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H. H. & H. C. HARRIS.

WIRE STRETCHER.

APPLICATION FILED AUG. 3, 1907.

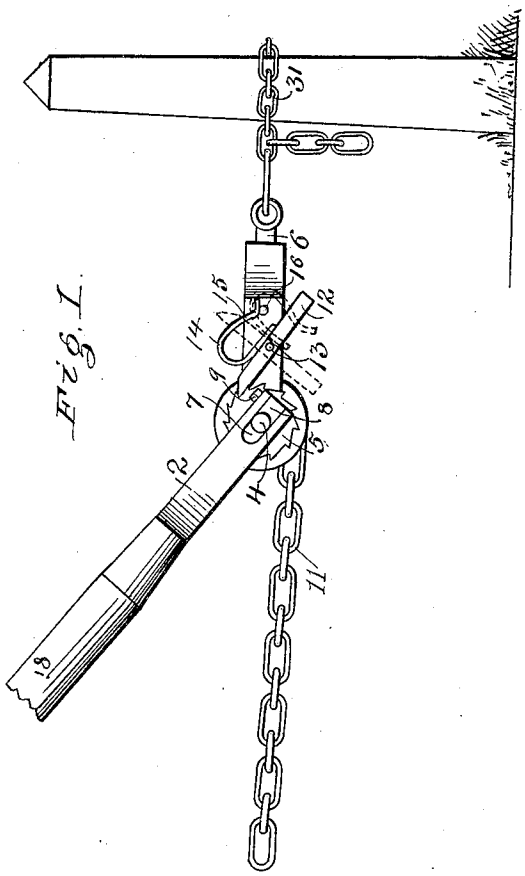


Fig. 1.

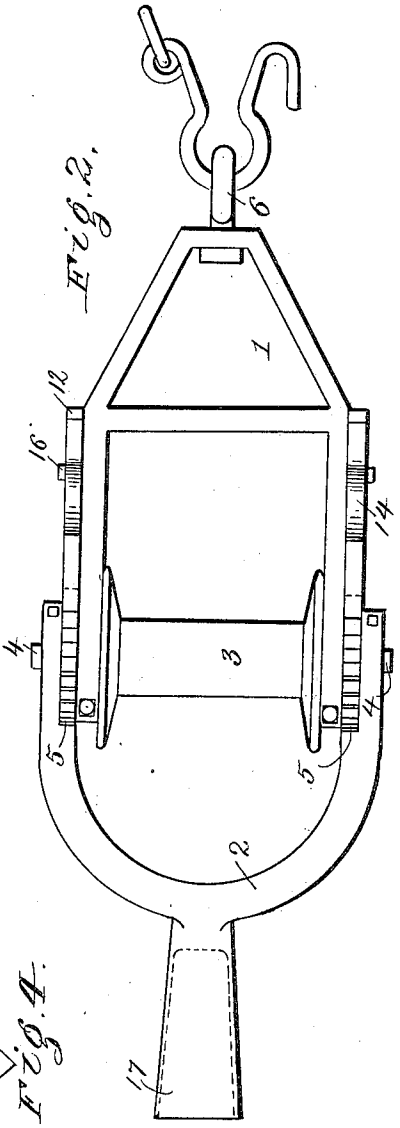


Fig. 2.

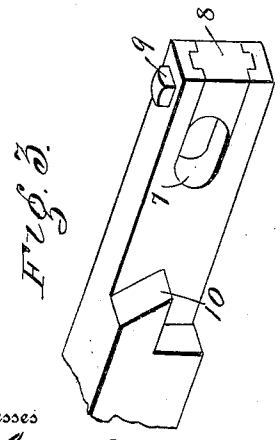


Fig. 3.

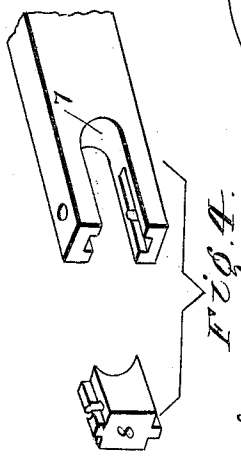


Fig. 4.

Witnesses

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WIRE-STRETCHER.

No. 889,879. Specification of Letters Patent. Patented June 2, 1908.

Application filed August 3, 1907. Serial No. 386,957.

To all whom it may concern:

Be it known that we, HARVEY H. HARRIS and HENRY C. HARRIS, citizens of the United States, residing at Cowgill, in the county of Caldwell and State of Missouri, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification.

This invention appertains to wire fence implements and more particularly to means for stretching runner wires either singly or in series according to the style of fence and the nature of the clamp or grip employed.

The invention consists of the novel features and structural details which hereinafter will be more particularly set forth and claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a side view of a wire stretcher embodying the invention. Fig. 2 is a plan view of the stretcher. Fig. 3 is a detail perspective view of an end portion of the operating fork. Fig. 4 is a detail perspective view of an end portion of the stretcher frame, showing the block for closing the open end of the bearing slot detached.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The stretcher may be adapted either for stretching a wire fence as a whole or individual wires thereof, or for drawing the ends of broken wires or independent wires when it may be required to splice or couple the same.

