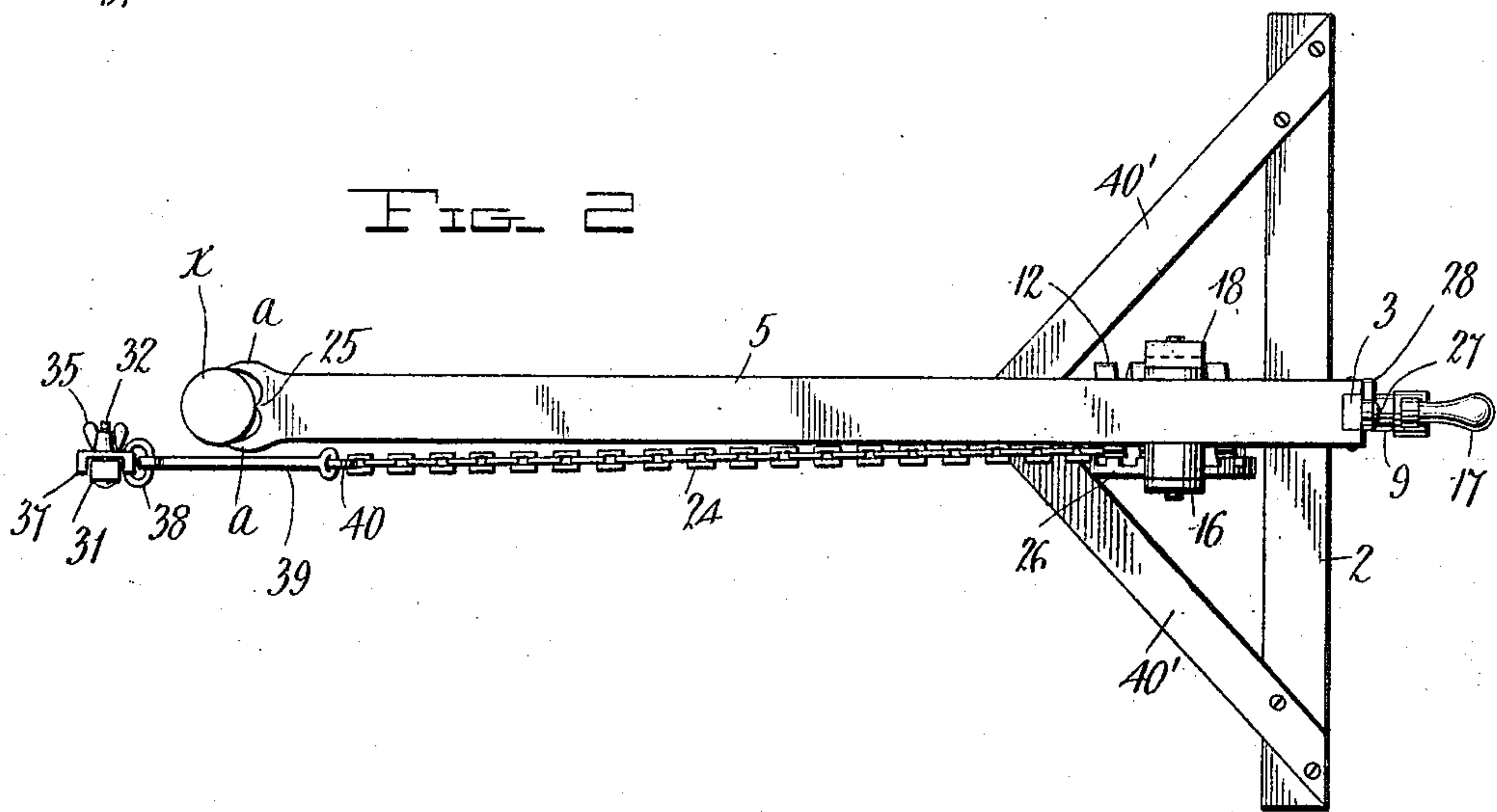
