(No Model.)

V. ARNOLD & W. L. YERGIN.

WIRE STRETCHER.

No. 409,597. Patented Aug. 20, 1889.

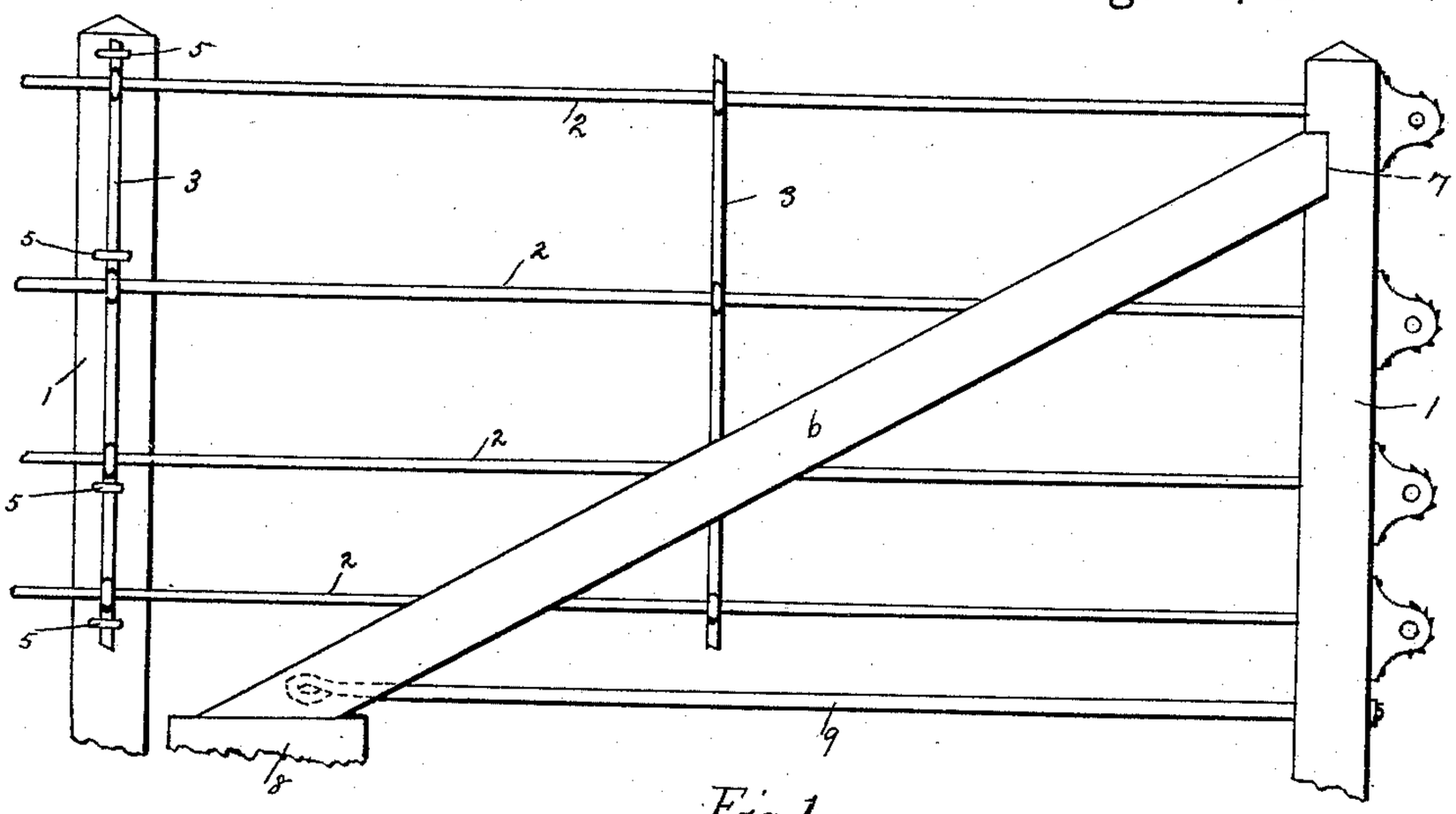


Fig. 1.

