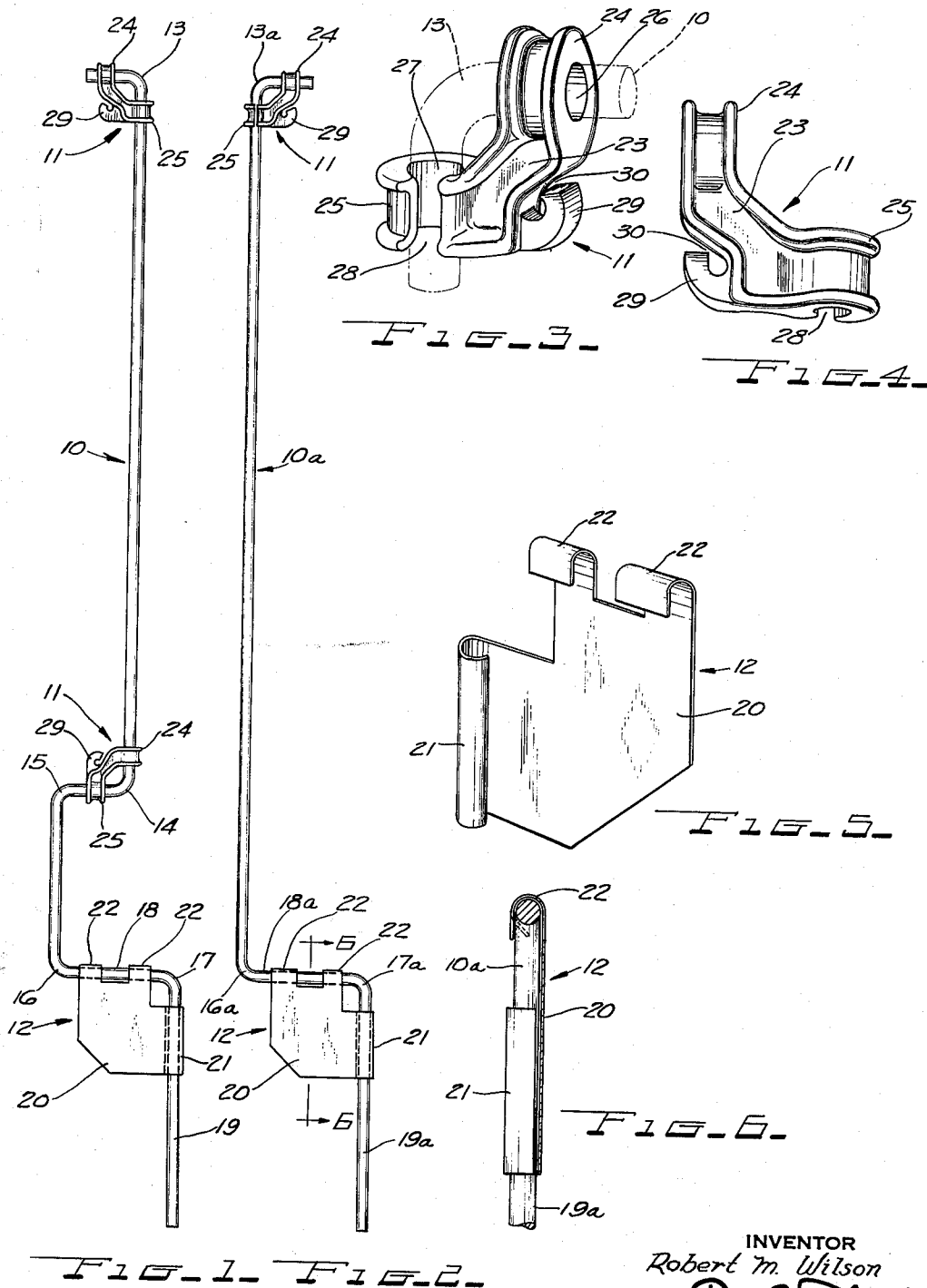


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SPECIAL FORM OF INSULATOR AND POST
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ELECTRIC FENCE POST ASSEMBLY HAVING A SPECIAL FORM OF INSULATOR AND POST

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The present invention relates broadly to electric fencing apparatus, and more specifically to an electric fence post, an anchoring plate, and a special insulator usable on the former.

Electric fencing in the past has commonly used straight metal posts with electric insulators fastenable on same by means of J-hook fasteners, pinch clamps, and wires, and even nails where wooden posts are used. Such constructions have required the use, by fence installers and removers, of tools such as wrenches, screw drivers, pliers and the like. With these fences, repairs or relocation of same was time consuming and could not be satisfactorily carried out if the proper tools were not on hand. It was a recognition of these shortcomings and difficulties in the electric fencing art which led to the conception and development of the present invention.