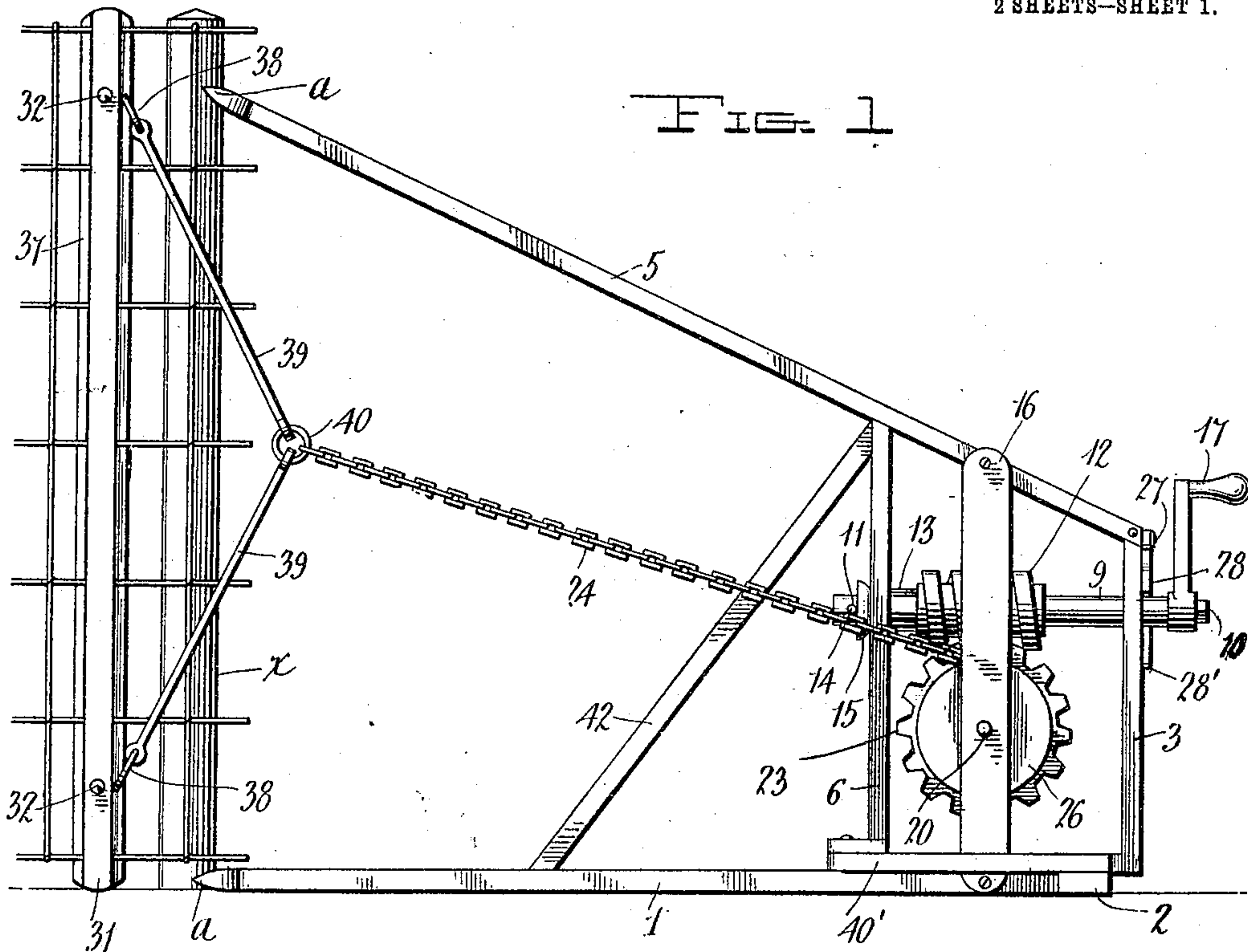


