(No Model.) 2 Sheets—Sheet 1.

C. M. KILER.

WIRE STRETCHER.

No. 431,265. Patented July 1, 1890.

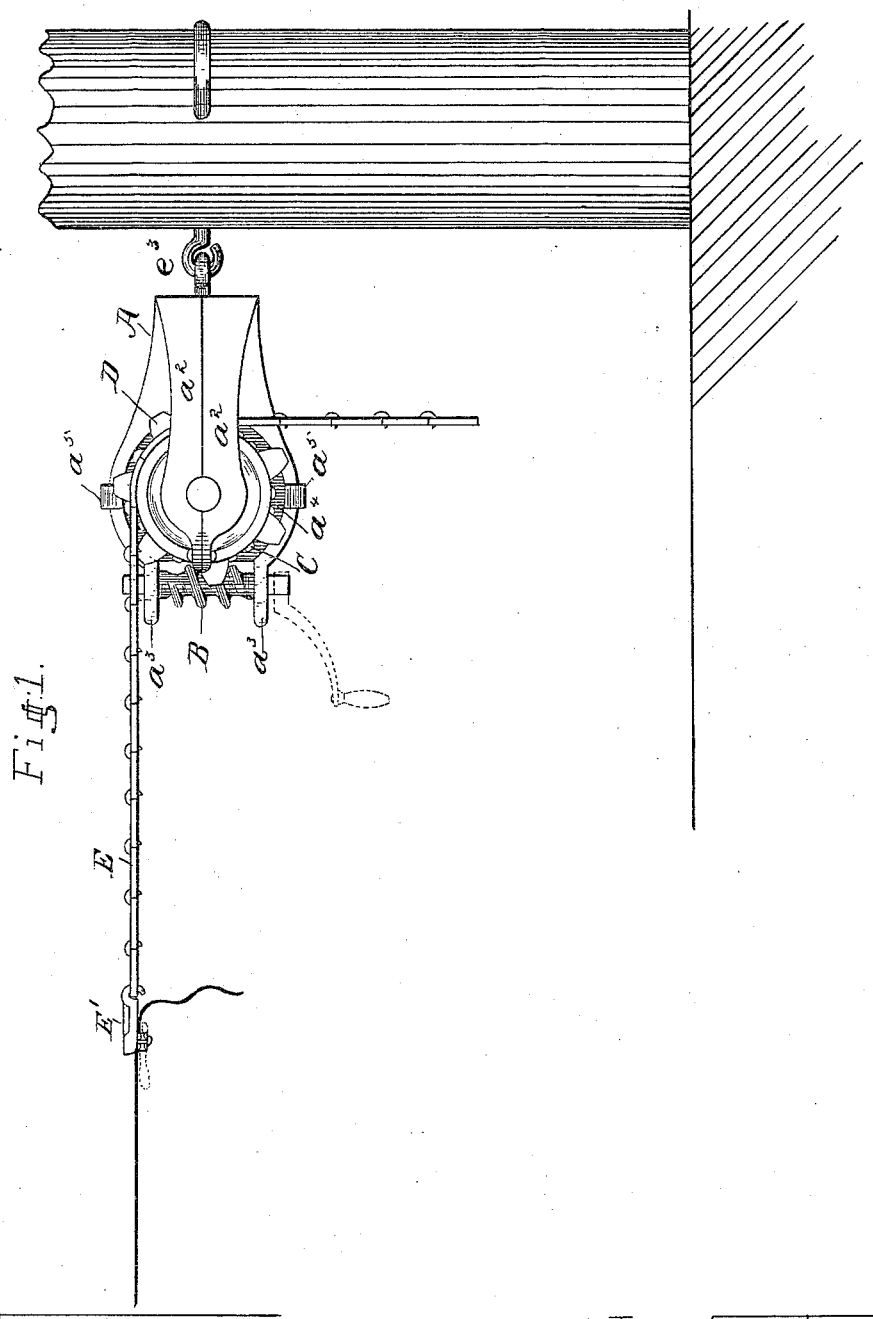

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

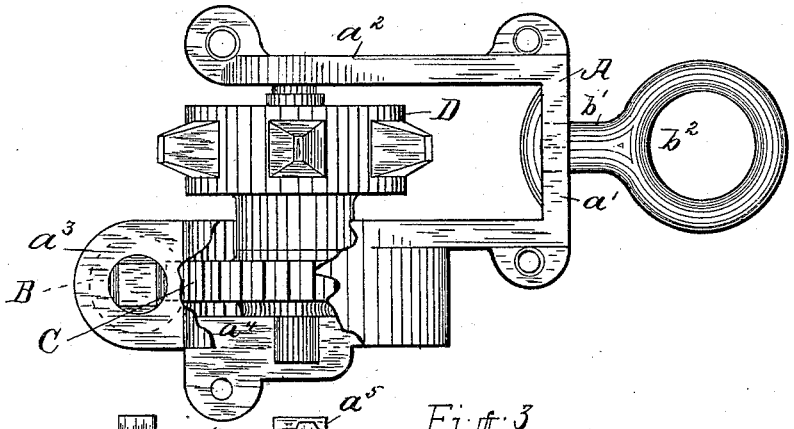


Fig. 3.

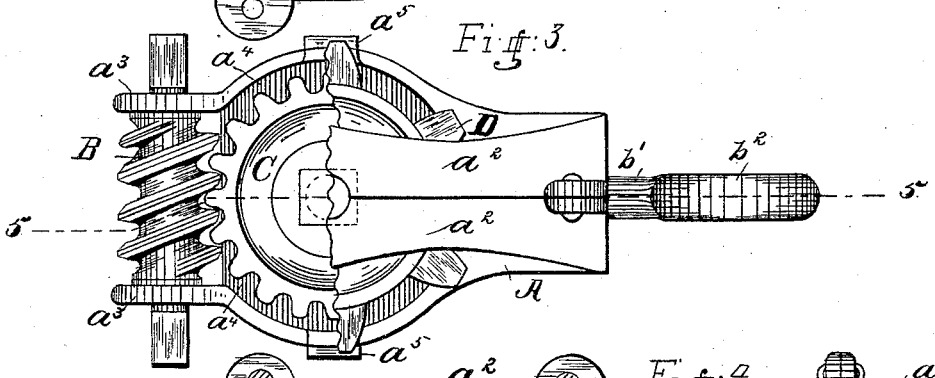


Fig. 5.

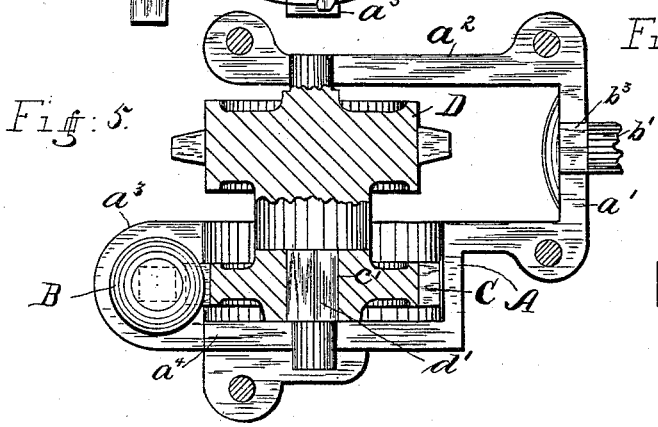
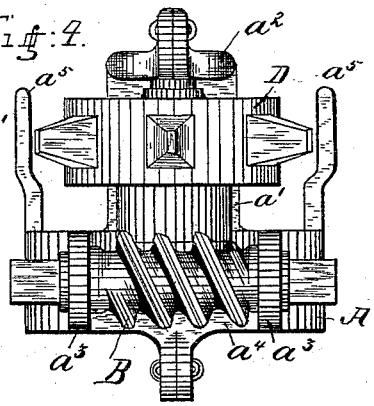


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES M. KILER, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO ROBERT E. POINDEXTER, OF SAME PLACE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 431,265, dated July 1, 1890.

Application filed April 22, 1890. Serial No. 349,015. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. KILER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, 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 improvements in wire-stretchers for wire fences, the object of the present invention being to provide a simple, durable, and effective device which may be quickly attached to and removed from a fence-wire, and which will effectively stretch said wire to any desired tension without exertion on the part of the operator, said device being constructed especially to stretch the wires of fences subsequently to erection. In long-line wire fences, where wire-stretchers are not employed at each end of the wire, more especially in old wire fences having wooden posts, the stretching of the wires is a matter of great difficulty as heretofore practiced, as in most cases the wires have been drawn as nearly taut as possible by hand and subsequently secured in this condition to the post, which operation and its results are very unsatisfactory; and it is the chief object of my present invention to provide a device that any inexperienced person may operate, that will obviate this difficulty, and by which the wires may be drawn absolutely taut irrespective of the length of said wires.

With these objects in view my invention consists in the special construction and in the combination and arrangement of the several parts of the wire-stretcher, substantially as hereinafter described, and set forth in the claim.

