

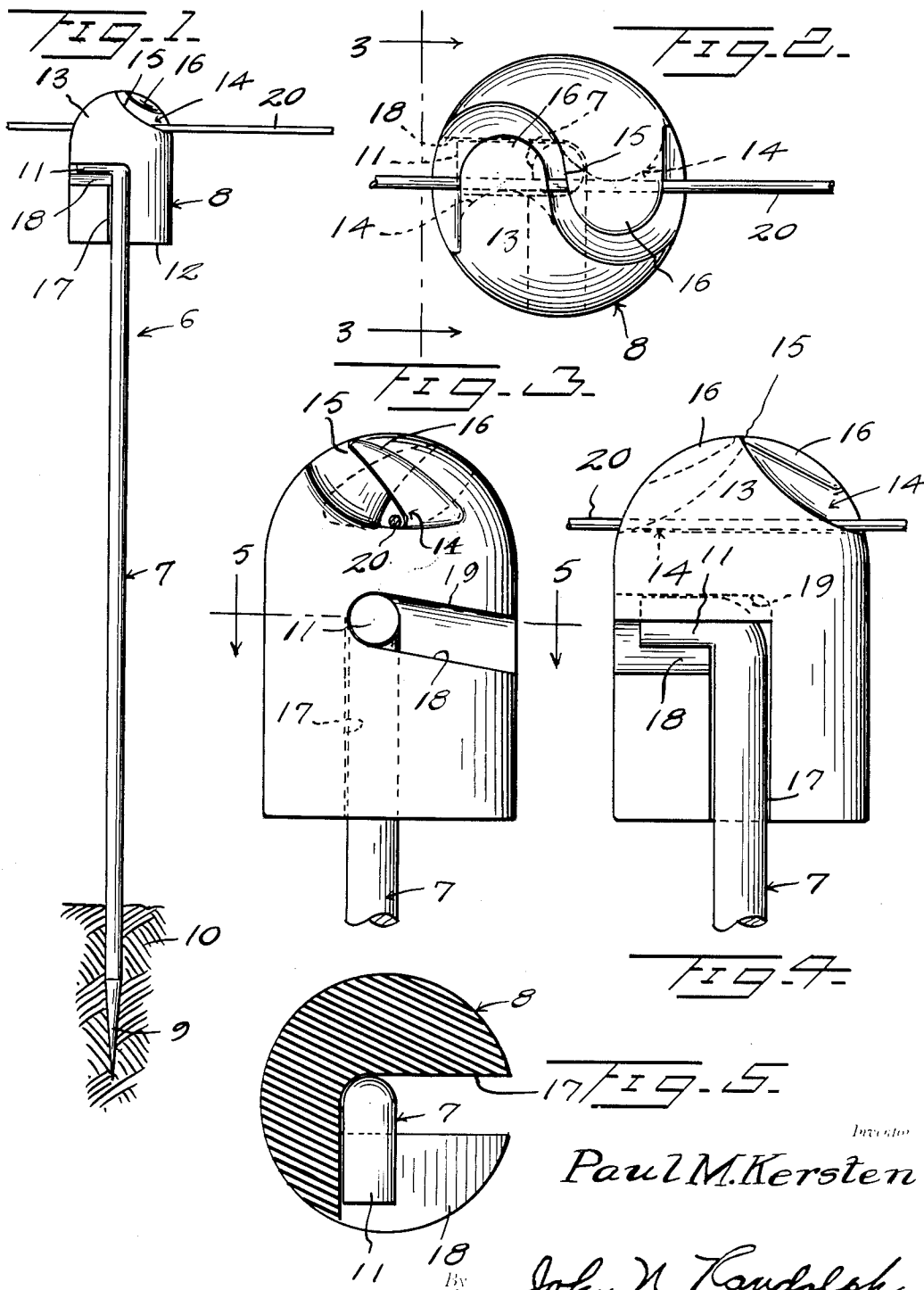
Oct. 25, 1955

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2,721,891

ELECTRIC FENCE WIRE SUPPORTING POST

Filed Aug. 30, 1950



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1

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ELECTRIC FENCE WIRE SUPPORTING POST

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Application August 30, 1950, Serial No. 182,307

3 Claims. (Cl. 174—158)

This invention relates to a novel construction of fence wire supporting post including a supporting standard and an electric insulator demountably supported on the upper end of said standard in which is detachably received a strand of electric fence wire and which insulator is so constructed that the fence wire while taut may not be removed therefrom and will function to retain the insulator in a position to prevent it from being disengaged from the upper end of the supporting standard so that the supporting standard and insulator, constituting the fence wire supporting post cooperate in a unique manner with one another and with a wire engaged and supported by the insulator.

More particularly, it is an aim of the present invention to provide an insulator having a slot opening outwardly of its lower end and through a portion of its side wall and which includes angularly disposed portions for receiving angularly disposed portions of the supporting standard for maintaining the insulator on the supporting standard without the use of other retaining means to prevent removal of the insulator from the standard without rotating the insulator on its longitudinal axis or without displacing the insulator upwardly and laterally with respect to the standard.

