(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 090 724 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
19.08.2009 Bulletin 2009/34

(51) Int Cl.:
E04H 17/12 *(2006.01)*

(21) Application number: **09250387.9**

(22) Date of filing: **13.02.2009**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR
Designated Extension States:
AL BA RS

(30) Priority: **15.02.2008 US 66038 P**
21.10.2008 US 288468

(71) Applicant: **Ratanasiriwilai, Suchin**
Bangkok 10150 (TH)

(72) Inventor: **Ratanasiriwilai, Suchin**
Bangkok 10150 (TH)

(74) Representative: **Pratt, David Martin**
Withers & Rogers LLP
Goldings House
2 Hays Lane
London SE1 2HW (GB)

(54) Universal fencing stake

(57) A fencing stake for securing a cord. The fencing stake of the present application creates a more usable and robust fence. The fencing stake has a shaped cross-sectional portion. The fencing stake also includes an anchor, wherein the anchor is formed from at least one shaped aperture having an insertion aperture for inserting the cord and at least two vertical apertures connected to the insertion aperture for securing the cord. The fencing stake further includes an end portion for placing the stake into the ground.

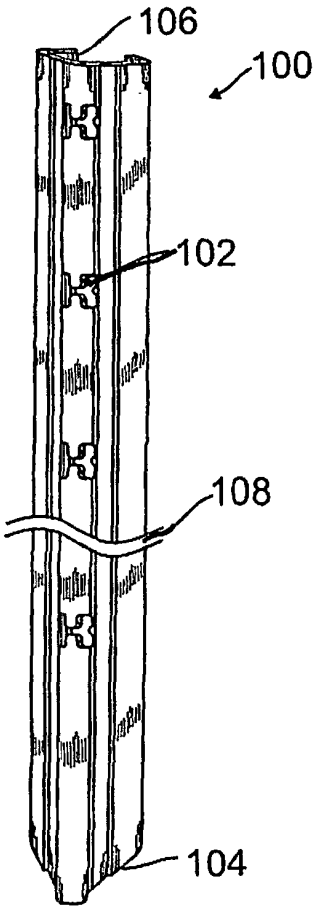


FIG. 1A

EP 2 090 724 A2

Description

TECHNICAL FIELD

[0001] The present application relates to retaining and enclosing structures, and, more particularly, fencing stakes having multi-positioned, die-stamp anchors using shaped apertures affixed along multiple fencing stakes faces to provide locking attachment points along a cord.

BACKGROUND ART

[0002] Increasingly, protecting one's boundaries is becoming important. Fences provide freestanding structures designed to restrict or prevent movement across a boundary. Fences are also constructed to manage a location of domestic animals, plants, gardens, fruit growing, commercial land perimeters, and boundaries.

[0003] Fencing structures are typically composed of primary members such as posts, multiple metal resistant tubing, rails that are hollow having a generally rectangular cross-sectional configuration, and hollow fiberglass posts. Fencing structures are normally secured to their primary members using a post bracket, a first rail bracket, a second rail bracket, posts that are laterally spaced apart, support and retainer fixtures for hollow fence posts, fence post clips, fence post rods inserted into the hollow interior portion of the post, and corner post fixtures. Fence structures may further be composed of lattice panels, webbing, and post end caps attached to the top of a hollowed cylindrical fence post that are capable of supporting lawn decorations or accessory items.

[0004] Typically, installing fences require trained personnel and usually involves labor intensive tasks. For example, in a vineyard, trained personnel need to individually hand tie each post to a wire and the wire to a plant. As the plants grow, trained personnel generally remove securing items such as wire ties, wire clips, staples, and the like from the post to the wire to retightened or adjust a location of a plant on the wire to ensure proper continued growth conditions.

[0005] In addition, there are also labor intensive tasks related to maintain a fence structure supporting fruit trees. For example, a vineyard having hundreds or thousands of plants may span for miles requiring individual adjustments of securing items or posts. As such, this becomes very cumbersome and requires hundreds of trained personnel. ,

DISCLOSURE OF THE APPLICATION

[0006] This summary is provided to introduce a selection of concepts in a simplified form that is further described below in the DETAILED DESCRIPTION OF THE APPLICATION. This summary is not intended to identify key features of the claimed subject matter, nor is it intended to be used as an aid in determining the scope of the claimed subject matter.

[0007] In accordance with an aspect of the present application, a fencing stake is provided. The fencing stake includes at least one anchor. The anchor is formed by a shaped aperture in the fencing stake. The shaped aperture includes an insertion aperture for inserting a cord and at least two vertical apertures connected to the insertion aperture for securing the cord.

[0008] In accordance with another aspect of the present application, a fence is provided. The fence includes a cord for retaining and enclosing structures. The fence also includes a plurality of fencing stakes. The fencing stakes include at least one anchor for supporting the cord. The anchors are formed by a shaped aperture having an insertion aperture for inserting a cord and at least two vertical apertures connected to the insertion aperture for securing the cord.

[0009] In accordance with yet another aspect of the present application, a fencing stake for securing a cord is provided. The fencing stake includes a set of shaped apertures on each side of the fencing stake. The shaped apertures include an insertion aperture for inserting the cord and at least two vertical apertures connected to the insertion aperture for securing the cord.

[0010] In accordance with another aspect of the present application, a post apparatus for supporting a cord is presented. The post apparatus includes a hollow tube having a shaped cross section. The post apparatus also includes an end portion connected to the hollow tube. Furthermore, the post apparatus includes at least one anchor within the hollow tube. The anchor is formed by a shaped aperture having an insertion aperture for inserting a cord and at least two vertical apertures connected to the insertion aperture for securing the cord.

BRIEF DESCRIPTION OF THE DRAWING(S)

[0011] For a better understanding of the present application, reference is made to the below-referenced accompanying Drawing(s). Reference numbers refer to the same or equivalent parts of the present application throughout the several figures of the Drawing(s).

[0012] FIGURE 1A is a diagram showing a side elevated view of an exemplary fencing stake having multiple "X" type anchors in accordance with one aspect of the present application;

[0013] FIGURE 1B is a diagram showing a front view of an exemplary fencing stake having multiple "X" type anchors in accordance with one aspect of the present application;

[0014] FIGURE 1C is a diagram showing a back view of an exemplary fencing stake having multiple "X" type anchors in accordance with one aspect of the present application;

[0015] FIGURE 1D is a diagram showing a side view of an exemplary fencing stake having multiple "X" type anchors in accordance with one aspect of the present application;

[0016] FIGURE 1E is a diagram showing the other side

view of an exemplary fencing stake having multiple "X" type anchors in accordance with one aspect of the present application;

[0017] FIGURE 1F is a diagram showing a top view of an exemplary fencing stake having multiple "X" type anchors to fasten cords in accordance with one aspect of the present application;

[0018] FIGURE 1G is a diagram showing a front view of an exemplary fencing stake having multiple "X" type anchors to fasten cords in accordance with one aspect of the present application;

[0019] FIGURE 2A is a diagram showing a side elevated view of an exemplary fencing stake having multiple "n" type anchors in accordance with one aspect of the present application;

[0020] FIGURE 2B is a diagram showing a front view of an exemplary fencing stake having multiple "n" type anchors in accordance with one aspect of the present application;

[0021] FIGURE 2C is a diagram showing a back view of an exemplary fencing stake having multiple "n" type anchors in accordance with one aspect of the present application;

[0022] FIGURE 2D is a diagram showing a side view of an exemplary fencing stake having multiple "n" type anchors in accordance with one aspect of the present application;

[0023] FIGURE 2E is a diagram showing the other side view of an exemplary fencing stake having multiple "n" type anchors in accordance with one aspect of the present application;

[0024] FIGURE 2F is a diagram showing a top view of an exemplary fencing stake having multiple "n" type anchors to fasten cords in accordance with one aspect of the present application;

[0025] FIGURE 2G is a diagram showing a front view of an exemplary fencing stake having multiple "n" type anchors to fasten cords in accordance with one aspect of the present application;

[0026] FIGURE 3A is a diagram showing a side elevated view of an exemplary fencing stake having multiple "H" type anchors on the sides of the fencing stake in accordance with one aspect of the present application;

[0027] FIGURE 3B is a diagram showing a front view of an exemplary fencing stake having multiple "H" type anchors on the sides of the fencing stake in accordance with one aspect of the present application;

[0028] FIGURE 3C is a diagram showing a back view of an exemplary fencing stake having multiple "H" type anchors on the sides of the fencing stake in accordance with one aspect of the present application;

[0029] FIGURE 3D is a diagram showing a side view of an exemplary fencing stake having multiple "H" type anchors on the sides of the fencing stake in accordance with one aspect of the present application;

[0030] FIGURE 3E is a diagram showing the other side view of an exemplary fencing stake having multiple "H" type anchors on the sides of the fencing stake in accordance with one aspect of the present application;

[0031] FIGURE 3F is a diagram showing a top view of an exemplary fencing stake having multiple "H" type anchors on the sides of the fencing stake in accordance with one aspect of the present application;

[0032] FIGURE 3G is a diagram showing a side view of an exemplary fencing stake having multiple "H" type anchors on the sides of the fencing stake to fasten cords in accordance with one aspect of the present application;

[0033] FIGURE 4A is a diagram showing a side elevated view of an exemplary fencing stake having multiple "N" type anchors in accordance with one aspect of the present application;

[0034] FIGURE 4B is a diagram showing a front view of an exemplary fencing stake having multiple "N" type anchors in accordance with one aspect of the present application;

[0035] FIGURE 4C is a diagram showing a back view of an exemplary fencing stake having multiple "N" type anchors in accordance with one aspect of the present application;

[0036] FIGURE 4D is a diagram showing a side view of an exemplary fencing stake having multiple "N" type anchors in accordance with one aspect of the present application;

[0037] FIGURE 4E is a diagram showing the other side view of an exemplary fencing stake having multiple "N" type anchors in accordance with one aspect of the present application;

[0038] FIGURE 4F is a diagram showing a top view of an exemplary fencing stake having multiple "N" type anchors to fasten cords in accordance with one aspect of the present application;

[0039] FIGURE 4G is a diagram showing a front view of an exemplary fencing stake having multiple "N" type anchors to fasten cords in accordance with one aspect of the present application;

[0040] FIGURE 5A is a diagram showing a side elevated view of an exemplary fencing stake with multiple "n" type anchors having non-horizontal insertion apertures in accordance with one aspect of the present application;

[0041] FIGURE 5B is a diagram showing a front view of an exemplary fencing stake with multiple "n" type anchors having non-horizontal insertion apertures in accordance with one aspect of the present application;

[0042] FIGURE 5C is a diagram showing a back view of an exemplary fencing stake with multiple "n" type anchors having non-horizontal insertion apertures in accordance with one aspect of the present application;

[0043] FIGURE 5D is a diagram showing a side view of an exemplary fencing stake with multiple "n" type anchors having non-horizontal insertion apertures in accordance with one aspect of the present application;

[0044] FIGURE 5E is a diagram showing the other side view of an exemplary fencing stake with multiple "n" type anchors having non-horizontal insertion apertures in accordance with one aspect of the present application;

[0045] FIGURE 5F is a diagram showing a top view of an exemplary fencing stake with multiple "n" type anchors having non-horizontal insertion apertures to fasten cords in accordance with one aspect of the present application;

[0046] FIGURE 5G is a diagram showing a front view of an exemplary fencing stake with multiple "n" type anchors having non-horizontal insertion apertures to fasten cords in accordance with one aspect of the present application;

[0047] FIGURE 6A is a diagram showing a front view of an exemplary fencing stake having multiple anchors on the front and sides of the fencing stake in accordance with one aspect of the present application;

[0048] FIGURE 6B is a diagram showing a back view of an exemplary fencing stake having multiple anchors on the front and sides of the fencing stake in accordance with one aspect of the present application;

[0049] FIGURE 6C is a diagram showing a side view of an exemplary fencing stake having multiple anchors on the front and sides of the fencing stake in accordance with one aspect of the present application;

[0050] FIGURE 6D is a diagram showing the other side view of an exemplary fencing stake having multiple anchors on the front and sides of the fencing stake in accordance with one aspect of the present application;

[0051] FIGURE 6E is a diagram showing a side elevated view of an exemplary fencing stake having multiple anchors on the front and sides of the fencing stake in accordance with one aspect of the present application;

[0052] FIGURE 7A is a diagram showing exemplary parallel anchor placements on a "V" shaped fencing stake in accordance with one aspect of the present application;

[0053] FIGURE 7B is a diagram showing exemplary alternate anchor placements on a "V" shaped fencing stake in accordance with one aspect of the present application;

[0054] FIGURE 7C is a diagram showing a closer view of exemplary anchor placements on a "V" shaped fencing stake in accordance with one aspect of the present application;

[0055] FIGURE 7D is a diagram showing exemplary measurements of an anchor having a non-horizontal insertion aperture on the "V" shaped fencing stake in accordance with one aspect of the present application;

[0056] FIGURE 7E is a diagram showing exemplary measurements of a "V" shaped fencing stake in accordance with one aspect of the present application;

[0057] FIGURE 7F is a diagram showing exemplary measurements of an alternative "V" shaped fencing stake in accordance with one aspect of the present application;

[0058] FIGURE 7G is a diagram showing exemplary end portions of a "V" shaped fencing stake in accordance with one aspect of the present application;

[0059] FIGURE 8A is a diagram showing exemplary parallel anchor placements on a "Hat" shaped fencing stake in accordance with one aspect of the present application;

[0060] FIGURE 8B is a diagram showing alternative exemplary parallel anchor placements on a "Hat" shaped fencing stake in accordance with one aspect of the present application;

[0061] FIGURE 8C is a diagram showing a closer view of exemplary anchor placements on a "Hat" shaped fencing stake in accordance with one aspect of the present application;

[0062] FIGURE 8D is a diagram showing a closer view of alternative exemplary anchor placements on a "Hat" shaped fencing stake in accordance with one aspect of the present application;

[0063] FIGURE 8E is a diagram showing exemplary measurements of an anchor on the "Hat" shaped fencing stake in accordance with one aspect of the present application;

[0064] FIGURE 8F is a diagram showing exemplary measurements of a "Hat" shaped fencing stake in accordance with one aspect of the present application;

[0065] FIGURE 8G is a diagram showing exemplary end portions of a "Hat" shaped fencing stake in accordance with one aspect of the present application;

[0066] FIGURE 9A is a diagram showing exemplary parallel anchor placements on a "W" shaped fencing stake in accordance with one aspect of the present application;

[0067] FIGURE 9B is a diagram showing alternative exemplary parallel anchor placements on a "W" shaped fencing stake in accordance with one aspect of the present application;

[0068] FIGURE 9C is a diagram showing a closer view of exemplary anchor placements on a "W" shaped fencing stake in accordance with one aspect of the present application;

[0069] FIGURE 9D is a diagram showing a closer view of alternative exemplary anchor placements on a "W" shaped fencing stake in accordance with one aspect of the present application;

[0070] FIGURE 9E is a diagram showing exemplary measurements of an anchor on the "W" shaped fencing stake in accordance with one aspect of the present application;

[0071] FIGURE 9F is a diagram showing exemplary measurements of a "W" shaped fencing stake in accordance with one aspect of the present application;

[0072] FIGURE 9G is a diagram showing exemplary end portions of a "W" shaped fencing stake in accordance with one aspect of the present application;

[0073] FIGURE 10A is a diagram showing exemplary anchor placements on a "semi-W" shaped fencing stake in accordance with one aspect of the present application;

[0074] FIGURE 10B is a diagram showing exemplary measurements of a "semi-W" shaped fencing stake in accordance with one aspect of the present application;

[0075] FIGURE 10C is a diagram showing exemplary anchor placements of a "semi-W" shaped fencing stake in accordance with one aspect of the present application;

[0076] FIGURE 11A is a diagram showing an exem-

plary anchor for securing a cord in accordance with one aspect of the present application;

[0077] FIGURE 11B is a diagram showing an exemplary anchor for securing two cords in accordance with one aspect of the present application;

[0078] FIGURE 12 is an illustration of exemplary fencing stakes having multi-positioned, die-stamp anchors affixed along multiple stakes faces to provide locking attachment points along a cord in accordance with one aspect of the present application;

[0079] FIGURE 13 is an illustration of exemplary attachments fixed to the fencing stakes in accordance with one aspect of the present application;

[0080] FIGURE 14 is an illustration of an exemplary mesh apparatus fixed to the multi-positioned, die-stamp anchors in accordance with one aspect of the present application;

[0081] FIGURE 15 is an illustration of an exemplary tensional bar utilized to adjust tension in the cord for an agricultural application in accordance with one aspect of the present application;

[0082] FIGURE 16A is a depiction of one side of an exemplary key spanner for inserting the cord into the illustrative fencing stake in accordance with one aspect of the present application;

[0083] FIGURE 16B is a depiction of the other side of the exemplary key spanner four inserting the cord into the illustrative fencing stake in accordance with one aspect of the present application;

[0084] FIGURE 16C is a side view of the exemplary key spanner for inserting the cord into the illustrative fencing stake in accordance with one aspect of the present application;

[0085] FIGURE 16D is a top view of the exemplary key spanner for inserting the cord into the illustrative fencing stake in accordance with one aspect of the present application; and

[0086] FIGURE 16E is a bottom view of the exemplary key spanner for inserting the cord into the illustrative fencing stake in accordance with one aspect of the present application.

DETAILED DESCRIPTION OF THE APPLICATION

[0087] Generally described, the present application relates to a fence. In particular, the present application relates to a universal fencing stake that creates a more usable and robust fence. In an illustrative embodiment, the fencing stake has a shaped cross-sectional portion. In addition, the fencing stake includes at least one anchor, wherein the anchor is a shaped aperture having an insertion aperture for inserting a cord and at least two vertical apertures connected to the insertion aperture for securing the cord. The fencing stake also includes an end portion for placing the fencing stake into the ground and a top portion for holding attachments.

