that for which the claws 16 are provided. These claws serve to hold the ends of a broken wire or two strands of wire lapped, as shown in Fig. 1, preparatory to the tying or knotting operation. The crank 13 is detachably connected with the windlass-shaft and carries a hatchet 18, a staple-puller 19, wire twisting or tying fork 20, and claws 21. The crank and its attachments are conveniently formed of cast-steel, the hatchet serving to remove bark and unsound wood from the post preparatory to driving the staples, the staple-puller serving to pull staples in the process of repairing fences. The head of the hatchet is adapted to drive

the staples, and the twisting or tying fork and the claws serve to twist or knot the wires in the process of joining them.

In operation, the device being arranged as shown in Fig. 1 for putting up or mending a fence, the grab or grip being attached to the wire, the handle is turned and the wire stretched, and in case the grab is not in the right position to draw the wire far enough past the post the wire can be caught in the claw 16 and held and a fresh grip taken at any point. This enables the operator to do his work with ease and despatch, and when he takes up his wire it need not thereafter be dropped to the ground to take a new hold on it. When the machine is reversed and the stretching is from the opposite direction, the other claw 16 serves the same purpose as that just described. In the operation of mending a broken wire the operator takes the end of the wire to the left of the machine and places it in claw 17, with the barb inside the machine, the wire extending a little over half-way across the machine. He then catches the other wire about ten inches from the end with the grab or at a point to bring the end of the wire with a barb on it a little more than half-way across the frame, and then turns the crank until the wires are tight. He then detaches the crank, leaving the machine suspended to hold the wire from swinging or dropping to the ground, and then goes both ways with the crank having a staple-puller and pulls staples as far as the wire is slack. He then replaces the crank and turns until the wire is drawn perfectly tight. In this way the two ends of the wire are brought over the top of the machine, as shown in Fig. 1. The operator then detaches the crank and slips the fork 20 over one wire half-way between the lap of the two wires and gives it a slight turn to bend the ends of the wire. He then bends the end of the other wire in the same way. He then takes the claws 21 on the handle and catches both wires, one in one side and the other in the other side, and gives a right-hand turn of a complete revolution, when the wire is perfectly tied. The tying occurs below the point of the fork. Ordinarily this will leave the wire perfectly tight; but if not tight enough when the machine is detached the operator can take hold of the wire again and take up all the slack. The device gets its wires for forming the knot from the main wires and not from that which is in its grip. In this way any little slack due to failure to attach the grabs at the right point is taken up. The same cause that broke one wire will make the next one to it or other wires very slack. To take up this slack, drop the wire in claw 17, with barb inside the frame, as before, and grab the wire eight or ten inches from the other end of the frame. Then turn the crank until the wire is tight. Now detach the crank and draw the staples. Then go back, attach the crank, and take up all the slack. The

wire, being fastened at both ends of the machine, will force the body of each wire past each other over the top of the machine. Then detach the crank and hold it with its handle up and slip the fork 20 onto the loop in the wire as close down to the main wire as possible. Then give it a right-hand turn once around, when the loop will be completely tied. Then detach the machine, or, in case the wire is not tight enough, give the crank one or more turns, and it will be made tight. It should be noted that the claws 21 are for tying broken wires and the fork 20 is for tying looped or unbroken wires. By the use of my invention it will be seen that all that is needed to take down a wire fence and put it up is provided. No other tools or appliances are necessary. The hatchet will trim off unsound wood and fit posts for staples and also cut away brush that might be in the way.

In applying my invention to hoisting purposes the hook or horn 2 is secured in a suitable manner, as by a ring or rope 22 to an upright, and the grappling-hook 6 is attached to a support, as 23, and the windlass-rope carried through sheave or pulley on the support around to the weight or load to be raised or lifted. This application of the invention is illustrated in Fig. 2. It should also be noted that instead of applying it in this way the horn 2 may be adjusted beneath the body or bolster of a wagon and the same conveniently lifted or raised.

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

1. The combination with a windlass-frame, of a horn projecting laterally from the plane of the frame, and a bolster also projecting laterally from the same side of the frame having a concave bearing-face, substantially as described.

2. The combination of a windlass-frame, a bolster projecting laterally from one side of the frame and extending to some distance from the end of the frame, a chain, and a grappling-hook for holding the frame in position against a post against strain or tension, substantially as described.

3. The combination of a windlass-frame, a bolster extending a distance from the end of the frame, an extensible or adjustable chain connected with the frame, and a grappling-hook for holding the frame in position against a post, substantially as described.

4. In fence-wire-stretching machines, the combination of a windlass-frame, a bolster extending from the end of the frame, a chain and grappling-hook for connecting the frame with a post, and a claw or wire-holder connected with the frame, substantially as described.

5. In a fence-wire-stretching machine, the combination of a windlass-frame and windlass, means for locking the frame to a post, and wire claws connected with opposite sides

of the frame to adapt the apparatus for operation in reverse positions, substantially as described.

5 6. In fence-wire-stretching machines, the combination of a windlass-frame and windlass having a longitudinally-projecting bolster, means for coupling the frame with a post, wire-holding claws on both sides of the frame, and reversely-arranged ratchets and
10 pawls connected with the windlass-shaft, substantially as described.

7. In a fence-wire-stretching machine, the

combination of a windlass-frame having a longitudinally-extending bolster, means for coupling the frame with a post, a windlass- 15 cable, a wire grip or grab connected with the cable, and wire-holding claws connected with the frame, substantially as described.

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

BENJAMIN COLUMBUS HANCOCK.

Witnesses:

J. W. KINCHELOE,
LUTHER COX.