Accordingly, among the objects of the present invention is the provision of an electric fence post assembly having a special form of post and insulator, wherein the insulator can be installed on the post, and removed for replacement, where necessary, without the use of tools of any kind.

Another object is to provide a special shaped metal fence post on which the special electric insulator of this invention may be fitted and held in fixed position without the use of tools or external fastening members of any kind.

Another object is to provide an electric fence post formed from a metal rod, with such post having one or more angular bends adapted to receive and hold the electric insulator of the present invention.

Another object of this invention is to provide a rod type metal electric fence post which not only has offset portions for receiving and holding electric insulators, but also a sidewise offset portion near its lower end so that by stepping on the latter and forcing it down the post can be anchored in the ground.

Another object is to provide a special plate fitting the lower end of the post described above for holding same against turning after mounting in place in the ground ready for stringing the electric fence wire.

Another object is to provide an electric fence insulator adapted to be mounted on a rod type electric fence post preferably having a relatively sharp bend in same with said insulator receiving said post at opposite sides of said bend and being held at that point.

A further object is to provide an electric insulator and rod type metal fence post having a substantially sharp 90° angle bend adjacent the top of same, and another of said bends spaced substantially above ground, said insulator having two post gripping portions or arms with the axis of each being substantially 90° from each other with each gripping portion fitting said post at opposite sides of said bend, said insulator, moreover, being movable past said upper bend of said post, when threaded thereon, and mountable on said lower bend of same.

A further object is to provide an electric insulator having two arms at an angle of substantially 90° from each other, and with a passageway through the outer end of said arm portions with said passageways being at an angle of approximately 90° from each other.

A further object is to provide the above described insulator with a hook member between the arm portions

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thereof for receiving and holding an electric fence wire when the insulator has been mounted on a suitable electric fence post as hereinafter described.

A further object is to provide the above described insulator with a continuous wall passageway through one of the arms of same while the other arm has a passageway at approximately 90° to the first, with said second passageway having an open slit lengthwise of same for a purpose to be hereinafter described.

A further object is to provide an anchoring plate for holding an electric fence post from turning when same is of metal rod type and has a sidewise bent portion to be stepped on or pounded to drive the post into the ground, said plate having a tubular edge portion fitting the portion of the post to be pushed into the ground while the upper edge of this plate has hook members for receiving the horizontal lower portion of said post to hold said post against moving sidewise away from the upper portion of said plate.

Still further objects and advantages of this invention will appear as the description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims, the annexed drawing and the following description setting forth in detail certain means for carrying out the invention, such disclosed means illustrating, however, but several of the various ways in which the principle of the invention may be used.

In the annexed drawing:

FIGURE 1 is a side elevation of a preferred form of the fence post and insulator assembly with two insulators and an anchoring plate in place.

FIGURE 2 is a modified side elevation of a fence post similar to that shown in FIGURE 1 except that same is adapted for use of only one insulator.

FIGURE 3 shows a perspective view of a preferred form of the insulator of the present invention from the front and top of same and showing a phantom post portion fitting same.

FIGURE 4 shows a perspective view of the insulator illustrated in FIGURE 3 but from the opposite side and lower portion of same.

FIGURE 5 shows a perspective view of a preferred form of the fence post anchoring plate.

FIGURE 6 shows a fragmentary sectional view as taken along line 6—6 of FIGURE 2, looking in the direction of the arrows.

Referring more particularly to FIGURE 1 it will be noted that there is shown an electric fence post 10 carrying two insulators 11 and an anchoring plate 12. This post 10 has an upper substantially right angle bend 13 and a lower substantially right angle bend 14, both of which are adapted to receive one of the special electric insulators 11, which will be hereinafter described in detail. Additional bends 15, 16 and 17 finish out the post below the lower insulator 11 and provide a horizontal "step-on" portion 18 for pushing the lower end of the post 10 and anchoring plate 12 into the ground for holding the complete post and insulators in predetermined upright position.

While quite commonly it is desirable to keep both large animals, such as horses and cows, and small animals, such as pigs and sheep, in the same field and which thus requires the use of a high wire and a low wire such as is readily handled by the post illustrated in FIGURE 1, still there are times when only large animals such as horses and cows are to be kept inside of an electrically fenced area. In that situation the simplified post 10a of FIGURE 2 can be used and it will carry the single high electric insulator on its upper end as before, but will eliminate the bends required in connection with

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mounting and supporting a lower electric insulator as shown in FIGURE 1. The simplified electric fence post 10a, however, will have the same "step-on" portion 18 and anchoring plate 12 as previously described.