[0088] While the embodiments discussed below are described using specific features, one skilled in the relevant art will appreciate that the specific features may apply generally and from one embodiment to another. With reference now to illustrative embodiments of the present application, FIGURE 1A is a diagram showing a side elevated view of an exemplary fencing stake **100** having multiple "X" type anchors **102** in accordance with one aspect of the present application. In this embodiment, the fencing stake **100** includes four "X" type anchors **102**. One skilled in the relevant art, however, will appreciate that the fencing stake **100** can include one "X" type anchor **102** up to several "X" type anchors **102**. Line 108 indicates that the fencing stake **100** can include many more "X" type anchors **102** and can be longer than shown in FIGURE 1A. In addition, the fencing stake 100 includes an end portion **104** and a top portion **106**.

[0089] In one embodiment of the described fencing stake **100**, the fencing stakes **100** can be made of sheet metal. Alternatively, the fencing stakes **100** can be made of wood, plastic, steel, or other similar types of materials. One skilled in the relevant art will appreciate that the fencing stake **100** can be made of many types of different materials beyond those recited above.

[0090] Steel fencing stake **100** can include a powder coating preventing rusting of the stake **100**. Furthermore, the powder can prevent other unsightly damages to the stake **100**. In a preferred embodiment of producing the fencing stake 100 with a layer of powder coating, the stake **100**, made of galvanized steel, is sprayed with the powder on both sides. In turn, the stake 100 is baked using an oven at **200** ºC. Thereafter, the stake **100** is sprayed with or placed in a solution sealing the powder to the stake **100**. The finished produced results in a 20 μm coating on top of the stake **100**. To provide a sleek look for the stake **100**, the stake 100 is black.

[0091] Typically, the thickness of the stake **100** is about 1.20 mm to about 3.00 mm, while the height of the stake **100** can vary widely from about 1350 mm to about 3500 mm. Normally, the stake **100** may come in two different types of strengths. In one embodiment, the standard steel option, the stake **100** can take pressure greater than or equal to 245 N/mm^2, while the tensile strength of the stake **100** is greater than or equal to 380 N/mm. Alternatively, the hitensile steel option stake **100** can take pressure greater than or equal to 245 N/mm^2, while the tensile strength of the stake **100** is greater than or equal to 380 N/mm.

[0092] FIGURE 1B is a diagram showing a front view of an exemplary fencing stake **100** having multiple "X" type anchors **102** in accordance with one aspect of the present application. FIGURE 1C is a diagram showing a back view of an exemplary fencing stake **100** having multiple "X" type anchors **102** in accordance with one aspect of the present application. As shown through the back view of the fencing stake **100**, this embodiment is hollow. One benefit of having a hollow fencing stake **100** is that it is easier to carry. As described below, the fencing stake **100** may include other embodiments.

[0093] FIGURE ID is a diagram showing a side view

of an exemplary fencing stake **100** having multiple "X" type anchors **102** in accordance with one aspect of the present application. FIGURE 1E is a diagram showing the other side view of an exemplary fencing stake **100** having multiple "X" type anchors **102** in accordance with one aspect of the present application. Each side view of the fencing stake **100** in FIGURES 1D and 1E includes multiple "X" type anchors **102**.

[0094] FIGURE 1F is a diagram showing a top view of an exemplary fencing stake **100** having multiple "X" type anchors to fasten cords in accordance with one aspect of the present application. As previously described, the top view of the fencing stake **100** indicates that the fencing stake **100** is hollow. Alternatively, the fencing stake **100** can be solid. In another embodiment, the fencing stake is filled with other materials such as foam or earth.

[0095] The top view of the fencing stake **100** resembles a "V" shaped structure. While the present discussion relates to different types of anchors **102**, the fencing stakes **100** typically come in a variety of shapes and patterns. In addition, one skilled in the relevant art will appreciate that the "V" shaped structure for the fencing stake **100** is not limited to having "X" type anchors **102**. Instead, the "V" Shaped structure for the fencing stake **100** may include other types of anchors **102**, which will be discussed below.

[0096] In alternative embodiments, stake **100** can include a rubberized top for preventing damage to stake **100**. When placed into the ground, pressure is applied to the top of the stake **100** sometimes causing damage to the top and ultimately affecting the aesthetic look of the stake **100**. Through the rubber top, damage is prevented to the stake **100**.

[0097] FIGURE 1G is a diagram showing a front view of an exemplary fencing stake **100** having multiple "X" type anchors **102** to fasten cords **112** in accordance with one aspect of the present application. As shown, the cord **112** has been secured within a brace **110** of the anchor **102**. This prevents the cord **112** from becoming separated from the fencing stake 100. The brace **110** is formed by the shaped aperture **102**. The shaped aperture **102** of the fencing stake **100** typically includes an insertion aperture **102** to insert the cord **112.** As shown, the insertion aperture **102** is horizontal. In addition, and once the cord **112** is inserted into the horizontal insertion aperture **102**, the aperture **102** includes at least two vertical apertures **102** connected to the insertion aperture **102** for securing the cord **112**. This prevents the cord **112** from coming out of the fencing stake **100** when force is horizontally applied to the cord 112. Through these sets of apertures, the cord **112** will generally come out when the cord 112 is lifted and then horizontally shifted. When the insertion aperture **102** is non-horizontal, the cord **112** will come out when the cord **112** is lifted and shifted at an angle.

[0098] With specific reference to the "X" type anchor **102**, the side portions of the "X" type structure 102 prevent the cord **112** from coming out or moving up out of the fencing stake **100** due to the side bracing of the "X" type anchor **102**. In some fencing stakes **100**, this becomes useful as it prevents the cord **112** from coming out without some intentional force by the user.

[0099] With continued reference to FIGURE 1G, the cord **112** can be a cable, wire, mesh structure, rail, or panel. The cord **112** can be made of metal, rope, plastic, yarn, or the like. The cord can also be made of high-tensile strength steel wire, wire cable, glass fiber, or synthetic fibers such as polyester, nylon polyester, or polyester propylene. In addition, the cord **112** can be railing. The railing **112** can be a bar made of wood, metal, steel, or the like. The bar **112** can be fixed horizontally for any various purposes such as support, barrier, or fencing. Furthermore, the cord **112** can be rope. The rope **112** can be constructed using mixtures of several fibers or using co-polymer fibers. The rope **112** can also be made out of metal fibers, silk, wool, and hair. As shown in FIGURE 1G, the cord **112** is barbed wire. Barbed wire **112** can be used in cases where the user wishes to prevent someone or something from passing the fence structure. One skilled in the relevant art will appreciate that there are many types of cords **112** that can be used.

[0100] The previous FIGURES show "X" type anchors **102**. One skilled in the relevant art will appreciate that those features presented above can be typically included in those embodiments presented below. FIGURE 2A is a diagram showing a side elevated view of an exemplary fencing stake **100** having multiple "n" type anchors **102** in accordance with one aspect of the present application. As shown, the fencing stake **100** includes four "n" type anchors **102**. One skilled in the relevant art, however, will appreciate that the fencing stake **100** can include one "n" type anchor **102** up to several "n" type anchors **102**. Line **108** indicates that the fencing stake **100** can include many more "n" type anchors 102 and can be longer than shown in FIGURE 2A. In addition, the fencing stake **100** includes an end portion 104 and a top portion **106.**

[0101] FIGURE 2B is a diagram showing a front view of an exemplary fencing stake **100** having multiple "n" type anchors **102** in accordance with one aspect of the present application. FIGURE 2C is a diagram showing a back view of an exemplary fencing stake **100** having multiple "n" type anchors **102** in accordance with one aspect of the present application. FIGURE 2D is a diagram showing a side view of an exemplary fencing stake **100** having multiple "n" type anchors **102** in accordance with one aspect of the present application. FIGURE 2E is a diagram showing the other side view of an exemplary fencing stake **100** having multiple "n" type anchors **102** in accordance with one aspect of the present application.

[0102] FIGURE 2F is a diagram showing a top view of an exemplary fencing stake **100** having multiple "n" type anchors to fasten cords in accordance with one aspect of the present application. FIGURE 2G is a diagram showing a front view of an exemplary fencing stake 100 having multiple "n" type anchors **102** to fasten cords **112** in accordance with one aspect of the present application.

[0103] In another embodiment of a fencing stake **100**, FIGURE 3A is a diagram showing a side elevated view of an exemplary fencing stake **100** having multiple "H" type anchors **102** on the sides of the fencing stake **100** in accordance with one aspect of the present application. As shown in the FIGURE, the fencing stake **100** includes four "H" type anchors **102**. One skilled in the relevant art, however, will appreciate that the fencing stake **100** can include one "H" type anchor **102** up to several "H" type anchors **102**. In addition, the fencing stake **100** includes an end portion **104** and a top portion **106**. Line **108** indicates that the fencing stake **100** can include additional "H" type anchors **102** and can be longer than shown in FIGURE 3A. Like the embodiments presented above, the fencing stake **100** can incorporate other types of anchors **102** and is not limited to those presented.

[0104] FIGURE 3B is a diagram showing a front view of an exemplary fencing stake **100** having multiple "H" type anchors **102** on the sides of the fencing stake **100** in accordance with one aspect of the present application. FIGURE 3C is a diagram showing a back view of an exemplary fencing stake **100** having multiple "H" type anchors **102** on the sides of the fencing stake **100** in accordance with one aspect of the present application. FIGURE 3D is a diagram showing a side view of an exemplary fencing stake **100** having multiple "H" type anchors **102** on the sides of the fencing stake **100** in accordance with one aspect of the present application. FIGURE 3E is a diagram showing the other side view of an exemplary fencing stake **100** having multiple "H" type anchors **102** on the sides of the fencing stake **100** in accordance with one aspect of the present application.

[0105] FIGURE 3F is a diagram showing a top view of an exemplary fencing stake **100** having multiple "H" type anchors on the sides of the fencing stake **100** in accordance with one aspect of the present application. FIGURE 3G is a diagram showing a side view of an exemplary fencing stake **100** having multiple "H" type anchors **102** on the sides of the fencing stake 100 to fasten cords **112** in accordance with one aspect of the present application.

[0106] One skilled in the relevant art will appreciate that the aforementioned embodiments of the fencing stake **100** and the anchors **102** thereon can be interchangeable. While those anchors **102** included horizontal insertion apertures **102**, the present application is not limited to such. FIGURE 4A is a diagram showing a side elevated view of an exemplary fencing stake 100 having multiple "N" type anchors **102** in accordance with one aspect of the present application. As shown in the FIGURE, four "N" type anchors **102** are provided. One skilled in the relevant art, however, will appreciate that the fencing stake **100** can include one "N" type anchor **102** up to several "N" type anchors **102**. Line **108** indicates that the fencing stake 100 can include many more "N" type anchors **102** and can be longer than shown in FIGURE 4A. In addition, the fencing stake **100** includes an end portion **104** and a top portion 106.

[0107] As differentiated from those embodiments previously described, the "N" type anchors **102** have a downward sloping insertion point. The user of the fencing stake **100** typically manipulates the cord at an angle to insert a cord into the anchor **102**. Similar to the previous embodiments, however, the anchors **102** maintain two vertical shaped apertures **102** connected to the insertion aperture **102**. One skilled in the relevant art will appreciate that the sloped insertion aperture **102** may provide a more secure holding for the cord. As such, a simple lift and horizontal movement will not release the cord from the fencing stake **100**.

[0108] FIGURE 4B is a diagram showing a front view of an exemplary fencing stake **100** having multiple "N" type anchors **102** in accordance with one aspect of the present application. FIGURE 4C is a diagram showing a back view of an exemplary fencing stake **100** having multiple "N" type anchors **102** in accordance with one aspect of the present application. FIGURE 4D is a diagram showing a side view of an exemplary fencing stake **100** having multiple "N" type anchors **102** in accordance with one aspect of the present application. FIGURE 4E is a diagram showing the other side view of an exemplary fencing stake **100** having multiple "N" type anchors **102** in accordance with one aspect of the present application.

[0109] FIGURE 4F is a diagram showing a top view of an exemplary fencing stake **100** having multiple "N" type anchors **102** to fasten cords in accordance with one aspect of the present application. FIGURE 4G is a diagram showing a front view of an exemplary fencing stake 100 having multiple "N" type anchors **102** to fasten cords **112** in accordance with one aspect of the present application.

[0110] FIGURE 5A is a diagram showing a side elevated view of an exemplary fencing stake **100** with multiple "n" type anchors **102** having non-horizontal insertion apertures in accordance with one aspect of the present application. Similar to the "N" type anchors **102** presented in FIGURES 4A through 4G, the "n" type anchors **102** having non-horizontal insertion apertures typically require the user to bend the cord at an angle to secure the cord. One skilled in the relevant art will appreciate that the sloped insertion aperture **102** prevents the cord from easily slipping out from the fencing stake **100**.

[0111] FIGURE 5B is a diagram showing a front view of an exemplary fencing stake **100** with multiple "n" type anchors **102** having non-horizontal insertion apertures in accordance with one aspect of the present application. FIGURE 5C is a diagram showing a back view of an exemplary fencing stake **100** with multiple "n" type anchors **102** having non-horizontal insertion apertures in accordance with one aspect of the present application. FIGURE 5D is a diagram showing a side view of an exemplary fencing stake **100** with multiple "n" type anchors **102** having non-horizontal insertion apertures in accordance with one aspect of the present application. FIGURE 5E is a diagram showing the other side view of an exemplary fencing stake **100** with multiple "n" type anchors **102** having non-horizontal insertion apertures in accordance with one aspect of the present application.

[0112] FIGURE 5F is a diagram showing a top view of an exemplary fencing stake **100** with multiple "n" type anchors having non-horizontal insertion apertures to fasten cords in accordance with one aspect of the present application. FIGURE 5G is a diagram showing a front view of an exemplary fencing stake **100** with multiple "n" type anchors **102** having non-horizontal insertion apertures to fasten cords **112** in accordance with one aspect of the present application.

[0113] FIGURE 6A is a diagram showing a front view of an exemplary fencing stake **100** having multiple anchors **102** on the front and sides of the fencing stake **100** in accordance with one aspect of the present application. The fencing stakes **100** provide a user with the ability to have a multi-directional layout fence pattern to achieve a customizable fence layout. FIGURE 6B is a diagram showing a back view of an exemplary fencing stake **100** having multiple anchors **102** on the front and sides of the fencing stake **100** in accordance with one aspect of the present application. FIGURE 6C is a diagram showing a side view of an exemplary fencing stake **100** having multiple anchors **102** on the front and sides of the fencing stake **100** in accordance with one aspect of the present application. FIGURE 6D is a diagram showing the other side view of an exemplary fencing stake **100** having multiple anchors **102** on the front and sides of the fencing stake **100** in accordance with one aspect of the present application.

[0114] While an "H" type anchor **102** is shown in the previous FIGURES, one skilled in the relevant art will appreciate that any type of anchor **102** may be used including the "X", "n", "N", or any combination of the anchors **102** presented above. Furthermore, the anchors **102** do not have to be the same when multiple anchors **102** are used in a fencing stake **100**. For example, the front anchor **102** can include an "X" type anchor **102**, while the side anchors **102** can include an "n" type anchor **102**. The fencing stake **100** can also be limited to having one side having anchors **102.**

[0115] FIGURE 6E is a diagram showing a side elevated view of an exemplary fencing stake 100 having multiple anchors **102** on the front and sides of the fencing stake **100** in accordance with one aspect of the present application. As shown, the FIGURE provides more detail on the shape of the anchors **102**. The left side anchor **102** is an "H" type anchor **102** and the right side anchor **102** is also an "H" type anchor **102**. In addition, the middle anchor **102** corresponds to an "H" type anchor **102**.

[0116] While specific features of the fencing stake **100** were presented above, the fencing stakes **100** are not limited to the previously described embodiments. As such, the features may be interchanged between the embodiments. For example, one fencing stake **100** can include "X" type anchors **102** on one side and "H" type anchors **102** on the right side. Furthermore, the anchors **102** can vary among a single side or face of the fencing stake **100**. While not disclosing all of the different combinations of fencing stakes **100**, additional features may be included. As will be shown below, different shaped cross-sectional portions of the fencing stake **100** may be used instead of the "V" cross-section. Furthermore, the fencing stakes **100** can include interchangeable end portions **104**, which will also be described below.

[0117] Presented below are exemplary dimensions for the anchors **102**, distances between the anchors **102**, and the shaped cross-sectional area of the fencing stake **100**. One skilled in the relevant art will appreciate that the dimensions are for illustrative purposes and should not be construed as limiting the scope of the application.

[0118] FIGURE 7A is a diagram showing exemplary parallel anchor **102** placements on a "V" shaped fencing stake **100** in accordance with one aspect of the present application. The placement of the first anchors **102** are set at 50 mm from the top 106 of the fencing stake **100**. The next placement of anchors **102** occurs every **100** mm thereafter until the bottom 104 of the fencing stake **100** is reached. Alternatively, the placement of anchors **102** occurs every 100 mm thereafter until 688.4 mm from the bottom **104** of the fencing stake **100** is reached. In this alternative embodiment, a fencing stake **100** having 18 anchors **102** on each side is produced. One skilled in the relevant art will appreciate that the number of anchors **102** typically depends on the size of the fencing stake **100**.

[0119] FIGURE 7B is a diagram showing exemplary alternate anchor **102** placements on a "V" shaped fencing stake **100** in accordance with one aspect of the present application. The placement of a first anchor **102** on a first side is set at 50 mm from the top 106 of the fencing stake **100**. The placement of a first anchor **102** on a second side is set at **100** mm from the top **106** of the fencing stake **100**. The next placement of anchors **102** occurs every **100** mm on each side thereafter until the bottom 104 of the fencing stake **100** is reached. Alternatively, the placement of anchors **102** occurs every 100 mm thereafter until 688.4 mm from the bottom 104 of the fencing stake **100** is reached. In this alternative embodiment, a fencing stake **100** having 18 anchors **102** on each side is produced.

