

(No Model.)

W. N. PARRISH.
FENCE TWISTING TOOL.

No. 582,370.

Patented May 11, 1897.

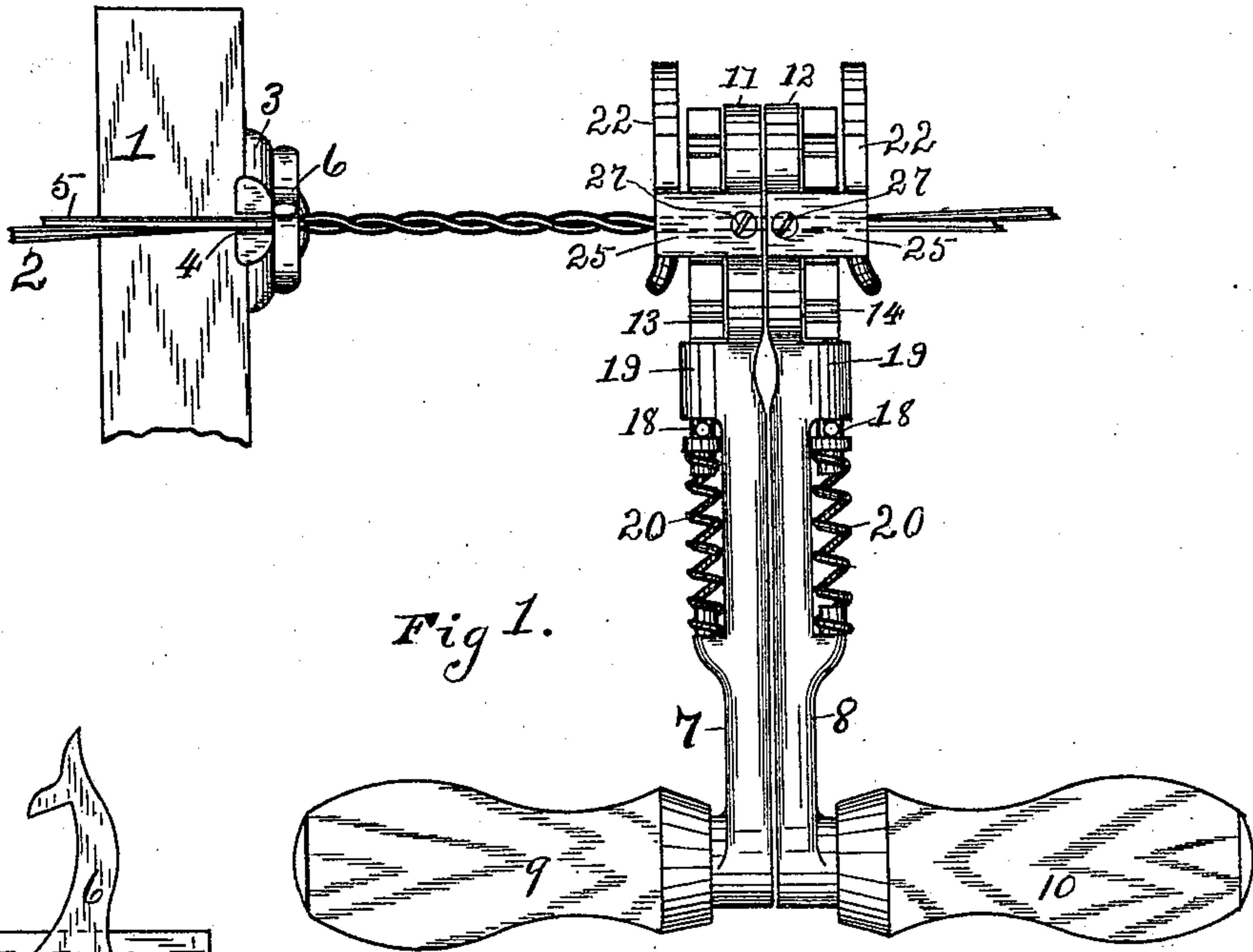


Fig 1.