The stretcher comprises a frame 1, an operating fork 2, windlass 3 and a ratchet mechanism coöperating with the parts 1, 2 and 3. The windlass or spool 3 is provided at opposite ends with journals 4 which pass through the fork or spaced members of the parts and which receive ratchet wheels 5 fast thereto. The frame 1 has its outer end of triangular form and provided with an eye bolt 6 connected thereto by means of a swivel joint. The inner portion of the frame 1 comprises parallel bars or members between which the windlass or spool 3 is arranged. The frame 1, as also the operating fork 2, is preferably of one piece, being cast, although they may be constructed in any way. The windlass 3 has the journals 4 formed therewith and to admit of assembling the parts or separating the same when required, the end portions of the frame 1 and the members of the operating fork 2 are formed with slots 7, which are closed at their open ends by means of blocks 8, the latter being retained in place by fastenings 9, which may consist of bolts, machine screws or pins. To prevent lateral displacement of the blocks 8 interlocking joints are formed between their edges and the adjacent edges of the slot 7, said interlocking joints consisting of a tongue and groove, as shown most clearly in Fig. 4. When the blocks 8 are in position in the slots of the side members of the frame 1, the openings formed correspond to the diameter of the journals 4, thereby preventing any play of the windlass in the frame 1, but admitting of said windlass turning freely. The openings formed in the fork members of the part 2, after the blocks 8 have been placed in position, are elongated, thereby admitting of the operating fork 2 having a limited longitudinal play upon the journals 4 in addition to a turning movement. The longitudinal movement or play of the operating fork 2 is essential to admit of the teeth or cogs 10 carried thereby ratcheting with the teeth of the ratchet wheels 5. The teeth or cogs 10 are provided upon the inner sides of the members of the fork 2 and are formed by cutting away portions of said fork members. Upon moving the operating fork 2 in one direction, the teeth or cogs 10 ride upon the teeth of the ratchet wheels 5 and upon moving the operating fork 2 in the opposite direction, the teeth or cogs 10 engage with the teeth of the ratchet wheels 5 and turn the windlass or spool 3 so as to wind the chain 11, or like flexible connection, thereon.

To prevent backward rotation of the windlass 3 to unwind the chain or flexible connection 11, detent pawls 12 are provided and pivoted at 13 to the side members of the frame 1, said pawls 12 having springs 14 connected thereto and of such formation as to either hold the pawls in engagement with the teeth of the ratchet wheels 5 or in position so as not to interfere with the free turning of the windlass as when it may be required to have the chain or flexible connection 11 unwind freely therefrom. The two positions of the detent pawls are shown by the full and dotted lines in Fig. 1. The springs 14 are approximately of U-form, one member thereof being secured to a pawl and the other member having a crimp 15 near its free end to coöperate with a pin 16, so as to hold the

pawl in engagement with the teeth of the ratchet wheels. Upon throwing the operating pawls to the position shown by dotted lines in Fig. 1, the crimp 15 clears the pin 16 and holds the pawl out of the path of the teeth of the ratchet wheel so that the windlass may turn freely in either direction. The operating fork 2 is provided with a socket 17 or like attaching end to which is fitted a handle 18, whereby power may be applied for turning the windlass 3 to wind the chain or flexible connection 11 thereon when tightening a fence or drawing a wire or like part.

When adapting the invention for tightening a wire fence, a chain 31 is connected with the eye bolt 6 of the frame 1 and may be secured to a post, or to a wire to be spliced, and the chain or flexible connection 11 connected to the wire to be tightened.

The operation of the device may be plainly stated as follows: Upon oscillating the handle 18, the windlass 3 is intermittently turned and winds the chain or flexible connection 11 thereon, with the result that the wire connected with the part 11 is drawn towards the windlass and tightened.

Having thus described the invention, what is claimed as new is:

A wire stretcher comprising a frame, having an end portion of triangular form and the opposite end portion consisting of spaced members having slots extended inward from their ends, an eye bolt having swivel connection with the outer end of said frame, a windlass having journals mounted in the slots formed in the ends of said frame members, blocks closing the open end of said slots, ratchet wheels fast to the journals, an operating fork having slots extended inward from the ends of its members and adapted to receive the outer end of the aforesaid journals, blocks closing the open ends of said slots, the inner sides of said forked members being cut away to provide teeth for coöperation with the teeth of the ratchet wheels, detent pawls pivoted to the spaced members of the frame and adapted to coöperate with the teeth of the said ratchet wheel, U-shaped springs for said detent pawls having one end fast thereto and the opposite end crimped, pins applied to the spaced members of the frame and coöperating with the crimped ends of said springs to hold the pawls either in or out of operative position, means for connecting the windlass to the part to be subjected to tension, and means for imparting an oscillatory movement to the operating fork.

In testimony whereof we affix our signatures in presence of two witnesses.

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HENRY C. HARRIS. [L. S.]

Witnesses:
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