[0120] FIGURE 7C is a diagram showing a closer view of exemplary anchor placements **102** on a "V" shaped fencing stake **100** in accordance with one aspect of the present application. One skilled in the relevant art would appreciate that the placement of the anchors **102** do not have to be uniform and can be spaced at different distances throughout. Furthermore, the placement of anchors **102** do not need to be placed in a straight light from top 106 to bottom 104. In one embodiment, the anchors **102** can be spiraling.

[0121] FIGURE 7D is a diagram showing exemplary measurements of an anchor **102** having a non-horizontal insertion aperture on the "V" shaped fencing stake **100** in accordance with one aspect of the present application. In this embodiment, the anchor **102** includes three portions: a first oval area **720**, a second oval area **722**, and a connector **724** between the first oval area **720** and the

second oval area **722**. The typical length and height of the anchor **102** is 20 mm by 20 mm. The first **720** and second oval **722** areas are generally 20 mm in height and 6 mm in length. The connector **724** is 8 mm in length with a varying height. As shown in the FIGURE, the connector's **724** shape is defined by a 60 degree angle from each side of the first **720** and second **722** oval arenas.

[0122] FIGURE 7E is a diagram showing exemplary measurements of a "V" shaped fencing stake **100** having a protruded top portion thereof in accordance with one aspect of the present application. The "V" shaped fencing stake's **100** exemplary measurements include 60 mm in length and 35 mm in height. Beginning with the starting point **730** of the fencing stake **100**, the fencing stake **100** curves upwards at a 39 degree angle. The fencing stake **100** then bends towards the center at 74 degree angle. A **109** degree angle is then used. Thereafter, another 74 degree angle bends the fencing stake **100** and ends with another 39 degree angle towards the ending point **732**. FIGURE 7E shows further measurements that describe the "V" shaped fencing stake **100** and in particular, specific lengths of the fencing stake **100**. The representative measurements of an anchor **102** as shown in FIGURES 7D work with the measurements of the fencing stake **100** in FIGURE 7E because the anchor **102** is bent around the corners of the fencing stake **100**. One skilled in the relevant art will appreciate that the measurements of the fencing stake **100** and the anchor **102** may vary and are not limited to the discussions herein.

[0123] FIGURE 7F is a diagram showing exemplary measurements of an alternative "V" shaped fencing stake in accordance with one aspect of the present application. As shown, the fencing stake **100** is further enclosed. In the embodiment, the starting point **730** and ending point **732** are nearly connecting. In another embodiment, the fencing stake **100** can be fully connected.

[0124] FIGURE 7H is a diagram showing exemplary end portions **104** of a "V" shaped fencing stake **100** in accordance with one aspect of the present application. The end piece **104** can take on the form of a sharp end **104**. One skilled in the relevant art will appreciate that the sharp end **104** allows for deeper penetration into the ground. Alternatively, the straight end **104** allows for greater stability. The unsharp end **104** provides both deeper penetration and stability.

[0125] In another illustrative embodiment, FIGURE 8A is a diagram showing exemplary parallel anchor **102** placements on a "Hat" shaped fencing stake **100** in accordance with one aspect of the present application. The placement of the first anchors **102** are set at 2 inches (5.1 cm) from the top **106** of the fencing stake **100**. The next placement of anchors **102** occurs every 4 inches (10.2 cm) thereafter until the bottom **104** of the fencing stake **100** is reached. Alternatively, the placement of anchors **102** occurs every 4 inches (10.2 cm) until 26 inches (66 cm) from the bottom **104** of the fencing stake **100** is reached, In this alternative embodiment, a fencing stake **100** having 18 anchors **102** on each side is produced. FIGURE 8C is a diagram showing a closer view of exemplary anchor 102 placements on a "Hat" shaped fencing stake **100** in accordance with one aspect of the present application.

[0126] FIGURE 8B is a diagram showing alternative exemplary parallel anchor **102** placements on a "Hat" shaped fencing stake **100** in accordance with one aspect of the present application. The placement of the first anchors **102** are set at 2 inches (5.1 cm) from the top **106** of the fencing stake **100**. The next placement of anchors **102** occurs every 6 inches (15.2 cm) thereafter until the bottom 104 of the fencing stake **100** is reached. Alternatively, the placement of anchors **102** occurs every 6 inches (15.2 cm) thereafter until 28 inches (71.1 cm) before the bottom **104** of the fencing stake 100 is reached. In this alternative embodiment, a fencing stake **100** having 12 anchors **102** on each side is produced. FIGURE 8D is a diagram showing a closer view of alternative exemplary anchor **102** placements on a "Hat" shaped fencing stake **100** in accordance with one aspect of the present application.

[0127] FIGURE 8E is a diagram showing exemplary measurements of an anchor **102** on the "Hat" shaped fencing stake **100** in accordance with one aspect of the present application. As shown, the anchor **102** can include two portions: a first portion **820** and a second portion **822**. Typically, the first portion **820** can be 22.5 mm high by 8 mm wide. The first portion **820** resembles one side of the "H" type anchor **102**. The second portion **822** connects to the first portion **820**. As will be described below, the second portion **822** provides an insertion area for the cord. The measurements presented above for the exemplary anchor **102** are representative but not limiting.. One skilled in the relevant art will appreciate that the measurements may differ depending on the size and shape of the fencing stake **100**.

[0128] FIGURE 8F is a diagram showing exemplary measurements of a "Hat" shaped fencing stake **100** in accordance with one aspect of the present application. The "Hat" shaped fencing stake **100** is typically 74.45 mm in length and 30.5 mm in height. The bottom portion of the fencing stake **100** includes a first prong **830** and a second prong **832**. The first prong **830** and the second prong **832** each are 17.5 mm in length. A section of the first prong 830 and the second prong **832** each bend backwards. The first prong **830** and the second prong **832** bend at 72 degree angle to lead to the top portion **834** of the fencing stake **100**. The top portion **834** of the fencing stake **100** has a length of 25.4 mm. When put together, the shape of the fencing stake **100** resembles a "Hat". FIGURE 8F further shows measurements that describe the "Hat" shaped fencing stake **100** and in particular, specific lengths of the fencing stake **100**. FIGURE 8G is a diagram showing exemplary end portions **104** of a "Hat" shaped fencing stake **100** in accordance with one aspect of the present application.

[0129] In another embodiment depicting a cross-sectional area of a fencing stake **100**, FIGURE 9A is a dia-

gram showing exemplary parallel anchor **102** placements on a "W" shaped fencing stake **100** in accordance with one aspect of the present application. The placement of the first anchors **102** are set at 2 inches (5.1 cm) from the top **106** of the fencing stake **100**. The next placement of anchors **102** occurs every 4 inches (10.2 cm) thereafter until the bottom **104** of the fencing stake **100** is reached. Alternatively, the placement of the anchors **102** ends at 46 inches (116.8 cm) above the bottom **104** of the fencing stake **100**. FIGURE 9C is a diagram showing a closer view of exemplary anchor **102** placements on a "W" shaped fencing stake **100** in accordance with one aspect of the present application.

[0130] FIGURE 9B is a diagram showing alternative exemplary parallel anchor **102** placements on a "W" shaped fencing stake **100** in accordance with one aspect of the present application. The placement of the first anchors **102** are set at 2 inches (5.1 cm) from the top **106** of the fencing stake **100**. The next placement of anchors **102** occurs every 6 inches (15.2 cm) thereafter until the bottom 104 of the fencing stake **100** is reached. Alternatively, the placement of the anchors **102** ends at 46 inches (116.8 cm) above the bottom **104** of the fencing stake **100**. FIGURE 9D is a diagram showing a closer view of alternative exemplary anchor **102** placements on a "W" shaped fencing stake **100** in accordance with one aspect of the present application.

[0131] FIGURE 9E is a diagram showing exemplary measurements of an anchor **102** on the "W" shaped fencing stake 100 in accordance with one aspect of the present application. One skilled in the relevant art will appreciate that the anchor **102** is similar to the anchor **102** presented in the discussion related to FIGURE 7D.

[0132] FIGURE 9F is a diagram showing exemplary measurements of a "W" shaped fencing stake **100** in accordance with one aspect of the present application. The "W" shaped fencing stakes **100** are typically 60 mm in length and 33 mm in height. Beginning with the starting point **930** of the fencing stake **100**, the fencing stake **100** curves upwards at a **131** degree angle. The fencing stake **100** then bends towards the center at a 92 degree angle. An 89 degree angle is then used. Thereafter, another 89 degree angle bends the fencing stake **100**. The fencing stake **100** curves at a 92 degree angle and then a **131** degree angle towards an ending point **932**. While most measurements were discussed, FIGURE 9F shows further measurements that describe the "W" shaped fencing stake **100** and in particular, the specific lengths of the fencing stake **100**. The representative measurements of an anchor **102** as shown in FIGURE 9E work with the measurements of the fencing stake **100** in FIGURE 9F because the anchor **102** is bent around the corners of the fencing stake **100**. FIGURE 7G is a diagram showing exemplary end portions **104** of a "W" shaped fencing stake **100** in accordance with one aspect of the present application.

[0133] FIGURE 10A is a diagram showing exemplary anchor **102** placements on a "semi-W" shaped fencing stake **100** in accordance with one aspect of the present application. The placement of the anchors **102** can be similar to the placements of those anchors **102** described above including both parallel and alternating placements.

[0134] FIGURE 10B is a diagram showing exemplary measurements of a "semi-W" shaped fencing stake **100** in accordance with one aspect of the present application. The "semi-W" shaped fencing stake 100 is 36.5 mm in length and 18 mm in height. The bottom portion of the fencing stake **100** includes a left prong **1030** and a right prong **1032**. The left prong **1030** and the right prong **1032** each bend toward a top portion **104** of the fencing stake **100**. When put together, the shape of the fencing stake **100** is a "semi-W".

[0135] FIGURE 10C is a diagram showing exemplary anchor **102** placement measurements of a "semi-W" shaped fencing stake **100** in accordance with one aspect of the present application. The first anchor **102** is typically set at 12.80 mm from the top **106** of the fencing stake **100**. The next anchors **102** are placed every 25.40 mm thereafter until the bottom of the fencing stake **100** is reached. Alternatively, the placement of the anchors **102** ends at a certain height above the bottom of the fencing stake **100**.

[0136] While several cross-sectional shapes of the fencing stake **100** have been presented, one skilled in the relevant art will appreciate that there are numerous fencing stake **100** shapes available. As described above, but not limiting the present application, the fencing stake **100** includes a "V", "Hat", "W", or "semi-W" cross-sectional shape. Furthermore, the fencing stake **100** includes at least one shaped aperture or anchor **102** having a brace for securing a cord or a fence structure. The anchors **102** can be shaped in a "X", "n", "N", or "H" shape. The fencing stake **100** also includes an end portion **104**. The end portion **104** can include a sharp, unsharp, and straight end.

[0137] In general, the fencing stake **100** provides a user with added functionality and versatility to achieve a wider variety of options for fencing structures and improving reliability over conventional fencing structures. The fencing provides the user with the ability to periodically adjust a fence structure, the fence structure breaking down due to time, wear, or weather conditions. The fencing stake **100** also allows the user to build a fence adaptable to accept one or more accessories while requiring fewer parts.

[0138] Still further, the fencing stake **100** permits an easy initial configuration and reconfiguration of the fencing structure. The fencing stake **100** allows attachment and detachment of a fencing structure to supplement a present fencing structure that minimizes labor and/or time. The fencing stake **100** minimizes the labor intensive task of adjusting fence structures. Furthermore, user customized fencing configuration and appearances can be easily accomplished. The fencing stakes **100** minimize the use of wire ties for securing a fence structure and provides weather resistance.

[0139] These features and objectives can be accomplished with the fencing stake 100 through the anchor **102** which is formed by the shaped aperture. FIGURE 11A is a diagram showing an exemplary anchor **102** for securing a cord **112** in accordance with one aspect of the present application. In this embodiment, the back view of an anchor **102** is shown. The cord **112** is secured by placing it through the insertion aperture **102** and sliding the cord **112** over the brace **110** into the at least two vertical apertures **102**. This firmly secures the cord **112**. The brace **110** should be made of a rigid material so that it does not break. In another embodiment, the cord **112** can be crimped onto the brace **110** for a more secure holding. A special tool may be used for crimping the cord **112** over the brace **110**.

[0140] Typically, the anchor **102** or the brace is not bent outwards. This prevents the anchor 102 or brace from becoming detached after multiple uses. This also allows secure attachment of the cord **112**. Alternatively, the anchor **102** or the brace can slightly protrude from the fencing stake 100 to allow for easier insertion of the cord **112**. In another embodiment, the anchor **102** or brace can extend further out of the fencing stake **100** so that the cord **112** can be more easily placed on and taken off the anchor **102**. In yet another embodiment of the present application, the cord **112** may be locked onto the fencing stake **100**. The lock can be another piece of wire, bending the anchor back over the cord **112.** an actual lock, or the like.

[0141] In an alternative embodiment, FIGURE 11B is a diagram showing an exemplary anchor 102 for securing two cords **112** in accordance with one aspect of the present application. In this embodiment, the back view of an anchor **102** is shown. A first cord **112** is secured by placing the cord **112** through the anchor **102** and sliding the cord **112** over a lower brace **110**. A second cord is secured by placing the cord **112** through the anchor **102** and sliding the cord **112** under an upper brace **110**. This firmly secures both the upper and lower cords **112**. The brace **110** should be made of a rigid material so that it does not break. Preferably, it is important to crimp the top cord **112** to the brace **110** so that the cord **112** does not become loose. In another embodiment, only the top brace **110** of the anchor **102** is used to secure a top cord **112**.

[0142] With reference to the other anchors **102** presented above, including the "n", "N", and "H" type anchors 102**,** one skilled in the relevant art will appreciate that the same type of process or method may be used to secure a cord **112** to those anchors **102**. Furthermore, some anchors **102** will only allow one cord **112**, while other anchors will allow multiple cords **112**. In other embodiments, the cords **112** are secured to the anchors on the sides of a fencing stake 100 through the same process or manner.. By allowing multiple attachment points on the fencing stake 100 numerous patterns may be made by the user of the fencing stakes **100**. While "X", "n", "N", and "H" type anchors **102** were used to secure the cords **112**, one skilled in the relevant art will appreciate that other such apertures **102** may be used, preferably those apertures **102** having a brace **110**. In an alternative embodiment, some anchors **102** can secure cords **112** that are vertical.

[0143] FIGURE 12 is an illustration of exemplary fencing stakes **100** having multi-positioned, die-stamp anchors affixed along multiple fencing stake faces to provide locking attachment points along a cord **112** in accordance with one aspect of the present application. In one embodiment, the fencing stakes **100** have the fencing stake faces directly attached to the cords **112**. This requires that each fencing stake **100** have an anchor on its face. In another embodiment, the fencing stakes **100** are alternated i.e. a fencing stake 100 on its face, a fencing stake **100** on its side, and so on. The fencing stakes **100** include at least one anchor in the front portion of the fencing stake **100** and an additional anchor on the side portions of the fencing stake **100**. By having this, the fencing stakes **100** can provide a multi-directional layout fence pattern to achieve a customizable fence **1200** layout. One skilled in the relevant art will appreciate that there are numerous ways to position the fencing stakes **100** to achieve a desired layout. As such, the fencing stakes **100** do not have to be parallel and perpendicular to each other. Instead, they can be placed at designated angles to each other.

[0144] FIGURE 13 is an illustration of exemplary attachments fixed to the fencing stakes **100** in accordance with one aspect of the present application. In one embodiment, the fencing attachments **1302** are not affixed to every fencing stake **100** of the fence. Instead, they are affixed to every other fencing stake **100**. One skilled in the relevant art will appreciate that the placement of attachments **1302** may vary and as such, the attachments are not limited to every other fencing stake **100**. The fencing attachments **1302** can include a lamp, cover, or sprinkler system. In addition, the fencing attachments **1302** can include a security device, a beeper to scare away birds, or other type of system.

[0145] FIGURE 14 is an illustration of an exemplary mesh apparatus **112** fixed to the multi-positioned, die-stamp anchors in accordance with one aspect of the present application. The illustration provides an expanded view of the mesh apparatus **112** attached to the fencing stake **100**. The mesh apparatus **112** provides the fence **1200** with the ability to grow vines. Furthermore, the mesh apparatus **112** allows the fence **1200** to protect and keep out animals without harming them.

[0146] In one exemplary fence **1200**, fencing stakes **100** are placed 10 feet apart from each other. Between the fencing stakes **100** are d-bars (or deformed bars). The d-bars are placed at each vine or shrubbery providing support for the vine or shrubbery. D-bars can take the form of any object such as a stick or any other apparatus that allows the growing plant to cling to.

[0147] In another embodiment of the present application, FIGURE 15 is an illustration of an exemplary ten-

sional bar **1502** utilized to adjust tension in the cord **112** for an agricultural application in accordance with one aspect of the present application. Due to time, wear, or weather conditions, the cord **112** of the fence structure **1200** begins to sag or drop. To overcome this, a tensional bar **1502** is used in addition to the fencing stakes 100 and cord **112**. By adjusting the tensional bar **1502**, the cord **112** is lifted. While this embodiment is described in agricultural uses, one skilled in the relevant art will appreciate that it is not limited to such.

[0148] With continued reference to FIGURE 15, clips **1504** may also be attached along the cord **112** to provide fine or gross adjustments to the cabling tension (or securing process) of the cord **112**. Typically, one clip **1504** is placed between each fencing stake **100**. Alternatively, several clips **1504** may be placed between each fencing stake **100**.

