M. E. SEWALT.

WIRE STRETCHER.

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1,156,322.

Patented Oct. 12, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

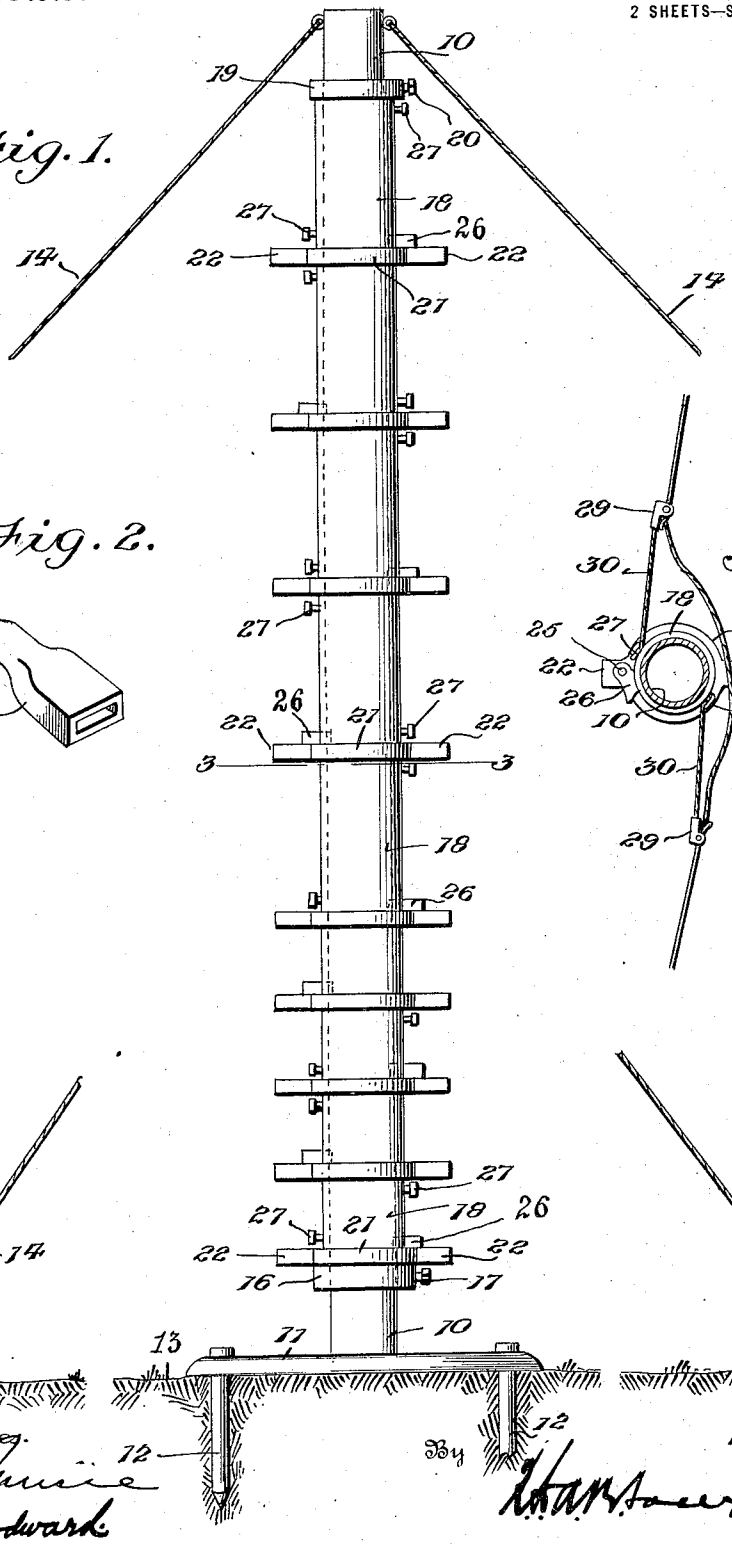


Fig. 2.

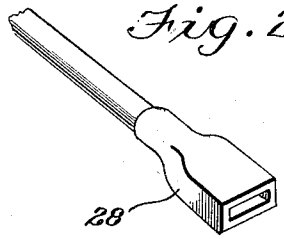


Fig. 3.

