

(No Model.)

2 Sheets—Sheet 1.

L. H. DOWELL.
WIRE STRETCHER AND SPLICER.

No. 490,070.

Patented Jan. 17, 1893.

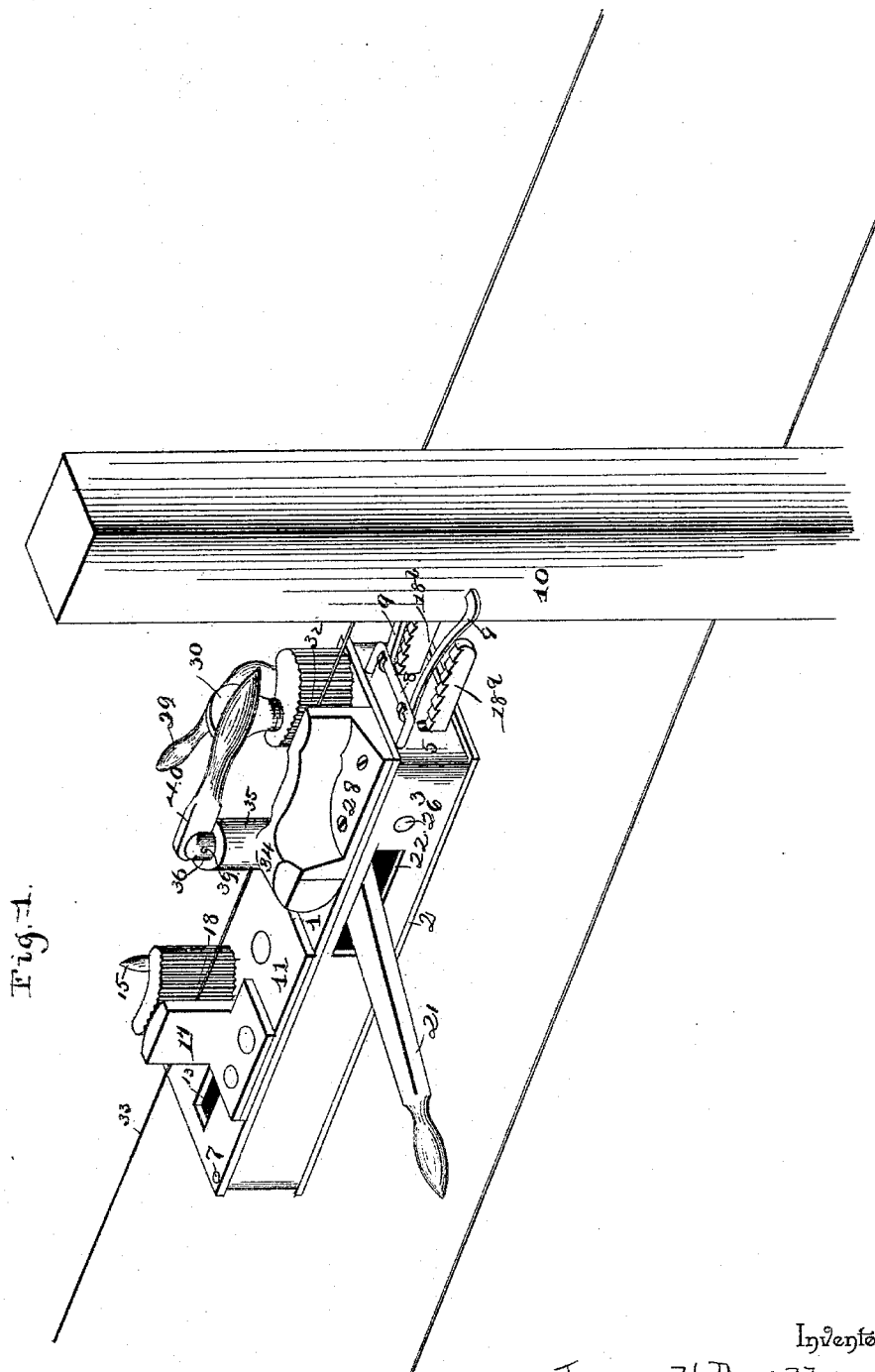


Fig. 1.

Witnesses

H. G. Seitz

A. J. Hollander

Inventor

L. H. Dowell, Jr.

By his Attorneys,

C. A. Snow & Co.

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Fig. 2.