[0149] To insert and remove cord **112** to and from fencing stake **100** in an easy manner, a key spanner **2500** is provided as depicted in FIGURE 16A. The key spanner **2500** typically includes a top end **2502** and a bottom end **2504**. Primarily, the top end **2502** of the key spanner **2500** is used for inserting a cord **112** into the fencing stake. Coupled to the top end **2502** is a pair of risers. The pair of risers are curved so that they can easily pivot. The pair of risers are placed at the bottom portion of the vertical apertures. These elevate the cord **112** into the aperture located within fencing stake **100**.

[0150] Also attached to the exemplary key spanner **2500**, is an inserter as depicted in FIGURE 16B, which illustrates the other side of the key spanner **2500**. The inserter fits over the anchor when the pair of risers are placed into the bottom portion of the vertical apertures.

[0151] To insert a cord **112**, typically the pair of risers are placed into the bottom portion of the vertical apertures and the inserter is placed above the anchor. When the user wants to insert the cord, the cord **112** is located above the inserter and the user applies an upward motion to the key spanner **2500**. By performing this motion, the cord **112** slides into the insertion aperture and down the vertical apertures, thus securing the cord **112**.

[0152] To remove the cord **112**, bottom end **2504** is used. Typically, the bottom end **2504** contains a remover. The remover, from behind the stake **100**, is inserted between the portion of cord **112** that is secured by the anchor. The user applies an upward motion to the cord **112** using the anchor thereby lifting the cord **112** over the anchor removing the cord **112** completely.

[0153] FIGURE 16C is a side view of the exemplary key spanner for inserting the cord into the illustrative fencing stake in accordance with one aspect of the present application, while FIGURE 16D is a top view of the exemplary key spanner for inserting the cord into the illustrative fencing stake in accordance with one aspect of the present application. FIGURE 16E is a bottom view of the exemplary key spanner for inserting the cord into the illustrative fencing stake in accordance with one aspect of the present application.

[0154] Previously, a certain type of wire, called a hinged joint, characterized by a criss-crossing patchwork of wires, required that those wires be hand tied into the fencing stake **100**. Through the use of key spanner 2500, the hinged joints can be coupled to fencing stake **100** removing the more mechanical method of hand tying the wires.

[0155] The foregoing description is provided to enable any person skilled in the relevant art to practice the various embodiments described herein. Various modifications to these embodiments will be readily apparent to those skilled in the relevant art, and generic principles defined herein may be applied to other embodiments. Thus, the claims are not intended to be limited to the embodiments shown and described herein, but are to be accorded the, full scope consistent with the language of the claims, wherein reference to an element in the singular is not intended to mean "one and only one" unless specifically stated, but rather "one or more." All structural and functional equivalents to the elements of the various embodiments described throughout this disclosure that are known or later come to be known to those of ordinary skill in the relevant art are expressly incorporated herein by reference and intended to be encompassed by the claims. Moreover, nothing disclosed herein is intended to be dedicated to the public regardless of whether such disclosure is explicitly recited in the claims.

Claims

1. A fencing stake comprising at least one anchor, wherein the at least one anchor is formed by a shaped aperture in the stake, the shaped aperture having an insertion aperture for inserting a cord and at least two vertical apertures connected to the insertion aperture for securing the cord.

2. The fencing stake of claim 1, wherein the shaped aperture includes an "X" type structure.

3. The fencing stake of claim 2, wherein a side portion of the "X" type structure prevents the cord from moving up.

4. The fencing stake of claim 1, wherein the shaped aperture includes an "n" type structure.

5. The fencing stake of claim 1, wherein the shaped aperture includes an "H" type structure.

6. The fencing stake of claim 1, wherein the insertion aperture for inserting the cord is a non-horizontal aperture.

7. The fencing stake of claim 6, wherein the shaped aperture includes an "N" type structure.

8. The fencing stake of claim 6, wherein the shaped aperture includes an "n" type structure having a non-horizontal insertion aperture.

9. The fencing stake of claim 1, further comprising a hollowed interior portion having a cross section.

10. The fencing stake of claim 9, wherein the cross-section has a "V" shaped structure.

11. The fencing stake of claim 9, wherein the cross-section has a "W" shaped structure.

12. The fencing stake of claim 9, wherein the cross-section has a "semi-W" shaped structure.

13. The fencing stake of claim 9, wherein the cross-section has a "Hat" shaped structure.

14. The fencing stake of claim 1, wherein the fencing stake is made of sheet metal.

15. The fencing stake of claim 1, further comprising:

an end portion; and
a top portion.

16. The fencing stake of claim 15, wherein the end portion is sharp.

17. The fencing stake of claim 15, wherein the end portion is unsharp.

18. The fencing stake of claim 15, wherein the end portion is straight.

19. The fencing stake of claim 15, wherein the top portion includes a lamp.

20. The fencing stake of claim 15, wherein the top portion includes a sprinkler.

21. The fencing stake of claim 15, wherein the top portion includes a cover.

22. The fencing stake of claim 1, further comprising an additional set of shaped apertures on the side portions of the fencing stake.

23. The fencing stake of claim 22, wherein the additional set of shaped apertures on the side portions of the fencing stake are parallel to each other.

24. The fencing stake of claim 20, wherein the additional set of apertures on the side portions of the fencing stake are alternating between each other.

25. The fencing stake of claim 1, wherein the cord includes a mesh apparatus.

26. The fencing stake of claim 1, wherein the cord includes a railing.

27. The fencing stake of claim 1, wherein the cord includes barbed wire.

28. A fence comprising:

a cord for retaining and enclosing structures;
a plurality of fencing stakes, wherein each fencing stake has at least one anchor for supporting the cord, the at least one anchor formed by a shaped aperture having an insertion aperture for inserting a cord and at least two vertical apertures connected to the insertion aperture for securing the cord.

29. The fence of claim 28, wherein the cord is a mesh apparatus.

30. The fence of claim 28, wherein the cord is a rope apparatus.

31. The fence of claim 28, wherein the cord is barbed wire.

32. The fence of claim 28, wherein the cord is rope.

33. The fence of claim 28, wherein the shaped aperture includes an "X" type structure.

34. The fence of claim 28, wherein the shaped aperture includes an "n" type structure.

35. The fence of claim 28, wherein the shaped aperture includes an "H" type structure.

36. The fence of claim 28, wherein the insertion aperture for inserting the cord is a non-horizontal aperture.

37. The fence of claim 36, wherein the insertion aperture includes an "N" type structure.

38. The fence of claim 36, wherein the insertion aperture includes an "n" type structure having a non-horizontal insertion aperture.

39. The fence of claim 28, wherein the plurality of fencing stakes includes at least one anchor in the front portion of the fencing stake and additional anchors on the side portions of the fencing stake.

40. The fence of claim 39, wherein the fencing stakes provide a multi-directional layout fence pattern to achieve a customizable fence layout.

41. The fence of claim 28, wherein the cord is locked into the at least one anchor of the fencing stake.

42. The fence of claim 41, wherein the cord is locked into the at least one anchor by a crimping device.

43. The fence of claim 28, further comprising at least one clip attached to a fencing stake for providing adjustments to a tension of the cord.

44. The fence of claim 28, further comprising a tension controlling apparatus to adjust the cord elasticity due to environmental and wear conditions.

45. A fencing stake for securing a cord, the fencing stake comprising a set of shaped apertures on each side of the stake, wherein each shaped aperture includes an insertion aperture for inserting the cord and at least two vertical apertures connected to the insertion aperture for securing the cord.

46. The fencing stake of claim 45, wherein the set of shaped apertures on each side of the stake are parallel to each other.

47. The fencing stake of claim 45, wherein the set of shaped apertures on each side of the stake are alternating between each other.

48. The fencing stake of claim 45, wherein the set of shaped apertures include an "X" type structure.

49. The fencing stake of claim 45, wherein the set of shaped apertures include an "n" type structure.

50. The fencing stake of claim 45, wherein the set of shaped apertures include an "H" type structure.

51. The fencing stake of claim 45, wherein the set of shaped apertures include an "N" type structure.

52. The fencing stake of claim 45, wherein the set of shaped apertures include an "n" type structure having a non-horizontal insertion aperture.

