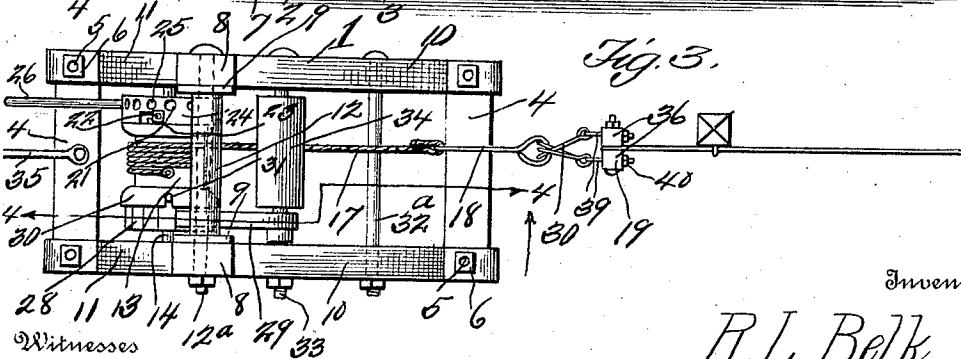
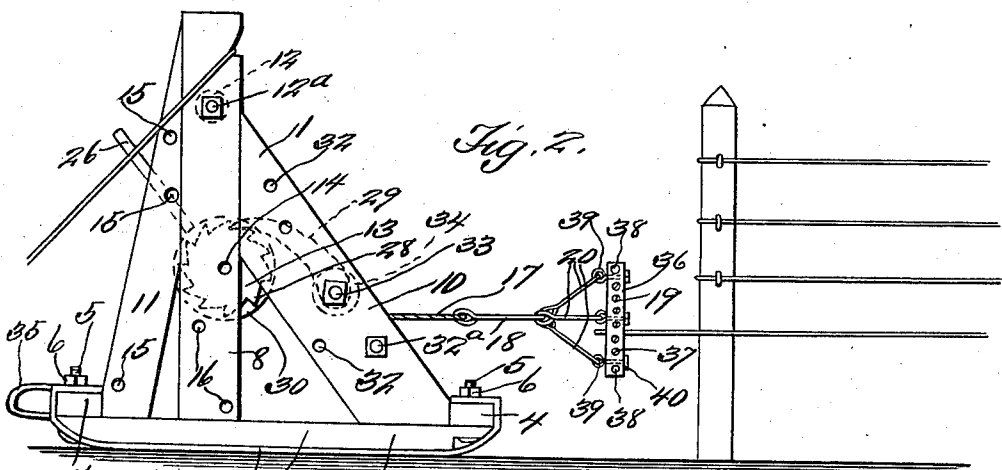
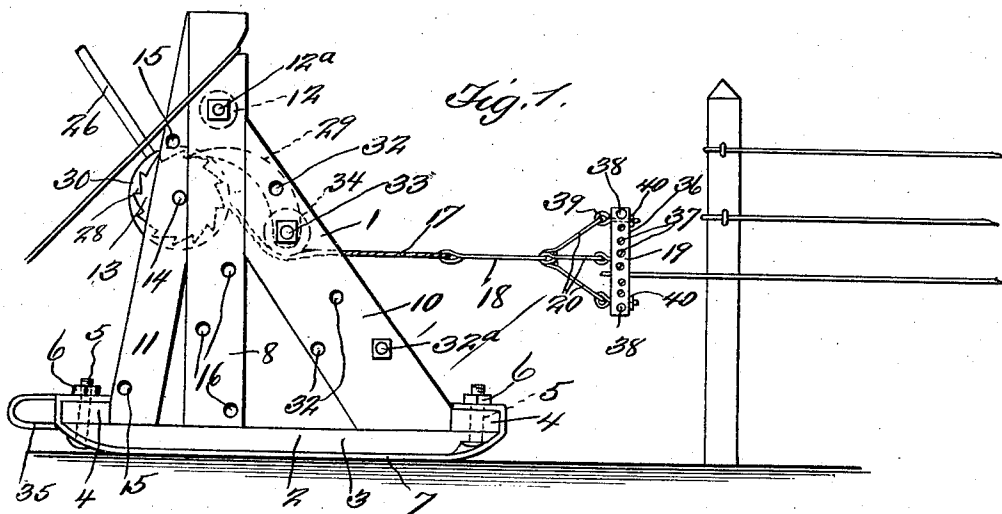


R. L. BELK.
WIRE STRETCHER.
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1,014,035.

Patented Jan. 9, 1912.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT LARKIN BELK, OF WAXHAW, NORTH CAROLINA.

WIRE-STRETCHER.

1,014,035.

Specification of Letters Patent.

Patented Jan. 9, 1912.

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To all whom it may concern:

Be it known that I, ROBERT LARKIN BELK, a citizen of the United States, residing at Waxhaw, in the county of Union and State of North Carolina, have invented a new and useful Wire-Stretcher; and I 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.

This invention relates to a new and useful wire stretcher.

The invention in its broadest scope aims as its primary object to provide a simple, efficient and practical device of this character, adapted for stretching fence wire mesh work, or single fence or telephone wires.

A further object of the invention is to provide a wire stretcher including a triangular shaped frame having holes or apertures for adjusting the combined winding drum and ratchet in adjusted position, said holes or apertures being arranged in staggered relation.

Another object of the invention is to provide apertures in the frame arranged in proper relation with the first apertures for adjusting the shaft on which the pawl is mounted, so as to arrange the pawl properly in relation with regard to the ratchet when the combined winding drum and ratchet is adjusted.