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 of the novel fence post;

Figure 2 is an enlarged top plan view thereof;

Figure 3 is a fragmentary side elevational view taken at a right angle to Figure 1, looking in the direction as indicated by the line 3—3 of Figure 2;

Figure 4 is an enlarged fragmentary side elevational view looking from right to left of Figure 3, or similar to the upper portion of Figure 1, and

Figure 5 is a horizontal sectional view taken substantially along a plane as indicated by the line 5—5 of Figure 3.

Referring more specifically to the drawing, the novel electric fence post in its entirety is designated generally 6 and includes a supporting standard 7 and an insulator 8.

The supporting standard 7 comprises an elongated rod preferably of circular cross section which may be of any desired length to support the insulator 8 at any desired elevation. The rod forming the standard 7 has a tapered lower end 9 which is adapted to be driven into the earth, as illustrated in Figure 1 at 10 for supporting the standard 7 in an upright position. The upper end of the standard 7 is bent to form a terminal 11 which is preferably disposed at a right angle to the axis of said standard 7.

The insulator 8 which may be formed of any suitable electrical insulating material is preferably but not necessarily of circular cross section and has a substantially flat bottom 12 and a substantially hemispherical top 13. The upper end 13 of the insulator 8 is provided with a groove

2

14 having a bed portion which extends diametrically or transversely through the insulator 8; however, said groove 14 is provided with a sinuous reversed S-shaped portion which opens outwardly of the dome or top portion of the insulator 8 and which combines with the substantially straight bed portion 14 of the groove to form insulator portions 16 which are spaced from one another by an intermediate portion of the open top 15 of the groove and which extend in opposite directions to overlie complementary bed portions of said groove, for a purpose which will hereinafter become apparent. The specific shape of the groove 14, 15 is not basically new, per se, as a similar fence wire receiving groove is disclosed in U. S. Patent #737,027; however, the wire fence receiving groove 14, 15 with the insulator 8 functions in a unique manner with another portion of said insulator and with the upper end of the standard 7, as will hereinafter be described.

The insulator 8, below the groove 14, 15 is provided with a slot 17 which extends longitudinally thereof downwardly from a point beneath the groove 14 and which opens outwardly of the bottom surface 12. The slot 17 opens outwardly of a portion of the side wall of the insulator 8 and extends inwardly from its open side a distance greater than the radius of the insulator or to beyond the center thereof so that the groove 14 is disposed directly above a portion of the slot 17, as clearly illustrated in Figures 2 and 3, and said groove 14 is disposed to extend transversely through the insulator 8 at a right angle to the direction that the slot 17 extends transversely with respect to the insulator 8. The insulator 8 is provided with a second slot 18 which extends generally parallel to the groove 14 and which is disposed at substantially a right angle to the slot 17. The slot 18 communicates with the upper end of the slot 17 and has a top wall forming a continuation of the top wall of slot 17. Said top wall, designated generally 19, is inclined downwardly and outwardly from the inner to the outer end of the slot 17, for a purpose which will hereinafter become apparent and the bottom wall of the slot 18 is preferably disposed parallel to its top wall 19, as illustrated in Figure 3. The slot 18 preferably opens outwardly of the cylindrical wall of the insulator 8 through an arc of substantially 90° but it will hereinafter become apparent that said slot 18 need not open outwardly of the insulator 8 as it is only essential that it open into the upper end of the slot 17.

From the foregoing it will be readily apparent that the standard 7 may be driven into the ground so as to be disposed in substantially an upright position and with its angular terminal 11 disposed substantially parallel to a fence line of which the post 6 forms a part. The insulator slot 17 is aligned with the terminal 11 so that the insulator 8 may then be applied either by being moved laterally of said standard 7 or downwardly with respect thereto to position the insulator 8 on the standard 7 and with the slot 17 receiving the upper portion of the post including the angular terminal 11. The insulator 8 is then rotated on the axis of the post 6 through an arc of 90° and in a counterclockwise direction, as seen in Figures 2 and 5, so that the terminal 11 will then be positioned in the slot 18 and with the inclined upper surface 19 of said slot resting upon the terminal 11 so that in order to slide the insulator 8 laterally off of the standard 7 from its position of Figures 3 and 4, the insulator 8 must also be displaced upwardly. It will thus be apparent that the inclined top surface 19 functions with the terminal 11 as a cam for urging the insulator 8 to move laterally relatively to the standard 7 and in a direction from left to right of Figure 3.