53. The fencing stake of claim 45, further comprising a hollowed interior portion having a cross section.

54. The fencing stake of claim 53, wherein the cross-section has a "V" shaped structure.

55. The fencing stake of claim 53, wherein the cross-section has a "W" shaped structure.

56. The fencing stake of claim 53, wherein the cross-section has a "semi-W" shaped structure.

57. The fencing stake of claim 53, wherein the cross-section has a "Hat" shaped structure.

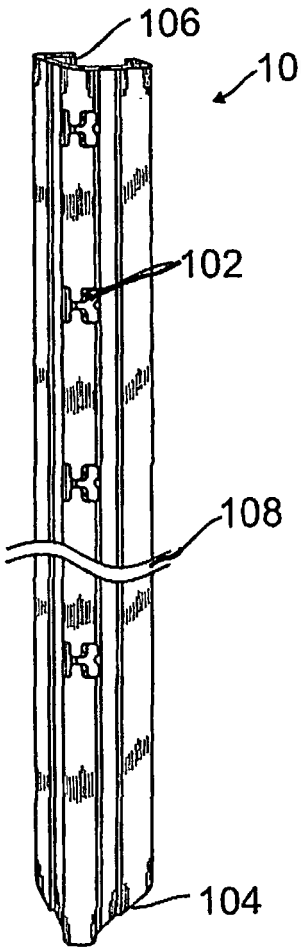


FIG. 1A

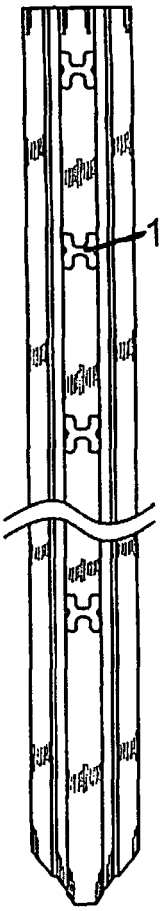


FIG. 1B

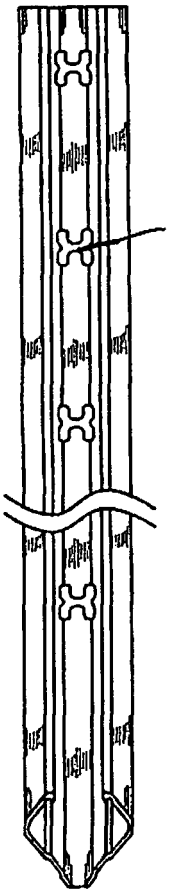


FIG. 1C

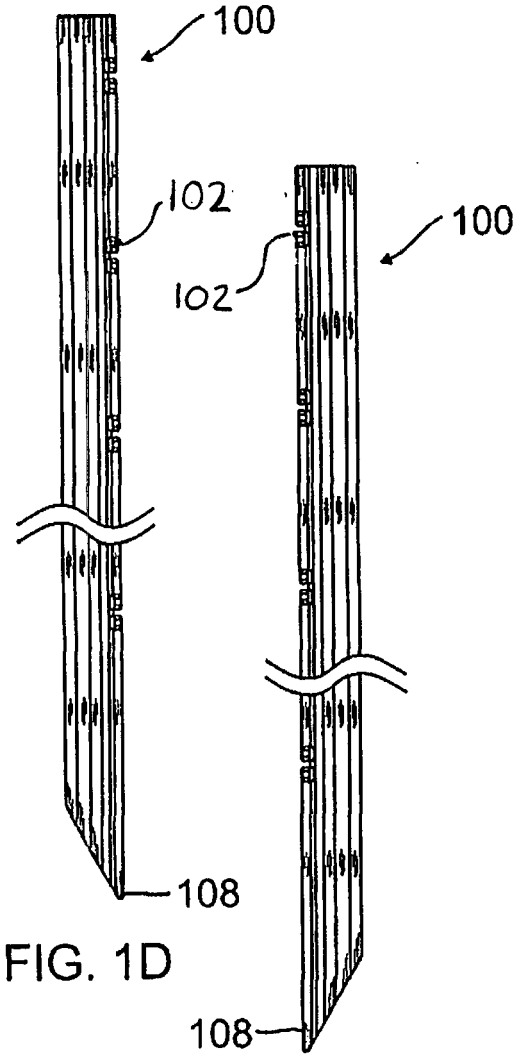


FIG. 1D

FIG. 1E

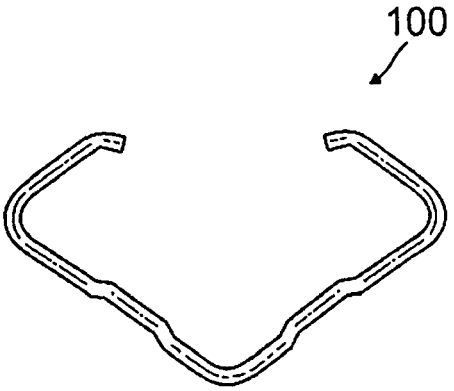


FIG. 1F

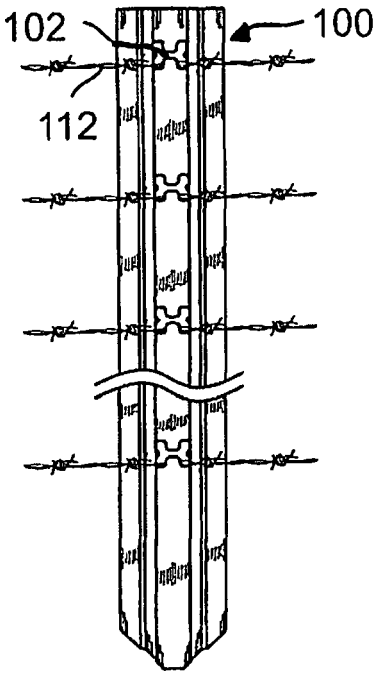


FIG. 1G

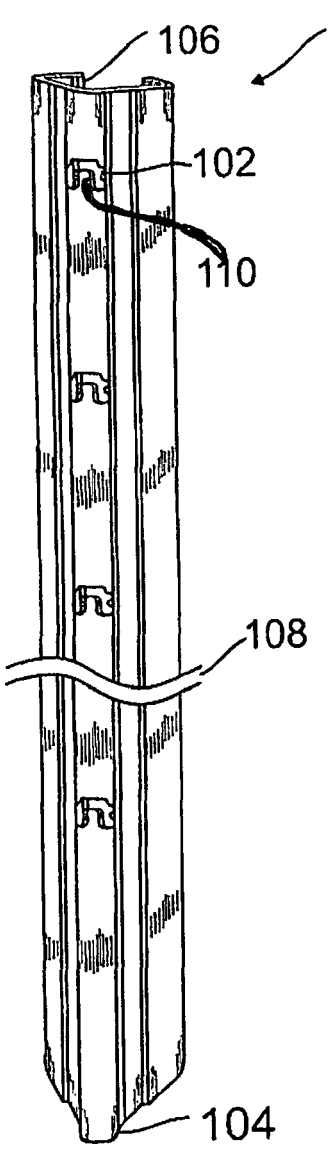


FIG. 2A

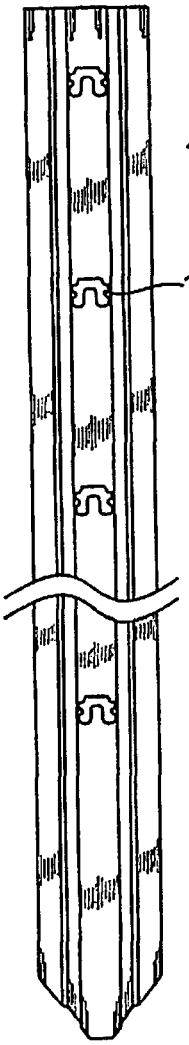


FIG. 2B

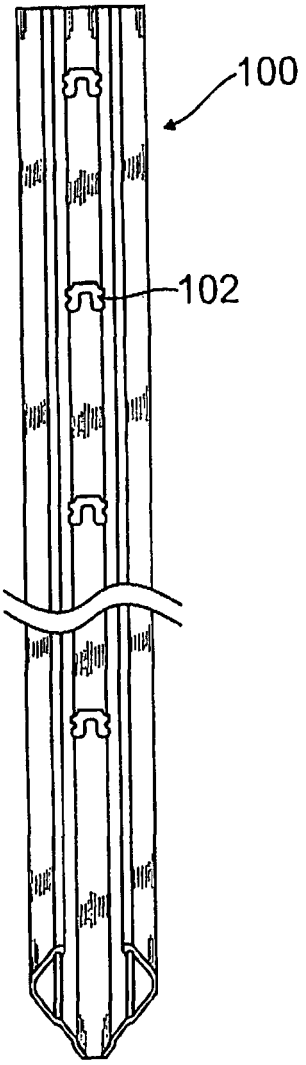


FIG. 2C

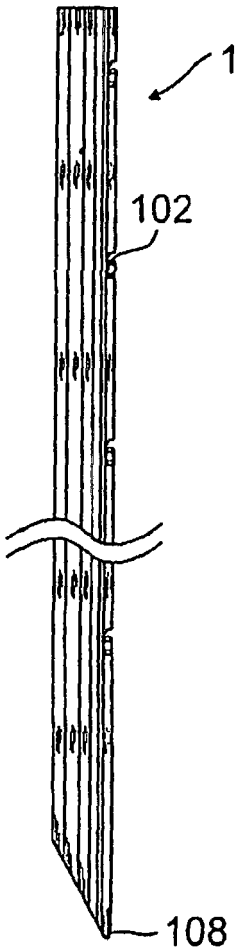


FIG. 2D

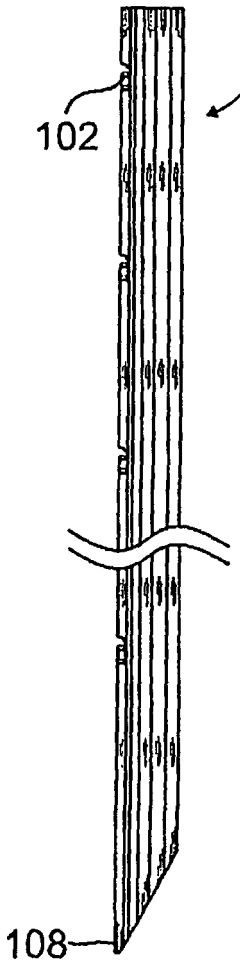


FIG. 2E

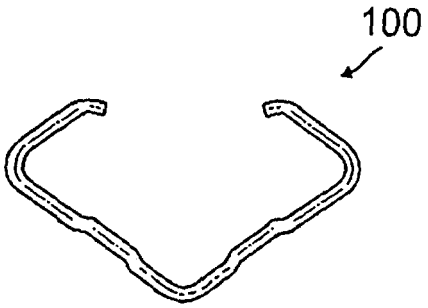


FIG. 2F

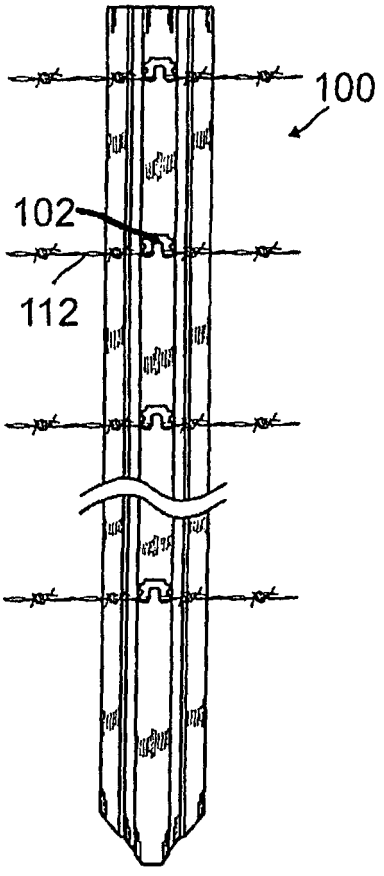


FIG. 2G

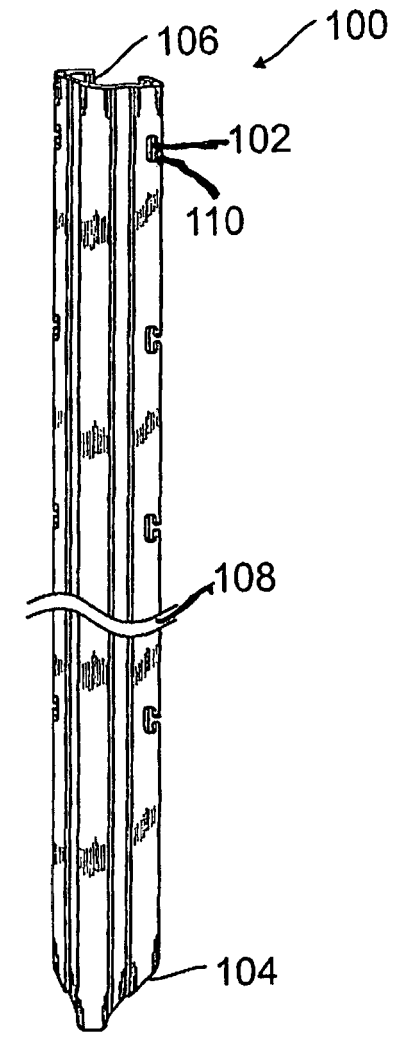


