March 16, 1965 P. A. MILLERBERND 3,173,662

FENCE POSTS

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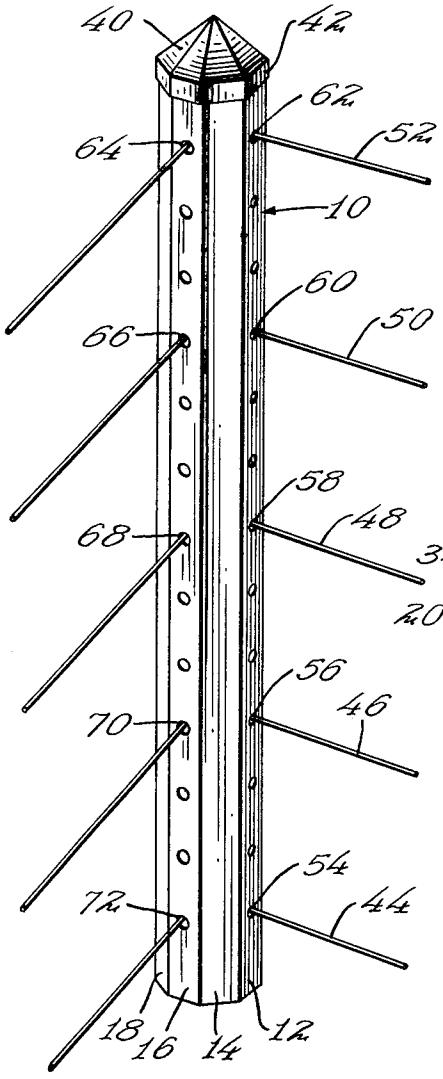

FIG. 1

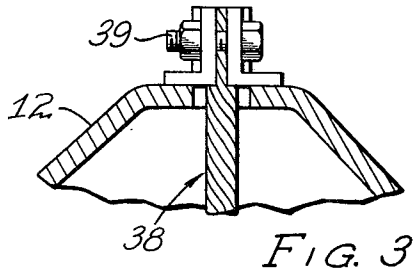

FIG. 3

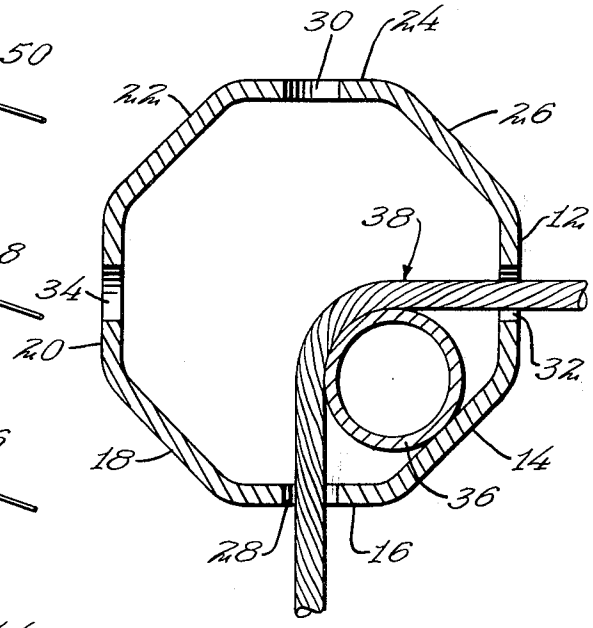

FIG. 2

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FENCE POSTS

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This invention relates to fence posts particularly adapted for use with wire rope, cable, and the like and in particular to a hollow, octagonal, capped post usable in connection with other similar fence posts through which the wire rope extends, the corner posts providing rotatable means whereby the direction of extension of the wire rope may be readily changed and individual cables quickly and easily tightened.

It will be understood that in conventional fences the fencing wire is secured to the individual posts by suitable fastening means. While these particular fencing arrangements may prove suitable for some types of fencing, various disadvantages are readily apparent. Particularly is this true where the fences are to be used in connection with feeding pens and the like where the animals are readily susceptible to injury from conventional fencing of barbed wire.