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2 SHEETS—SHEET 1.



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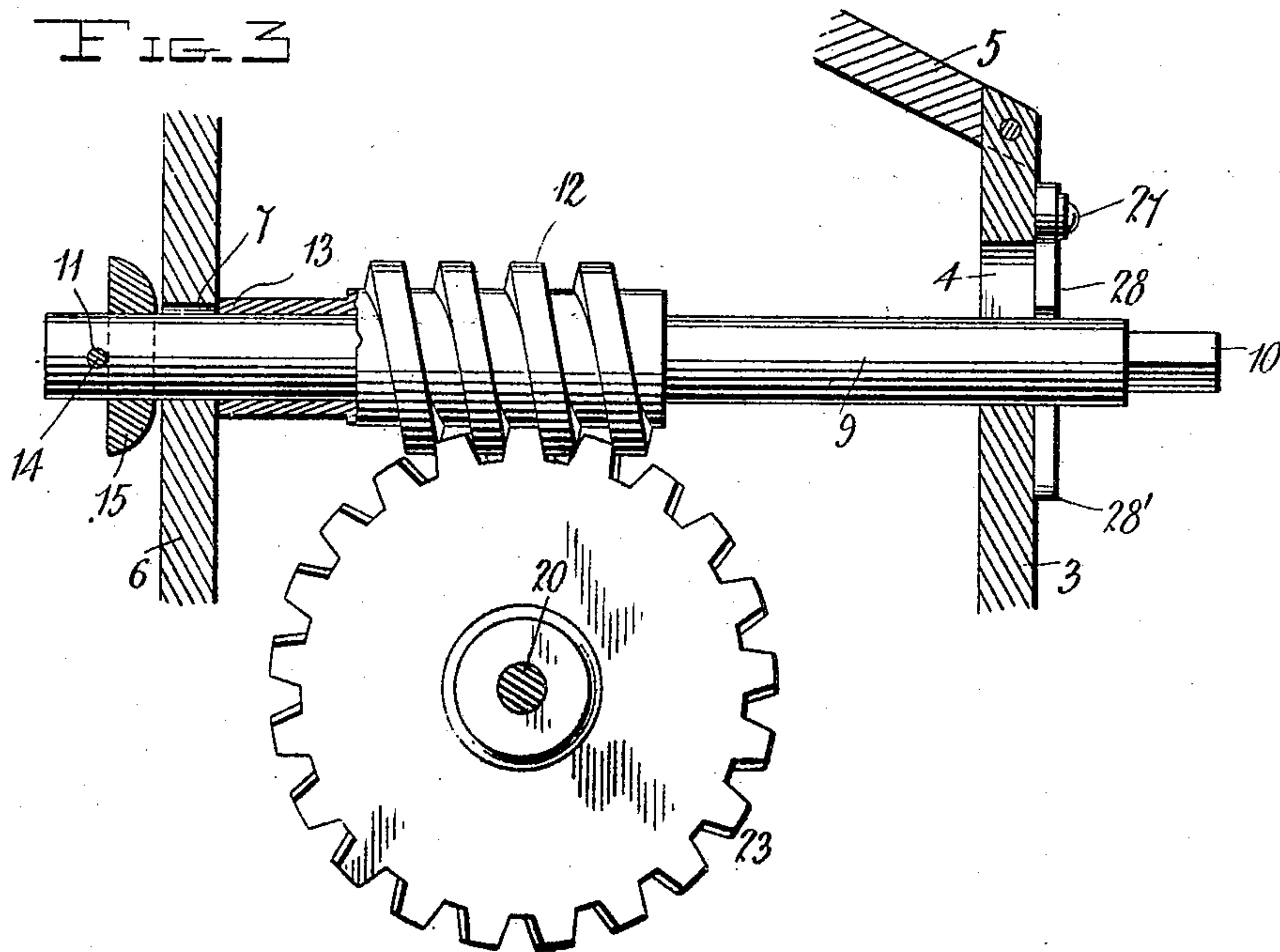