FIG. 3A

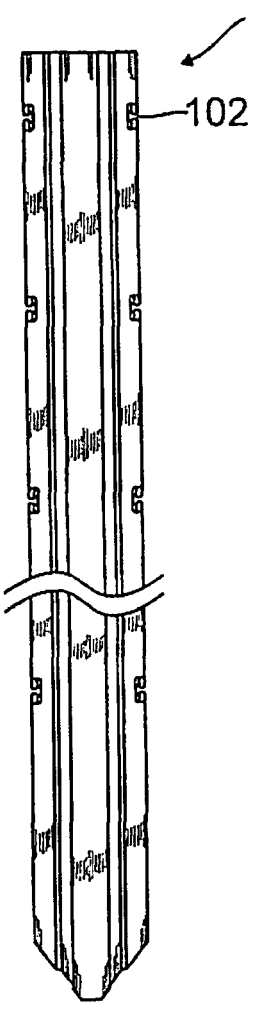


FIG. 3B

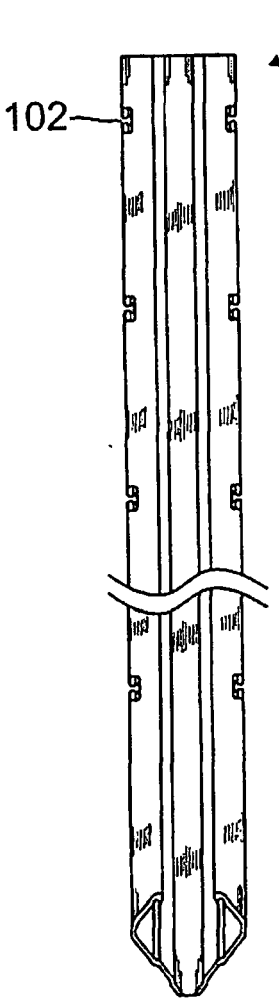


FIG. 3C

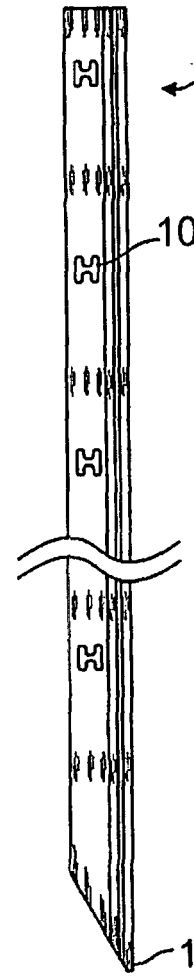


FIG. 3D

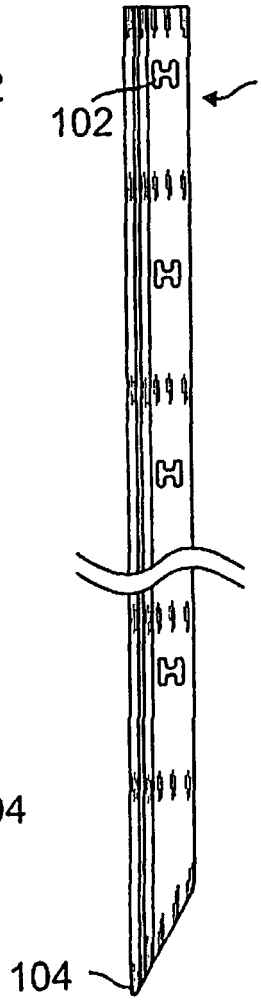


FIG. 3E

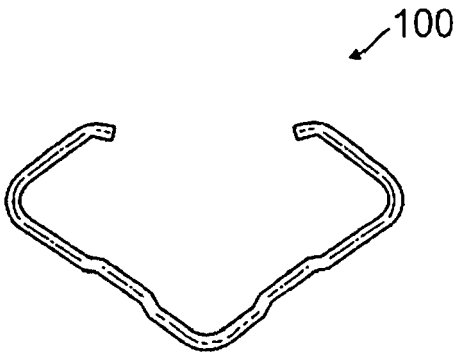


FIG. 3F

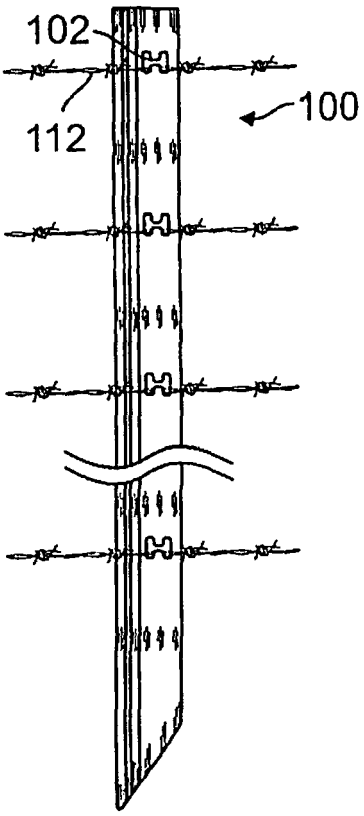


FIG. 3G

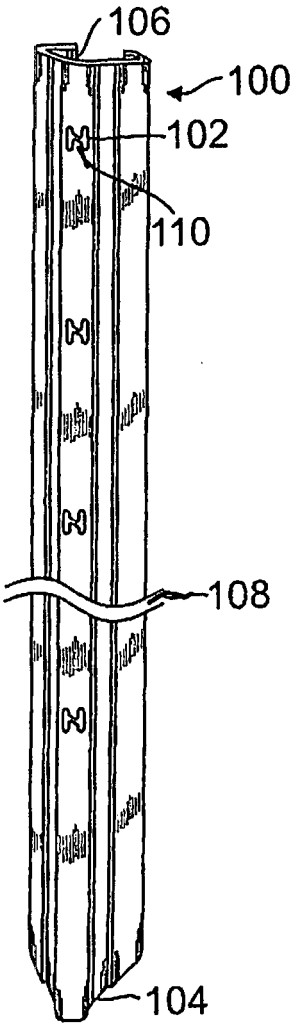


FIG. 4A

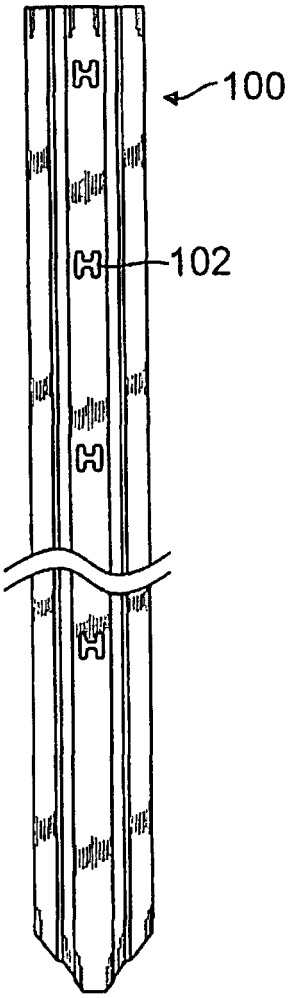


FIG. 4B

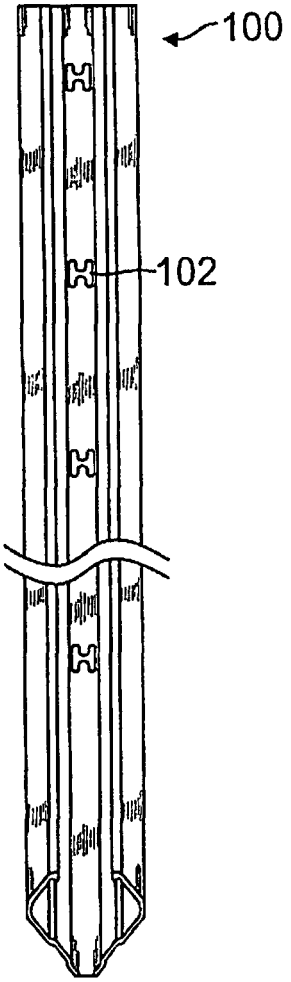


FIG. 4C

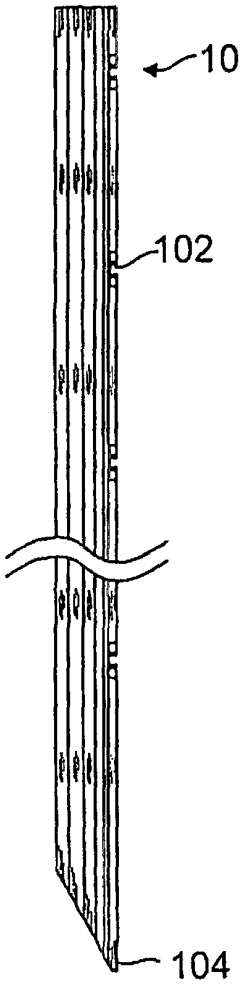


FIG. 4D

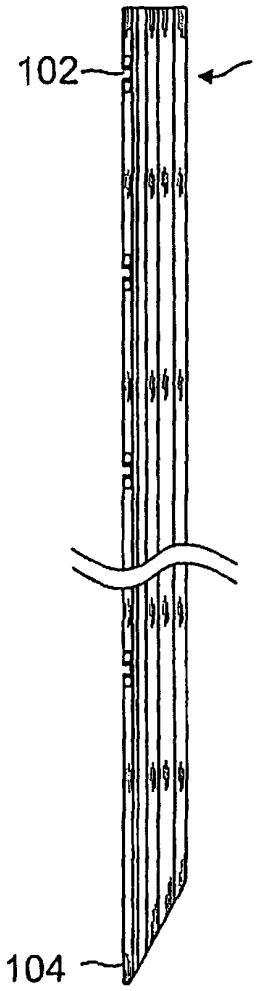


FIG. 4E

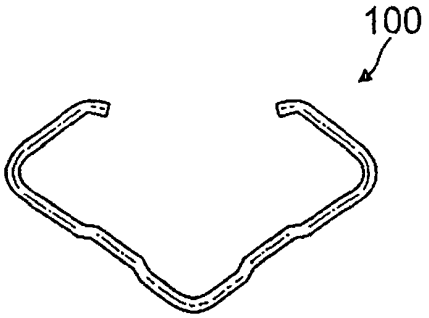


FIG. 4F

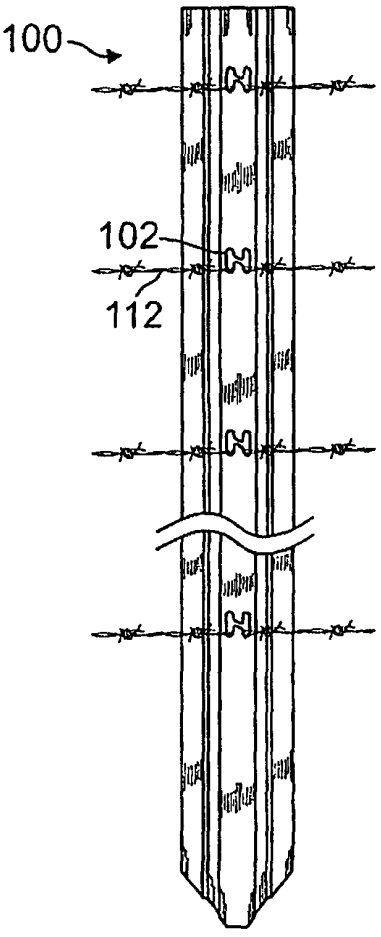


FIG. 4G

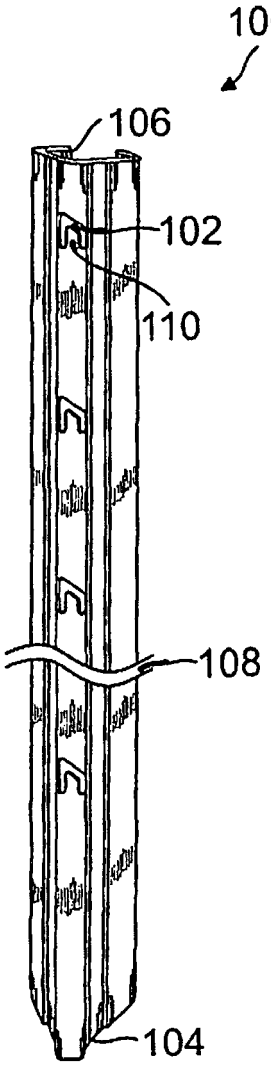


FIG. 5A

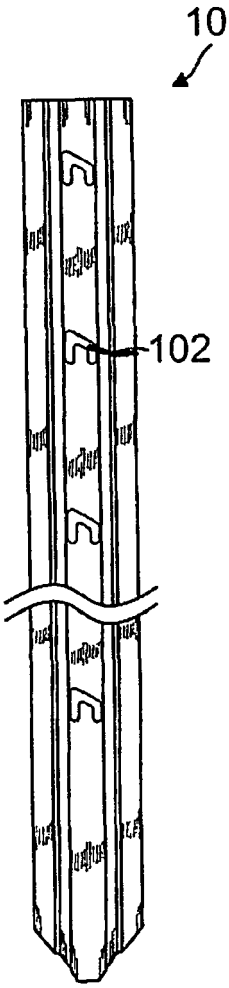


FIG. 5B

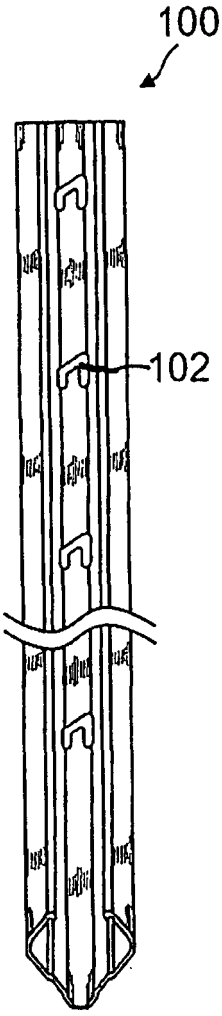


FIG. 5C

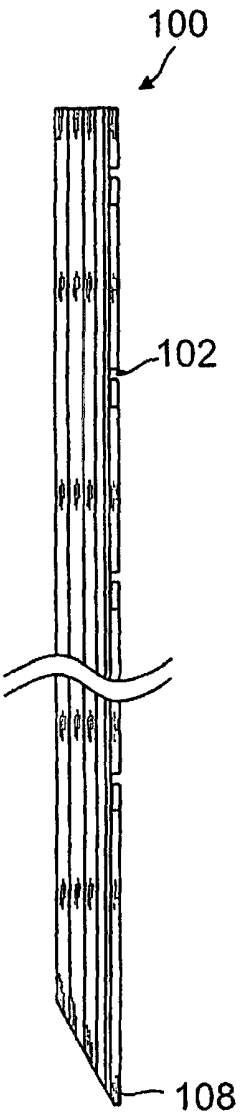


FIG. 5D

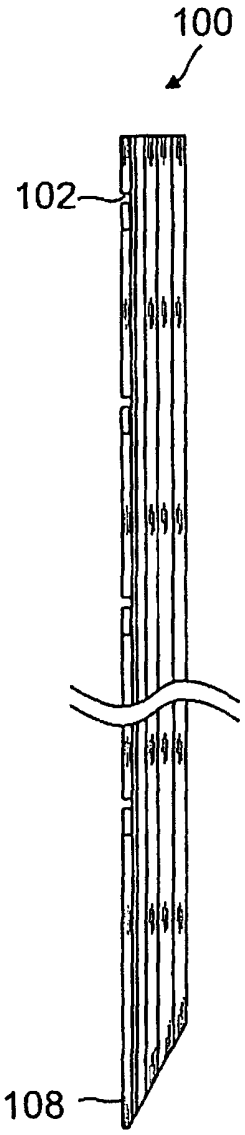


FIG. 5E

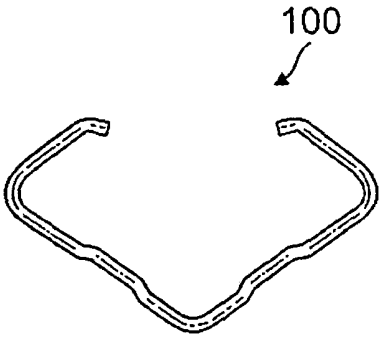


FIG. 5F

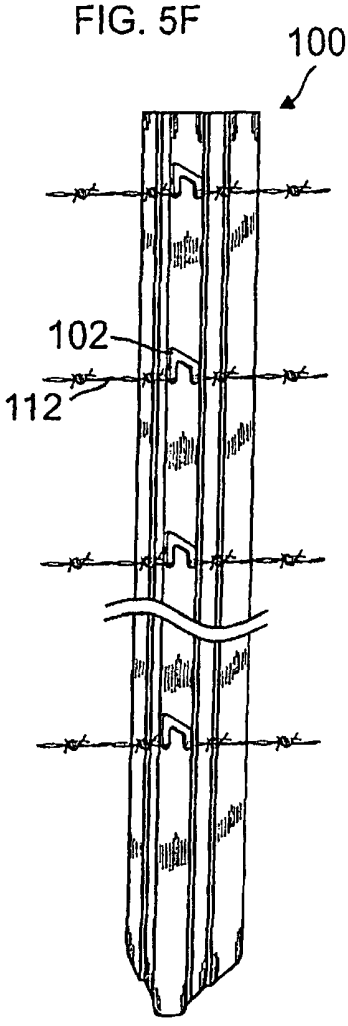


FIG. 5G

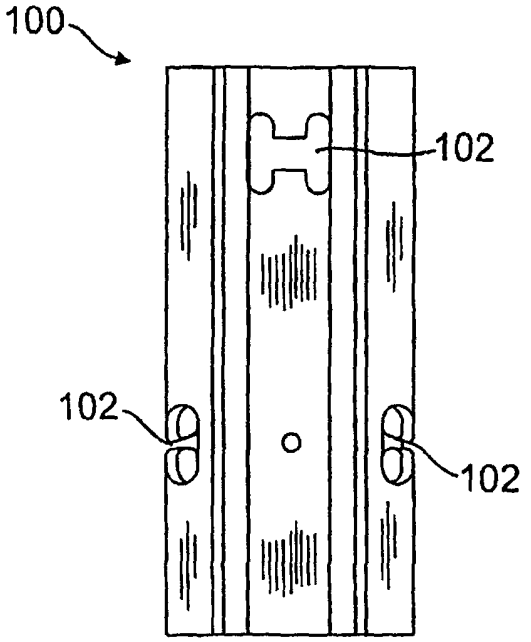


FIG. 6A

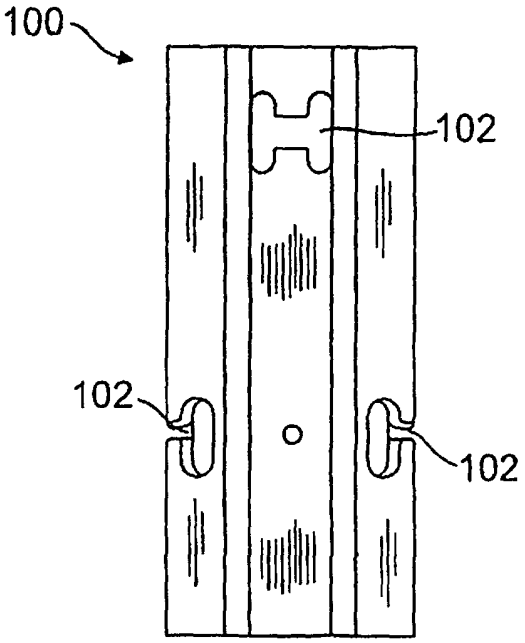


FIG. 6B

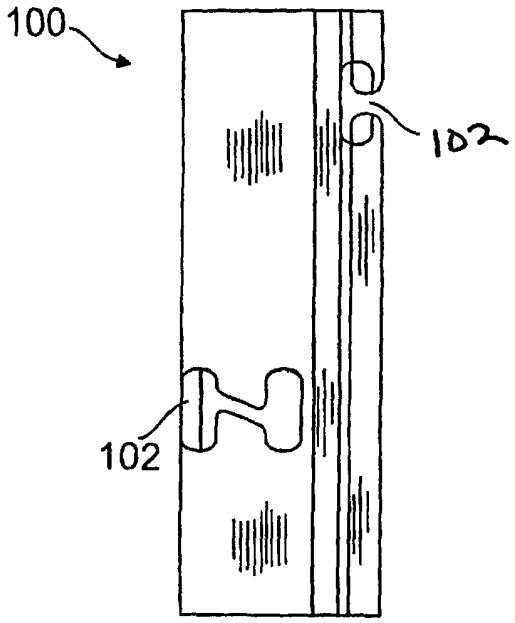