Witnesses.

J. Murrie

C. K. Woodward.

Inventor:

M. E. Sewalt.

By Howson & Howson, Attorneys.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

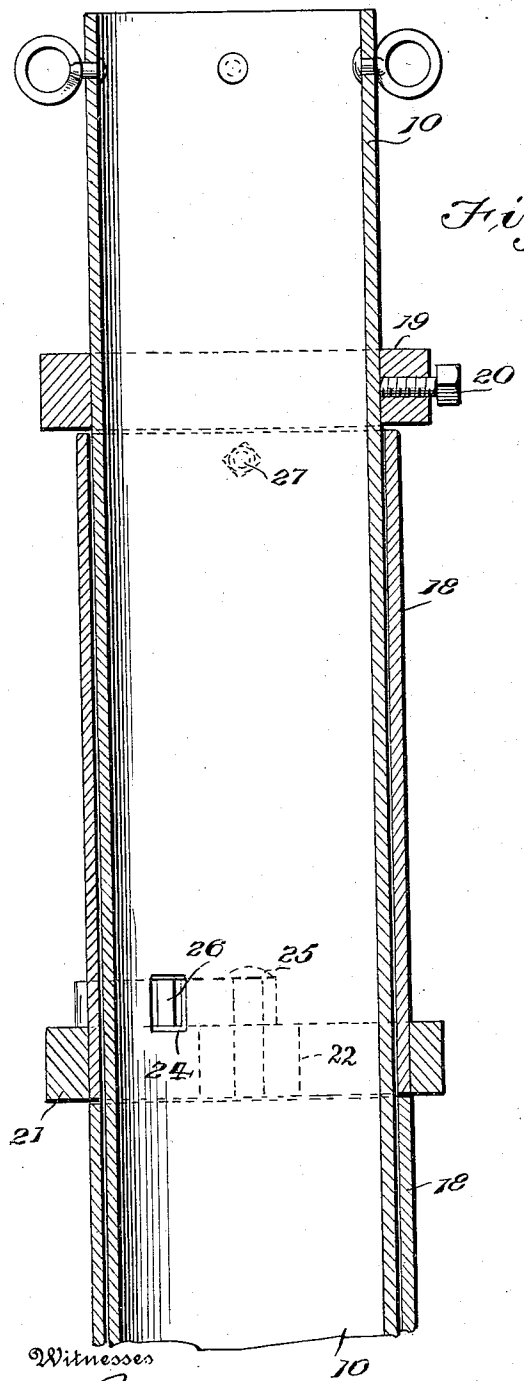


Fig. 4.

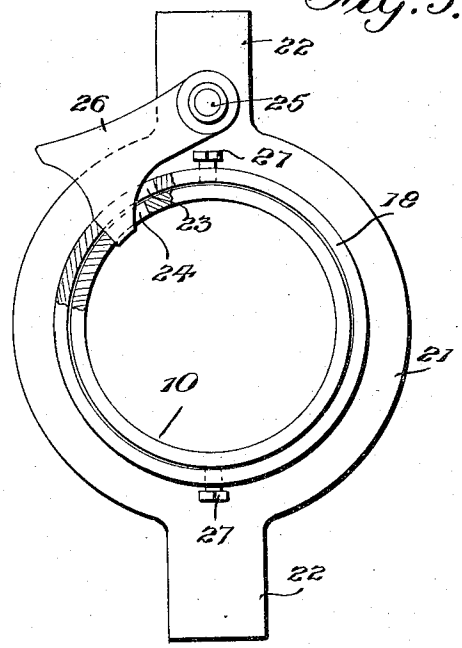


Fig. 5.

Witnesses

E. M. Woodward

Inventor

M. E. Sewalt.

By Hanson & Co., Attorneys.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MATTHEW E. SEWALT, OF LOVINGTON, NEW MEXICO.

WIRE-STRETCHER.

1,156,322. Specification of Letters Patent. Patented Oct. 12, 1915.

Application filed October 20, 1913. Serial No. 796,337.

