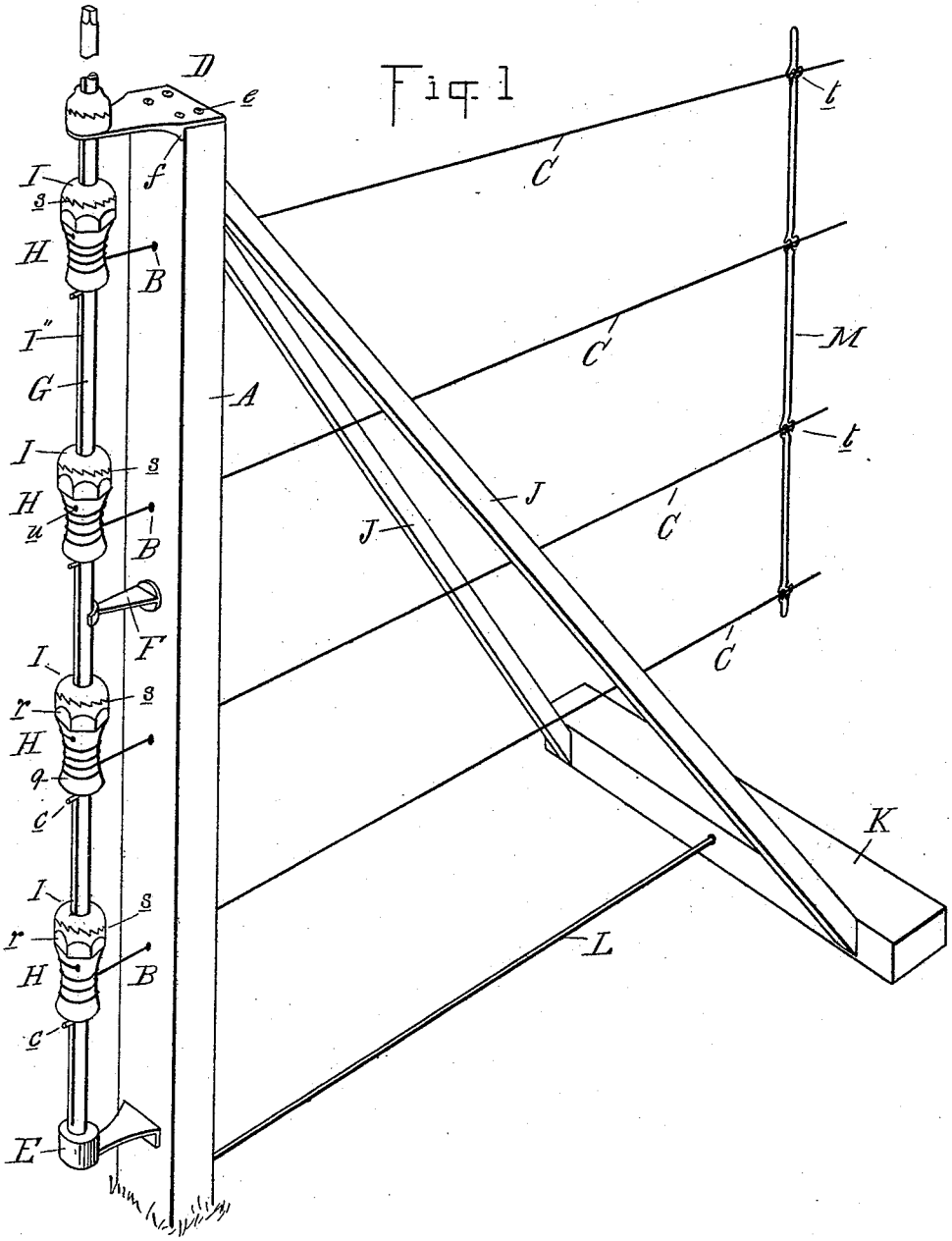
(No Model.) 2 Sheets—Sheet 1.

J. N. MERCHANT.

STRAINING DEVICE FOR WIRE FENCES.

No. 420,819. Patented Feb. 4, 1890.

Fig 1



Witnesses:
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J. Paul Mayer

Inventor:
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(No Model.) 2 Sheets—Sheet 2.