FIG. 6C

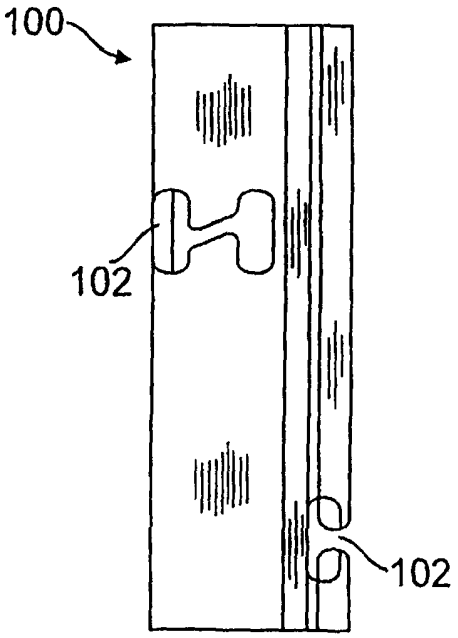


FIG. 6D

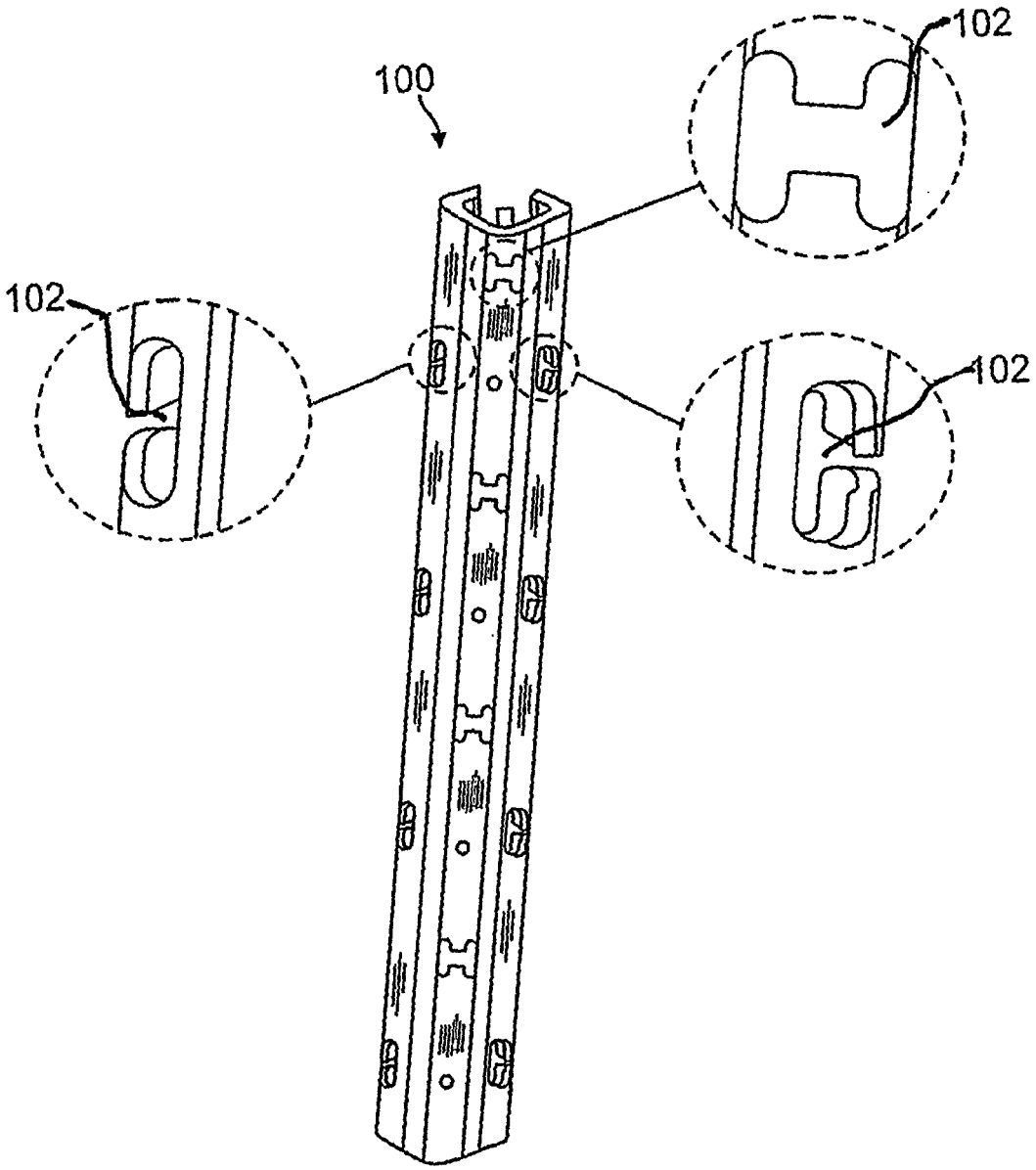


FIG. 6E

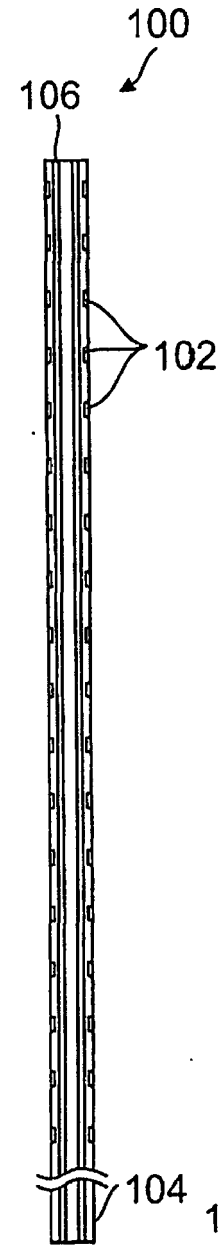


FIG. 7A

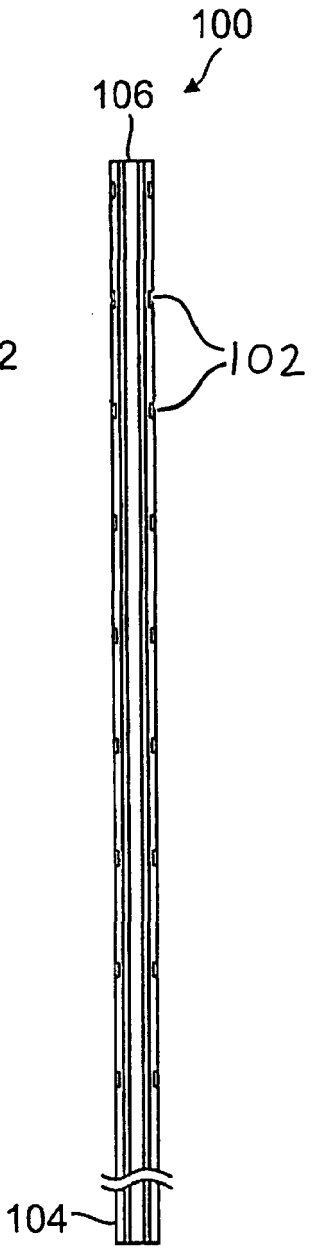


FIG. 7B

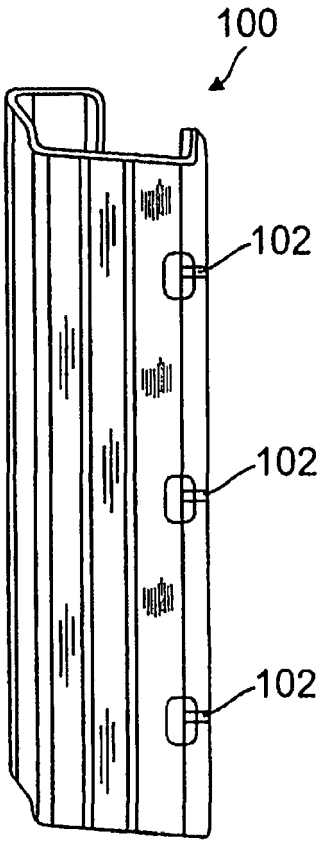


FIG. 7C

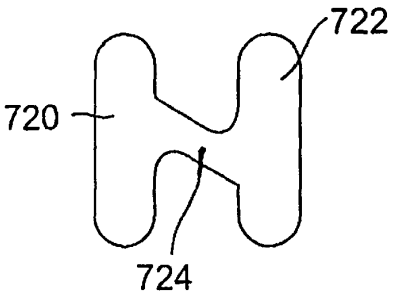


FIG. 7D

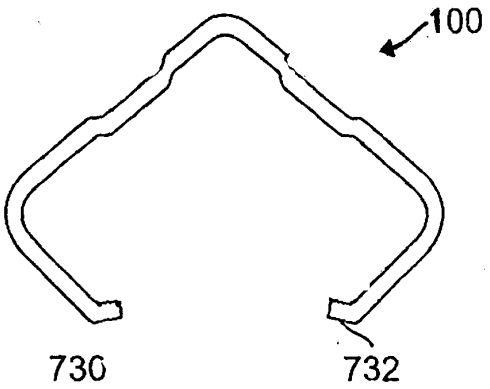


FIG. 7E

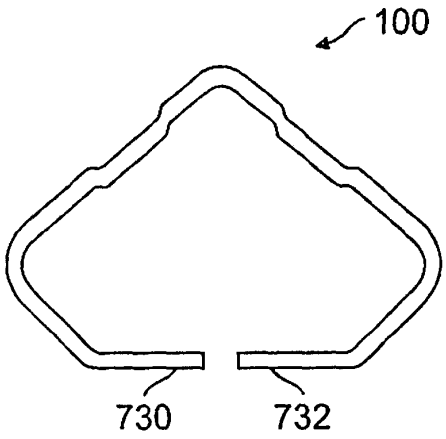


FIG. 7F

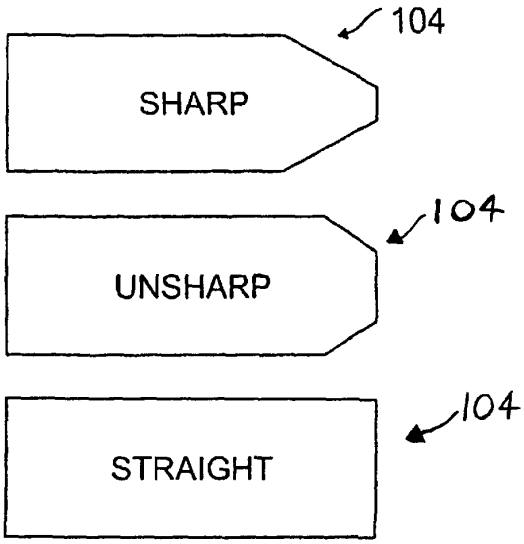


FIG. 7G

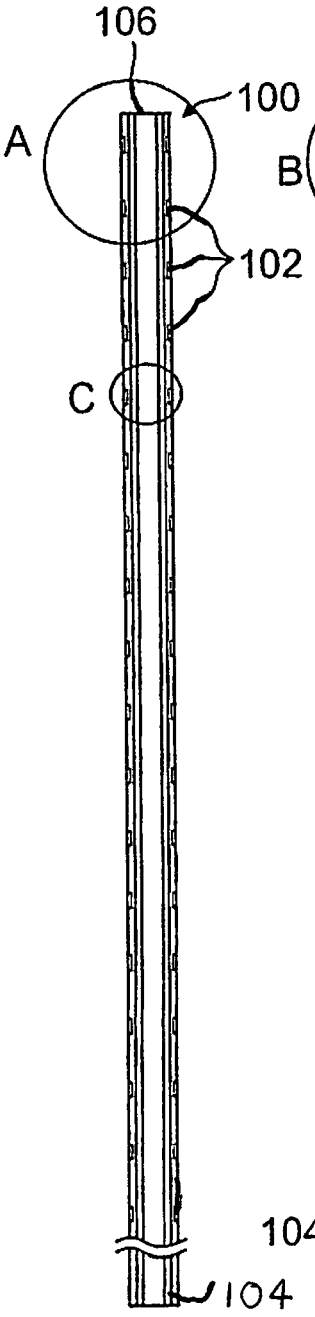


FIG. 8A

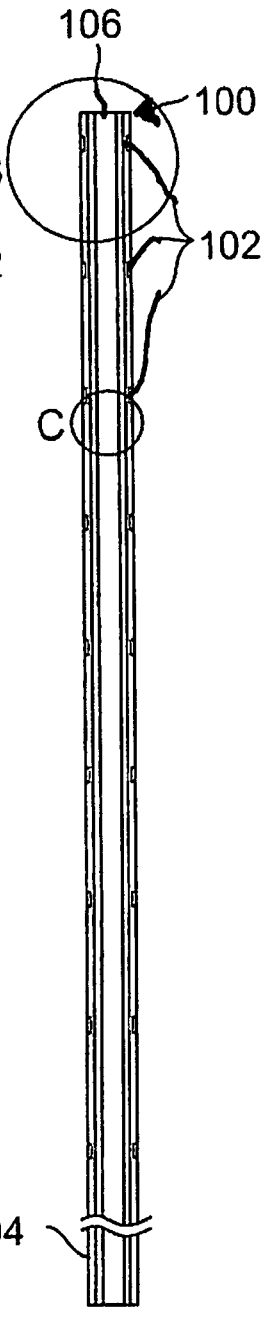
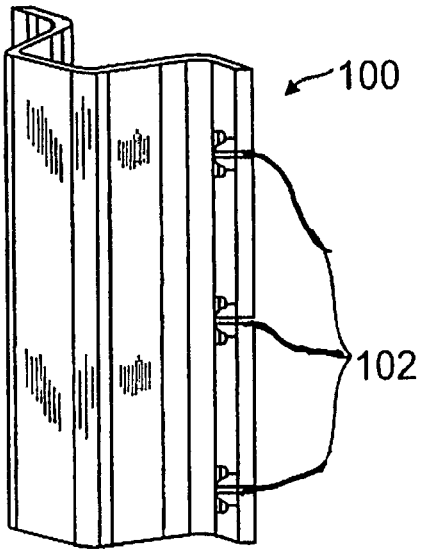
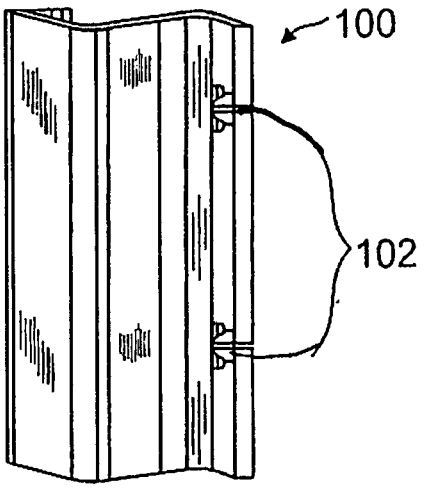


FIG. 8B



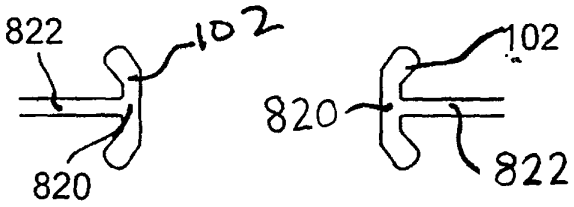
DETAIL A

FIG. 8C



DETAIL B

FIG. 8D



DETAIL C
FIG. 8E

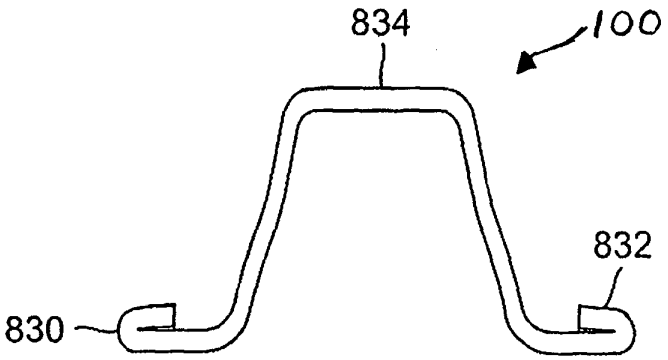


FIG. 8F

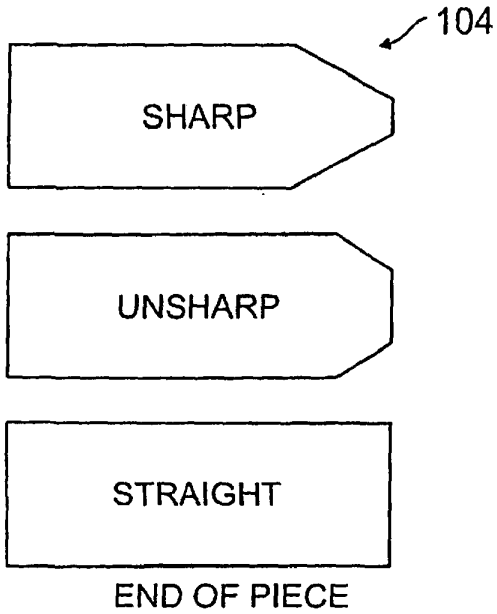


FIG. 8C

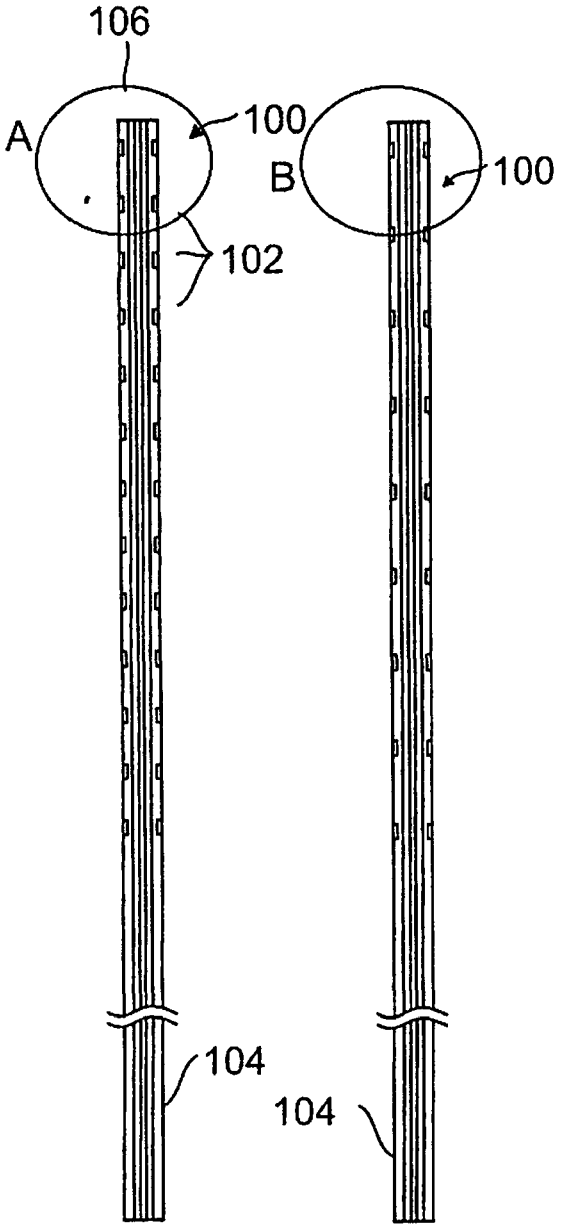
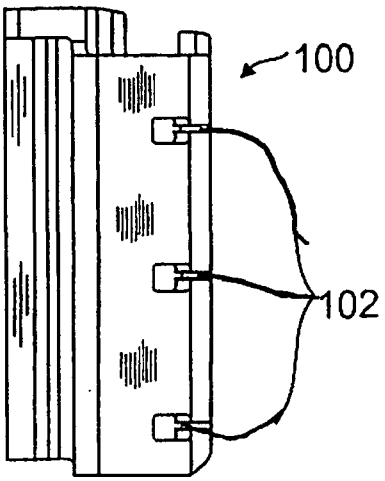
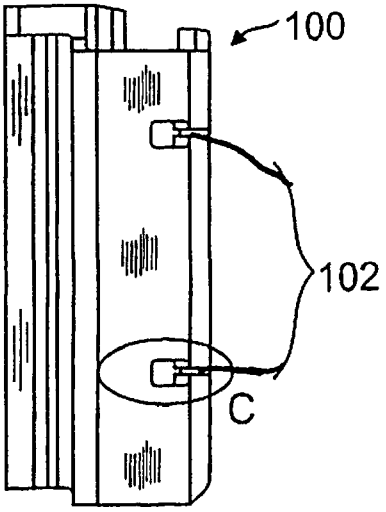


FIG. 9A

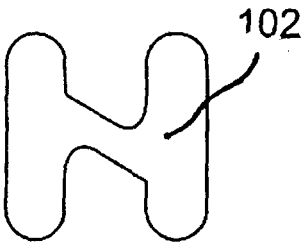
FIG. 9B



DETAIL A
FIG. 9C



DETAIL B
FIG. 9D



DETAIL C
FIG. 9E

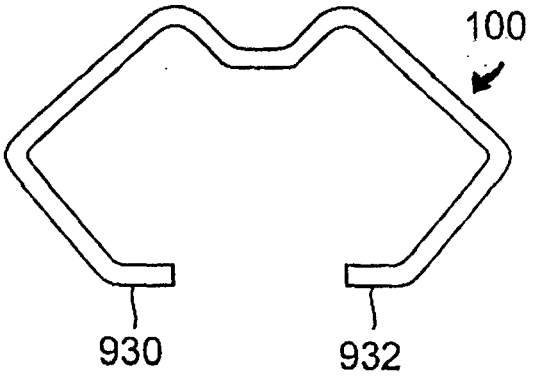
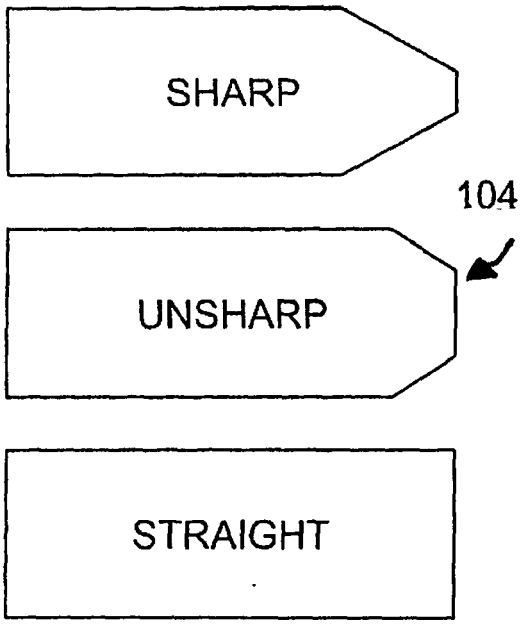


