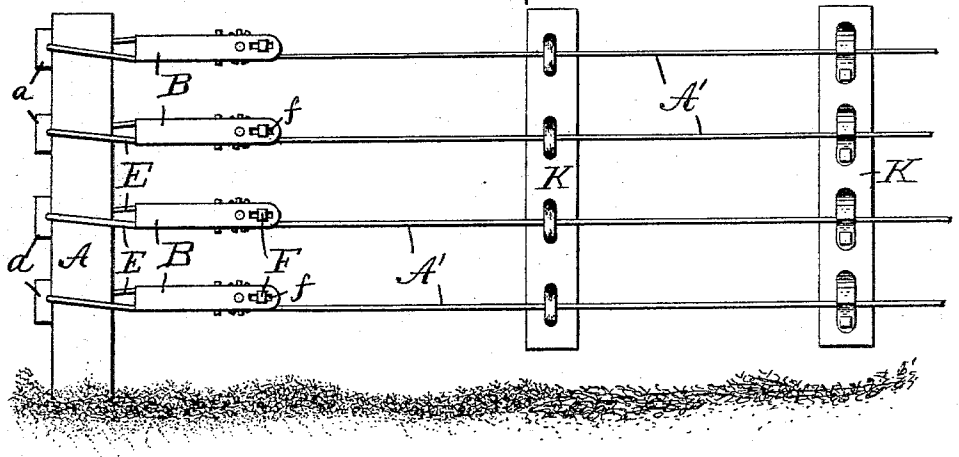
(No Model.)

H. S. STAUFFER.

WIRE FENCE.

No. 545,255. Patented Aug. 27, 1895.

FIG. 1.



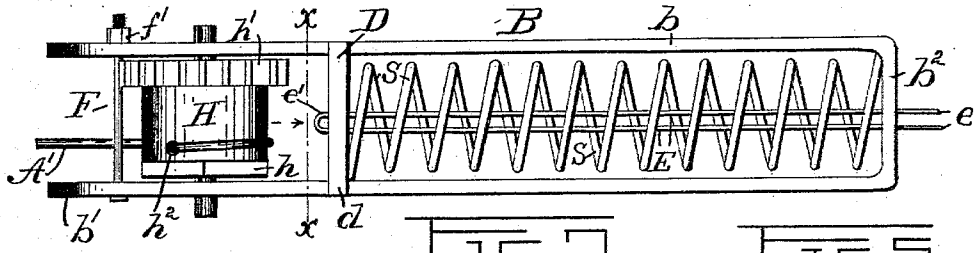


FIG. 2.

FIG. 5.

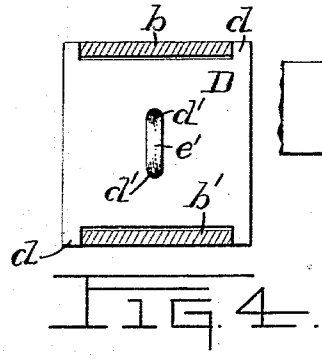


FIG. 4.

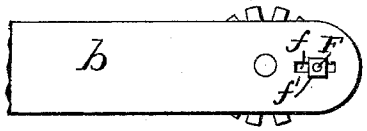


FIG. 3.

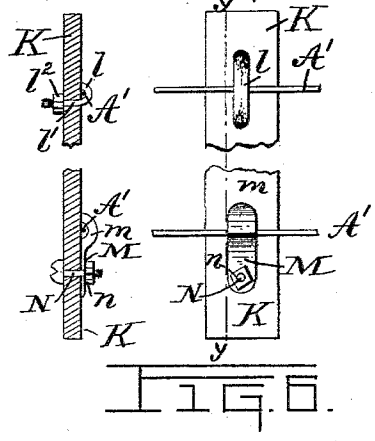


FIG. 6.

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UNITED STATES PATENT OFFICE.

HENRY S. STAUFFER, OF FARMERSVILLE, PENNSYLVANIA.

WIRE FENCE.

SPECIFICATION forming part of Letters Patent No. 545,255, dated August 27, 1895.

Application filed October 13, 1894. Serial No. 525,779. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. STAUFFER, a citizen of the United States, residing at Farmersville, in the county of Lancaster, State of Pennsylvania, have invented certain Improvements in Wire Fences, of which the following is a specification.

This invention relates to improvements in wire fences; and the objects of my improvements are, first, to regulate the tension on the fence-wires, and, second, to detachably connect the palings with said wires.

The invention consists in the peculiar construction of the tension-governor and of the clasps connecting the palings with the fence-wires, as hereinafter fully described, and then specifically pointed out in the claims.

I accomplish the objects of my invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of a panel of a fence embodying my improvements; Fig. 2, an enlarged top view of one of the tension-governors, and Fig. 3 a side view of one end thereof. Fig. 4 is a transverse section on broken line $x\,x$ of Fig. 2. Fig. 5 is a face view of a connection between a fence-wire and a paling and of a vertical sectional view of the same on the broken line $y\,y$, and Fig. 6 a similar face and sectional view of a modified connection between a paling and a fence-wire.

Similar letters indicate like parts throughout the several views.

Referring to the details of the drawings, A indicates a fence-post of any suitable construction, and A′ the fence-wires.