Fig 3

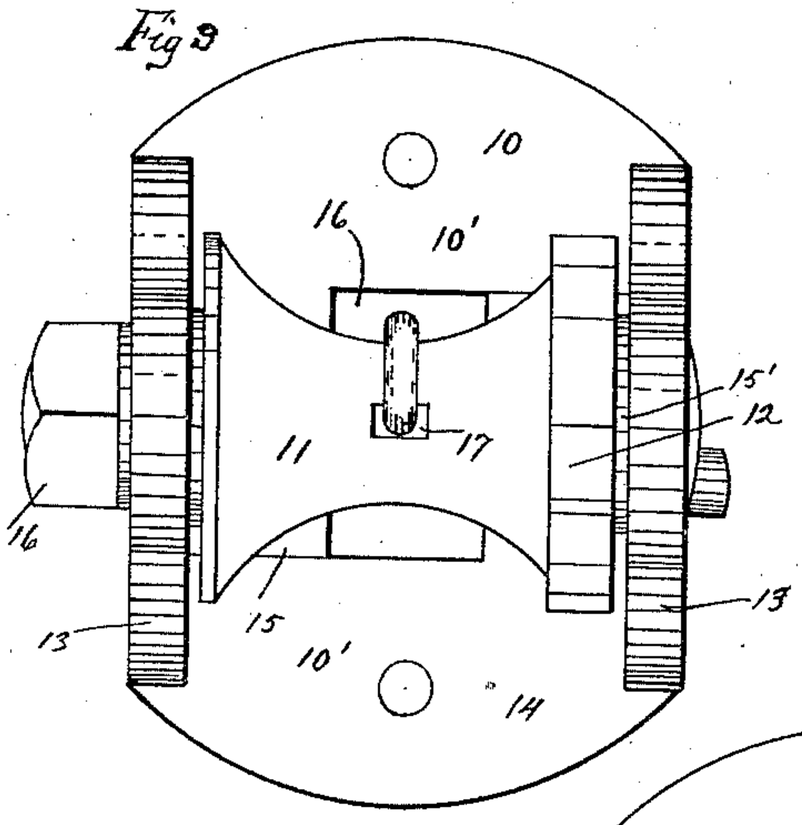


Fig. 2.

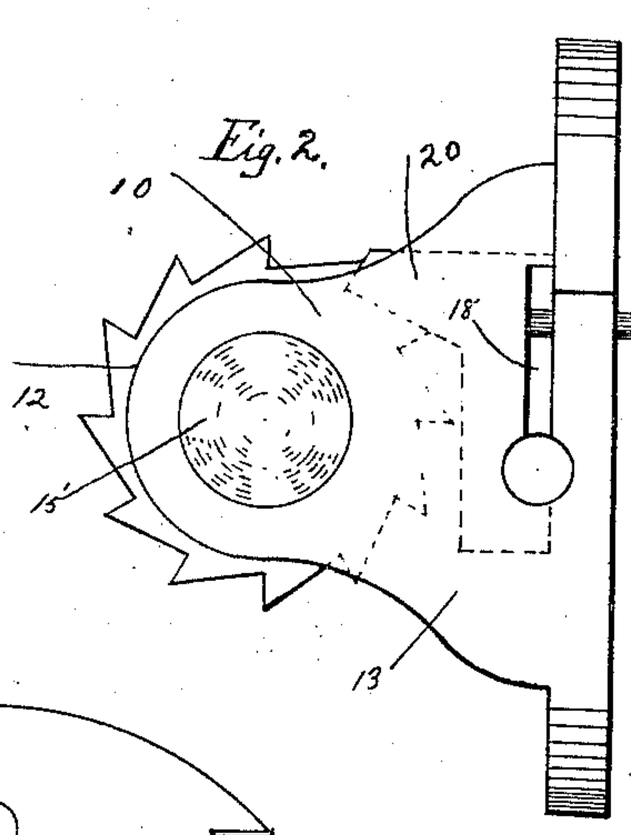


Fig 5

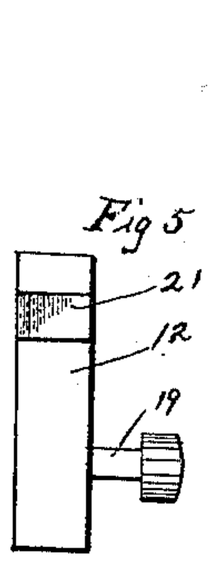


Fig. 4.