A further object of the invention is to provide an improved strengthening means for the frame.

In the drawings, there is only disclosed one form of the present invention, but in practical fields this form may require alterations, to which the applicant is entitled, provided the alterations are comprehended within the scope of what is claimed.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings, Figure 1 is a view in side elevation of the improved wire stretcher frame and clamp constructed in accordance with the invention. Fig. 2 is a view similar to Fig. 1, showing the combined winding drum and ratchet and pawl adjusted in different positions. Fig. 3 is a plan view.

Referring more especially to the accompanying drawings, 1 designates the triangular shaped frame of the apparatus.

This frame comprises the base 2, which consists of the longitudinal bars 3, and the transverse bars 4, which are fastened together by the bolts and nuts 5 and 6.

Secured to the under faces of the bars 3 are the strips 7, which engage about the ends thereof and over the bars 4 and secured by the said nuts and bolts 5 and 6, thus strengthening the base. Rising from the bars 3 are the vertical beams 8, which are braced relatively with regard to the bars 3, by the strips 9 which are made integral with the strips 7. The strips 9 are secured to the adjacent faces of the beams 8, as shown. The vertical beams 8 are further braced by the angularly arranged beams 10 and 11. The vertical beams are connected by a transverse tubular member 12 and bolt 12^a. A combined winding drum and ratchet 13 is provided, which is mounted on a shaft 14. The beams 11 are provided with a plurality of apertures 15 in any opposite corresponding two of which the shaft 14 may be journaled, it depending upon the height of the wire which is being stretched. The vertical beams 8 are also provided with apertures 16, in any opposite corresponding two of which the shaft 14 may be adjusted, it also depending upon the height of the wire being adjusted.

The combined winding drum and ratchet is provided with a central portion, about which the winding cable 17 is wound. This cable 17 connects with the hook 18 (which is connected to the clamp 19 by the links 20). One end of the combined winding drum and ratchet is provided with a plurality of depressions or sockets 21, arranged annularly about the drum. Surrounding the end of the drum having the socket and secured by the stud 22 and nut 23 is an annular metal band 24, which is provided with apertures 25. These apertures are disposed in registration with the sockets, as shown in the drawings, in order to receive the member 26, whereby the drum may be rotated. The end 27 of the drum is provided with a plurality of ratchet teeth 28, with which the pawl 29 coöperates, for holding the drum to the position rotated. Extending annularly about the drum and adjacent the ratchet teeth is a metal band 30, the same being constructed on its inner circumference correspondingly with the ratchet teeth, in order to be arranged in place.

This band 30 is secured in position by the screws 31. The band 30 is designed for the purpose of holding the pawl true to its work.

The beams 10 are provided with a plurality of apertures 32. These apertures 32 are designed for the purpose of receiving the shaft 33, which carries the pawl 29, there being a roller 34 journaled upon this shaft between the pawl and one of the beams 10, under which the cable of the winding drum passes. The apertures 32 are so arranged with relation to the apertures 15 and 16, that as the shaft 14 of the winding drum is adjusted, the shaft of the pawl 29 is correspondingly adjusted, so that the pawl will properly engage the ratchet teeth. To obtain this result the apertures 15 and 16 are arranged relatively to one another in staggered relation. One end of the frame is provided with a clevis 35, to which an evener or equalizer (not shown) may be connected, so that the frame may be drawn from place to place.

To stretch a fence wire or wire mesh, the device is connected as shown in Fig. 1, after which the combined winding drum and ratchet is rotated, until the fence wire or mesh work has been drawn sufficiently taut. The pawl 29 holds the ratchet and winding drum so as to prevent retrograde rotation, until the wire or meshwork which is being stretched is secured to the fence post. To stretch a wire or mesh work, which is lower than that shown in Fig. 1, the device is connected up as shown in Fig. 2, the staggered relation of the apertures tending to permit of this adjustment.

The clamping mechanism shown in so far as this application is concerned does not constitute the invention, but is only disclosed to show how the wire or wires may be clamped, so that the wire stretcher may perform its work.

The invention having been set forth, what is claimed as new and useful is:

1. In a device as set forth, a triangular

shaped skeleton frame, said frame having a plurality of apertures arranged in corresponding series in one portion, a shaft adapted to be journaled in any two corresponding apertures, a combined winding drum and ratchet mounted on the shaft, a pawl for the ratchet, a shaft on which the pawl is mounted, said frame having an additional plurality of apertures, in any two of which the shaft of the pawl may be journaled, the first apertures being arranged in staggered relation and in such a relation with the second apertures that the combined winding drum and ratchet and pawl may be vertically adjusted, so as to stretch wires at different heights.

2. In a device as set forth, a triangular shaped skeleton frame, said frame having a plurality of apertures arranged in corresponding series in one portion, a shaft adapted to be journaled in any two corresponding apertures, a combined winding drum and ratchet mounted on the shaft, a pawl for the ratchet, a shaft on which the pawl is mounted, said frame having an additional plurality of apertures, in any opposite corresponding two of which the shaft of the pawl may be journaled, the first apertures being arranged in staggered relation and in such a relation with the second apertures that the combined winding drum and ratchet and pawl may be vertically adjusted, so as to stretch wires at different heights, a cable wound around the drum and having connections with the wire clamp for stretching a fence wire, said drum having a plurality of sockets, and a member to engage the socket for rotating the drum.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT LARKIN BELK.

Witnesses:

GEORGE W. MOSER,
MILLER A. BELK.