B B are tension-governors connecting the fence-wires with the post. Each tension-governer comprises a U-shaped frame, between the arms $b\,b'$ of which is located a coiled spring S, one end of which rests against the cross-bar b^2 of the frame and the other end against a movable bearing-plate D, having horizontal ears d at the four corners embracing or lapping the upper and lower edges of arms $b\,b'$, as shown in Fig. 4. The ends e of a doubled fastening-wire E pass through openings d' in bearing-plate D, through coiled spring S, and out through perforations in cross-bar b^2, the loop e', formed by the doubling of wire E, embracing the metal between openings d' of the bearing-plate. Ends e are taken around opposite sides of post A and fastened together behind it or secured to bolts a, as may seem best. The free ends of arms $b\,b'$ are tied by a rod F, one end of which engages and is movably secured in a slot f in arm b for a purpose to be described, the other end being pivotally secured in arm b'.

Inside of rod F a drum H is journaled in arms $b\,b'$, the end adjacent to arm b' being squared, as shown at h, to afford a wrench-hold for turning the drum, the other end having a ratchet-wheel h' formed thereon.

To the drum is connected one end of a fence-wire. This wire passes beneath rod F and beneath, up behind, and over the top of drum H, and has one end formed as a hook and engaged with a socket h^2 in said drum. As will be readily understood, the tension on the line-wire is regulated or controlled by the revolution of the drum.

Drum H is locked in position by the engagement of rod F with the teeth of ratchet-wheel h', said rod being clamped in position in or out of engagement with the ratchet-wheel by nut f'.

K indicates the pickets. These are connected with the fence-wires A′ by clasps.

In Fig. 5 the fence-wire is shown as grasped by a hook l, having a shank l' extending through an opening in the paling and held in place by a nut l^2, screwed thereon.

Fig. 6 illustrates a different form of clasp and the one I preferably use. This clasp comprises a flat plate M, which rests against the face of the picket and has a hook m on one end thereof that takes over fence-wire A′. The other end of plate M is perforated, and through said perforation and a corresponding perforation in the picket the clasp is secured thereto by a screw-bolt N and nut n. This construction of clasp allows a fence-wire to be readily attached and detached from the picket, and is especially convenient when it is necessary to replace either a fence-wire or a picket.

My tension-governors are peculiarly well adapted to the regulation of a yielding tension on the individual wires of a fence, as the drum in each case is directly connected with the fence-wire and the spring connection with the post acts independently of the drum.

I am aware that the use of drums for taking up the slack of fence-wires and controlled by detents adapted to engage ratchets thereon is old; but with such devices the wires can only be uncoiled from the drums intermittingly, and the attention of an attendant is required during the entire operation of uncoiling. My device by which the revolution of the drum is controlled differs from others in this respect, and is especially convenient, for while the strain of the drum on the locking-rod is carried by both sides of the frame, yet the drum can be freed for any length of time from the control of said rod by disengaging the same from the ratchet, whereby a person working on the fence between the end posts can, by first disengaging the locking-rods from the ratchets, obtain any amount of slack in the fence-wires he may desire without returning to the post to let out additional wire.

The construction of the yielding connection between the drum and the fence-post is particularly convenient for disconnecting the parts to replace those broken or worn out and for again reassembling them. The parts are separated by disconnecting the ends *e* of wires E from the post and then withdrawing that wire by pulling upon loop *e'*. When wire E is detached, all connection between the frame and the spring is broken, the bearing-plate being readily removed by turning it in place between the side bars of the frame. To reassemble the parts the operation is reversed, as will readily be understood.

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

1. The combination, in a wire-fence, of an open-ended U-shaped frame, a drum journaled in the arms of the frame and adapted to have a fence-wire attached thereto, a ratchet-wheel on one end of the drum, a rod having one end thereof pivoted to the arm of the frame opposite the ratchet-wheel, the other end of said rod engaging the arm of the frame adjacent to the ratchet-wheel and being constructed to be moved parallel with the longitudinal edge of said arm, to be engaged with or disengaged from the ratchet-wheel, a movable bearing-plate disconnected from the drum-mechanism and located within the arms of the frame between said drum and the closed end of said frame, ears on the bearing-plate lapping the arms of the frame, a coiled spring bearing on said plate and on a bearing at the closed end of the frame, and a double wire having its ends passing through separate openings in said bearing-plate, said ends passing through the coiled-spring and the bearing at the closed end of the frame and being adapted to be secured to a post, substantially as and for the purpose specified.

2. The combination, in a wire-fence, of a frame having a slot in an arm thereof parallel with the longitudinal edge of said arm, a drum journaled in the arms of said frame and adapted to have a fence-wire attached thereto, a ratchet-wheel on the end of the drum adjacent to the arm of the frame having the slot therein, an angular head formed on the other end of the drum, a rod having one end pivoted in the arm of the frame adjacent to said head and the other end threaded and passing through said slot, said rod being adapted to engage the ratchet-wheel, a nut on the threaded end of the rod, and a connection between said frame and a post, substantially as and for the purpose specified.

3. The combination, in a wire-fence, of an open-ended U-shaped frame, one of the arms of said frame having a slot therein parallel with the longitudinal edge thereof, a drum journaled in the arms of the frame and adapted to have a fence-wire attached thereto, a ratchet-wheel on the end of the drum adjacent to the arm of the frame having the slot therein, a rod having one end pivoted in the arm of the frame opposite the slot and the other end threaded and passing through said slot, said rod being adapted to engage the ratchet-wheel, a nut on the threaded end of the rod, means for rotating the drum, a movable bearing plate engaging said arms between the drum and the closed end of the frame, a coiled-spring bearing on said plate and the cross-piece closing the end of the frame, a doubled wire having its ends passing through openings in the bearing-plate, said ends extending through the coiled-spring and the closed end of the frame and being adapted to be secured to a post, substantially as and for the purpose specified.

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