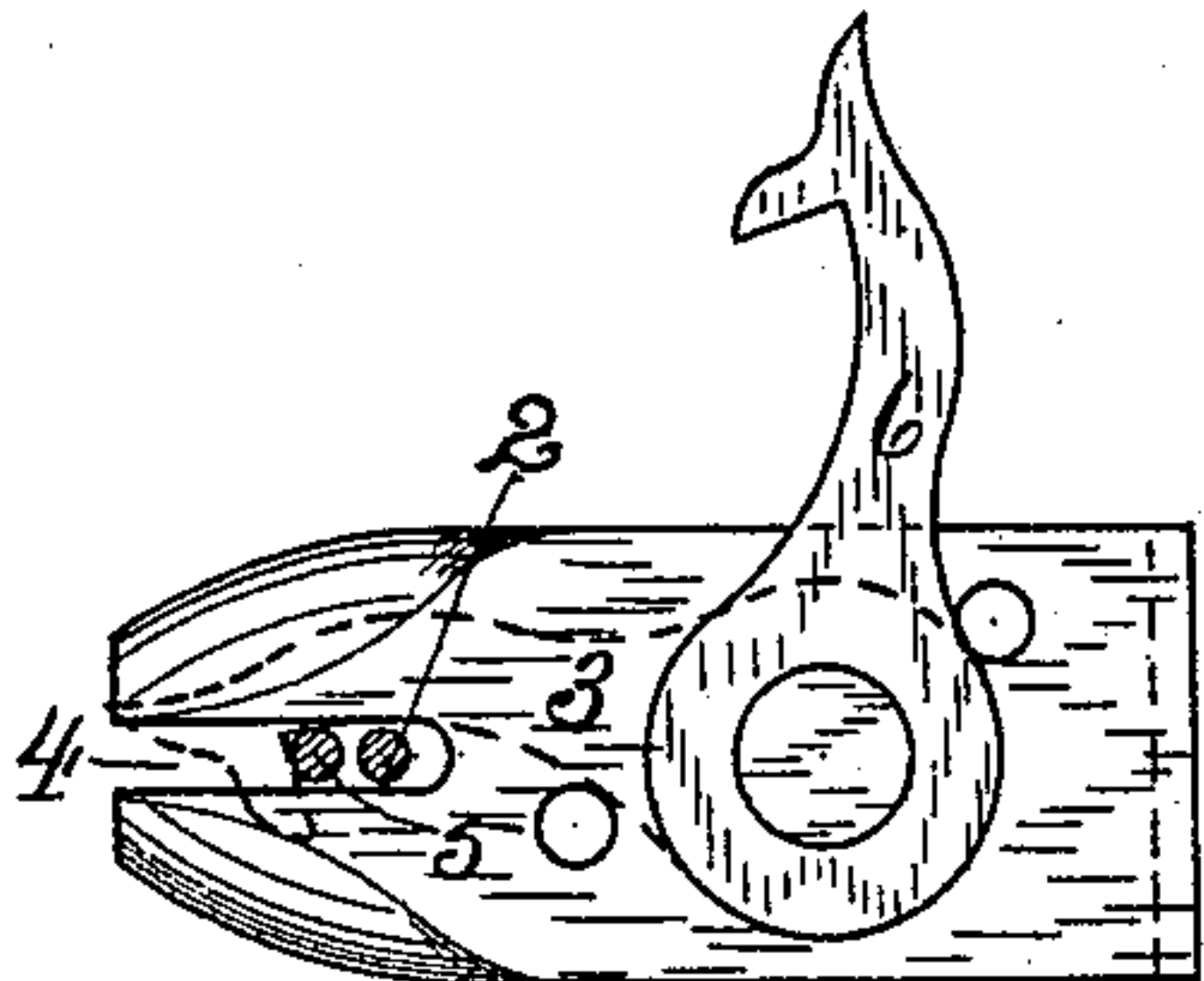


Fig 7.