It has been found that pens constructed using steel cable rather than barbed wire are particularly effective for use as feeding pens because of the rapidity with which the pen may be constructed and because of the lessened likelihood of injury to the animals.

A particular object of the invention lies in a fence post of octagonal shape of sufficient length to provide a base to be imbedded in soil or concrete and which will extend a desired amount above the ground or mounting surface. The octagonal post has sides through which apertures extend, the apertures on a given side being in spaced aligned relation. The apertures of related sides are in registrable alignment, some of the apertures being in opposed relation to the apertures of another side, and some apertures being in perpendicular relation to each other. As will be apparent from the foregoing, a wire rope may extend in one direction through opposed apertures, or be changed in line of direction by having the wire rope extend through apertures which are perpendicular to each other.

A further object of the present invention lies in a post which is hollow and of octagonal shape having the apertures in a particular arrangement, at least some of the apertures being perpendicularly registrable with each other. Where the post is to be used as a corner post, the post includes internally a rotatable means such as a hollow tube adjacent the vertex of an angle formed by two adjacent sides of an octagonal post, the wire rope extending into the interior of the post and around the tube and outwardly through an aperture at right angles to the first aperture through which the cable entered. Upon tightening the cable, the rotatable tube rotates permitting the cable to be readily tightened without frictional engagement of the cable in the apertures of the post. As will be readily apparent, the entire cable may be tightened from one end of the fence because of the lack of frictional engagement of the cable at the corner posts.

A further object of the present invention lies in a hollow octagonal post having a peaked cap end which is detachable from the octagonal post. It has been determined that the attractiveness and efficiency of a metal post is increased by the shape of the end cap. Accordingly, in the present invention a cap has been provided which will tend to shed water and snow readily and which will be attractive in appearance.

It is a further object of the present invention to provide a post which may be used in a fence, together with similar posts through which one or several wires may

extend to form a fence which may be readily adapted for either small or large animals.

It is a further object of the present invention to provide a fence which may be readily assembled, which is relatively easy to maintain, and which may be readily disassembled when it is no longer needed.

It is a further object of the present invention to provide a fence post which may be reused if desired, which is simple to manufacture, extremely durable, and relatively low in cost. These and other particular objects of the present invention will be further described and detailed in the following specification taken in connection with the accompanying drawings in which:

FIGURE 1 is a perspective view of a fence post particularly illustrating the octagonal design of the post, the registrable alignment of apertures, and the detachable cap end.

FIGURE 2 is a horizontal sectional view through the post of FIGURE 1.

FIGURE 3 is a partial horizontal section through the post showing a flexible line anchored thereto.

FIGURE 1 illustrates an octagonal fence post which is preferably constructed of steel or similar metal in order to provide the desired rigidity and strength.

The drawing of FIGURE 1 illustrates a post generally numbered **10** of elongated, hollow, octagonal construction having apertures extending therethrough along four of the eight sides of the post **10**. The post **10** has sides, four of which are shown, and which are numbered **12**, **14**, **16**, and **18** in the drawing of FIGURE 1, the other four sides of the post being shown in FIGURE 2 and numbered **20**, **22**, **24**, and **26**.

As will be apparent in order to provide the necessary line posts and corner posts for the construction of a fence, it is desirable to have elongated posts usable either as line or corner posts. Apertures are provided in at least three sides of the post, four sides being preferred. The apertures of any side aligned longitudinally of the post, opposed sides having the apertures registrable. The apertures are related both in line and angularly, a pair of apertures such as **54** and **72** at right angles to each other being perpendicularly registrable.

The posts are intended for use with fences of varying heights, apertures in any side such as **16** extending spacedly from a point adjacent the base portion of the post which is embedded in the ground, concrete, or other imbedding material to a point near the cap end of the post and the line, wire rope or other restraining means being led through the desired apertures. As is apparent from the drawing of FIGURE 2, the aperture **28** of the side **16** is planar with and registrable with the aperture **30** of the side **24**. The aperture **32** of the side **12** is planar and registrable with the aperture **34** of the side **20**. The apertures of the sides **16** and **24** are at right angles to the apertures of the sides **12** and **20**. Therefore, a particular post may be used as line or corner post without modification of the post.