FIG. 9F



END OF PIECE

FIG. 9G

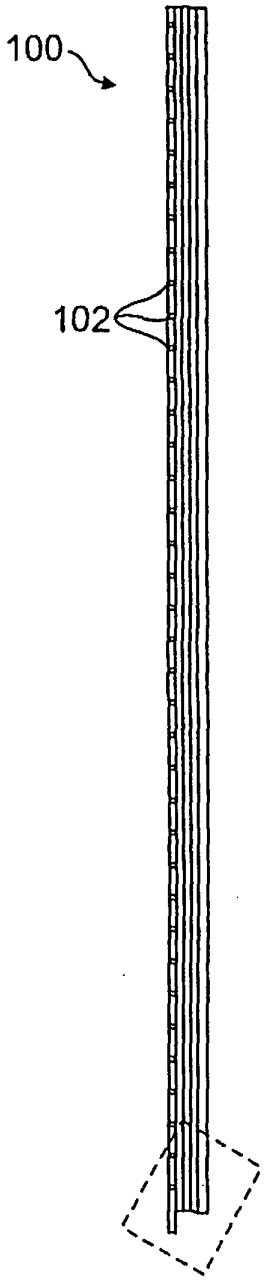


FIG. 10B

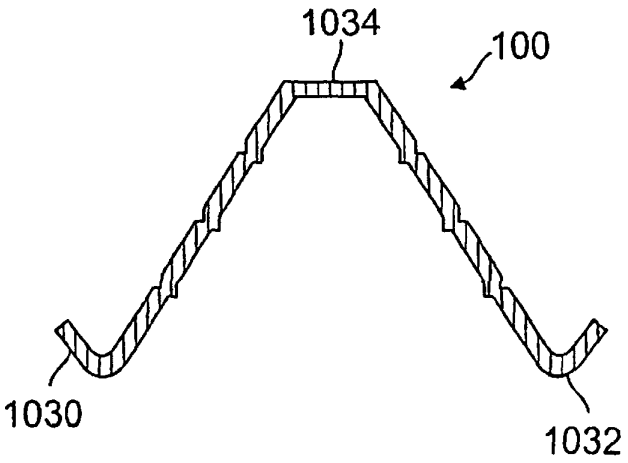


FIG. 10A

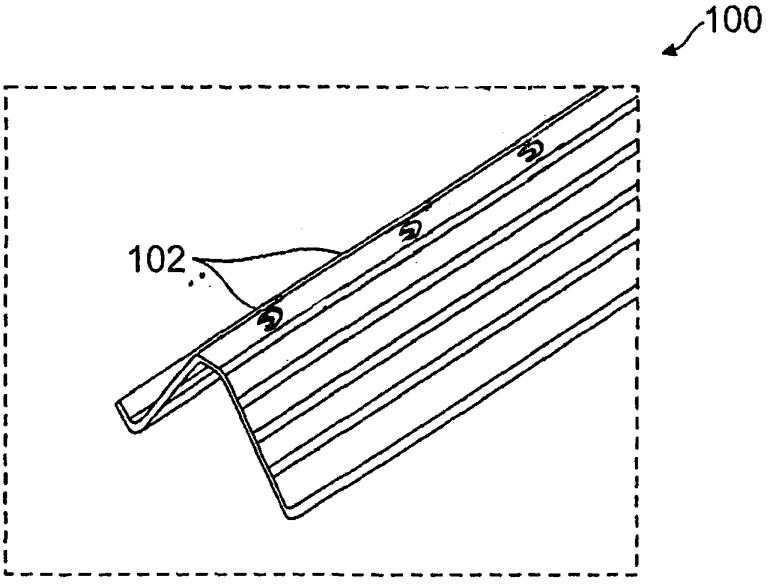


FIG. 10C

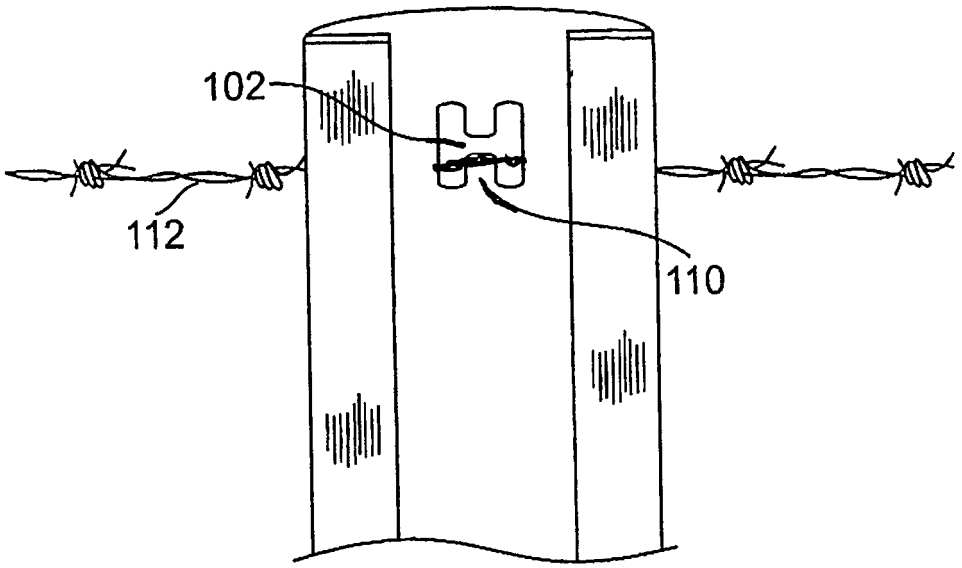


FIG. 11A

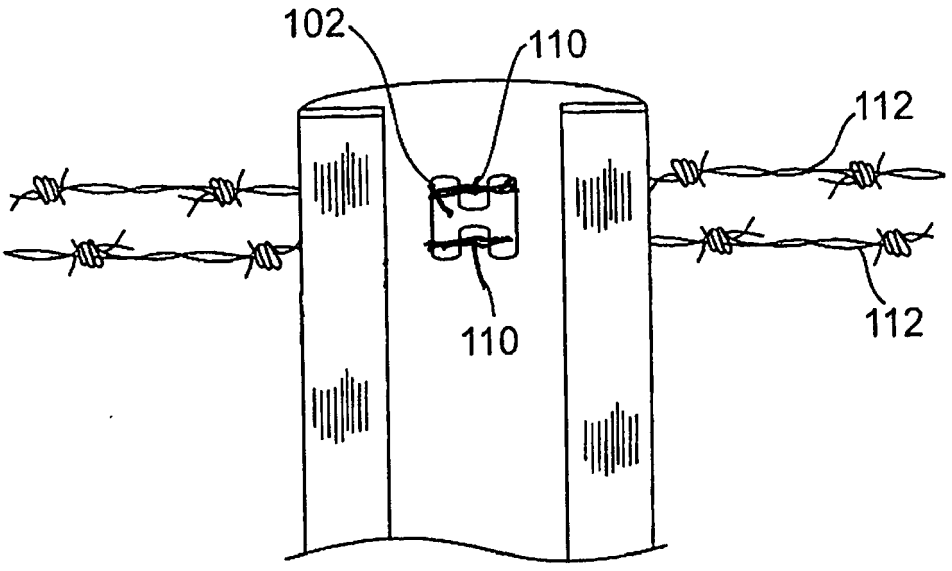


FIG. 11B

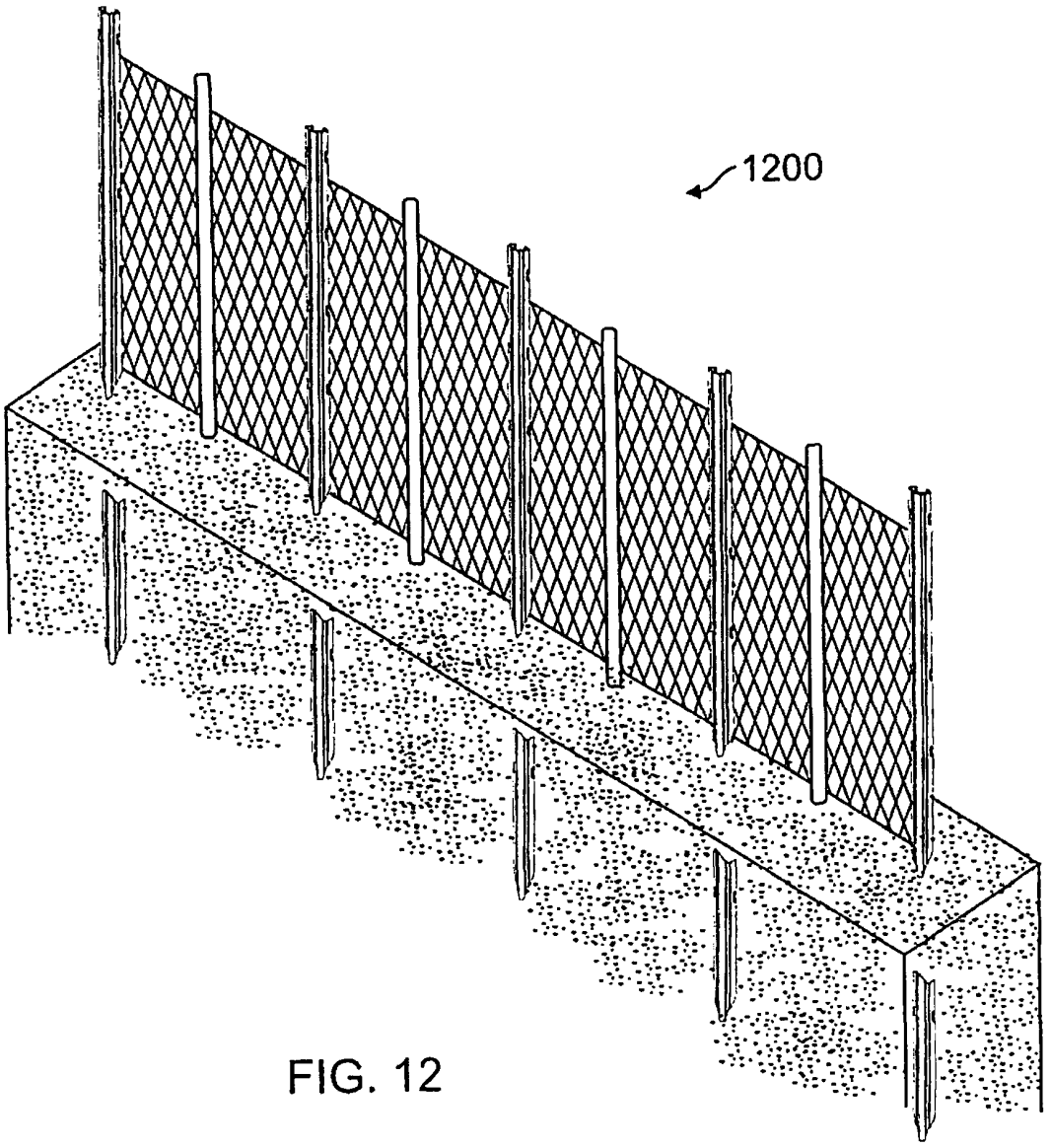


FIG. 12

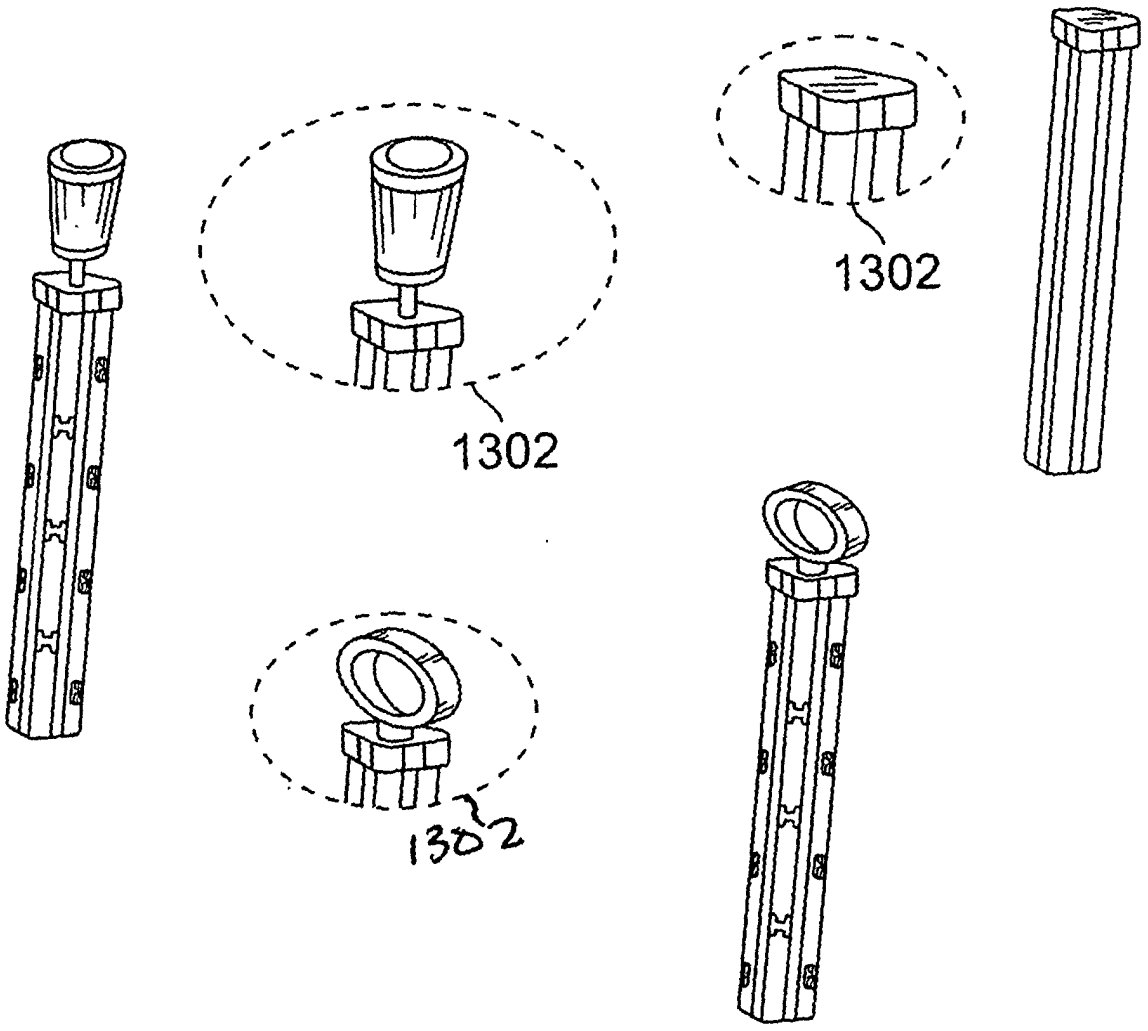


FIG. 13

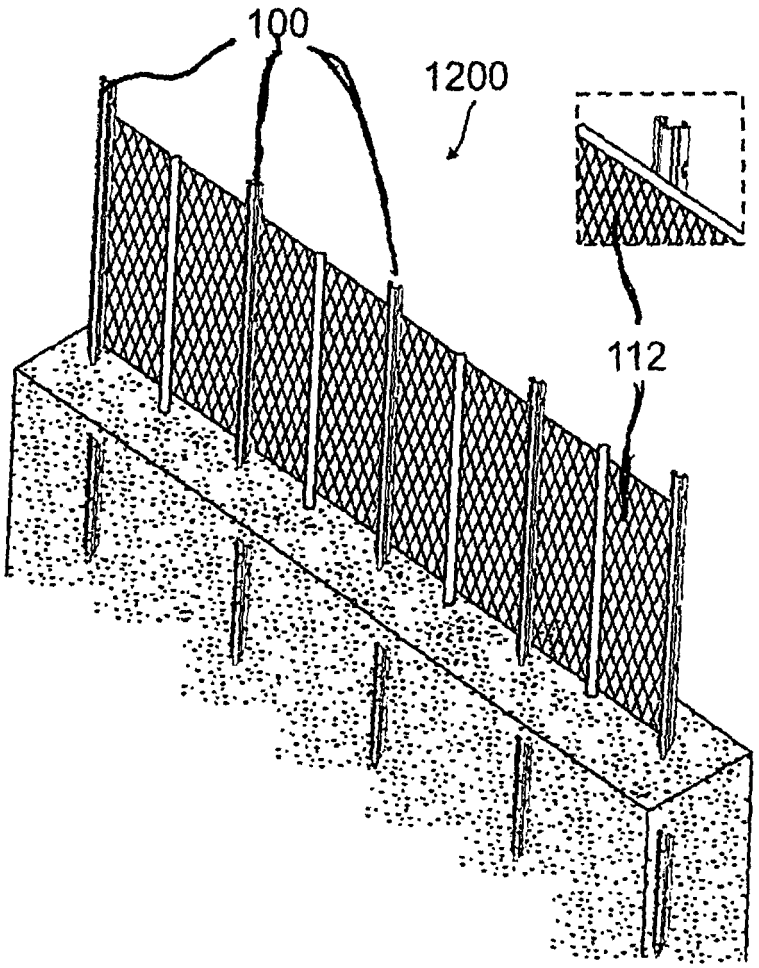


FIG. 14

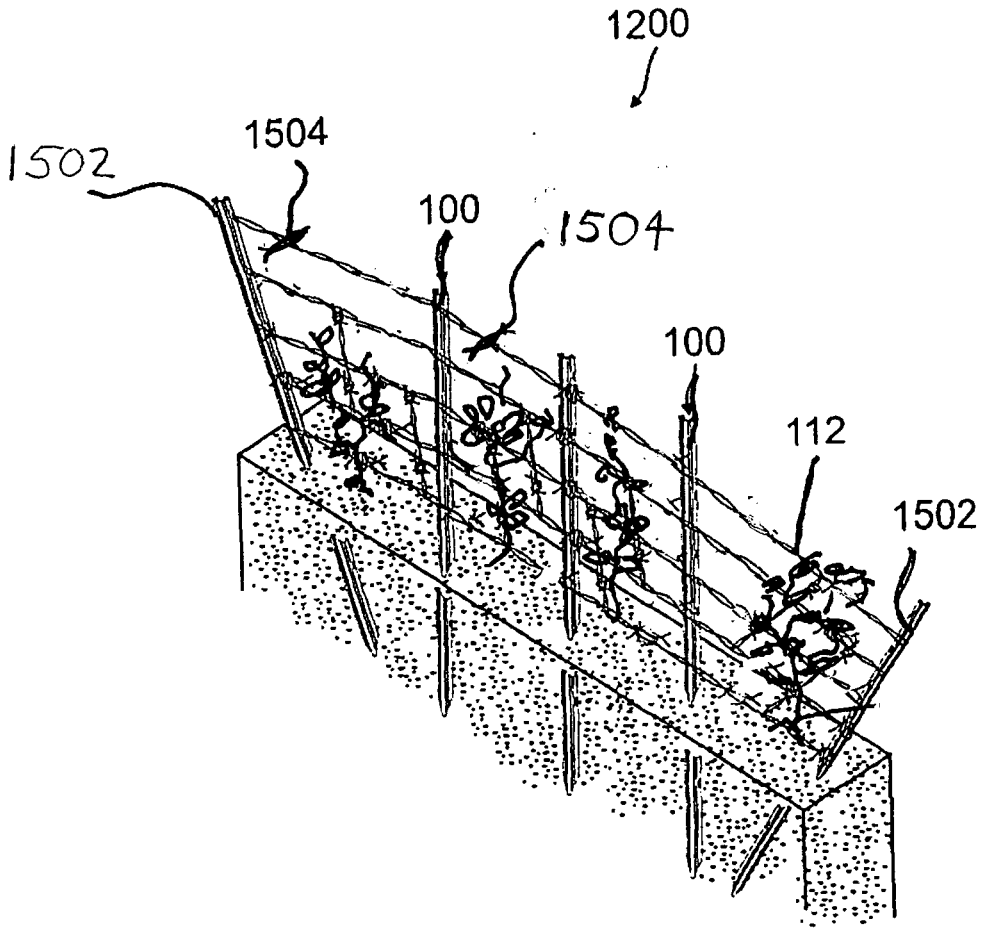
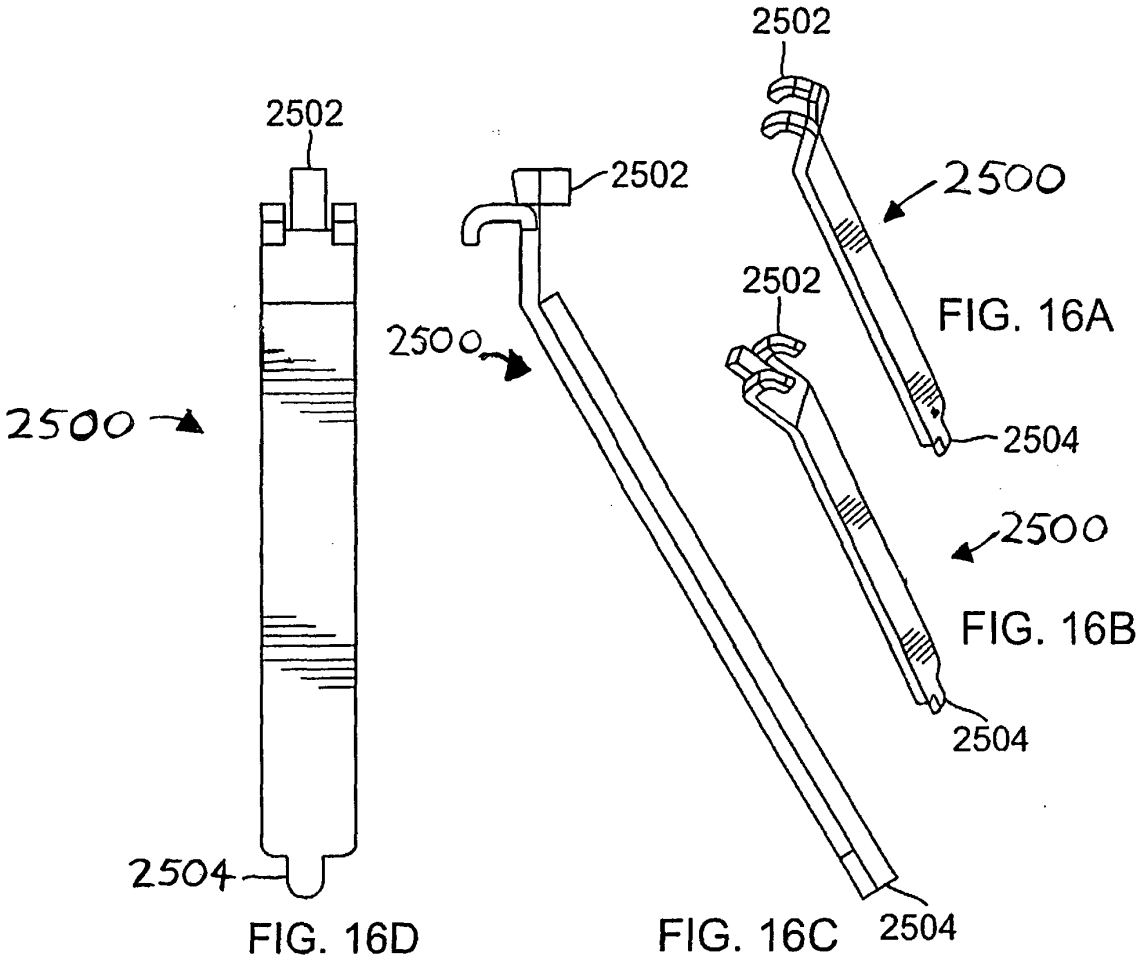


FIG. 15


2502
2500
2504
FIG. 16D
2502
2500
2504
FIG. 16C
2502
2500
2504
FIG. 16A
2502
2500
2504
FIG. 16B

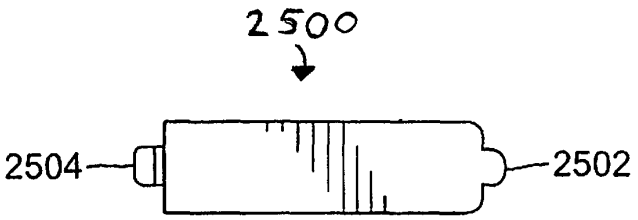

2500
2504
2502

FIG. 16E