H. A. PAHLKE.

WIRE STRETCHER.

APPLICATION FILED OCT. 5, 1914.

1,175,659. Patented Mar. 14, 1916.

Fig. 1.

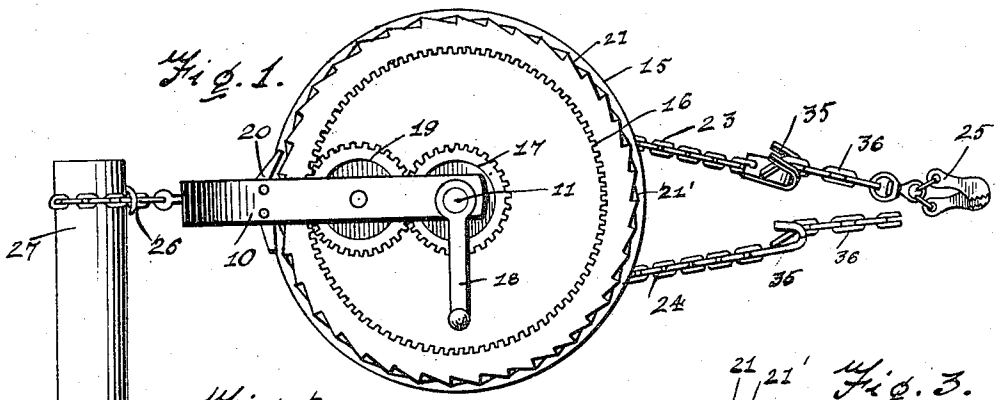


Fig. 2.

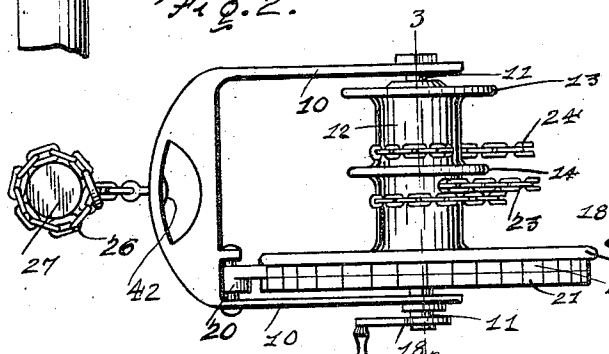


Fig. 3.

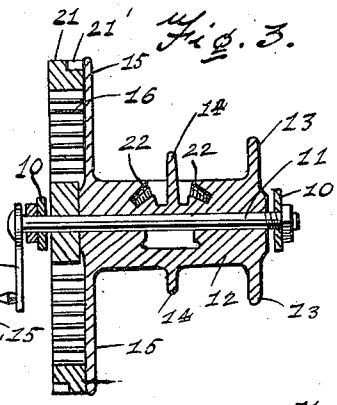
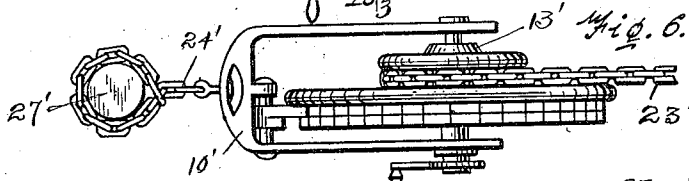


Fig. 6.



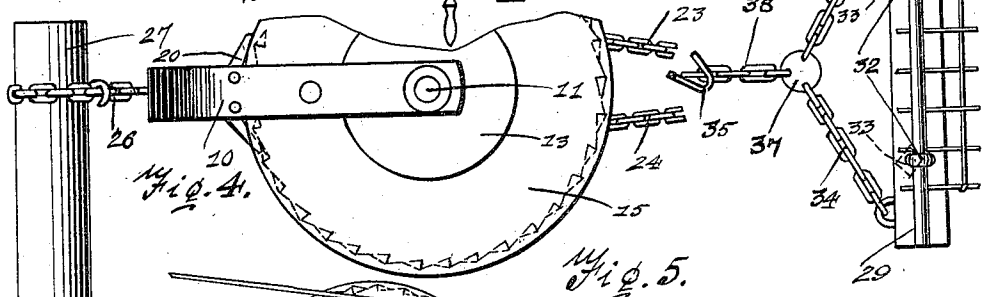
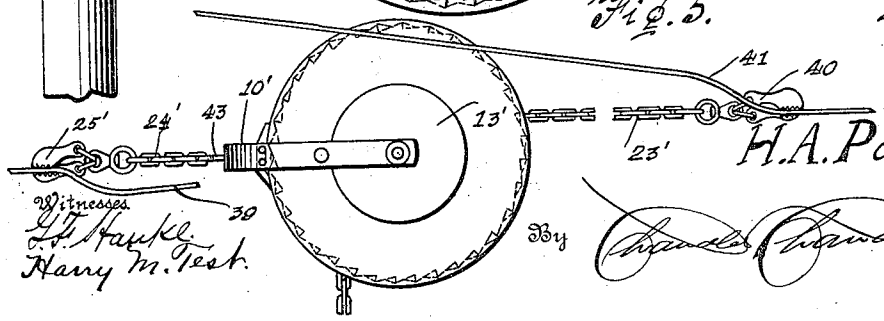


Fig. 4.

Fig. 5.



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WIRE-STRETCHER.

1,175,659. Specification of Letters Patent. Patented Mar. 14, 1916.

