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Invention Title: "Net Support Post Cap"

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The following statement is a full description of this invention, including the best method of performing it known to me:-

ABSTRACT

A net support post cap (10) which comprises a first portion (12) having a generally dome shaped surface which does not present any sharp protrusions or edges between the periphery of the first portion, whereby the first portion (12) is dimensioned such that the dome shaped surface is larger then the cross section of the fence post and the apertures in the netting to be supported by the post cap, the net support cap further comprising an engagement means (14) located in opposed relation to the dome shaped surface and having a central axis which is substantially normal to the first portion (12), such that it extends from the first portion (12) in generally opposed relation thereto, said engagement means (14) being adapted to be engageable with the end of a fence post to be positively secured thereto in that the engagement means comprises a spigot (14) which is engageable with the end of the fence post, wherein the spigot (14) comprises a hollow section, the spigot having a pair of opposed walls (19 &20) which are spaced such that they will become frictionally engaged with a pair of opposed webs of the section of a fence post comprising a hollow section, wherein the opposed walls (19 & 20) are capable of some resilient deformation on engagement of the spigot with the fence post to effect said frictional engagement, said engagement means (14) being further adapted to be engageable with the end of a fence post to be positively secured thereto in that the walls of the spigot are formed with slot shaped openings (25) angularly spaced from each other to enable the spigot to be received over the end of a STAR picket, and wherein the slot shaped openings are dimensioned to enable them to be frictionally engaged with a STAR picket.

TITLE: "Net Supporting Post Cap"

FIELD OF THE INVENTION

The present invention relates to a net support post cap that is capable of providing support for netting such as bird netting.

BACKGROUND ART

In the fruit growing and grape growing industry is an established practice to place netting over fruit trees and grapevines in order to protect the ripening fruit from predation by birds. This often involves covering a grove of fruit trees or a group of support trellises by the netting. In the past the netting has been supported from a number of wires or cables or the like which are strung between support posts located around and throughout the grove or groups of trellises. However in providing the support for the netting the nature of the posts that can be used is significantly restricted. The reason for such restriction relates to the need to minimise the likelihood that the netting may be torn by the post or become entangled with the post which prevents the netting from being able to move over the end of the fence post. As a result the cost of applying netting can be quite considerable, not only because of the cost of the netting but also due to the somewhat specialised nature of the posts that are required to support the netting.

It is an object of the invention to provide a means whereby conventional fence posts which are readily available can be used to support netting without the danger of the netting being damaged by the use of such fence posts. The fence posts with which it is envisaged that the invention can be used comprise STAR pickets and posts comprising rolled sheet metal sections. An example of posts formed of rolled metal sections comprise those which a sold under the trade mark GRIPFAST. These forms of post have not generally been used in the past for the support of netting since their cross sectional dimensions are such that they will pass through the apertures in the netting and the netting will become tangled or

engaged with the posts which creates a problem when it becomes necessary to remove the netting. In addition the sharp edges which are an inherent characteristic of the posts are likely to damage the netting.

Therefore the problem with the use of conventional metal fence posts in association with a locality over which netting is to be applied is that it is very likely that the netting will become attached to the fence post and as a result when the netting is removed, the fence post will damage the netting. In addition the contact of the netting with the sharp edges of the fence post will lead to tearing of the netting. Furthermore the sharp edges of the fence posts can also delay the time to remove the netting from the fence posts since the netting can easily become entangled with the sharp edges of the posts. In addition in using the known forms of fence posts referred to above the sharp edges present a hazard to the personnel employed in applying and removing the netting and in picking the crop.

DISCLOSURE OF THE INVENTION

The present invention seeks to reduce the above problems which are presented by using conventional fence posts to support netting and reduce the need to utilise specialised posts for that purpose.

Throughout the specification and claims the term fence post shall hereinafter be taken as comprising a STAR picket, and/or a post formed of a metal or plastic section and which are used as posts or droppers in the support of fences including posts which are marketed under the trade mark GRIPFAST and equivalent posts. In addition the term STAR picket shall be taken any form of fence post comprising axial flanges which extend the length of the fence post and are angularly displaced around the fence post.

