R. B. LEATHERMAN.

WIRE FENCE TIE.

APPLICATION FILED DEC. 22, 1915.

1,205,227. Patented Nov. 21, 1916.

Fig. 1

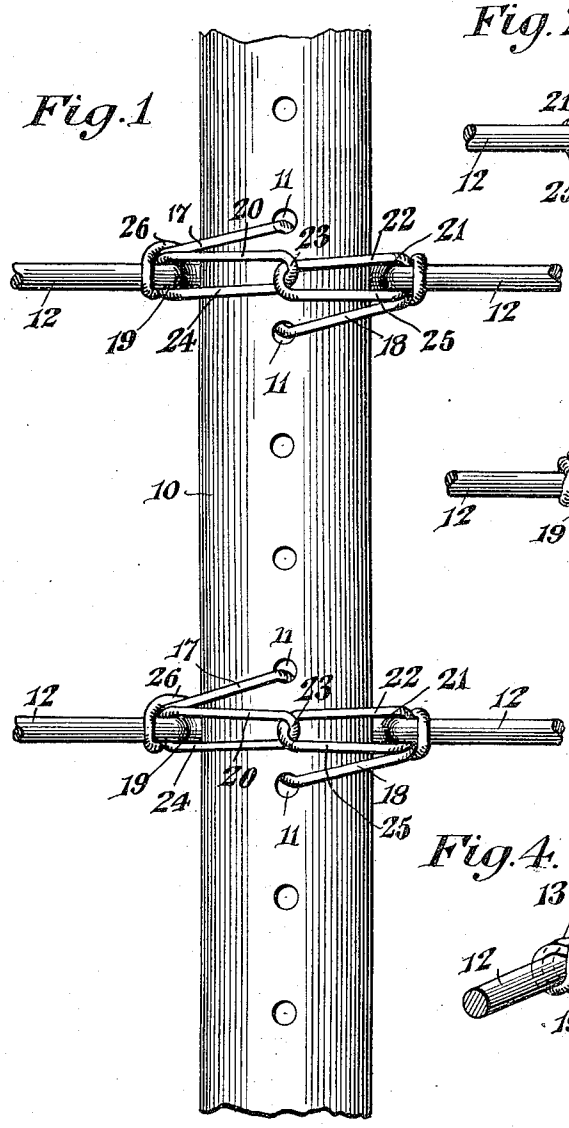


Fig. 2.

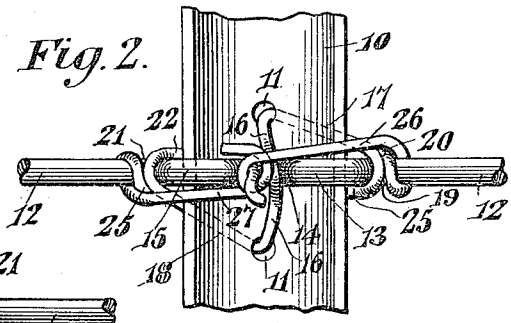


Fig. 3.

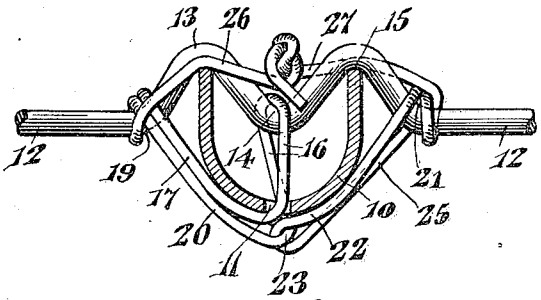
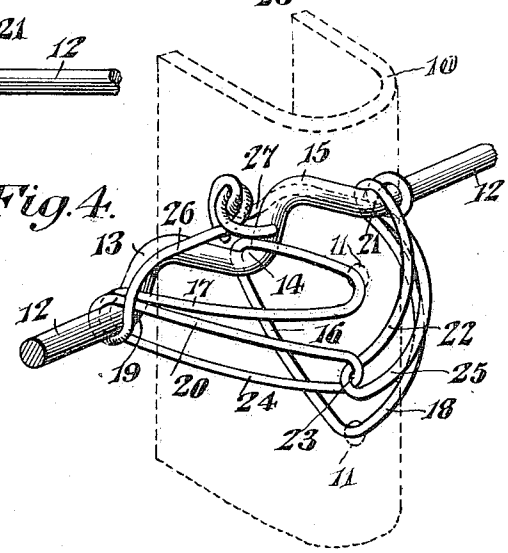


Fig. 4.



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WIRE-FENCE TIE.

1,205,227. Specification of Letters Patent. Patented Nov. 21, 1916.

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To all whom it may concern:

Be it known that I, RICHARD B. LEATHERMAN, a citizen of the United States, residing at Washington, in the county of Wilkes and State of Georgia, have invented a new and useful Wire-Fence Tie, of which the following is a specification.