FIG. 4

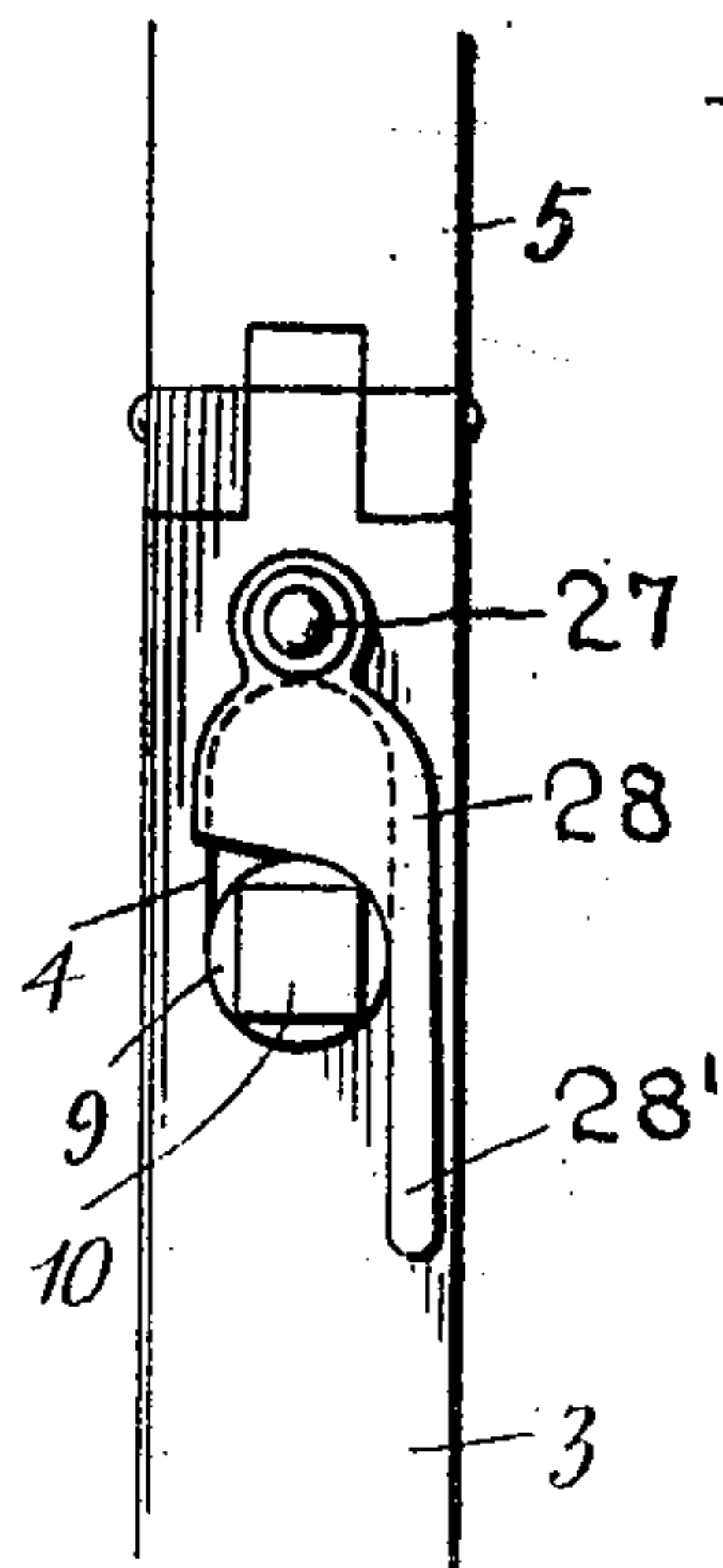
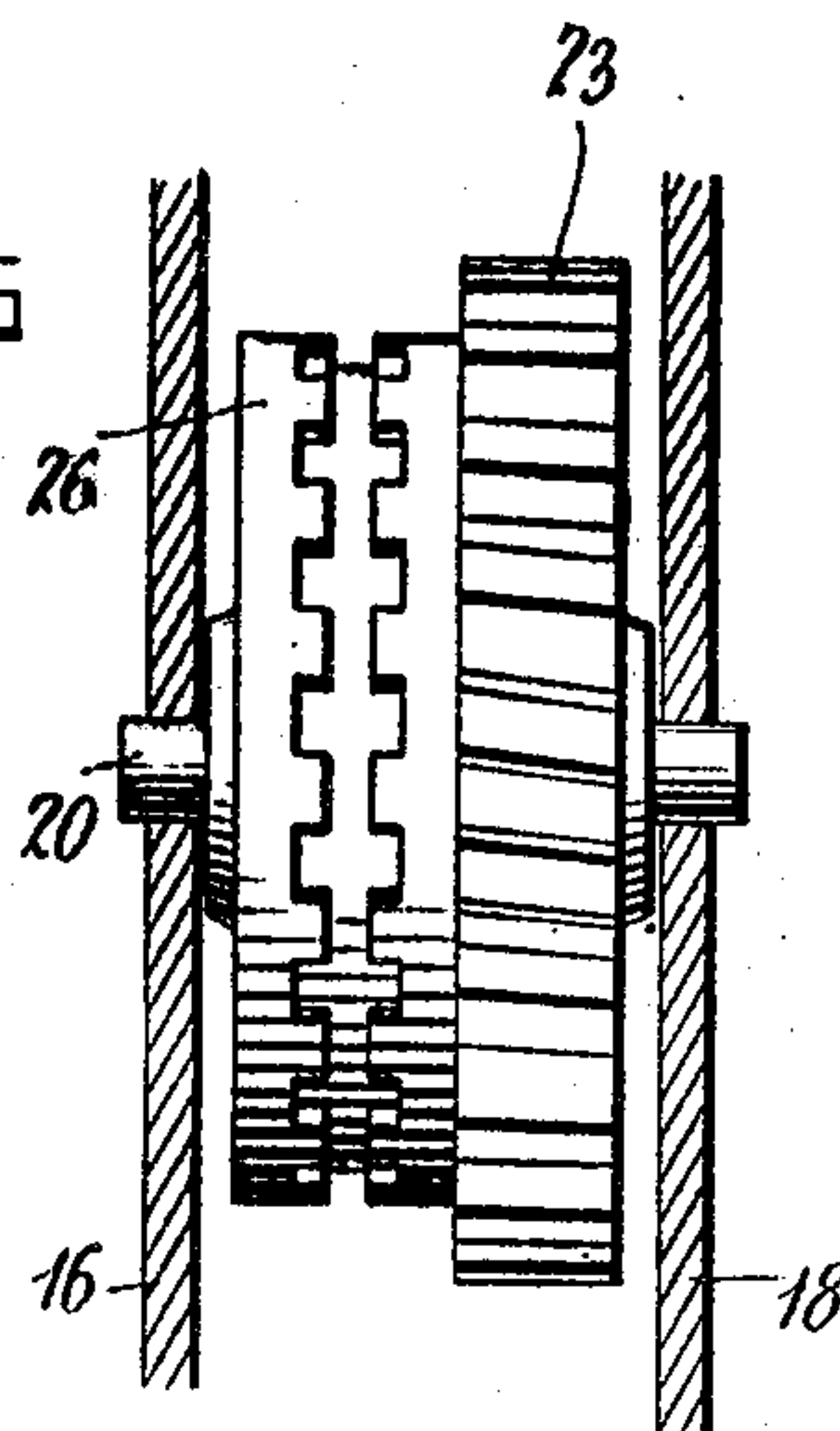