Accordingly, the present invention resides in a net support post cap which comprises a first portion having a generally dome shaped surface which does not present any sharp protrusions or edges between the periphery of the first portion,

whereby the first portion is dimensioned such that the dome shaped surface is larger then the cross section of the fence post and the apertures in the netting to be supported by the post cap, the net support cap further comprising an engagement means located in opposed relation to the dome shaped surface and having a central axis which is substantially normal to the first portion, sand engagement means being adapted to be engageable with the end of a fence post to be positively secured thereto, engagement means comprising a spigot which is engageable with the end of the fence post, the spigot being in the form of a hollow section, and having a pair of opposed walls which are spaced such that they will become frictionally engaged with a pair of opposed webs of the section of a fence post, wherein the opposed walls are capable of some resilient deformation on engagement of the spigot with the fence post to effect said frictional engagement, the walls of the spigot being formed with slot shaped openings angularly spaced from each other around the central axis to enable the spigot to be received over the end of a STAR picket, and wherein the slot shaped openings are dimensioned to enable them to be frictionally engaged with a STAR picket.

According to a preferred feature of the invention the opposed walls are interconnected by a pair of side walls whereby said side walls are capable of some resilient deformation on engagement of the spigot with the fence post to effect said frictional engagement.

According to a preferred feature of the invention the spigot is dimensioned to be received over the end of a fence post and is dimensioned to be frictionally engaged with the fence post. According to an alternative preferred feature of the invention the spigot is dimensioned to be received within the end of a fence post and which is dimensioned to be frictionally engaged with the fence post.

According to a one preferred feature the dome shaped surface is preferably shaped such that the upper surface is part spherical or ellipsoidal. The dome shaped surface may also be formed from a plurality of adjacent faces each of a part conic section which define a generally convex surface. In addition the periphery of the dome shaped surface may have the shape of a circle, ellipse or a polygon such as a square, or hexagon or octagon. In this regard it is a requirement of the dome shaped surface that it does not present between its periphery sharp protrusions or edges that are likely to result in the tearing or damage to a netting.

According to a further preferred feature the dome shaped surface is provided with one or more protrusions which may take the form of ribs, dimples, lugs, grooves or slots.

According to a further preferred feature the net support post cap is formed of a plastics material such as polypropylene, polyethylene polyurethane.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood in the light of the following description of several specific embodiments which is made with reference to the accompanying drawing; of which:

Figure 1 is an upper perspective view of an embodiment of the post cap in accordance with the present invention;

Figure 2 is a perspective view of the post cap as shown in Figure 1 when the post cap is inverted;

Figure 3 is a plan view of the post cap as shown in Figure 1;

Figure 4 is an inverted plan view of the post cap as shown in Figure 1;

Figure 5a is a lower perspective view of the embodiment of the post cap when secured on a STAR picket; and

Figures 5b and 5c are lower perspective views of the embodiment of the post cap when secured on two alternative forms of fence post which are formed of a hollow section.

BEST MODES FOR CARRYING OUT THE INVENTION

The first embodiment of the present invention as shown in the accompanying drawings comprises a net support post cap 10 which is intended to be engagable with the end of a STAR picket which is illustrated at Figure 5a and is also engageable with a fence post formed of a hollow section such as that which is illustrated at Figure 5b and which is marketed under the trade mark GRIPFAST or of the type which is illustrated at Figure 5c . The post cap has a first portion 12 and an engagement means in the form of a hollow spigot 14. The first portion 12 has a substantially dome shaped surface and having a generally circular periphery. The dome shaped portion is dimensioned such that is greater than the cross section of the fence post and significantly greater than the dimensions of the apertures in the netting with which the net support post cap is to be used. In addition the dome shaped surface is formed with a pair of reinforcing ribs 16 which are angularly spaced at 90 degrees to each other and which intersect at the centre and extend from opposed sides of the periphery. The post cap is formed of a plastics material such as polypropylene, polyethylene or polyurethane as a single integral element.

The hollow spigot 14 comprises a pair of opposed parallel end walls 19 and 20 which are connected by a pair of side walls 15 and 17 a pair of end walls 19 and 21 respectively. The walls generally define a rectangular spigot. However the end walls 19 and 21 are of a convex profile while the side walls 15 and 17 are of a generally concave profile. The post cap is made of a resilient material and the convex and concave profiles of the walls serve to enable the spigot to be resiliently compressed when engaged into the end of a GRIPFAST fence post as

shown at Figure 5b and the type of fence post illustrated at Figure 5c in order that the end walls are frictionally engaged with the opposed side flanges of the section of the fence post. The spigot 14 has a length such that when inserted into the end of a fence post it will terminate short of the apertures, lugs and like features which are provided adjacent the end in order to accommodate the fencing wires. The shape and dimensions of the spigot 14 as shown in the drawings are such that it will be frictionally engaged with the fence posts formed of rolled sheet metal sections such as those sold under the trade mark GRIPFAST and as shown in Figure 5b and of the form shown at Figure 5c or similar posts.

