(No Model.)

A. KAHL.

WIRE STRETCHER.

No. 490,566. Patented Jan. 24, 1893.

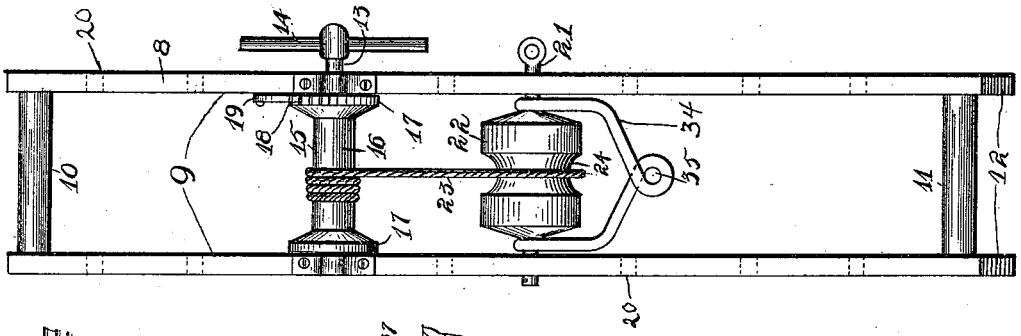


FIG. 1.

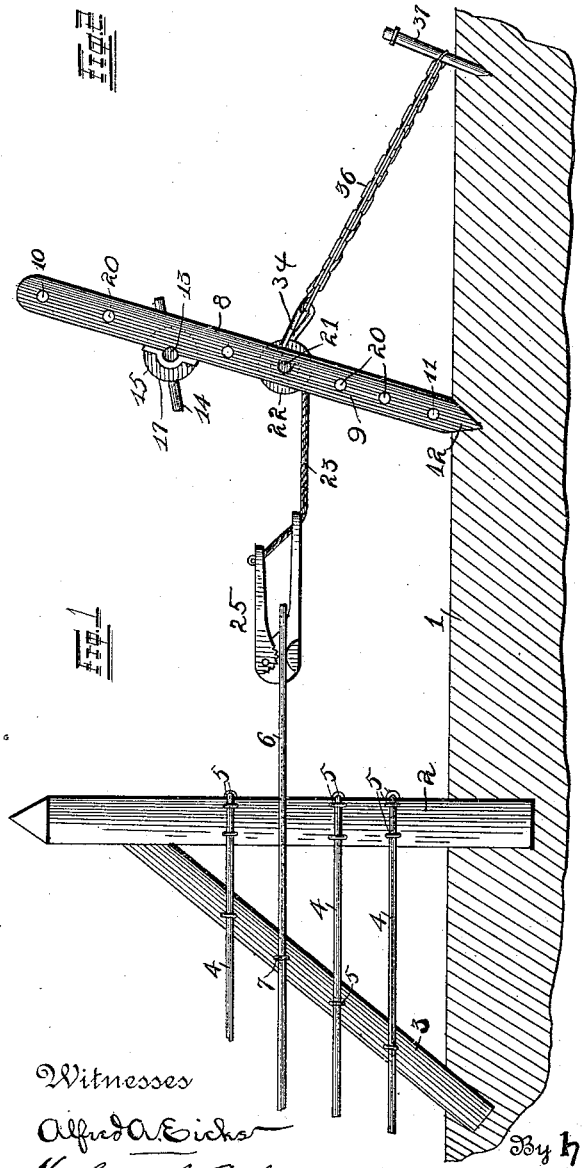
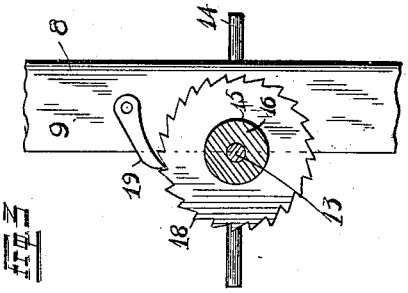


FIG. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

ADOLPH KAHL, OF SORENTO, ILLINOIS, ASSIGNOR OF ONE-HALF TO THOMAS SCHARF AND ALBERT KAHL, OF SAME PLACE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 490,566, dated January 24, 1893.

Application filed July 21, 1892. Serial No. 440,751. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH KAHL, of the city of Sorento, Bond county, and State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in "wire stretchers," and consists in the novel arrangement and combination of parts as will be more fully hereinafter described and designated in the claims.

The object of my invention is to construct a portable wire stretcher to be used in the proper construction of what are properly termed wire fences.