To all whom it may concern:

Be it known that I, MATTHEW E. SEWALT, citizen of the United States, residing at Lovington, in the county of Eddy and State of New Mexico, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification.

This invention relates to devices for stretching strand wires of wire fences, and has for one of its objects to provide a simply constructed device whereby the strand wires may be individually and independently stretched to any required extent and held in stretched condition until fastened to the posts.

Another object of the invention is to provide a simply constructed device which may be applied to the fence and arranged to stretch the wire simultaneously from both directions.

Another object of the invention is to provide a device of this character which may be readily adapted to fences having any required number of strand wires, and likewise adapted to stretching individual strand wires or the strand wires of web fencing of various forms.

With these and other objects in view the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claim, and in the drawings illustrative of the preferred embodiment of the invention.

Figure 1 is an elevation of one of the improved devices. Fig. 2 is a detached perspective view of the operating wrench device. Fig. 3 is a section on the line 3—3 of Fig. 1 illustrating the construction and operation of the tension applying sleeves and the wire gripping devices. Fig. 4 is an enlarged sectional detail of the upper portion of the improved device illustrating its construction. Fig. 5 is a plan view enlarged and partly in section of one of tension applying sleeves and one of the locking devices.

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 improved device comprises a standard or support 10, preferably tubular and of greater height than the height of the fence to which it is to be applied and provided with a lateral foot or bearing member 11 resting upon the ground. The member 11 is secured from lateral movement by any suitable means, preferably by spikes or pins 12 driven into the ground, which is indicated conventionally at 13. A plurality of guy wires 14 are connected at their upper ends to the standard 10 and supported at any suitable distance from the standard by pins 15 or like devices driven into the ground. Any required number of the stays 14 may be employed, and the pins 15 located at any required distance from the standard. Connected to the standard 10 near its lower end is a collar 16 having a set screw 17 to enable the collar to be adjusted upon the standard. The collar is designed to be located at a point a little below the line of the lowest wire of the fence, and is designed to support the wire stretching elements of the device, which consists of a plurality of cylindrical shaped members 18 engaging end to end and corresponding in length substantially to the distances between the strand wires of the fence. For instance, if a fence is provided with nine strand wires, as in the illustration, nine of the cylinders will be employed. The strand wires of woven wire fences are generally located relatively close together near the ground and spaced at greater intervals toward the upper line of the fence, and in Fig. 1 of the drawings the lengths of the cylinders correspond substantially to such an arrangement of the strand wires, but it will be understood that the lengths of the cylinders may be varied as required, to correspond to the distance between the strand wires, and it is not desired to limit the invention in this respect. A stop collar 19 is located upon the standard 10 above the upper cylindrical member 18, as shown in Figs. 1 and 2, and provided with a set screw 20 to enable the collar to be adjusted upon the standard. By this means the cylindrical members 18 are held from movement longitudinally of the standard by the collars 16—19, but are free to be independently rotated upon the standard.

Attached to each of the cylindrical members 18 at its lower end is a collar 21 having wrench receiving extensions 22 at opposite sides, as illustrated in Figs. 3 and 5. The collars 21 are rigidly connected to the cylinders so that the latter rotate with the collars. Each of the cylindrical members 18 is provided with an opening adjacent to the upper face of its collar 21, one of the open-

ings being represented at 23 in Fig. 5, while the standard 10 is likewise provided with a plurality of openings which register respectively with the openings 23 when the cylindrical members are rotated to a certain point thereon. One of the standard openings is represented at 24 in Fig. 5. Pivoted at 25 upon one of the lateral projections 22 of each of the collars 21 is a pawl 26 which engages at its outer end through the openings 23—24 when the latter are disposed in registering position, and thus lock the cylindrical members to the standard. Projecting from each of the cylindrical members 18 are wire receiving pins 27. A suitable wrench device is provided for engaging with one of the projections 22, and a conventional wrench of this character is represented at 28 in Fig. 2.