FIG. 5



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UNITED STATES PATENT OFFICE.

LARKIN MILLER, OF REA, MISSOURI.

WIRE-STRETCHER.

No. 914,595.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed March 9, 1908. Serial No. 420,037.

To all whom it may concern:

Be it known that I, LARKIN MILLER, a citizen of the United States, residing at Rea, in the county of Andrew, State of Missouri, have invented certain new and useful Improvements in Wire-Stretchers; and I do hereby 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.

This invention relates to a new and useful improvement in wire stretchers.

The object of my invention is, to provide a wire stretcher of that class used in stretching a wire fence fabric and by means of which immense leverage may be exerted, in order to properly stretch the fence fabric; a further object being to provide a releasing mechanism whereby the winding drum as used in this invention may be instantly released in unwinding the tightening chain or cable, as will be described more fully hereinafter and finally pointed out in the claims.

In the accompanying drawings I have shown in Figure 1, a stretcher embodying my invention, the device being disclosed in elevation a portion of a fence fabric being disclosed. Fig. 2 shows a top view of my stretcher. Fig. 3 shows an enlarged sectional detail disclosing the manner of securing the worm shaft. Fig. 4 shows a face view of the shaft locking dog, and Fig. 5 an edge view of the drum and driving gear as used in my invention.

In carrying out the object of my invention, I employ a base bar 1, which at one end is provided with the sill 2. Extending upward from this base bar 1, is the vertical end bar 3, provided near its upper end with a bearing slot 4, as shown in Fig. 3, and upwardly inclined from said vertical end bar is the frame bar 5, as clearly disclosed in Fig. 1. Midway between said base bar 1, and frame bar 5, is the bearing provided cross bar 6, the bearing within the same being shown in Fig. 3.

Revolubly and tiltably held within the bearing 7 and slot 4, is the worm shaft 9 having the square end 10 at one end, and the pin opening 11, at the remaining end, this shaft carrying the worm 12 having the stop shoulder 13, adapted to find a bearing against the inner face of the cross bar 6, as disclosed. Held within the opening 11, is

the pin 14 working against a dished washer 15, which washer has its curved surface bearing against the outer face of the cross bar 6, this construction permitting the crank end of the shaft being raised within the slot 4. Secured to the square shaft portion 10 is the operating crank 17.