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STRAINING DEVICE FOR WIRE FENCES.

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Fig. 2

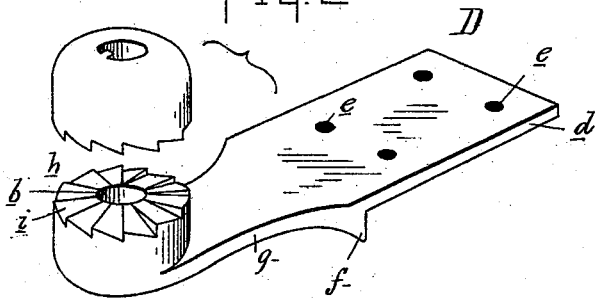


Fig. 3

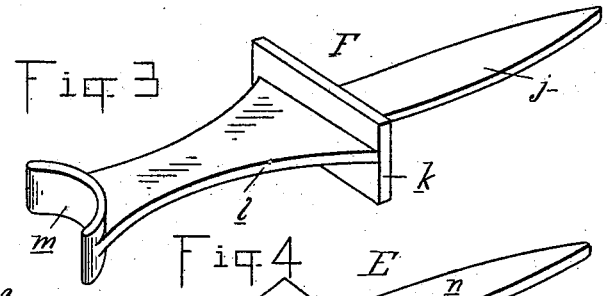


Fig. 4

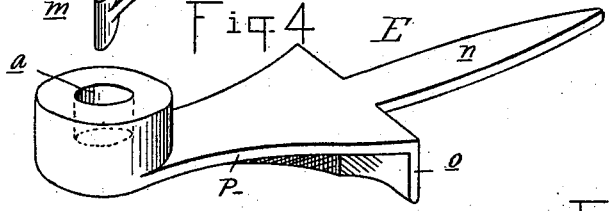


Fig. 5

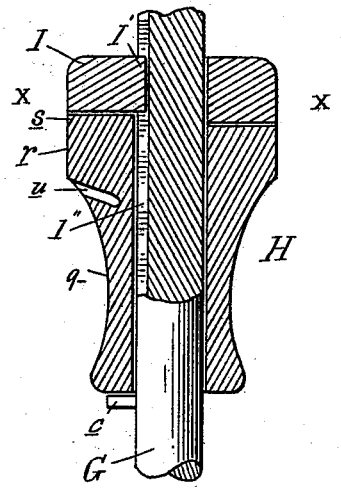
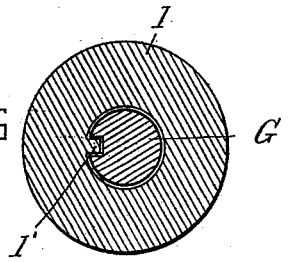


Fig. 6



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UNITED STATES PATENT OFFICE.

JUDSON N. MERCHANT, OF CHELSEA, MICHIGAN.

STRAINING DEVICE FOR WIRE FENCES.

SPECIFICATION forming part of Letters Patent No. 420,819, dated February 4, 1890.

Application filed April 25, 1889. Serial No. 308,525. (No model.)

To all whom it may concern:

Be it known that I, JUDSON N. MERCHANT, a citizen of the United States, residing at Chelsea, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Straining Devices for Wire Fences, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in straining devices for wire fences; and the invention consists in the peculiar construction of a series of rotatable spools sleeved upon a standard carrying vertically-adjustable ratchet wheels or caps, whereby any wire can be adjusted independently of any of the others, or all can be turned up together, as may be desired, all as more fully set forth and specified in the claims.

In the drawings which accompany this specification, Figure 1 is a perspective view of my improved straining device as in use. Figs. 2, 3, and 4 are detached perspective views of the cap, central support, and bottom support for the tension-rod. Fig. 5 is a vertical longitudinal section through one of the spools and stationary ratchet-wheels, and Fig. 6 is a cross-section thereof on line X X.

A is a tension-post provided with apertures B for the wires C, of which the fence is constructed.

D is a top bracket secured to the top of the post A. E is a bottom bracket secured at or near the base of the post, and F is a central bracket.

G is a tension-rod supported at its lower end in the bottom bracket E and at its top in the top bracket D, suitable bearings *a* and *b* being provided in the respective parts.

