March 30, 1954 F. H. HOLLMIG 2,673,579

FENCE WIRE STRETCHING AND ANCHORING TOOL

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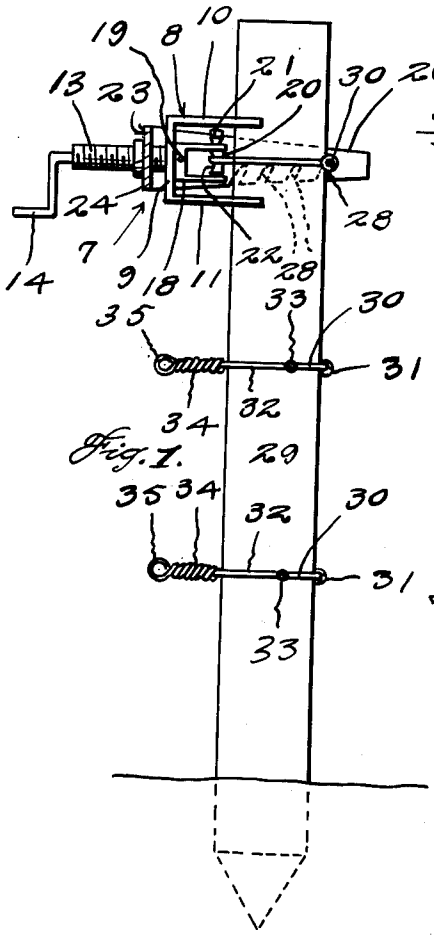


Fig. 1.

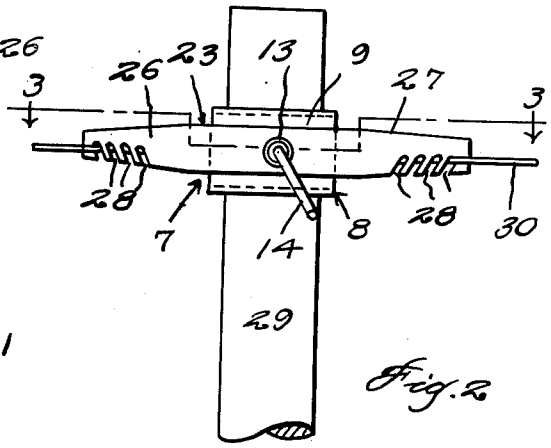


Fig. 2

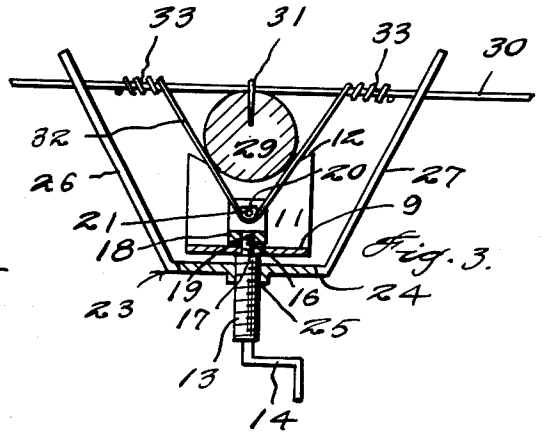


Fig. 3.

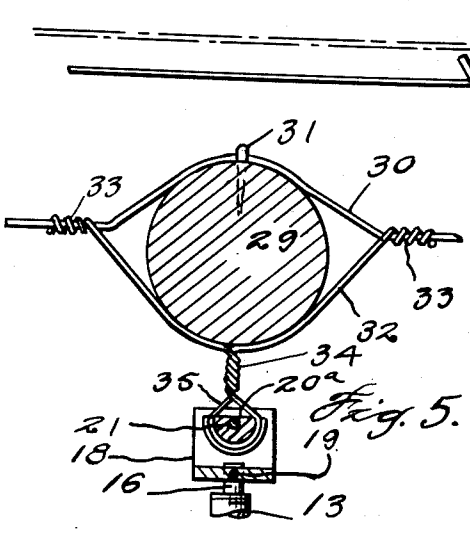


Fig. 5.