In the drawings: Figure 1 is a side elevation of my improved wire stretcher as applied in use. Fig. 2 is an enlarged front view of the stretcher-frame. Fig. 3 is a detail sectional view of a portion of the stretcher-frame with the reel-ratchet and pawl connected therewith.

Referring to the drawings: 1 indicates the ground in which is set an upright post 2, supported by a brace 3, also placed in the ground 1. In the illustration I have shown three strands of wire 4 which have already been stretched and secured by means of staples 5 to said post 2 and brace 3, in the usual manner. The strand 6 is shown in the operation of stretching, and has been loosely passed through a staple 7 in the brace 3 in order to hold said strand 6 in alignment with the strands 4 during said operation.

I will now describe in detail the parts of the wire stretcher proper. It consists of a frame 8 constructed of two long side pieces 9 an upper cross piece 10 connecting same at their upper extremities, and a cross piece 11 connecting them at a point a short distance from their lower extremities. The lower ends 12 of said side pieces 9 are sharpened in order that they may readily enter the ground when pressure is applied to the cross piece 11 which I denominate a foot piece. Secured in suitable bearings at a point relatively near the upper portion of the stretching frame 8 is a shaft 13 projecting beyond one side piece 9 of said frame 8 and having on its projecting end a lever-bar 14 by means of which same is manipulated. Keyed upon said shaft 13 is a spool or reel 15 provided with a center spindle 16 and end flanges 17. The flange 17 upon the end of said reel adjacent the lever-bar 14 is provided with teeth 18 and forms a ratchet for the securing of said reel 15 by the engagement of a pawl 19 with said teeth 18, said pawl being fastened to one of the side pieces of the stretcher frame. The side pieces 9 of said stretcher frame 8 are provided with perforations 20, the perforations in the side pieces being in horizontal alignment with each other. Removably secured in one pair of said perforations 20 by means of a pin 21, is a pulley or roller 22 over which the rope 23 passes, one end of said rope 23 being permanently secured to the spindle 16 of the reel 15. The other end passes over a groove 24 in said pulley 22 and carries at its free end a clamp 25.

A single piece of metal is preferably bent in the shape shown in Figs. 1 and 2 by the numeral 34. This forms an eye 35 in which a chain 36 may be secured and passed around a stake or peg 37 provided for the purpose as hereinafter described.

Having fully described the construction of my improved wire stretcher, I will now proceed to detail its operation.

Usually in wire fence construction upon a level piece of ground the wire may be stretched in quarter and half mile lengths and sometimes even more. The stretcher-frame 8 is placed opposite the end of the fence, and the attenuated ends 12 forced into the ground 1 preferably by means of foot-pressure applied to the foot piece 11. It is not placed directly upright but in a backwardly inclined position and the chain 36 is connected with the eye 35 and passed around the peg 37 which has previously been driven into the ground directly in the rear of the stretcher-frame 8. The rope 23 is preferably secured to the clamp 25 as shown in Fig. 1 and the strand of wire to be stretched is secured within said clamp. Previously the adjustable pulley 22 over which the rope passes has been adjusted in one of the perforations 20 so as to be in direct alignment with the position of the strand of wire to be stretched. Manipulation of the reel 15 in one direction causes the clamp 25

to be brought closer to the stretcher-frame 8 and consequently increases the tension of the wire and makes it taut. Staples such as 5 are driven over the wire 6, and the wire is then permanently secured, and the stretcher device may be applied to another strand of wire without removing the stretcher-frame from its position by simply withdrawing the key 21, and removing the roller 22 and placing it in another pair of the perforations 20 so that said roller 22 will be in alignment with the next strand of wire which is to be stretched.

The parts of my invention, while all readily detachable are preferably kept in operative order for handiness in transportation and for use.

A chain or cable may be used in place of the rope 23 and would not in any way affect the fundamental principle of my improved invention.

Having fully described my invention, what I claim is,

1. In a wire stretcher of the class described, the combination, with the frame carrying a reel, of a spool journaled in said frame and longitudinally adjustable therein, and a bail mounted on the shaft of said spool and adapted to serve as a support for the frame, whereby the frame is supported approximately in alignment with the strain of the wire which is being stretched; substantially as and for the purpose set forth.

2. In a wire stretcher of the class described, the combination, with the frame comprising parallel bars provided with coincident apertures, and a reel journaled between said bars, of a pin 21 adapted to be inserted in a pair of said apertures, a spool 22 bearing on said pin, and a bail 34 also bearing on said pin at each side of the spool; substantially as and for the purpose set forth.

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

ADOLPH KAHL.

Witnesses:
B. WASSERBURGER,
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