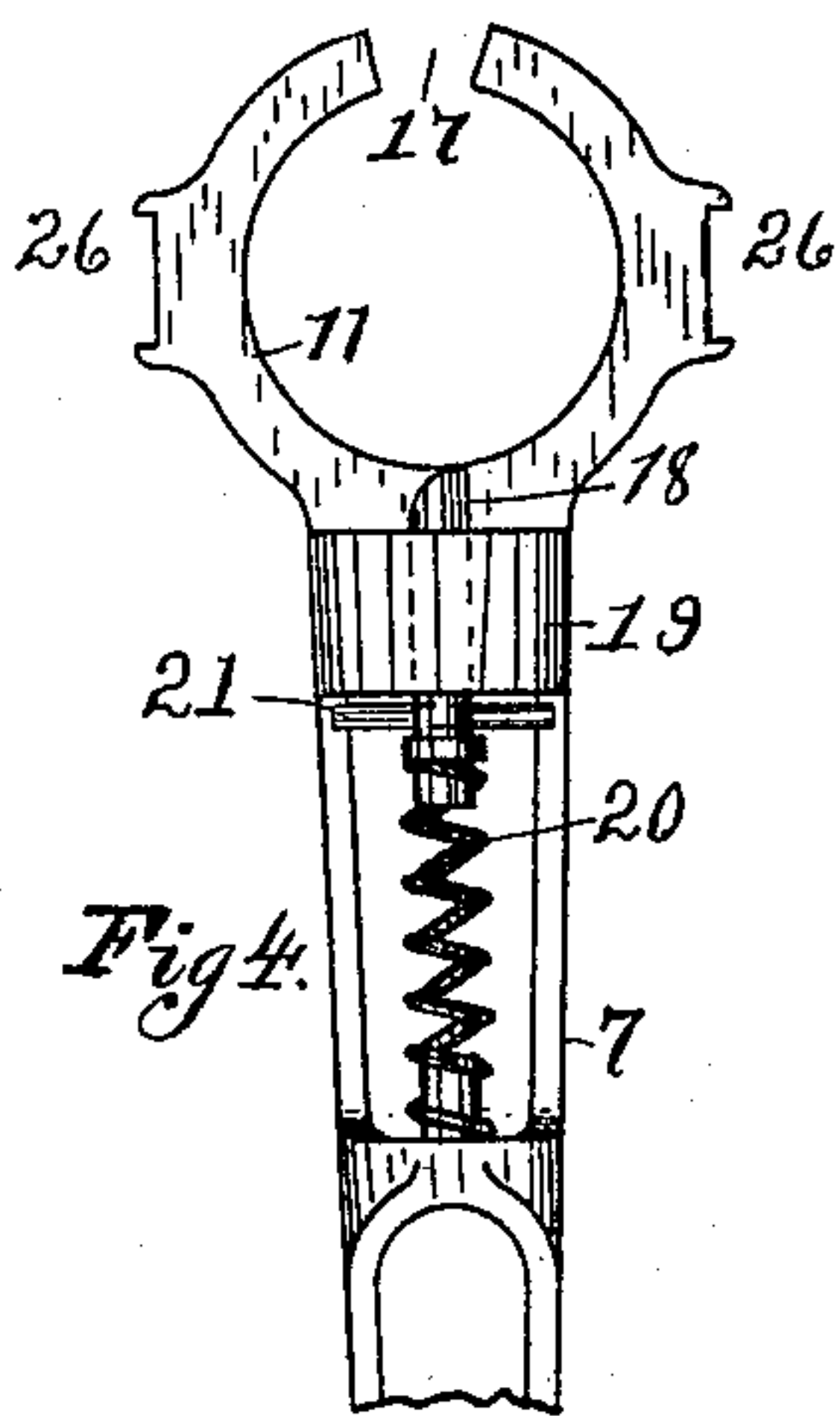


Fig 4.