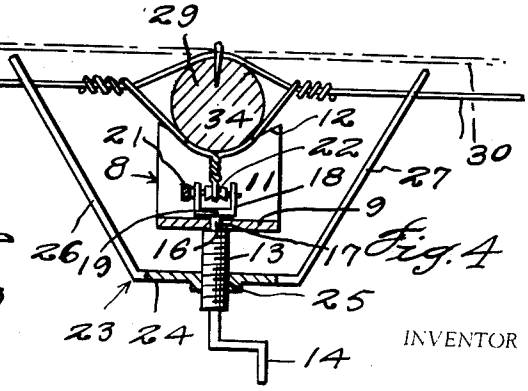


Fig. 4

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FENCE WIRE STRETCHING AND ANCHORING TOOL

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5 Claims. (Cl. 140—123.5)

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This invention relates to a novel tool for use in stretching strands of fence wire between fence posts and for securely anchoring the wire to the fence posts to eliminate the danger of anchoring staples being pulled out of fence posts by the fence wire.

Frequently fence wire anchoring staples are pulled out of fence posts and the fence wire is released thereby either due to fence posts assuming positions out of alignment with one another so that the fence wires exert an outward pull on staples of certain of the posts or due to livestock pushing against the fence wire strands in a direction to cause the staples to be pulled from the fence post.

Accordingly, it is the primary object of the present invention to provide a tool for stretching fence wire between fence posts and for simultaneously attaching an auxiliary wire to the strand of fence wire adjacent each fence post for holding the fence wire so that the staple cannot be pulled from the fence post by the fence wire.

Another object of the invention is to provide a tool of extremely simple construction wherein the aforementioned operations are accomplished simultaneously by a manual operation of the tool.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a side elevational view partly in section showing the tool in an applied position;

Figure 2 is an end elevational view of the tool in an operative position looking from left to right of Figure 1;

Figure 3 is a horizontal sectional view taken substantially along a plane as indicated by the line 3—3 of Figure 2;

Figure 4 is a view similar to Figure 3 showing the tool and the parts engaged thereby after stretching and anchoring of a fence wire has been completed or substantially completed, and

Figure 5 is an enlarged fragmentary view taken on substantially the same plane as Figures 3 and 4 and illustrating only a portion of the tool after completion of the anchoring and stretching operations.

Referring more specifically to the drawing, the novel fence wire stretching and anchoring tool in its entirety is designated generally 7 and includes a fence post engaging abutment member, designated generally 8, having an end wall

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9 and corresponding top and bottom walls 10 and 11, extending from the ends of the end wall 9 and disposed substantially at right angles thereto. The substantially parallel top and bottom walls 10 and 11 have corresponding notched outer ends 12, as clearly illustrated in Figures 3 and 4.

A feed screw 13 is provided with a crank 14 at one end thereof and has a restricted unthreaded stem 16 extending from its opposite end. The stem 16 is rotatably disposed in a substantially central opening 17 of the end wall 9. A bifurcated head 18 is detachably secured by a pin or fastening 19 to a distal end of the stem 16 and is disposed within the abutment member 8. A wire engaging member 20 is detachably mounted in the head 18 between its furcations by a pin 21 which extends through the furcations of the head 18 and through the wire engaging member 20. Said member 20 is preferably provided with an arcuate grooved outer surface 22 around which a portion of a strand of wire is adapted to engage, as will hereinafter be described.

The tool 7 also includes a wire pulling yoke 23 including an intermediate or bight portion 24 having a substantially centrally disposed flanged threaded opening 25 through which the feed screw 13 is threaded. The yoke 23 includes corresponding legs 26 and 27 which project from the ends of its bight portion 24 in outwardly diverging relationship to one another. Each of the legs 26 and 27 is provided with a series of longitudinally spaced downwardly opening notches 28, all of which are inclined in a direction away from the free ends of said legs.