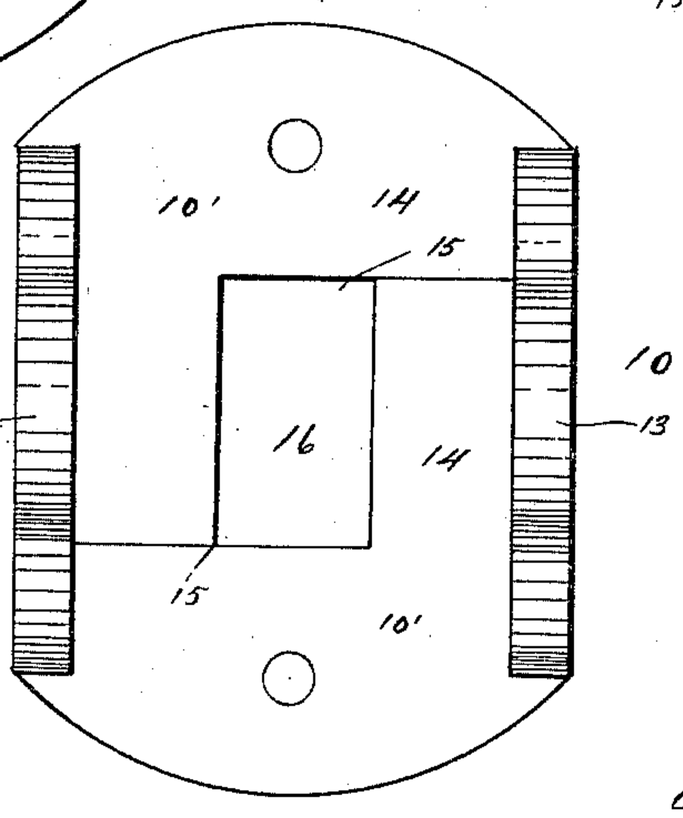
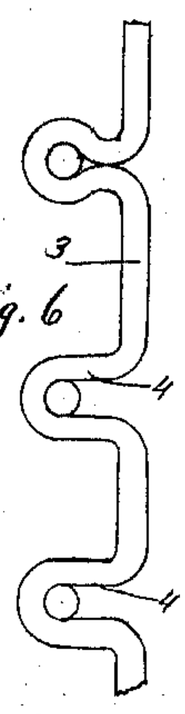


Fig. 6



Witnesses:

William A. Belt.

H. Berukoff

Inventors:
Vinden Arnold.
William L. Yergin
By their Attorneys,
Edson Bro's

UNITED STATES PATENT OFFICE.

VINDEX ARNOLD AND WILLIAM L. YERGIN, OF MARSHALL, MICHIGAN, ASSIGNORS OF ONE-HALF TO ANDREW RUDDOCK AND ARTIRSIS CASE, OF SAME PLACE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 409,597, dated August 20, 1889.

Application filed June 8, 1889. Serial No. 315,543. (No model.)

To all whom it may concern:

Be it known that we, VINDEX ARNOLD and WILLIAM L. YERGIN, citizens of the United States, and residents of Marshall, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Wire-Stretchers; and we 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.

Our invention relates to improvements in stretchers for wire fences, and has for its objects to provide means for readily and easily straining the line-wires of a fence and holding them in such taut condition; to enable the winding-drum and ratchet to be readily adjusted in the supporting-bracket and the entire device quickly and easily applied to a fence-post; and so to construct the parts that they shall be very simple and durable in construction, efficient and reliable in operation, and cheap of manufacture.

With these ends in view our invention consists in the peculiar construction and arrangement of parts, as will be hereinafter described and claimed.

To enable others to understand our invention we will now proceed to a detailed description thereof in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of a wire fence having our improved wire-stretchers applied to one of the posts and connected to the line-wires thereof. Fig. 2 is a side elevation of the wire-stretcher detached from the post and on an enlarged scale. Fig. 3 is a top plan view of the wire-stretcher on the same scale as Fig. 2. Figs. 4 and 5 are detail detached views of the sectional supporting-bracket and the adjustable pawl, respectively. Fig. 6 is an enlarged detail view of our preferred stay-wire for bracing the line-wires and connecting the same to the fence-posts.