This invention relates to an improved wire fence tie for securing the runners or strands of a wire fence to the stay or post, and has for an object to provide an improved tie which so engages the runner and the stay as to securely hold the runner from longitudinal slipping, and to hold the stay from sliding vertically across the runners of the fence.

Another object of the invention is to peculiarly bend or crimp the runner to receive the tie, and wherein the runner and the tie are peculiarly assembled with respect to a channeled or U-shaped stay for interlocking the runner and the stay, so as to reinforce the stay, to hold the runner from slipping across the stay, to insure the positioning of the tie on the stay and the runner should one side of the same be accidentally broken, and also to house and protect the twist or secured ends of the tie within the channel or concavity of the stay.

The above and other objects of this invention will be more fully brought out in the following detail description of the present preferred embodiment of the invention, the same being disclosed in the accompanying drawing, wherein:—

Figure 1 is a side elevation of a portion of a fence, the view showing a stay with two runners or strand wires secured thereto by the improved tie and assemblage of this invention. Fig. 2 is a rear side elevational view of a portion of the stay, showing the runner and tie secured thereto. Fig. 3 is a transverse sectional view through the stay, taken immediately above the tie and runner. Fig. 4 is a perspective view of a runner with the tie of this invention applied thereto, the dotted lines showing the position of the stay within the tie.

Referring to these drawings, wherein like parts are designated by similar characters of reference throughout the several views, 10 designates the stay of a wire fence which, as may be clearly seen from the drawings, is of channel or U shape, and which is provided intermediate its longitudinal edges with a row of spaced apart openings 11. The stay 10 is adapted to support any number of runners or strand wires 12, which extend longitudinally of the fence and comprise the body portion of the same. Each strand wire 12 passes across the inner spaced apart edges of the stay 10 and is horizontally crimped or bent to provide three angles 13, 14 and 15, the angles 13 and 15 facing outwardly and receiving therein the inner edges of the U-shaped stay 10. The runner 12 is so crimped or bent as to space the angles 13 and 15 apart a distance equal to the spacing apart of the flanges of the stay 10 so that the stay rests in the angles 13 and 15, without bending or distorting the stay. The angled portions 13 and 15 provide pockets or recesses which are spaced apart and which open toward the opposite edges of the U-shaped stay. The pockets or recesses receive therein the spaced apart edges of the stay to hold the same from displacement. It will be observed, from Fig. 3 particularly, that the crimped or bent portion of the runner 12 is offset inwardly from the runner so as to lap around the inner side of the stay 10 and dispose the longitudinal strands of the runner 12 substantially in the plane of the central axis of the stay 10. This crimping or bending of the runner 12, projects the bend 14 into the concavity of the stay 10, and positions the bends 13 and 15 about the rear edges of the stay 10 to hold the sides of the stay from spreading or collapsing. Thus, this peculiar bending or crimping of the runner constitutes a strengthening or reinforcing means for the stay.

The runner 12 is held across the rear edge of the stay 10 by means of an improved tie, the same comprising a length of wire which is returned upon itself to provide two strands and an intermediate loop. The loop, designated as 16 in the drawings, is engaged over the runner 12 in the angle 14 thereof, the strands forming the loop passing forwardly through a pair of adjacent openings 11, and being lapped against the outer convex face of the stay 10, and carried in opposite directions, as at 17 and 18. The strand 17 is carried rearwardly about one side of the stay 10 and passed downwardly behind the bend 19 of the runner 12, from which the strand is passed forwardly against the stay 10, as at

20. The opposite strand 18 is lapped against the opposite side of the stay 10, and carried rearwardly for engagement upwardly behind the angle 21 of the runner 12 from which the strand is then carried forwardly against the convexed face of the stay 10, as at 22. The two portions or lengths 20 and 22 of the tie are carried to the intermediate portion of the convexed face of the stay, substantially in line with the row of perforations 11 and at such point the strands of the tie are twisted one half turn about each other to provide an interlock 23 which is drawn tight by the twisting, so as to dispose the interlock or twist 23 in the horizontal plane of the runner 12, as clearly shown in Fig. 1. In this position the twist 23 is located in between the adjacent pairs of openings 11, through which the initial lengths 17 and 18 of the strand emerge. From the interlock or twist 23 the opposite strands are again carried backwardly from the convexed face of the stay 10, as at 24 and 25 and are again bent around behind the angles 19 and 21 of the runner 12 to complete a pair of forwardly extending interlocked loops, the strands 24 and 25 being finally carried from the angles 19 and 21 rearwardly across the edges of the stay 10, as at 26 and 27. The extremities of the lengths 26 and 27 are twisted about one another to secure the ends of the tie together, the twisting being effected in the angle 14, and the ends of the wire being bent forwardly into the concavity of the stay 10, and against the opposite sides of the angle or bent portion 14 of the runner.