For the purpose of illustrating a preferred application and use of the tool 7, a conventional fence post 29 is illustrated in the drawing having a plurality of strands of fence wire 30 extending transversely across said fence post, each of which may be anchored to the fence post in a conventional manner by a staple 31. It will be obvious that if a pressure is exerted against the fence wires 30 in a direction for displacement of the fence wires away from the portion of the post 29 to which they are anchored by the staples 31, that this will tend to extract the staples from the fence post to thus disengage the fence wires from the fence post or at least loosen the staples sufficiently so that the fence wires will not be anchored thereby to the fence post. The tool 7 functions not only to stretch and tension the fence wires 30 but also to additionally

anchor the fence wires so that a pressure thereon cannot extract or loosen the staples 31.

To utilize the tool 7 for anchoring each fence wire to each fence post and for stretching the fence wires 30 between adjacent fence posts, a short strand of anchoring wire 32 has its intermediate portion passed through the head 18 and disposed in engagement with the grooved portion 22 of the wire engaging member 20. The ends of the anchoring wire 32 are then wrapped or coiled as seen at 33 around one of the fence wires 30 at points spaced from the staple 31 which anchors the fence wire to the post 29, so that the anchoring wire 32 extends around the post on the side thereof opposite the side engaged by the fence wire 30. It will be obvious that the intermediate portion of the anchoring wire 32 could be positioned in engagement with the wire engaging member 20 after its ends are anchored by the coils 33 to the fence wire 30 by removing the pin 21 and wire engaging member 20 so that the member 20 could be inserted into engagement with the intermediate portion of the anchoring wire 32 and then placed properly positioned in the head 18 to receive the pin 21. Assuming that the anchoring wire 32 has been secured to the fence wire 30 and is engaged by the member 20 and further assuming that the notched ends 12 of the abutment member walls 10 and 11 are in engagement with the post 29, as illustrated in Figure 3, the yoke 23 which is disposed on the screw 13 with its intermediate portion 24 adjacent the wall 9 is then ready to be engaged with the fence wire 30 to be stretched and anchored. This is accomplished by selected notches 28 of the yoke legs 26 and 27 being positioned in engagement with the strand 30 outwardly of the coils 33. With the tool 7 thus applied, as illustrated in Figure 3, the screw 13 is manually revolved by the operator engaging the crank 14 and the stem 16 thereof revolved in the opening 17. The screw is revolved in a direction to cause the yoke 23 through its threaded engagement with the screw 13 to be moved outwardly and away from the abutment member 8. The yoke 23 is prevented from turning with the screw 13 by engagement of its legs 26 and 27 with the fence wire 30. When the yoke 23 is thus displaced away from the abutment member 8, the legs 26 and 27 will exert a pull on the fence wire 30 for pulling the fence wire from its position on Figure 3 and its dotted line position of Figure 4 to its full line position of Figure 4 or to its position of Figure 5, so that the fence wire will partially engage around the post 29 and will extend away from the post in inwardly offset relationship to the portion of the post to which the fence wire is anchored by the staple 31. It will also be readily apparent that as the wire is thus pulled around the post 29 by the yoke 23 for stretching the wire between the post 29, against which the tool 7 engages and the two posts, not shown, adjacent thereto, that the intermediate portion of the anchoring wire 32 will be simultaneously twisted by rotation of the feed screw 13 and its head 18, to form a twisted portion 34 in the anchoring wire 32 between the post 29 and the wire engaging member 20 and to form a loop 35 therebeyond in the portion of the wire engaged by the member 20. The twisted wire portion 34 thus formed exerts a pull on the end portions of the anchoring wire 32 between the twist 34 and the coils 33 so that the fence wire 30 is retained in its full line position of Figure 4 and in its position of Figure 5, after having been stretched by the tool 7, by the anchoring wire 32. The anchoring wire 32 thus prevents the portion of the fence wire 30 which engages the post 29 from being displaced away from said post and thereby prevents the staple 31 from being extracted from the post or loosened by a pressure exerted on the fence wire. The anchoring wire 32 additionally holds the fence wire under the tension which has been applied thereto by the tool 7 to retain the fence wire properly stretched and tensioned. The pin 21 is then removed from the head 18 and member 20 so that said member 20 can then be removed from the wire loop 35. The screw 13 is then revolved in the opposite direction to displace the yoke 23 back toward the abutment member 8 so that the leg notches 28 can be disengaged from the tensioned fence wire 30. The fence wire 30 is initially engaged selectively with the notches 28 depending upon the diameter or cross sectional size of the fence post 29. It will be readily apparent that each fence wire 30 may thus be stretched and anchored at each fence post 29 to which it is connected by operation of the tool 7, as previously described, and that such operation simultaneously stretches a fence wire and anchors it to a fence post. It will also be obvious that the staples 31 could be omitted if desired as the anchoring wires 32 will effectively retain the fence wires 30 properly secured and anchored to the fence post 29 without the use of other securing means.