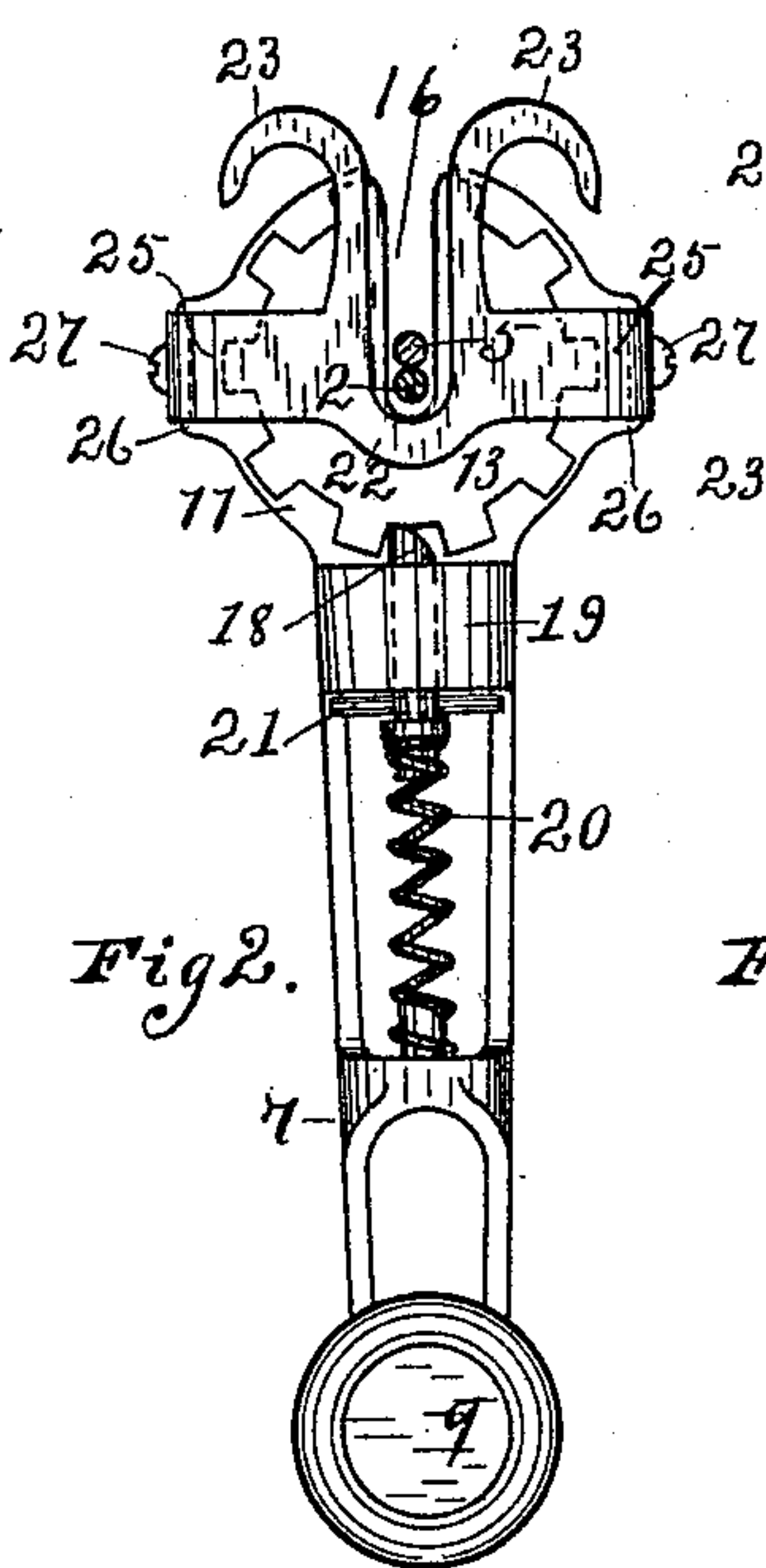


Fig 2.