H are winding-spools turning loosely on the tension-rod and held in position by means of pins *c*, secured in the tension-rod. Any other suitable abutment may be used to support the spools.

I are ratchet-disks non-rotatably secured upon the rod by means of a feather I′, engaging the keyway I″, which extends the entire length of the tension-rod.

The top bracket is provided with a suitable bearing-face *d*, having apertures *e* for screws or nails, and a flange *f* to rest against the side of the post, and with the extension *g*, provided with the aperture *b*, and the circular bearing-face *h*, which is provided with ratchet-teeth *i*.

The central bracket consists of the spike or stem *j*, adapted to be driven into the post up to the flange *k*, and of the extension *l*, which has a circular bearing or shoulder *m* to support the central part of the tension-rod and allow it to rotate easily when under the strain.

The lower bracket consists of the stem or spike *n*, adapted to be driven into the post up to the flange *o*, and of the extension *p*, which is provided with the aperture or socket *a* to receive the lower end of the tension-rod.

Each spool consists of the central concave part *q* and the hexagonal or squared portion *r* for a wrench-hold. The upper faces of the spools are provided with ratchet-teeth corresponding with the ratchet-teeth *s* on the ratchet-disks I.

J are braces connected at their tops with the tension-post and at their bottom secured to a suitable brace-block K, which is connected with the base of the tension-post by means of the brace-rod L.

M is a spreader-bar designed, in connection with my device, to be applied about midway between the posts to keep the wires apart; and to this end the bar is provided with a series of eyes *t*, each eye being separated from the others by the same distance as the apertures B in the tension-post.

The parts being thus constructed, the tension device is intended to be placed at any suitable point in the wire fence to remain permanently to tighten it up from time to time, as may be necessary to keep it tight. The ends of the wires are engaged with the apertures *u* in the spools and the wrench is applied to the square top of the tension-rod. The fence-wires are coiled upon the spools until a sufficient tightness is obtained, as near as can be, without tightening each wire separately. As the tension-rod rotates it carries with it all the ratchet-wheels I, and by means of the engagement of the ratchet-wheel with the teeth of the spool the spools are also rotated. To tighten up any one of the wires which may need more tension than the others the wrench may be engaged upon the hexagonal or squared portion of the spool carrying that

wire, and it may be then turned to the requisite degree of tightness. The ratchet-disks I, having a sliding engagement with the tension-rod, will rise and fall the width of the ratchet-teeth and will fall into engagement with the teeth on the spool and hold it in its adjusted position by gravity. In this way each of the wires may be strained separately, or they may be all strained simultaneously, as may be desired.

The device is cheap and small, and with small expense may be left permanently upon the fence and the wires kept tight with a few moments' time.

By the use of my spreader-bar, in connection with the straining device to tighten up the wires, about one-third or one-half of the usual number of posts may be dispensed with, the spreader-bar holding the wires in position between the posts, even if they are set much farther apart than usual.

What I claim as my invention is—

1. In combination with a wire fence, a straining device journaled in suitable brackets applied to one of the posts and consisting of the following elements: a vertical tension-rod journaled in brackets, ratcheted spools loosely sleeved upon said rod, and a sliding ratchet-disk on the rod above each spool, substantially as described.

2. In combination with a wire fence, a straining device consisting of a post carrying a vertical tension-rod journaled in upper and lower brackets, abutments or pins on said post separating ratcheted spools loosely journaled on said rod, and ratchet-disks having a feather sliding in a keyway formed in said tension-rod, substantially as described.

3. The combination, with a wire fence, of a straining device consisting of the following elements: a post carrying a vertical tension-rod in suitable brackets, abutments on said tension-rod separating ratcheted spools loosely journaled on said rod and provided with the part q and the squared or hexagonal part r, sliding ratchet-disks above said spools, and means for rotating said rod, whereby all the spools may be wound at once or each one separately, substantially as described.

4. In a wire fence, the combination, with a post carrying the straining device, consisting of a vertical shaft carrying ratcheted-spools loosely journaled thereon and sliding ratchet-disks above said spools, of the spreader-bar M, having eyes t, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 22d day of January, 1889.

JUDSON N. MERCHANT.

Witnesses:

J. PAUL MAYER,

A. B. EATON.