In addition the post cap of the embodiment has three slots 25 which are provided in the walls of the spigot 14 and which are angularly displaced around the central axis of the spigot such that they will be received over a STAR picket as shown at Figure 5a. In this regard and as shown at Figures 2 and 4 a pair of opposed slots 25 are provided towards one end of the side walls 15 and 17 while the third slot 25 is provided in the remote end wall 21 The slots 25 are dimensioned such they will frictionally engage with the respective flanges of a STAR picket. As a result the post cap of the embodiment can be used with the fence posts formed of a hollow section as well as STAR pickets.

In use, the net support post cap 10 of the embodiment is mounted on a fence post by using a mallet to drive the post cap 10 into engagement with the end of a post as shown at Figures 5a, 5b and 5c. In application of the netting it is secured to the ground by suitable securing means such as ground pins or the like and the netting is then supported above the ground surface by the dome shaped surface of the first portion 12 of the post cap 10 and if desired wires or the like which extend between the fence posts. The presence of the net support post caps ensures that the netting is not damaged by contact with the edges of the post and allows the application of the netting and its subsequent removal. When the user wishes to remove the netting, the user can simply pull the netting from the post caps as the netting does not need to be secured to the post cap 10.

The net support post cap of the embodiment can be used for supporting nets that are used in the protection of crops such as fruit, etc and in vineyards. However, it is to be understood that the application of the device 10 should not be restricted to only this particular use. The net support post cap of the embodiment may also be used to support netting of any kind, shade cloth and any other forms of flexible sheet material.

According to a further embodiment the hollow spigot of each of the previous embodiments may be dimensioned to be receivable over the end of the fence posts of the form shown at Figures 5b and 5c.

The words "comprises", "comprising" and other similar variations as used throughout the specification, unless the context requires otherwise, will be understood to imply the inclusion of a stated integer or group of integers but not the exclusion of any other integer or group of integers.

It should be understood that the present invention should not be restricted to the embodiments described above. Modifications and variations such as would be apparent to a skilled addressee are deemed to be within the scope of the present invention.

The claims defining the invention are as follows:

1. A net support post cap which comprises a first portion having a generally dome shaped surface which does not present any sharp protrusions or edges between the periphery of the first portion, whereby the first portion is dimensioned such that the dome shaped surface is larger than the cross section of the fence post and the apertures in the netting to be supported by the post cap, the net support cap further comprising an engagement means located in opposed relation to the dome shaped surface and having a central axis which is substantially normal to the first portion, said engagement means being adapted to be engageable with the end of a fence post to be positively secured thereto, the engagement means comprising a spigot, which is engageable with the end of the fence post, the spigot being in the form of a hollow section and having a pair of opposed walls which are spaced such that they will become frictionally engaged with a pair of opposed webs of the section of a fence post, wherein the opposed walls are capable of some resilient deformation on engagement of the spigot with the fence post to effect said frictional engagement, the walls around the central axis of the spigot being formed with slot shaped openings angularly spaced from each other to enable the spigot to be received over the end of a STAR picket, and wherein the slot shaped openings are dimensioned to enable them to be frictionally engaged with a STAR picket.

2. A net support post cap as claimed at claim 1 wherein the opposed walls are interconnected by a pair of side walls whereby said side walls are capable of some resilient deformation on engagement of the spigot with the fence post to effect said frictional engagement.

3. A net support post cap as claimed at claim 1 or 2 wherein the spigot is dimensioned to be received over the end of a fence post and is dimensioned to be frictionally engaged with the fence post.

4. A net support post cap as claimed at claim 1, 2 or 3 wherein the spigot is dimensioned to be received within the end of a fence post and which is dimensioned to be frictionally engaged with the fence post.

5. A net support post cap as claimed at any one of the preceding claims wherein the dome shaped surface is preferably shaped such that the upper surface is part spherical or ellipsoidal.

6. A net support post cap as claimed at any one of claims 1 to 4 wherein the dome shaped surface is formed from a plurality of adjacent faces each of a part conic section which jointly define a generally convex surface.

7. A net support post cap as claimed at any one of the preceding claims wherein the periphery of the dome shaped surface has the shape of a circle.