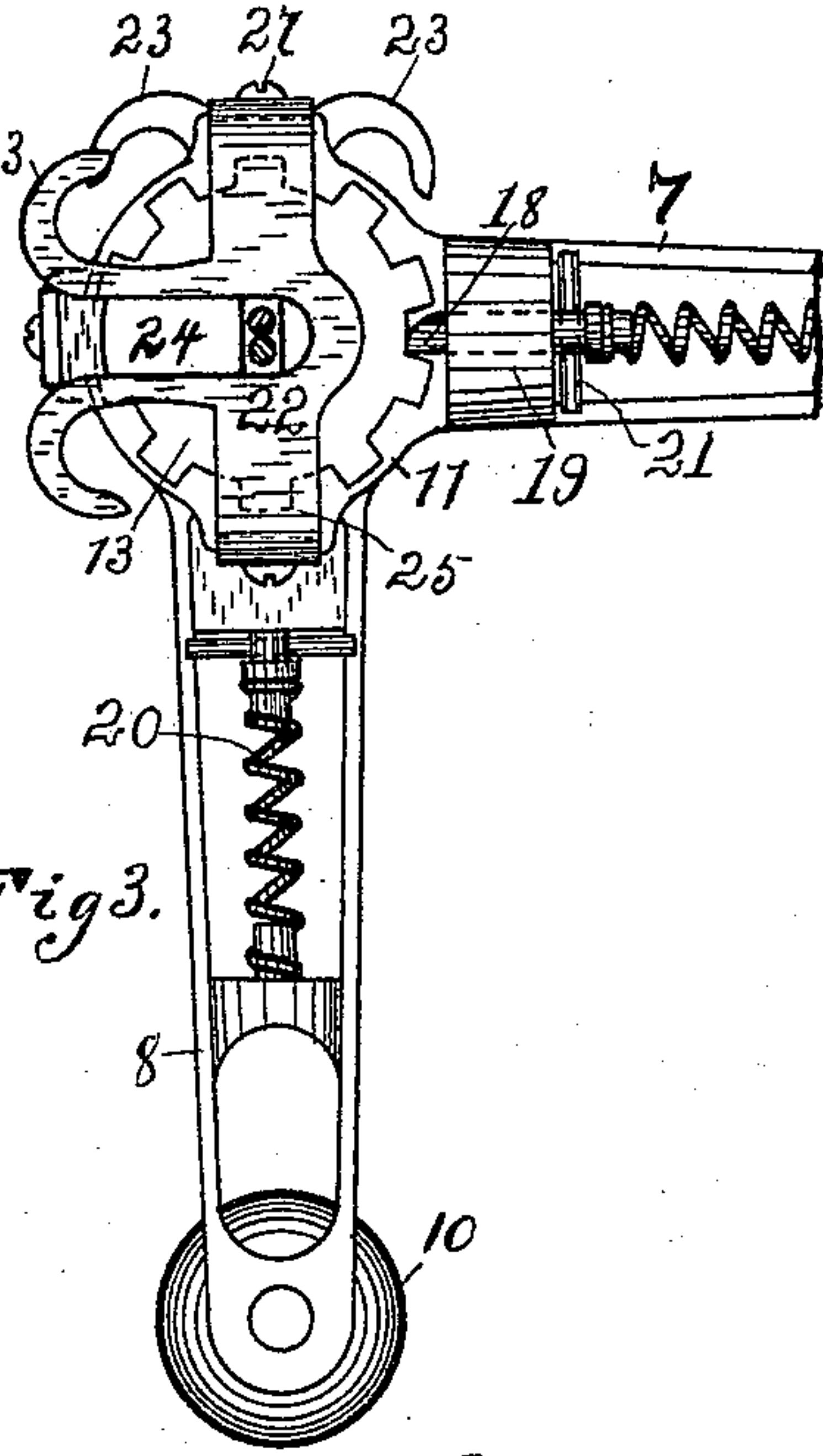


Fig 3.