The anchoring plate 12, FIGURE 5, has a body portion 20, which is preferably flat, a side edge tubular sleeve portion 21, and at least one upper hook portion 22, which can be bent, if desired, around the "step-on" portion 18 of the post 10, or 10a, as shown in dotted lines in FIGURE 6. With the anchoring plate 12 in place, and the upper hook portion 22 bent to grip the post, this assembly is very stable and will stand a great deal of abuse under conditions of use without the plate 12 loosening up sufficiently for same to be removed from the post. This anchor plate 12, when thus installed, holds the post against turning which would involve danger of breaking or shorting an electric fence wire mounted on the electric insulator carried by the post.

Referring to FIGURES 3 and 4, the insulator 11 is made of any suitable insulating material which has a moderate degree of resilience facilitating flexing to install on a post 10 or 10a, as will be hereinafter set forth. A preferred material for these insulators is polyethylene, although other suitably resilient plastic materials, including rubber, having good electrical insulating properties, may be used very satisfactorily. The insulator is also preferably ribbed for rigidity while using less material to make it.

The insulator 11 is of angular construction having a body 23 with two arms 24 and 25 in angular relation to each other, and preferably approximately at right angles to each other, for fitting a suitable angular bend, preferably a right angle bend, in the electric fence post 10. If the bend in the electric fence post was only slightly different from a right angle, an insulator with its arms substantially at right angles from each other would still fit satisfactorily. However, where the post bends are moderately more obtuse or even moderately acute, the insulator could be made with the angle between its arms substantially matching the post bend and same would equally well serve the purpose of an electric fence insulator for a post having bends as noted.

Referring more particularly to FIGURES 3 and 4, it will be noted that the insulator arm 24 is provided with a moderately short through bore 26 which is of a size to relatively closely fit post 10 and yet be large enough to pass around bends 13 and 14 when the insulator is threaded onto the post and moved to the lower insulator position on post bend 14 as shown in FIGURE 1. Arm 25, on the other hand, while having a bore 27 approximately the same size as bore 26 in arm 24, is provided with a full length side slot 28 which is a little narrower than post 10 on which it is used. The insulator 11 is sufficiently resilient to allow the insulator to have its arm 24 slipped onto the post as shown in FIGURES 1 and 2 and then have the slotted side of arm 25 pushed against post 10, at the other side of bend 13 or 14, to resiliently spread slot 28 and allow the post to pass through said slot and be gripped in the bore 27 of arm 25, thus stabilizing the insulator in position for conventional use.

The body 23 of insulator 11, between arms 24 and 25 and on the side away from the electric fence post, is provided with a hook 29 having an entrance opening in the form of a slot 30 at the point of the hook for receiving an electric fence wire (not shown) to be supported by said hook. This hook, as illustrated in FIGURE 1, is in upturned wire receiving and supporting position on both bends 13 and 14 when slid on the post and snapped in place as shown.

These posts 10 and 10a can be pushed into the ground desired position and the insulator 11 slid on and resiliently snapped in place with the posts and insulators lined up for stringing the electric fence wire. All of this

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can be done with no tools at all, and when the fence is to be moved, the posts can be pulled up after removing the wire, and then reset as before, thus providing a new concept in the electric fencing art.

Other modes of applying the principle of my invention may be employed instead of those explained, change being made as regards the insulator, post, and assembly of same herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I claim:

1. An electric insulator mountable on an angular bent portion of an electric fence post, said insulator having a body member, an arm member on each end of said body member, each of said arm members having an opening extending longitudinally therethrough at least one of said openings being substantially cylindrical, and threadable around the angular bent portion of said post, the axis of said openings being substantially at the same angle to each other as the angular bent portion of said electric fence post with said openings in said arms closely fitting said post at opposite sides of the bend of said bent portion thereof, and electric wire supporting means on the outer portion of said body member between said arm members.

2. An electric insulator as set forth in claim 1, wherein said openings through said arms are relatively short, said arms are relatively firm but resilient, and at least one of said arms has a longitudinal side opening groove which is a little narrower than the size of the electric fence post and adapted to be spread sufficiently to resiliently snap over the electric fence post when said grooved side of the insulator arm is firmly pressed sideways against the post with said insulator having its arm members at opposite sides of the bend of said bent portion of said post.