The size and shape of the fence wire engaging member 20 may be varied depending upon the size of the loop 35 that it is desired to form therein. A wire engaging member 20a of larger cross sectional size is illustrated in Figure 5, and it will be apparent that wire engaging members may be made of other larger or smaller sizes.

Various other modifications and changes are likewise contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A wire stretching and anchoring tool comprising an abutment member having one end adapted to bear against a fence post, said abutment member having an end wall at its opposite end, a feed screw having a stem extending inwardly through said end wall and journalled therein and having a screw portion extending outwardly from said end wall, a pulling yoke having an intermediate portion disposed outwardly of said end wall through which the screw portion of said feed screw threadedly extends, said yoke having legs projecting from said intermediate portion and adapted to straddle the fence post and detachably engage the fence wire on opposite sides of the fence post, means secured to the inner end of said stem and disposed on the inner side of said end wall and adapted to detachably engage an intermediate portion of an anchoring wire the ends of which are secured to the fence wire on opposite sides of the fence post, and means for revolving said feed screw in one direction to displace the intermediate portion of the pulling yoke away from the abutment member to cause the yoke to exert a pull on the fence wire for pulling the fence wire partially around the fence post to tension the fence wire, said first mentioned means being revolved with the feed screw for twisting the intermediate portion of the anchoring wire to take up the slack created

therein by the pull exerted on the fence wire by the pulling yoke for anchoring the fence wire partially around the post and for maintaining the tension thereon applied to the fence wire by the pulling yoke.

2. A tool as in claim 1, said abutment member including top and bottom walls projecting from said end wall and having notched free ends engaging the fence post, said first mentioned wire twisting means being disposed between said top and bottom walls and between the end wall and post.

3. A tool as in claim 1, said first mentioned wire twisting means comprising a bifurcated head fixed to and projecting from said stem toward the fence post, a wire engaging member disposed in said head and around which the intermediate portion of the anchoring wire extends, and a pin extending through the furcations of said head and through said wire engaging member and detachably disposed therein for detachably connecting the wire engaging member and anchoring wire to the head.

4. A tool as in claim 3, said abutment member having top and bottom walls projecting from said

end wall and provided with notched free ends adapted to bear against the fence post above and below the anchoring wire, and said head being loosely disposed in said abutment member between the post and said end wall and between the top and bottom walls.

5. A tool as in claim 1, said yoke legs projecting outwardly from the ends of the intermediate portion of the yoke in diverging relationship to one another and being provided with at least one downwardly opening notch for receiving the fence wire to be stretched, the notch of each leg being inclined away from the free end of said leg from its upper closed end to its lower open end.

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