Where a line, cable or wire rope means **38** is led through a corner post, the line **38** makes a 90 degree change in direction. The post **10** includes an internal member **36** in the form of a cylinder which may be a pipe or tube, or a cylindrical rod rotatable against an interior side of the post. For example, a cable means **38** such as is shown in FIGURE 2 of desired strength and diameter is inserted through an aperture such as **32** in the side **12**, around the cylindrical means **36** and out through the aperture **28** in the side **16**. Preferably the line **38** is relatively flexible since it may be readily tightened from one dead end corner post by means such as a turnbuckle as will be described.

Where the post is to be used as a line post, the cable such as **38** would extend through opposed apertures such as **32** and **34** along a chosen direction. By utilizing the preferred construction shown in FIGURE 2, it has been found that the octagonal post may be used as either line posts or corner posts with equal facility and success.

When the desired number of line and corner posts have been imbedded in the soil, concrete, or other imbedding medium in the desired spacing and order, the wire cable such as **38** is connected to an end or corner post and led through the remaining posts which constitute the fence arrangement. When the cable has been brought through the terminal end post, the cable may be tightened for the entire fence by providing sufficient pull. As will be readily apparent, because of the unique rotatable tube **36** in rotatable engagement with an inner side within the corner posts, the cable **38** may be pulled taut without frictional engagement of the rope or cable **38** against the sides of the apertures of the corner posts.

As is apparent from the drawing of FIGURE 2, the diameter of the rotatable tube **36** is sufficient to enable the cable **38** to travel in a comparatively straight line through the aperture **32** around the tube **36** and in a relatively straight line outwardly through the aperture **28** to prevent the binding of the cable **38** against the sides of the aperture which ordinarily would occur. In other words the rotatable tube provides a curved surface in tangential relation to the apertures **32** and **38** which are angularly related. It should be further pointed out that the rotatable tube **36** rotatably moves across the inner surface of the side against which it is located within the corner post to enable the cable **38** to be more easily tightened.

In preferred construction the rotatable tube **36** may be left unsecured at its ends within the corner post and is held in rotatable engagement with the inner side of the corner post by the wire rope or cable **38**.

Suitable fastening means such as clamps **39** are secured to the ends of the cable **38** either internally or externally of the post serving as the dead end post. The clamps obviously serve to hold the cable **38** in desired tension.

The upper end of the post **10** is capped by an octagonally peaked cap generally numbered **40** of sufficient size to accept the upper extremity of the post **10** within the cap rim edge **42**. The peaked construction of the cap **40** enables the cap to readily shed snow and rain away from the pole or post **10**, the cap being readily removable and replaceable as desired.

The drawing of FIGURE 1 illustrates a corner post having wire cables or ropes **44**, **46**, **48**, **50**, and **52** extending internally into the post in one direction through apertures **54**, **56**, **58**, **60**, and **62** in one direction and projecting or extending outwardly from the post in a ninety degree change of direction from apertures **64**, **66**, **68**, **70**, and **72**.

It is presumed that because the posts are interchangeably usable either as line or corner posts that further drawings and description are not required.

While I have endeavored to set forth the best embodiments of my invention, I desire to have it understood that obvious changes and modifications may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A fence comprising in combination:
   (*a*) elongated octagonal hollow line posts and corner posts,
   (*b*) each said post including a cap end and a detachable cap member,
   (*c*) at least an opposed end portion of each said post adapted to be imbedded in soil or concrete,
   (*d*) said posts including sides having axially aligned spaced apertures extending therethrough said sides intermediate said base and cap end,
   (*e*) some said apertures being in opposed relation to each other and some said apertures being in angular relation to each other,
   (*f*) a flexible line such as a wire rope extending through opposed apertures in said line posts and angularly related apertures in said corner posts,
   (*g*) cylindrical rotatable means rotatably engageable against an inner side surface of said corner posts,
   (*h*) at least portions of said cylindrical tube being in generally tangential relation to said angularly related apertures,
   (*i*) said flexible line extending through said angularly related apertures having portions tangent to said cylinder and slidably positioned by said cylinder in non-engagement with the sides of said apertures, whereby the direction of extension of said line is changed,
   (*j*) securing means whereby the one end of said line is secured to one end post of said fence,
   (*k*) said line being adapted to be pulled taut without frictional engagement and cutting of said line against the sides of the apertures at said corner posts by a pulling tension at the other end of said line, and
   (*l*) means securing said other flexible line end to a said end post.