As indicated most clearly in Fig. 5 an end of the pawl 26 projects beyond the collar 21 to form a finger piece to facilitate the easy disengagement of the pawl from the standard when it is required to turn the cylindrical member backward. It is further noted that a portion of the pawl extends across the path of the wrench so as to be engaged and moved inward by the wrench to cause the end of the pawl to pass through the openings 23 and 24 and lock the cylindrical member to the standard. By this means the cylindrical member may be turned backward without requiring the operator to withdraw the pawl from engagement with the standard which would be the case if a spring were employed to exert a constant inward pressure upon the pawl.

The strand wires are connected at their ends to the terminal posts and stretched as taut as possible manually. The improved stretching implement is then located substantially midway between the terminal posts of the fence and in alinement with said posts. A plurality of gripping devices are provided, preferably two for each of the cylindrical members, and may be of any suitable construction, but for the purpose of illustration a conventional grip device is represented in Fig. 3 consisting of a wire gripping member 29 and a flexible pull member 30, the latter being a flexible wire cable. The cables 30 are attached to the pins 27, while the grip members 29 are connected to one of the strand wires. For instance, the lower-most strand wire, which probably lies upon the ground, is engaged at opposite sides of the stretching device by a pair of the clips 29 and the cables 30 connected to the pins 27 of the lower-most cylindrical member. The next strand wire is coupled in the same manner to the next cylindrical member, and so on throughout the series.

If preferred a single pair of the clip devices may be employed and attached to the strand wires consecutively and the cylindrical member to which the cables 30 are attached rotated by the wrench 28 to wind the flexible members 30 around the cylindrical member which thus serves as a windlass to apply strain to the strand wire, and when the proper tension is secured the pawl 26 holds the cylinder from retrograde movement by engaging in the registering apertures 23—24 until the stretched strand wire can be secured to the adjacent posts. The surplus wire is then cut off and the terminals thus formed secured to the posts. The strand wires may also be simultaneously stretched if a sufficient number of the grip devices are employed, or stretched one at a time by employing a single grip device as may be preferred.

Generally the wires will be stretched one at a time until the proper tension has been reached, and if one or more of the wires is too slack or too tightly stretched it can be readily adjusted by increasing the rotation of the cylindrical member to which the slack wire is connected or slack off one of the cylindrical members if the wire is stretched to too great an extent. It will thus be obvious that the strand wires may be stretched to a uniform degree and to any extent required. By locating the stretching device midway of the fence the strains are equalized from opposite ends of the fence, thus requiring relatively light guy members 14 to support the device.

The device is simple in construction and operation, may be quickly set up and easily operated, and enables the operators to build a relatively long section of fence in a comparatively short space of time. By arranging the device midway of the fence to be stretched it eliminates the necessity for extra post braces and like holding devices.

The improved device draws the wire from both directions at the same time, thus twice the amount of wire can be stretched than with a device which draws the wire only from one direction. By this device the individual strand wires may be tightened or loosened independently, thus enabling the wires to be stretched to a uniform degree and without adding to or taking from the improved device or without detaching any of the parts. If required the guys 14 may be of sufficient strength to so support the device that the stretching out may be from one direction only without changing any of the parts.

The improved device is especially advantageous in stretching web wire fences, as the strain can be effectually applied the whole height of the fence and every longitudinal member of the fence undergo exactly the same strain, thus insuring a uniform texture to the fence. The improved device will also be found very useful for repairing fences

already constructed, as a strand wire may be inserted at any point without disturbing the remaining wires of the fence.

Having thus described the invention, what is claimed is:

A wire fence stretcher comprising a standard having openings at intervals in its length, cylindrical members slipped upon the standard, each having an opening to register with an opening of the standard, stop collars at the upper and lower ends of the standard to properly position the cylindrical members thereon, a collar secured to the lower end of each of the cylindrical members and formed with a lateral extension to receive a wrench, and a pawl pivoted to the lateral extension and adapted to rest thereon and upon the collar and serving to secure the cylindrical member to the standard against vertical or retrograde movement and having a portion projecting to form a finger piece and to be engaged by the wrench fitted to the lateral extension to press the pawl inward.

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

MATTHEW E. SEWALT. [L. S.]

Witnesses:

T. ROE,

F. J. ROBINSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."