WITNESSES:

L. L. Allen.
Wm. Whitney

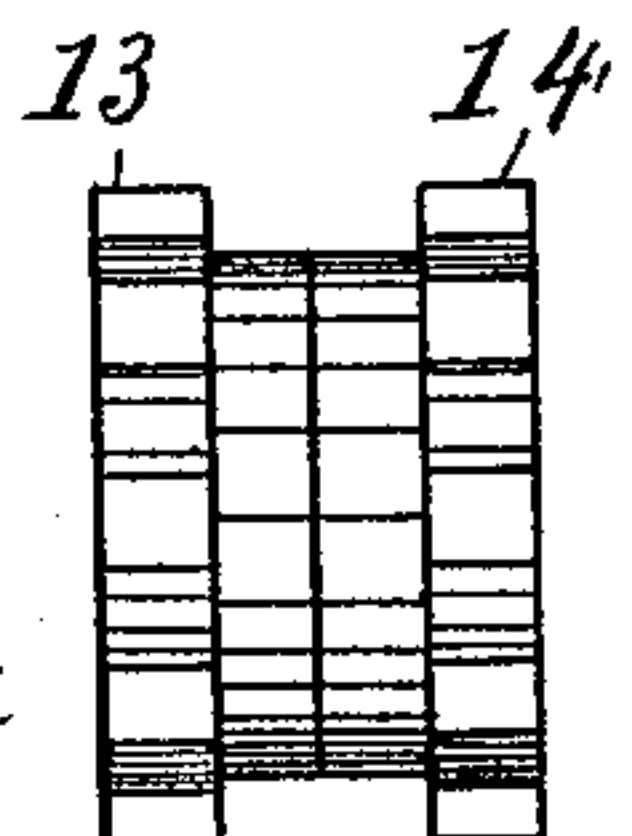


Fig 5.

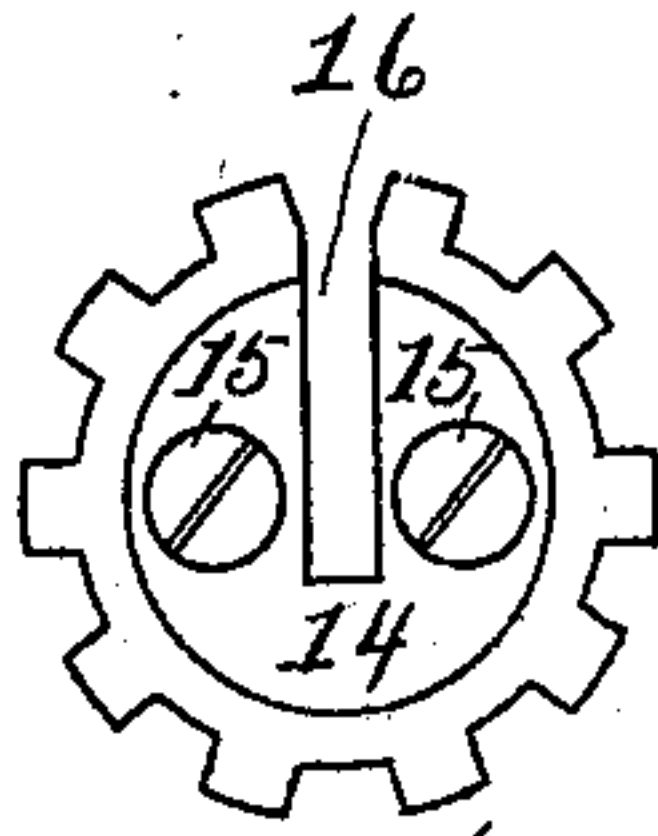


Fig 6.

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UNITED STATES PATENT OFFICE.

WILLIAM N. PARRISH, OF RICHMOND, INDIANA.

FENCE TWISTING-TOOL.

SPECIFICATION forming part of Letters Patent No. 582,370, dated May 11, 1897.

Application filed March 5, 1897. Serial No. 626,159. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. PARRISH, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Fence-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in wire-fence machines, and has a specific reference to a manually-operated machine for applying the vertical or stay wires to the lateral wires of a fence.

The object of the invention is to provide a hand-operated machine that will quickly and uniformly twist the stay-wires on the lateral wires in a manner that greatly strengthens the fence and imparts thereto a desirable amount of resiliency that enables the panels to return to their proper position when relieved of any pressure that may be placed thereon by cattle, horses, or other objects.

A further object of the invention is to provide a machine of this character that is simple and easily operated, so that any one may readily understand and know how to operate the same.