3. An electric insulator as set forth in claim 2, wherein the outer exposed portion of said insulator body member between said arms has an integral upwardly opening hook portion which is the wire receiving and supporting means of the insulator.

4. An anchoring plate for electric fence posts or the like, said plate having a tubular portion at one side of same for threadedly receiving the portion of said post to be pushed substantially vertically into the ground, and a hook portion to grip a sidewise extending portion of said post adapted to be substantially flush with the surfaces of said ground when said post is installed in upright position ready for use.

5. An electric fence post assembly having a rod type post with a portion adapted to be pushed into the ground to hold same upright, said post having at least one bend in same well above and extending laterally from said portion pushed into the ground, and an electric insulator mounted on said post, said insulator having separate, spaced apart, mounting portions for receiving and holding said post at opposite sides of said bend, said insulator also having a wire receiving and supporting portion, said rod type post, adjacent the portion to be pushed into the ground having a sidewise extending portion thereof adapted to be stepped on to push the end of the rod type post into the ground as well as carry an anchoring plate thereon, said anchoring plate having a substantially tubular portion for threadedly receiving the portion of said post to be pushed into the ground and a hook portion to grip said portion of the post to be stepped on, whereby the pushing of the end of the post into the ground will likewise push said plate edgewise into the ground and through the connection of said plate and post will hold said post in relatively fixed non-rotatable position.

6. An electric fence post assembly having a rod type post with a portion adapted to be pushed into the ground to hold same upright, said post having at least one bend in same well above and extending laterally from said portion pushed into the ground, and an electric insulator mounted on said post, said insulator having separate,

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spaced apart, mounting portions for receiving and holding said post at opposite sides of said bend, said insulator also having a wire receiving and supporting portion, said electric insulator mounted on said post being of angular form having said two separate, spaced apart, post receiving portions, at least one of which is longitudinally side slotted, whereby said insulator may be threadedly slid onto said post and substantially centered on said insulator receiving bend of said post and said slotted side post receiving portion of said insulator then snapped around said post to grip and hold said insulator in operating position.

7. An electric fence post assembly as set forth in claim 6, wherein said two separate, spaced apart, post receiving portions of said electrical insulator are joined together by a body portion at the adjacent sides of said post receiving portions and wherein said body portion has a hook member adjacent one of said post receiving portions and which hook member opens upward when said insulator is mounted in operating position on said post.

8. In an electric fence post assembly, at least one insulator of angular form with two separate post receiving portions one of which is perforated and the other side slotted, said assembly including a rod type post which has a first portion adapted to be pushed into the ground, a second portion connected to one end of said first portion and extending sidewise therefrom, and a third portion extending from the other end of said second portion and substantially parallel to said first portion, said third portion having at least an angular bend at its end portion remote from said second portion, with said angular bend receiving and supporting said electric insulator thereon with said two separate post receiving portions separately engaging said post at opposite sides of said bend.

9. An electric fence post assembly as set forth in claim 8, wherein the insulator mounted on said angular bend of said third portion has a body portion joining said two separate post receiving portions, said body portion having a hook member adjacent one of said post receiving portions and which hook member opens upward when said insulator is mounted in operating position on said post.

10. An electric fence post assembly as set forth in claim 9, wherein said third portion of said rod type post has a multiplicity of angular bends with at least two adapted for separately receiving and supporting insulators of said form having two separate post receiving portions engaging said post at opposite sides of said bends, each of said insulators having an upwardly opening hook when mounted on said post in operating position.

11. An electric fence post assembly having a rod type

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post with a portion adapted to be pushed into the ground to hold same upright, said post having at least one bend in same well above and extending laterally from said portion pushed into the ground, an electric insulator mounted on said post, said insulator having separate, spaced apart, mounting portions for receiving and holding said post at opposite sides of said bend, one of said mounting portions being substantially circular for threadedly fitting said post at one side of said bend and the other of said mounting portions being longitudinally side slotted for snapping around said post at the opposite side of said bend, said insulator also having a wire receiving and supporting portion.

12. An electric fence post assembly as set forth in claim 11, wherein said insulator has a body portion between said separate, spaced apart, mounting portions, and wherein said wire receiving and supporting portion is in the form of an upwardly opening hook means projecting from said body portion.

13. An electric insulator of angular form having separate, discontinuous, end portions with a separate passageway through each of same and with said passageways being in the same plane but at an angle with each other, a sidewise extending body member connecting said separate end portions solely at one side of each, and an electric wire supporting means carried by said body member between said end portions and projecting outward from said body member.

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