It is thus seen that by providing the spaced apart outwardly facing recesses or angles 13 and 15, the rear edges of the U-shaped stay 10 are held from lateral displacement, so that spreading of the edges is prevented, and the stay is reinforced against buckling or bending incident to pressure from any direction. By providing these angles or recesses 13 and 15, the intermediate recess or angle 14 is formed, which provides a recess or opening into which the twisted extremities of the tie may rest to house the same and prevent contact thereof with objects passing close to the inner side of the fence. By providing the twist or interlock 23 at the forward side of the stay 10, the tie is reinforced, as the loops which diverge from this twist or interlock 23 are anchored together, and thus hold the bent portions 19 and 21 of the runner against the opposite sides of the stay, and assist the initial lengths 17 and 18 in preventing the rearward movement of the runner from the stay. It will be noted that the lengths 17 and 18 of the tie tend to twist or distort the runner 12 out of its horizontal plane. The looped portions across the front of the stay 10 are designed to offset this twisting pressure to a considerable extent, as the looped portions themselves, are adapted to take up most of the pressure.

By the provision of a wire tie as above described, relatively thin wire may be used, which is economical and easily handled, and which has the required strength, as the wire is twisted or looped against the forward side of the stay, and is also secured at the rear side of the stay. The peculiar looping or twisting of the wire at the forward side of the stay provides a double securing means for holding the runner against the rear edges of the stay.

It is, of course, understood that the above specifically described tie may be varied as to detail arrangement or twisting, without departing from the spirit of this invention, and within the scope of the following claims.

What is claimed is:—

1. The combination with a U-shaped stay, of a runner having a horizontal crimped portion therein providing spaced apart angled portions for engagement about the opposite edges of said stay to brace the sides thereof, and to hold the stay from lateral movement, said crimped portion of the runner also providing an intermediate angled portion projecting into the concavity of the stay, and a wire tie engaging the stay and the runner to hold the spaced angled portions against the edges of the stay and prevent the relative movement of the runner and the stay, the ends of said tie being twisted together at the open side of the stay and being bent into the concavity of the stay and into the intermediate angled portion of the runner.

2. The combination with a U-shaped stay, and a runner traversing one side of the stay, a tie comprising a length of wire returned upon itself to provide an intermediate loop engaging about the runner and having its opposite strands extending forwardly through the stay, said strands being bent oppositely and laterally from the forward face of the stay and extending rearwardly and about said runner at the opposite sides of the stay, said strands being further carried forwardly and twisted to provide an interlock at the front of the stay, and being carried rearwardly and twisted a second time about the runner at the opposite sides of the stay, the ends of the strands then extending rearwardly and across the rear side of the stay, and being twisted thereat to secure the ends of the tie wire together.

3. The combination with a U-shaped stay having spaced apart openings disposed vertically intermediate of the lateral edges of the stay, of a runner traversing the rear side of the stay and having a crimped portion providing two spaced apart forwardly opening angled portions adapted to receive therein the rear edges of the stay, and providing

an intermediate angled portion projecting into the stay for reinforcing the same, and a tie wire engaging the stay and said intermediate angled portion of the runner for securing the runner to the stay.

4. The combination with a U-shaped stay having vertically spaced apart openings therethrough, of a runner wire traversing the rear edges of the stay and being crimped to provide spaced angled portions receiving the edges of the stay and an intermediate angled portion, and a tie wire returned upon itself to provide a loop for engagement over the intermediate angle portion of the runner, the strands of the loop extending forwardly through said vertically spaced apart openings and thence being extended laterally and rearwardly against the opposite sides of the stay for engagement about the runner at the opposite sides of the stay, each strand then extending forwardly to the intermediate portion of the stay, at which point said strands are twisted about one another and looped, and are thence carried laterally and rearwardly in binding engagement against the outer face of the stay to said runner, said strands being twisted about said runner and carried rearwardly and across the rear face of the stay, the extremities of the strands being twisted together to secure the tie in place, the twisted ends being forced inwardly into said intermediate angled portion of the runner and adapted to lie within the concavity of said stay for housing the twisted ends of the tie.

5. The combination with a U-shaped stay having vertically spaced apart openings intermediate its longitudinal edges, of a runner engaging across the rear open side of the stay and being crimped to provide angled portions adapted to receive and brace the opposite edges of the stay and hold the runner from slipping longitudinally thereacross, said crimping of the runner also providing an intermediate angled portion projecting into the rear side of the stay, and a tie having a looped portion engaging about said intermediate angled portion and extending forwardly through said vertically spaced apart openings, the ends of the tie wire extending oppositely from the openings and engaging about the runner at the opposite sides of the stay, said tie wire extending forwardly from the runner at the opposite sides of the stay and being locked around each other at the front of the stay for holding the angled portions against the rear edges of the stay, the ends of said tie wire being secured together at the rear side of the stay and being bent inwardly into the concavity of the stay and of said intermediate angled portion.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

R. B. LEATHERMAN.

Witnesses:
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F. H. FLICKLEN.

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