Extending upwardly from the base bar 1 to the inclined frame bar 5, are the two side bars 16 and 18, these bars being provided with registering bearings adapted to receive the drum shaft 20. This drum shaft is provided with the drum 26, upon which is wound a suitable chain 24. Secured to the drum shaft 20, adjacent the drum 26, is the worm gear 23 meshing with the worm 12, this gear and chain drum 26 as a matter of convenience being cast in one piece.

Fastened to the vertical end bar 3, by means of the bolt 27, is the shaft locking dog 28 the shoulder portion of which is adapted to ride upon the shaft 9, to hold this drum shaft revolubly within the lower end of the slot 4. This shaft locking dog 28, is provided with the pendent ear 28', by means of which the dog may be carried outward to permit the tilting of this shaft.

Used in connection with my wire tightening mechanism is a fence clamping device comprising the grooved bar 31 carrying the set bolts 32, these set bolts passing through a clamping bar 37, as disclosed in Fig. 2, suitable thumb nuts 35 being employed, to lock these clamping bars 31 and 37 together, in order to securely clamp the fence fabric. The clamping bar 31, is provided with the rings 38 one being secured near each end and fastened to these rings are the link bars 39 in turn secured to the ring 40. The tightening chain 24 is secured at its end to the ring 40 as disclosed in Fig. 1.

As disclosed in top view in Fig. 2, the ends of the base bar 1, and frame bar 5, are crescent-shaped to provide the two impinging points *a* and the intermediately disposed point 25. These pointed ends of the bars being adapted to be brought into impingement with the fence post serving as a fulcrum for this wire stretcher. The structure is strengthened by means of the brace bars 40', 40', extending from the sill 2 to the base bar 1, and the base bar 42, fixed to the base bar 1 and the cross bar 6, as disclosed in Fig. 1.

The operation of my invention is very simple. The fence fabric to be stapled to

the post is secured between the clamping bars 31 and 37. The base and frame bars are then impinged against a suitable post as is shown at *x* when the crank 17 is operated to revolve the worm 12 which in turn rotates the drum shaft 26 to wind up with immense leverage the chain 24. The tightly drawn fence fabric is then stapled to the post.

In order to facilitate the unwinding of the tightening chain 24 I have tiltably secured the worm shaft 9 so that when it is desired to unwind the cable 24 the operator throws outward the shaft locking dog 28 and then raises the shaft 9 within the guiding slot 4 so that the worm 12 becomes entirely disengaged from the worm gear 23, which can then be instantly rotated in unwinding the tightening chain therefrom. While I have described the member 24 as being a chain it should be understood that the same may also be a cable though I prefer using a chain.

And having thus described my said invention what I claim as new and desire to secure by U. S. Letters Patent is—

1. A wire stretcher having in combination, a base bar having an impinging point, a vertical end bar, an upwardly inclined frame bar having an impinging point, a cross-bar secured midway between said base and frame bars, said end bar having a suitable slot and said cross bar a bearing, a tiltably held worm shaft within said slot and bearings, a pivoted dog secured to said end bar to revolubly

hold said shaft within the lower end of said slot, two bearing provided side bars uniting said base and frame bars, a drum shaft held within the bearing of said supporting bars, a drum upon said last mentioned shaft, and a gear carried by said drum shaft in mesh with said worm, all arranged substantially as and for the purpose set forth.

2. A wire stretcher having in combination, a base bar having an impinging point, a vertical end bar, an upwardly inclined frame bar having an impinging point, a cross-bar secured midway between said base and frame bars, said end bar having a suitable slot and said cross bar a bearing, a tiltably held worm shaft within said slot and bearings, a pivoted dog secured to said end bar to revolubly hold said shaft within the lower end of said slot, two bearing provided side bars uniting said base and frame bars, a drum shaft held within the bearings of said supporting bars, a drum upon said last mentioned shaft, a gear carried by said drum shaft in mesh with said worm, and a clamp provided chain secured to said drum, all arranged substantially as and for the purpose set forth.

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

LARKIN MILLER.

Witnesses:

W. H. BAYNE,
V. L. TOWNSEND.