To the foregoing ends the invention consists of a machine that is operated by both hands, as hereinafter more fully described in the specification and pointed out in the claims.

In a detailed description of the invention reference is made to the accompanying drawings, which form a part of this application and upon which similar reference-characters indicate corresponding parts in the several views.

Figure 1 is a front elevation of my improved wire-twister in an operative position. Fig. 2 is a side elevation of the twister detached from the wires. Fig. 3 is a similar view showing the reciprocating levers separated as in the act of twisting the wires. Fig. 4 is a detached side elevation of one of the reciprocating levers. Figs. 5 and 6 are elevations of the two-part spur-wheel dismounted. Fig. 7

is a detached side elevation of one of the holding-plates in which the wires are supported while being twisted.

In a detailed description, 1 designates a movable post or upright that is used in connection with the twister to support the wires in proper position while said twister is being operated. The height of said post is such as to reach from the ground to a point above the top lateral wire 2, substantially as shown in Fig. 1. 3 designates a holding-plate rigidly attached to a side of said post. The number of said plates so attached corresponds to the number of lateral wires, and their positions on the post or their distances apart are the same as the distances between the wires, the purpose of said plates being to hold the wires in fixed relative positions.

4 designates a slot into which the lateral wire 2 is first placed and subsequently the stay-wire 5, or, rather, the wire that is to form the stay-wire. This slot is plainly shown in Fig. 7 to be of a width that insures said wires being at all times during the twisting operation in fixed relative positions or side by side in the same horizontal plane.

It is important that the slot 4 be of such width as will not permit of one wire climbing above or around the other, which would be the tendency during the twisting of the wires. When the wires are placed in the slot in the said holding-plate, a catch 6 is lowered on its pivot to inclose said wires and prevent them from moving out of the slot during the operation of twisting.

7 and 8 designate, respectively, two reciprocating levers provided with handles 9 and 10. The opposite ends of these levers terminate in bands or straps 11 and 12.

13 and 14 designate two spur-wheels which are rigidly connected by screws 15, or in any suitable manner so as to form thereof one rotatable body. One of said wheels is preferably hollow in order to reduce the thickness of the metal and thereby adapt the two parts to be thus united. On one side of the teeth of each wheel there is a peripheral flange around which the straps or bands 11 and 12 fit. The said straps are placed in position thereon prior to the uniting of the parts. After said parts are united the straps are loosely maintained in position by the pro-

jecting teeth on the outer side and their inner adjacent sides, as shown in Fig. 1. 16 designates a slot in said spur-wheel, extending from the axis to the periphery thereof, in which the wires are placed. The width or size of this slot is also such as to receive and maintain said wires in fixed relative positions in a manner similar to slot 4 in the holding-plates 3. It will be seen in Fig. 4 that a slot or opening 17 is formed in the outer end of each of the straps to enable the wires to enter the slot 16 in the twisters and the slots 24 in the side plates by bringing said slots 16 and 17 in line, as shown in Fig. 2. From the form and manner of connecting the levers 7 and 8 with the spur-wheel it is apparent that the said levers may be freely moved back and forth thereon, the said wheel forming the fulcrum upon which said levers turn.

18 18 designate two sliding bolts or pawls which operate independently with the teeth on the spur-wheel. The inner ends of said pawls have a tapering and a straight side, that permit of said pawls alternately releasing and engaging with said teeth. These bolts or pawls are slidingly mounted in openings in projections 19 19 on the levers and are normally pressed in contact with the teeth by coil-springs 20 20. 21 21 designate transverse pins projected through the outer ends of said pawls to limit the movement thereof.

22 22 designate two angular side plates having curves that form hooks 23 23, and intervening slots 24 24, and side projections 25 25, turned on an angle to project over opposite sides 26 26 of the straps, where they are made secure by screws 27 27. These plates are a very essential and important element of my invention and have several functions to perform, to wit: They serve as journal-bearings for the wheel in connection with the wires, and they serve as supports by means of the hooks 23 23, which enables the machine to be hung on a lateral wire of the fence while the hands are engaged in placing the stay-wire in position on the next lower lateral wire preparatory to twisting. The plates as shown in Figs. 2 and 3 are exact counterparts of the ones on the opposite side of the machine.