8. A net support post cap as claimed at any one of claims 1 to 6 wherein the periphery of the dome shaped surface has the shape of an ellipse.

9. A net support post cap as claimed at any one of claims 1 to 6 wherein the periphery of the dome shaped surface has the shape of a polygon.

10. A net support post cap as claimed at claim 9 wherein the periphery of the dome shaped surface has the shape of a square.

11. A net support post cap as claimed at claim 9 wherein the periphery of the dome shaped surface has the shape of a hexagon.

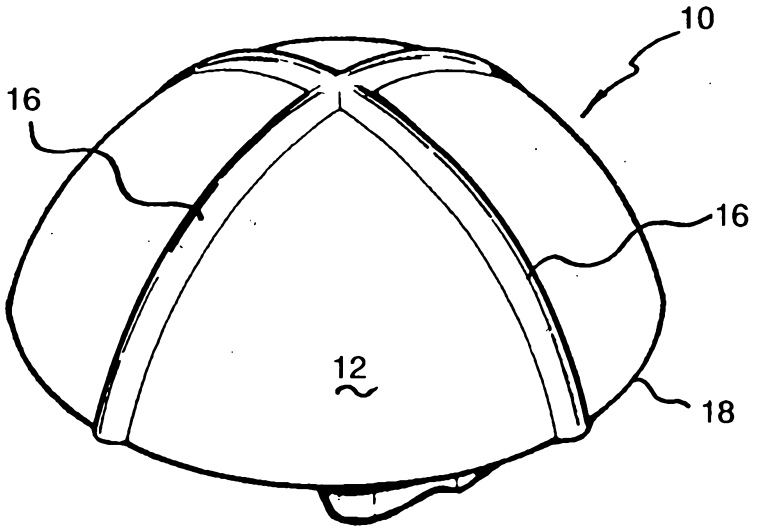

Fig. 1.

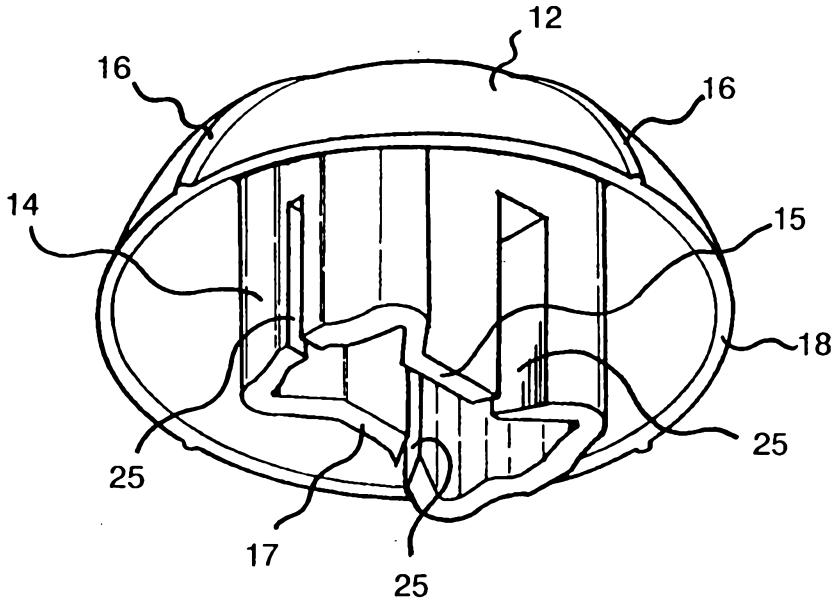

Fig. 2.