A strand of fence wire 20 to be electrically charged may be inserted into the reversed S-shaped open top 15

of the groove 14 before the insulator 8 is rotated 90° in a counterclockwise direction, as previously described so that when this rotation of the insulator 8 on the standard 7 occurs, the strand 20 will then be positioned to extend in a straight line through the bed portion 14 of the groove and portions thereof will be disposed beneath the overlying projections 16 to retain the fence wire 20 in the groove 14 against upward displacement. Likewise the wire 20, before its slack is taken up, may be inserted into the groove 14 through the groove portion 15 while the insulator is in its locked position, as illustrated. Furthermore, when the wire 20 is strong taut it will prevent the insulator 8 from being rotated clockwise as seen in Figures 2 and 4 to position the terminal 11 in the slot 17 so that the insulator may be disengaged from the standard and the terminal 11 by its engagement against the inner closed end of the slot 18 will prevent counterclockwise rotation of the insulator 8 on the post 7. As seen in Figure 3, the groove 14 and strand 20 are disposed in a vertical plane between the axis of the terminal 11 and the open side of the slot 17 when said terminal 11 is located at the inner end of the slot 18 so that the weight of the insulator 8 and wire 20 tends to displace the insulator 8 relatively to the standard 7 in a direction so that the terminal 11 is held against the inner end of the slot 18.

It will thus be readily apparent that an electric fence post of extremely simple construction has been provided wherein no fastenings are required to connect a detachable insulator to a supporting standard or a strand of fence wire to be charged to the insulator and wherein, due to the novel construction of the insulator and standard, said parts cooperate with one another and with the fence wire strand to maintain the fence post in an assembled position.

Various modifications and changes are 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. An electric fence post comprising a standard and an insulator, said standard comprising an upright rod having a right angularly bent terminal at its upper end adapted to be disposed parallel to a strand of electric fence wire to be supported by the fence post, said insulator comprising a body of electrical insulating material having a groove provided with a bed portion extending transversely through the insulator body, said groove having a reversed S-shaped upper portion opening outwardly of the top surface of the insulator body and combining with said bed portion to form complementary oppositely extending projections which overlie portions of the bed of the groove, said insulator body having a slot, opening outwardly of the bottom and of a portion of the side thereof and extending inwardly from said side portion of the insulator body to beyond the center of the insulator body, in which the upper portion of the standard including the terminal is removably received, the plane of said slot being disposed crosswise to the axis of the groove, and said insulator body having a second slot disposed at a right angle to the first mentioned slot and communicating with the upper part of said first mentioned slot and receiving the angular terminal of the standard when the insulator is rotated in one direction on said standard and when the straight bed portion of the groove is disposed parallel to the standard terminal, said second slot opening outward of the side of the insulator body from an outer open end of the second slot to an inner closed end thereof, said slots having a common upper surface inclined downwardly and outwardly from the inner end of said first mentioned slot toward its open side and against which said standard terminal engages.

2. An electric fence post comprising an upright standard and an insulator, said standard having a right angularly disposed terminal portion at its upper end adapted to be disposed parallel to a strand of fence wire supported by the post, said insulator comprising a block of electrical insulating material having a first slot opening outwardly of its lower end and through a portion of its side wall, said insulator body having a second slot disposed at substantially a right angle to the first slot and communicating with the upper end of said first slot, said slots having coplanar closed inner ends, said first slot receiving the upper portion of the standard including its angular terminal, said insulator body being rotatable in an arc of approximately 90° in one direction to position the standard terminal in the second slot, said insulator body having a groove extending transversely therethrough above the slots and disposed at substantially a right angle to the plane of the first mentioned slot and substantially parallel to the standard terminal when said terminal is in engagement with the inner end of the second slot, and said groove having a sinuous upper portion opening outwardly of the upper surface of the insulator body through which the fence wire strand is adapted to be inserted into or removed from the straight bed portion of the groove, said sinuous upper portion forming projections which constitute integral parts of the insulator body which extend in opposite directions to one another and which overlie spaced portions of the bed of the groove, said slots having a common top wall inclined downwardly and outwardly from the inner end of said first slot toward its open side.

3. An electric fence post insulator comprising a body of electrical insulating material having a groove provided with a bed portion extending transversely through the insulator body, said groove having a sinuous shaped upper portion opening outwardly of the upper surface of the insulator body and combining with said bed portion to form complementary oppositely extending projections overlying portions of the bed of the groove and adapted to retain a strand of wire in the bed portion of the groove and which is applied thereto and removed therefrom through said sinuous upper portion, said insulator body having a slot opening outwardly of the bottom and of a portion of the side thereof and extending inwardly from said side portion to beyond the center of the insulator body, in which the upper portion of a standard is adapted to be removably received, and said insulator body having a second slot disposed at a right angle to the first mentioned slot and communicating with the upper part of said first mentioned slot and adapted to receive an angular terminal portion of the upper end of the standard when the insulator is rotated in one direction on the standard and when the straight bed portion of the groove is disposed parallel to the standard terminal, said second slot having an open outer end and an open outer side opening outwardly of the side of the insulator body, and said insulator body having a surface defining the top wall of the slots and which is inclined downwardly and outwardly toward the open end of the second slot.

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