It is essential that the slots 24 24 in the side plates be somewhat wider than the slot 16 in the twisting-wheel in order to allow the wire to be inclosed therein without binding and to permit it to pass freely through said slots as fast as it is twisted by the wheel. The slots 24 24 serve to support the machine in an operative position and to maintain the wires in a central position or in a proper position in the slot 16 during the operation of twisting, as shown in Fig. 3.

As the machine is shown in Fig. 2 the slots 16 and 24 are in line. This is the proper position of the parts when the device is placed in a position on the wires to operate. In Fig. 3 one of the levers is raised to a horizontal or upper position to effect a new engagement of

a pawl with its respective set of teeth. From this position it is borne downwardly to rotate the wheel and twist the wires. In this movement the side plates 22 22 form journals in which the wires are supported while the wheel is rotated by the alternate action of the levers. In the movement of said levers it will be understood that the plates 22 22 are moved back and forth in the segment of a circle while the wheel continues to rotate, and it is the movement of the wheel that effects the twist. The twist is continued a suitable distance out from the post 1, and the free end of the stay-wire is then carried downwardly to a similar starting-point on the next lower lateral wire and the operation repeated until the lower lateral wire is reached. The twist is formed quickly by a continuous movement of the levers, one lever rotating the wheel from the point to which it was turned by the actuation of the previous operation of the other lever.

In placing the machine in position to twist, the wheel is first moved to bring the slot 16 in line with the slots in the side plates, as shown in Fig. 2. The machine is then moved to a position to receive the wires, after which the levers are operated to turn the wheel to twist the wires in a manner believed to be fully understood from the foregoing description.

Having fully described my invention, I claim—

1. In a wire-twister, the combination of a spur-wheel provided with a slot extending from the axis to the periphery thereof, and adapted to hold two wires in fixed relative positions; reciprocating levers having fulcrums on said wheel; a pawl carried on each of said levers and engaging with said spur-wheel, and means for initially supporting said wires in fixed relative positions while the wheel is rotated to twist them by the intermittent movements of the levers, substantially as described.

2. In a wire-twister, the combination of a twisting-wheel having two sets of teeth with a flat periphery between them; reciprocating levers provided with straps that inclose the flat periphery of said wheel; a sliding pawl mounted on each of said levers and adapted to engage with a respective set of teeth on said wheel, and means for supporting the levers and the twisting-wheel in an operative position while the wires are being twisted.

3. In a wire-twister, the combination of a twisting-wheel having two sets of teeth, and provided with a slot extending from the axis to the periphery thereof adapted to receive the wires to be twisted and to hold them in fixed relative positions; reciprocating levers loosely inclosing the portion of the periphery of said wheel that lies between the teeth; a sliding pawl carried on each of said levers adapted to engage with the teeth on said wheel, and supporting-plates mounted on said levers and adapted to support the ma-

chine in an operative position while the wires are being twisted, substantially as described.

4. A wire-twister, comprising a wheel having two sets of teeth with an intervening flat periphery; two reciprocating levers each of which terminates in a slotted strap or band that is adapted to inclose the flat periphery of the wheel; a side plate mounted on each of said levers and provided with slots that are adapted to support the machine upon the wires while the wheel is being rotated to twist them; and a pawl carried on each of said levers adapted to engage with said wheel to impart to it an intermittent progressive movement, substantially as described.

5. In a wire-twister, the combination with a wheel having an opening extending from the axis to the periphery thereof, and two sets

of teeth with an intervening flat periphery; of two reciprocating levers terminating in straps with slots therein and adapted to inclose the flat periphery of said wheel; supporting side plates attached to said levers and provided with slots to receive the wires; a pawl engaging with a respective set of teeth on said wheel and carried on said levers, and a holding-plate adapted to hold the wires in fixed relative positions during the initial twist, substantially as described.

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

WILLIAM N. PARRISH.

Witnesses:

R. J. McCARTY,

JONATHAN C. BOONE.