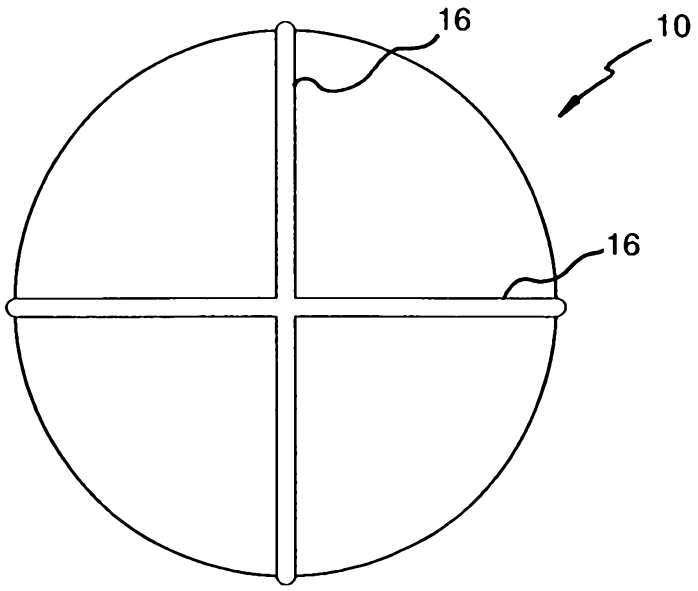

Fig. 3

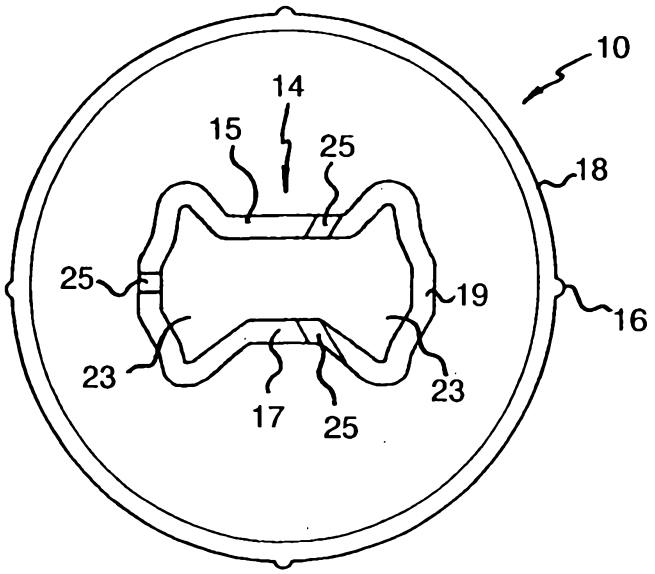

Fig. 4

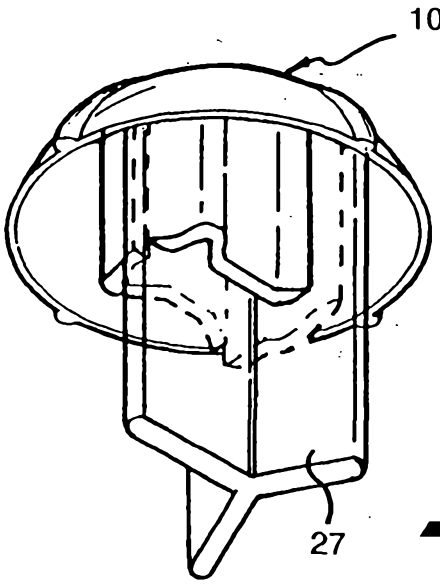

Fig. 5A

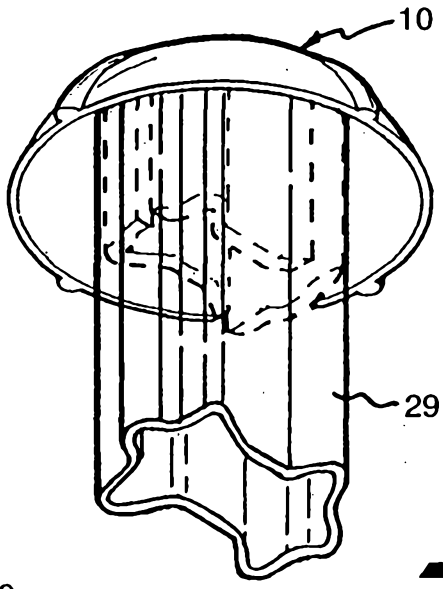

Fig. 5B

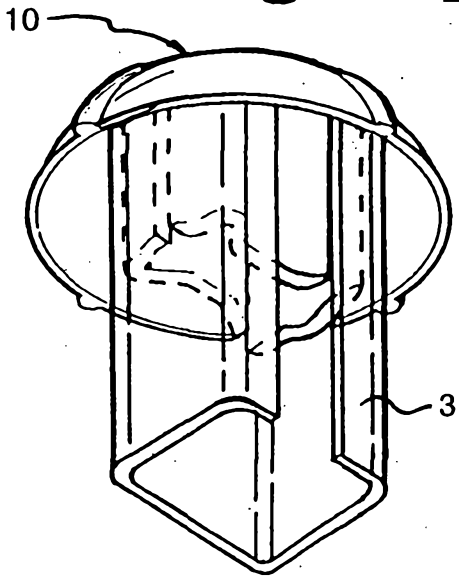

Fig. 5C