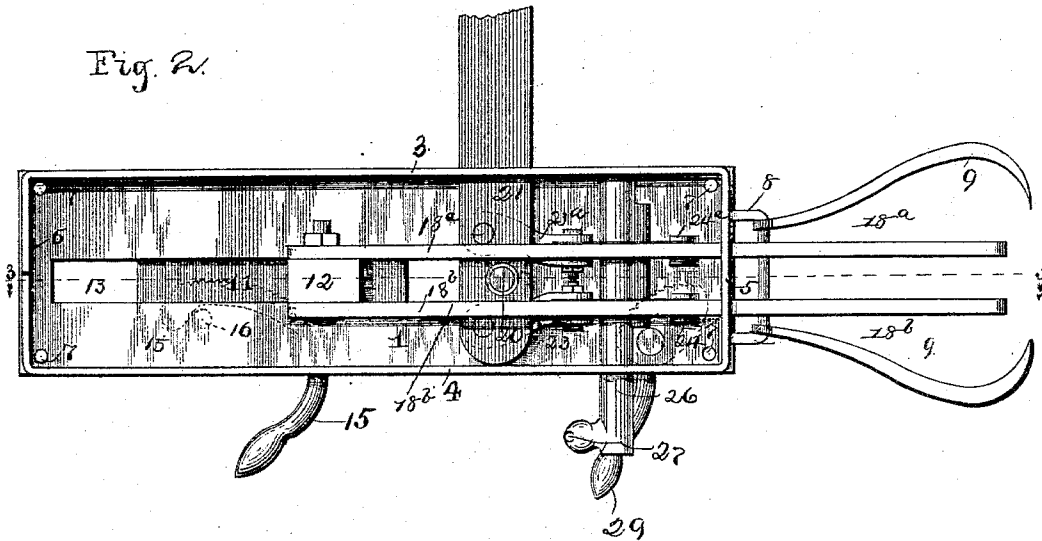
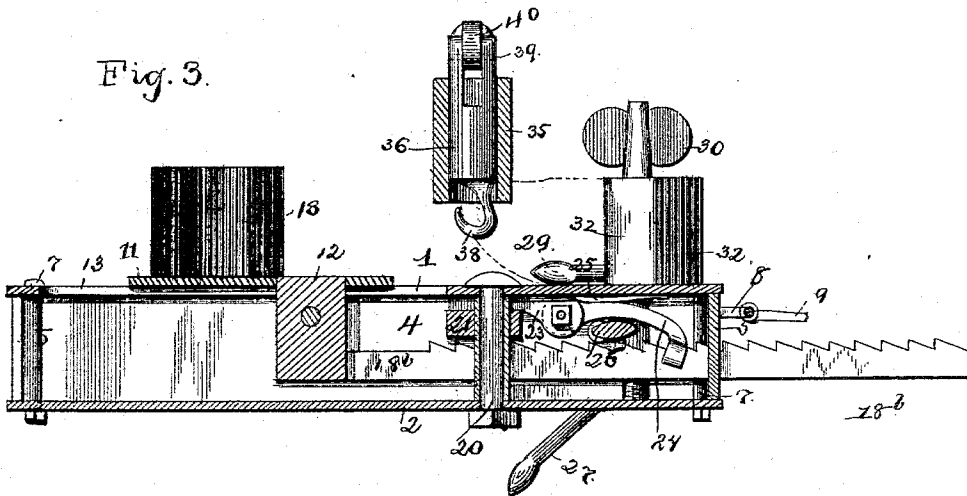


Fig. 3.



Witnesses

H. J. Sutz

A. J. Hollamer

Inventor

Larson H. Dowell

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

LAWSON HENREY DOWELL, OF WALTON, ASSIGNOR OF ONE-HALF TO DANIEL R. MURCHISON, OF ATHENS, TEXAS.

WIRE STRETCHER AND SPLICER.

SPECIFICATION forming part of Letters Patent No. 490,070, dated January 17, 1893.

Application filed October 1, 1890. Renewed December 14, 1892. Serial No. 455,174. (No model.)

To all whom it may concern:

Be it known that I, LAWSON HENREY DOWELL, a citizen of the United States, residing at Walton, in the county of Van Zandt and State of Texas, have invented a new and useful Wire Stretcher and Splicer, of which the following is a specification.

My invention relates to improvements in wire stretchers and splicers, and has for its object the stretching of the wire when a fence is being constructed, the tightening of the wire after the fence is constructed, and the splicing of broken wire, and it consists in certain features of novelty to be hereinafter described and then particularly pointed out in the claims.

In the accompanying drawings: Figure 1 shows the device in perspective, as used in stretching wires. Fig. 2 is a bottom plan view, showing the bottom of the casing removed. Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2.

The casing of the device consists of a top plate 1, bottom plate 2, and sides 3, 4 formed by a single bent up plate, the middle of which forms one end 5, and the inturned ends the other end 6. The plates are connected by corner bolts 7.

8 is a staple at the end 5 on which are pivoted the pair of inwardly presented hooks or grapplers 9 which engage the post 10.

Sliding on the top plate 1, and guided by a lug 12, projecting therefrom, which extends through a slot 13, is a plate 11 which is provided with an anvil plate 14.

15 is a cam-lever pivoted eccentrically at 16 to the plate 11 and having at its inner end a toothed cam 18, the cam being directly opposite the anvil plate so that when the lever is turned toward the right the teeth of the cam will engage a wire passing over the anvil plate.