Figure 1, Sheet 1, represents in side elevation a wire-stretcher and connections as secured to and operating upon a fence-wire, and as constructed in accordance with my invention; Fig. 2, Sheet 2, a side elevation, on an enlarged scale, of the wire-stretcher proper without attachments, parts being broken away; Fig. 3, a plan view of the same; Fig. 4, an end view, and Fig 5, a longitudinal vertical section on dotted lines 5 5, Fig. 3.

In the drawings, A represents the framework of the device, which will preferably be constructed of malleable iron in two parts divided vertically and centrally, as clearly shown in Figs. 1 and 3, said parts being secured together, preferably by set screws or rivets.

The casing consists of the back or main portion a', (having a central opening, in which is secured movably a swivel b', having an eye b^2 at its end,) an outwardly-projecting arm a^2 at its upper and two outwardly-projecting arms a^3 at its lower end, which arms a^3 are parallel, but remote from each other, and have a filling-piece a^4 extending a portion of their length at their under side, all of which are constructed, preferably, integral with the two halves of the casing, the purposes of which will be hereinafter fully explained.

Secured horizontally between the arms a^3, and having its bearings therein, is a worm B, the ends of which worm are preferably square and project a considerable distance beyond each arm a^3, said square ends being adapted to receive a wrench by means of which said worm is turned. The threads of this worm B mesh with the teeth of a horizontally-rotating pinion C, which pinion rests upon the filling-piece a^4, as shown in Fig. 5, and has a square opening c' formed centrally through it, which receives the square end d' of the hub of a horizontally-rotating sprocket-wheel D, which sprocket-wheel has a shaft bearing at one end in the upper arm a^2 and at the other end in the filling-piece a^4 of the casing A, and is rotated with the pinion C by means of the worm B.

It is obvious that instead of the construction and arrangement of the pinion and sprocket-wheel, as shown in Fig. 5, both the pinion and sprocket-wheel might be keyed upon one shaft, or might be cast integral with suitable journal-bearing ends, such constructions being equivalent and optional.

As shown in Fig. 5, the shank of the swivel b' will have a square portion b^3 near its ex-

treme end, which will fit the square opening in the back of the casing a' to hold it in position when its eye b^2 is adjusted to a vertical or horizontal position.

Extended around the sprocket-wheel D is a sprocket-chain E, having a cam-clamp E′ at its end to engage the wire of the fence, and hooked into the eye b^2 of the swivel b' is a hook-shaped bar e^3, the opposite end of which engages the post of the fence, as clearly shown in Fig. 1, Sheet 1.

The operation of the device is as follows: The clamp E′ will be engaged with the wire of the fence at the proper point. The sprocket-chain, to which the clamp is attached, will then be passed around the sprocket-wheel, after which the hook-shaped bar e^3 is engaged with the swivel b' and with the post. The worm B is then turned by means of a suitable wrench, which revolves the pinion C and sprocket-wheel D, and draws the sprocket-chain around the wheel D and stretches the wire taut, after which the wire in this condition will be secured to the post by staples or otherwise. Wings a^5, formed on the arms a^3, prevent the loose end of the sprocket-chain from turning inward and rewinding itself upon the sprocket-wheel.

The advantages of my improved wire-stretcher, as set forth in the statement of invention in the preamble of this specification, will be readily apparent to those skilled in the art to which it appertains.

I claim—

1. A wire-stretcher comprising a casing, a sprocket-wheel having bearings in said casing, a pinion fixed to revolve with the sprocket-wheel, a sprocket-chain engaging the sprocket-wheel and having a clamp to engage the wire to be tightened, a worm journaled in the casing and meshing with the pinion and adapted to revolve the pinion and connected sprocket-wheel, and a hook device pivotally engaging the casing and fence-post to hold the stretcher while the wire is being drawn taut, substantially as shown and described.

2. In a fence-wire stretcher, the two-part metallic casing A, having a hook pivotally secured to one end, the sprocket-wheel D and pinion C, both secured to the same shaft and journaled in the casing, as shown, the worm B journaled in the casing with its axis at right angles to the axis of the pinion C, and having an angular-shaped end projected beyond the casing, to be engaged by a crank or wrench, said worm meshing with the pinion and revolving it and the sprocket-wheel, and a sprocket-chain with a clamp at its end to engage the fence-wire, all substantially as shown and described.

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

CHARLES M. KILER.

Witnesses:
JOSEPH A. MINTURN,
N. E. C. WHITNEY.