Like numerals of reference denote corresponding parts in all the figures of the drawings, referring to which—

1 designates the fence-posts, 2 the longitudinal or line-wires, and 3 the stay-wires which are employed to connect the line-wires to the fence-posts, as well as to brace them at points between the posts. Each stay-wire is provided with a series of open **U**-shaped loops 4, arranged all on one side of the vertical axis of the wire, and of sufficient size to receive the line-wires. The loops 4 are open before the stay-wire is applied to the line-wires, as shown in Fig. 6, in order to permit the line-wires to be readily fitted therein; but the open sides of the loops are closed by a suitable implement in order to confine the line-wires in place and securely connect the line and stay wires together.

The stay-wires are secured only to the line-wires when they are arranged between two adjoining posts, (see Fig. 1,) but when the stay-wires are employed to connect the line-wires to the posts the stay-wires are first connected to the line-wires in the manner described, and said stay-wires are then secured firmly to the post by means of staples 5, which fit over the stay-wires and are firmly driven into the post. The post at the end or intermediate of the length of the fence can be braced by means of an inclined brace 6, which fits at its upper end in a notch 7 of the post, and rests at its lower end on a suitable support 8, and this inclined brace is adjusted by means of a tension-rod 9, which is connected at its ends to the brace and post, as shown.

We will now proceed to describe our mechanisms for stretching the line-wire of the fence, one of the stretchers being connected to each of the line-wires.

Each wire-stretcher consists of a fixed sectional bracket 10, a winding-drum 11, journaled in said bracket, and a pawl 12, supported by the bracket and adapted to engage a ratchet on the drum to hold the latter against rotation, the peculiar construction and arrangement of which parts we will now proceed to describe. To enable the winding-drum to be readily connected to or journaled in the supporting-bracket we make the latter in two parts or members 10′, each of which has a lug or bearing 13, made integral with the base or plate 14 of the member. The bases 14 of the members or sections are cut away on irregular lines to provide a lap-joint 15 and a central aperture 16 in the base of the bracket be-

tween the bearings or lugs 13 thereof, the lower edge of the upper member bearing against the upper edge of the lower member, as shown in Fig. 4, when said members are properly fitted together and secured to the fence-post, whereby the members serve to brace each other mutually.

The winding-drum is preferably concaved or reduced toward its middle, and at its ends this drum has trunnions 15′, which are journaled in the aligned bearings or lugs between which the drum is arranged. One of the trunnions of the winding-drum is extended beyond the supporting-bracket and squared, as at 16, to adapt an implement to be readily fitted thereon, in order to turn the drum on its axis to coil the line-wire around the same; and this drum is further provided with a slot 17, which lies in line with the central opening 15 of the base of the bracket, and with an aperture in the fence-post to which said bracket is applied, the line-wire being passed through the aligned openings in the fence-post and supporting-bracket.

One of the members or sections of the supporting-bracket is provided with a vertical slot 18 in its lug or bearing near the base-plate of said section or member, and in this slot works a horizontal guide pin or stud 19, which is attached to a vertically-adjustable sliding pawl 12. This sliding pawl is fitted within the supporting-bracket in rear of the drum, and it is shaped to fit snugly in the angle corner formed by and at the intersection of or the base and lug or bearing of the bracket-member. This pawl is held in place and guided vertically by the base and lug of said member and by its guide-stud fitting in the vertical slot, and the pawl is provided with a forwardly-extending tooth 21, that takes in the teeth of a ratchet 22, which is fixed on the winding-drum at one end thereof.

The operation of our improved wire-stretcher is obvious from the foregoing description, taken in connection with the drawings, and we do not, therefore, deem it necessary to describe the same in detail here.

We are aware that changes and alterations in the form and proportion of parts and details of construction can be made without departing from the spirit or sacrificing the advantages of our invention, the preferred embodiment of which we have shown and described herein.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

A wire-stretcher consisting of a supporting-bracket having a vertical slot 18, and made of two parts or members, formed with the inwardly-extending bases which lap each other on irregular lines, for the purpose described, a winding-drum journaled in aligned bearings on said members or sections of the bracket, and provided with a ratchet and a sliding pawl, having a lateral guide-pin which operates in the slot of the bracket, substantially as and for the purpose described.

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

VINDEX ARNOLD.
WILLIAM L. YERGIN.

Witnesses:
MICHAEL GREGG,
WILLIAM J. GREGG.