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To all whom it may concern:

Be it known that I, HENRY A. PAHLKE, a subject of Germany, residing at Elgin, in the county of Antelope, State of Nebraska, have invented certain new and useful Improvements in Wire-Stretchers; 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 improvements in wire stretchers, and particularly to wire stretchers for fences.

One object of the invention is to provide a novel and effective device whereby fence wires can be tightly stretched from post to post, and also by means of which broken ends of a wire can be drawn together for splicing as well as for taking up midwire slack.

Other objects and advantages will be apparent from the following description, when taken in connection with the accompanying drawings.

In the drawings: Figure 1 is an elevation of my wire stretcher. Fig. 2 is a top plan view. Fig. 3 is a transverse section on the line 3—3 of Fig. 2. Fig. 4 is an elevation showing the use of a clamp for woven wire fence stretching. Fig. 5 is an elevation of the device showing the same in use for stretching the broken ends of wires to be spliced. Fig. 6 is a top plan view of the device as shown in Fig. 5.

Referring particularly to the accompanying drawings, and particularly to Figs. 1 and 4, 10 represents a yoke frame in the ends of the arms of which are journaled the ends of the transverse shaft 11 and on which is secured a drum 12. The drum has a peripheral flange 13 on one end, and a similar flange 14 intermediate its ends, while on the other end is a large flange 15 formed with an outwardly extending and internally toothed rack 16. Mounted on the shaft 11 outwardly of the flange 15 is a pinion 17, this pinion being disposed between the flange and one arm of the yoke 10. Also secured to the shaft but outwardly of the arm of the yoke is a crank handle 18. Rotatably mounted on the arm of the yoke, between the rack 16 and the pinion 17, and meshing with both of them is a pinion 19 similar to the pinion 17. Thus when the crank handle is turned, the pinion 17 will transmit motion by means of the pinion 19 to the rack, thus rotating the drum. Mounted on the frame is a pivoted double pawl 20, one end of which engages with a series of ratchet teeth 21 formed on the flange 15, while the other end is adapted for engagement with a second set of oppositely extending ratchet teeth 21′ also formed on the flange.

Formed in the drum 12 are the sockets 22 in which are secured the corresponding ends of a pair of cables 23 and 24 respectively. These cables are wound on the drum in opposite directions, one of them being wound between the flanges 13 and 14 and the other one between the flanges 14 and 15. Secured to the outer end of each of the cables is a wire clamp 25. The closed end of the yoke frame 10 is provided with a chain 26 for attachment to a fence post 27.

In the operation of the device one of the clamps 25 is engaged with the wire to be stretched after first securing the stretcher to the post, and then the crank handle 18 rotated so as to wind one cable and unwind the other. One of the pawls 20 will engage with the ratchet teeth and hold the drum against retrograde movement. The clamp of the cable which has been unwound is then pulled forwardly and engaged with the wire in advance of the first clamp and then the pawl rocked on its pivot to engage the other set of ratchet teeth and then the drum rotated in the opposite direction. This winds up the heretofore slacking cable, stretching the wire, and at the same time unwinding or slackening the heretofore taut cable. This back and forth rotation of the drum is repeated until the wire is properly stretched and nailed to one of the posts.

To adapt the device for stretching woven wire fencing, there is provided the elongated strip 28 in one face of which is formed a longitudinal groove 29 across which is secured a strip of sheet metal 30. Engaged on the strip of sheet metal over the groove is a round bar 31 which is arranged to be drawn to press the sheet metal into the groove by means of the hook members 32 carried by the strip 28. The woven wire is engaged between the bar 31 and the strip 28 and the hooks tightened by means of the nuts 33 so as to firmly clamp the device on the wire. Chains 34 are secured to the strip 30 and to the ring 37, which ring carries a chain 38 adapted to be engaged with a hook 35 carried by the cable 23. It will be noted

that the clamps 25 are not connected directly to the cable but carry chains 36 which are engaged with the hooks 35 mentioned above. These chains 36 provide adjustments so that the clamps can be moved to greater or lesser distances from the stretching device.

Referring particularly to Fig. 5 the device is shown in use for stretching the broken ends of wires which are to be spliced. In this position, the frame 10′ has a chain 24′ attached thereto, the outer end of this chain carrying a clamp 25′ for engagement with the wire 39. Over the drum 13′ is engaged a chain 23′, the outer end of which carries a wire clamp 40 which grips the other broken end 41 of the wire, while the inner end depends from the other side of the drum. The drum is formed in the usual manner to receive the links of the chain. Thus when the drum is rotated to wind the chain 23′ thereon the end 41 of the wire will be drawn over to the end 39 so that these ends can be readily spliced together. It will be noted that the chain 26, as well as the chain 24′ are connected to the frame 10 and 10′ respectively by means of the swivels 42 and 43 respectively.

In Fig. 6, the chain 24′ and the clamp are removed and the chain properly secured around the post 27′.

What is claimed is:

A wire stretcher comprising a U-frame, a drum rotatably mounted in the arms of the frame, a small flange formed at one end of the drum, a similar flange formed centrally on the drum, a large flange formed on the other end of the drum, two circular series of ratchet teeth formed on the peripheral face of the larger flange, the teeth of one set extending in an opposite direction to those of the other set, a pivoted member carried by the frame and formed with a pair of oppositely extending and offset projections, each adapted to engage with one of the sets of teeth, the outer face of the said flange having a circular recess, the surrounding wall of which is formed with gear teeth, a pinion mounted on the adjacent pintle end of the drum and provided with a crank handle and an intermediate pinion mounted on one arm of the frame and simultaneously meshing with the said pinion and the teeth of the recess.

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

HENRY A. PAHLKE.

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