2. A fence post including:
   (*a*) an elongated hollow post member,
   (*b*) said post member including spaced generally radially extending apertures angularly spaced ninety degrees apart,
   (*c*) elongated means within said post member on an axis parallel to the axis of said post member engageable with the inner surface of said post member between said apertures and having a curved exterior surface in generally tangential relation to said angularly related apertures,
   (*d*) said curved exterior surface being adapted to guide a flexible line entering one of said apertures through an angular distance of substantially ninety degrees and out through the other said aperture,
   (*e*) said apertures being substantially on a common plane normal to the axis of the post member.

3. The structure of claim 2 and in which said post member is octagonal in section, said apertures extending substantially normally through two spaced sides of the octagonal post member, and said means engages a side of the octagnoal post member between said apertured sides.

4. A fence post including:
   (*a*) an elongated hollow post member having at least a portion of one end thereof adapted to be imbedded in concrete, soil and the like,
   (*b*) said post member having a pair of angularly spaced apertures therethrough arranged on substantially a common plane normal to the post member axis and at an angle of materially less than one hundred eighty degrees apart,
   (*c*) a means having a substantially cylindrical outer surface having its axis parallel to the axis of the post member within said post member and engageable against the inner surface of said post member between said apertures,
   (*d*) said means having portions of its surface substantially tangent to said apertures when positioned midway between said apertures,
   (*e*) said means being operable to guide a flexible line about its cylindrical surface from one aperture to the other to extend substantially radially through said apertures.

5. The structure of claim 4 and in which said cylindrical means is in rotatable contact with the inner surface of said post member.

6. The structure of claim 4 and including a closure for the other end of said post member.

7. A fence post including:

(*a*) an elongated hollow post member of octagonal cross section,

(*b*) alternate sides of said octagonal post member having apertures extending therethrough on an axis substantially normal to the surfaces of said sides and on a substantially common plane normal to the axis of the post member, and

(*c*) a means having a substantially cylindrical outer surface within said post on an axis parallel to the axis of the post member engageable against the inner surface of a side of said octagonal post member between two angularly related apertures and having its surface substantially tangent to said two apertures when positioned midway therebetween,

(*d*) whereby a flexible member may be guided from one of said two apertures about the surface of said cylindrical means and through the other of said two apertures to extend substantially normally with respect to the post member sides having said two apertures.

8. A fence post comprising:

(*a*) an elongated hollow post member having at least a portion of the post adapted to be imbedded in concrete, soil, and the like,

(*b*) said post including spaced apertures through said post in angular relation to each other,

(*c*) means within said post having a surface at least a portion of which is curved and in generally tangential relation to said angularly related apertures,

(*d*) said curved surface adapted to position slidably a flexible line extending into said post through one of the said angularly related apertures in one direction and extending from said post through an angularly related aperture in another direction from frictional engagement against the sides of said apertures, said

angularly related apertures being in substantially the same plane,

(*e*) said means being cylindrical in section with its axis parallel to the axis of said post member.

9. A fence post comprising:

(*a*) an elongated hollow post member having at least a portion of the post adapted to be imbedded in concrete, soil, and the like,

(*b*) said post including spaced apertures through said post in angular relation to each other,

(*c*) means within said post having a surface at least a portion of which is curved and in generally tangential relation to said angularly related apertures,

(*d*) said curved surface adapted to position slidably a flexible line extending into said post through one of the said angularly related apertures in one direction and extending from said post through an angularly related aperture in another direction from frictional engagement against the sides of said apertures, said angularly related apertures being in substantially the same plane,

(*e*) said post member being octagonal in section, said apertures extending substantially normally through to spaced sides of the octagonal post member, and said means engaging a side of the octagonal post member between said apertured sides, said means being cylindrical in section with its axis parallel to the axis of said post member whereby said means may rotate axially within said post member.

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