Pivoted on each side of the lug 12 of sliding plate 11 are ratchet-bars 18^a, 18^b that extend rearwardly through openings in the end 5. Each ratchet bar of the pair is alternately engaged by devices now to be described.

20 is a bolt or pin extending through the top and bottom plates of the casing, and between the ratchet-bars, on which is fulcrumed between its ends and above said bars the

throw-lever 21 that extends through slot 22 in side 3. On one side of the pivot bolt, the throw-lever carries a pivoted link 23, and on the other side of the pivot another pivoted link 23^a. To these links 23, 23^a, are pivoted the pawls 24, 24^a, respectively, the ends of which engage the teeth of the ratchet-bars, being thrust into engagement therewith by springs 25.

26 is an eccentric shaft extending transversely through the casing and having at one end the releasing lever 27. I call this a "releasing-lever" because when turned down it causes the eccentric of its shaft to act on and disengage the pawls from the rack-bars.

28 is another anvil-plate.

29 is the lever of another toothed cam 32 pivoted eccentrically on a thumb screw 30.

The anvil plate 14, and cam-lever 15, I denominate the straining or tightening clamp, and the anvil-plate 28, and cam 31, the holding clamp.

The operation of the device so far as described is as follows. A wire 33 being passed between the anvil-plate 14 and cam 18 of the straining clamp, the lever 15 is thrown to the left which brings the teeth of the cam in engagement with the wire. The throw lever 21 being grasped and reciprocated by one hand the pawls 24, 24^a, will alternately engage the teeth of ratchet-bars 18^a, 18^b respectively, each movement of the lever drawing the sliding plate 11 toward the post and straining or tightening the wire. When the slide reaches the limit of its movement in its straining direction, the lever 29 of the holding clamp is turned to the right to bring the teeth of its cam into engagement with the wire, and thus nip or clamp it against the anvil plate 28. The cam lever 15 being now thrown to the left, the slide may be slid to its operative position, and the wire be further strained if desired.

I will now describe the splicer or twister.

34 is an arm projecting from the anvil-plate 28, which has at its inner end a vertical cylindrical housing 35.

36 is a revoluble sliding stem having at its lower end a hook 38. The upper end of the stem is bifurcated, and extending across the bifurcations or forks is a pin 39.

40 is a swinging lever which is pivoted eccentrically on the pin 39 in such manner as that when swung to the left, the hook will be permitted to extend below the housing, but when swung to the right the hook will be drawn up into the housing.

This part of my invention is operated as follows: The cam-lever 29 having been reversed by withdrawing and replacing the thumb-screw on which it is pivoted, the different parts of the broken wire are engaged in the straining and the holding clamps. The extreme ends of the broken wire being overlapped so that the ends extend beyond the housing, they are engaged by the hook 38, the hook of course being lowered. The lever 40 being now swung over to the right the hook is elevated, which movement draws the ends of the wires up into the housing. The lever 40 being now revolved so as to revolve the hooked stem the ends of the wires will be twisted. The hook being now lowered, the wire will be found to be connected so as to stand ordinary strain.

When it is desired to tighten a wire already strung it is engaged by the hook and its body twisted in the same way as when two pieces are connected.

What I claim is:—

1. The combination in a wire stretcher, of a slide, a straining clamp carried thereby, a pair of ratchet bars connected with the slide, a throw lever carrying links pivoted thereto on each side of its fulcrum, pawls pivoted to the links for engaging the ratchet-bars, and springs pressing the pawls into engagement with said bars, substantially as set forth.

2. The combination in a wire-stretcher, of a casing having a longitudinal slot in its top, a slide on the top having a lug projecting into

the slot, a straining clamp carried by the slide, a pair of ratchet-bars pivoted to said lug, and means for engaging the ratchet-bars, substantially as set forth.

3. The combination in a wire-stretcher, of a casing having a longitudinal slot in its top, a slide on the top having a lug projecting into the slot, a straining clamp carried by the slide, a pair of ratchet-bars pivoted to said lug, a throw-lever, and pawls carried thereby for engaging the ratchet-bars alternately, substantially as set forth.

4. The combination in a wire-stretcher, of a casing, a slide moving thereon, a straining clamp carried thereby, a ratchet-bar connected with the slide, a throw-lever having a pawl engaging the rack-bar, and an eccentric shaft having an operating lever, said shaft being adapted to disengage the pawl from the ratchet-bar, substantially as set forth.

5. The combination in a wire-stretcher, of a frame or casing, a stationary retaining clamp at one end thereof, a movable straining clamp near the other end thereof for stretching the wires, and a twister between the ends of the frame or casing, substantially as set forth.

6. The herein described twister, consisting of a housing, a revoluble stem in the housing, having a hook at one end, and a pin at the other end, and a lever pivoted eccentrically on said pin, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

LAWSON HENREY DOWELL.

Witnesses:

J. B. MESSER,
JOHN W. PARKER.