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(54) POST CAP

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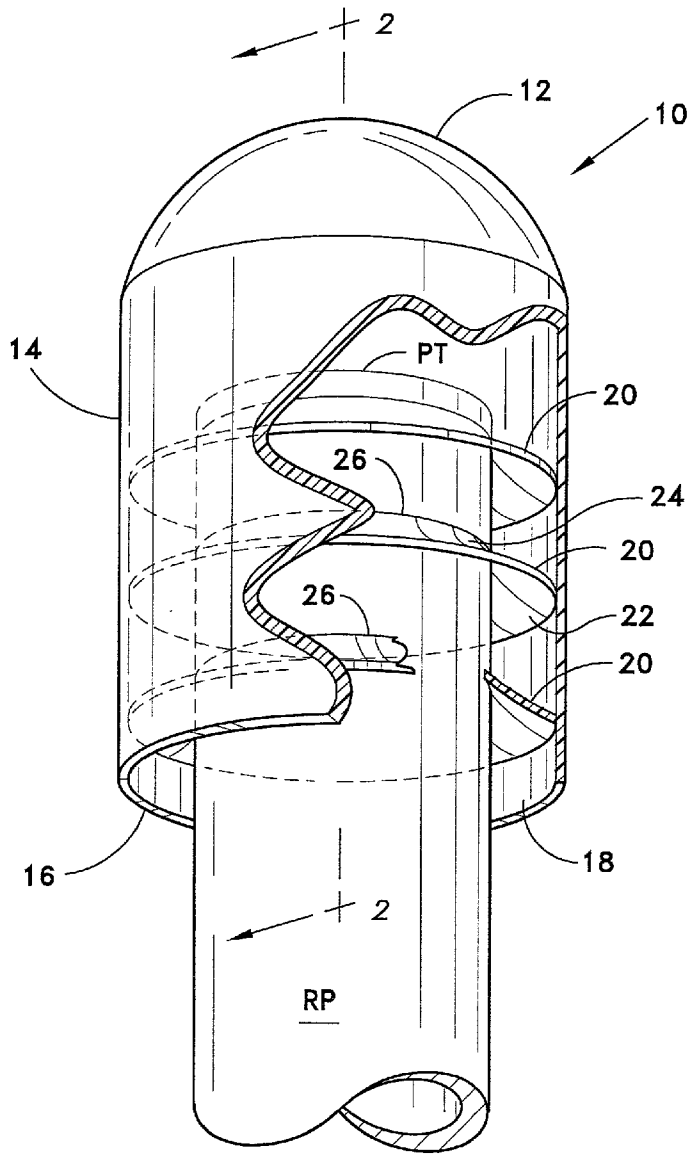
(57) ABSTRACT

A one piece, injection molded, post cap for covering the upper end of wooden posts, poles, and pilings. The cap is made in discrete, sizes and shapes and having internal structure to allow installation of each size over a range of diameters or dimensions of posts. The caps are decorative and the internal structure assures the caps remain in a desired vertical uniform position relative to the post so a row of posts has an attractive appearance. The internal structure comprises tiered rows of collars or fingers which are expanded or forced upward at their internal edge or ends so as to engage the post and resist removal of the cap. The caps may be provided in common shapes and sizes so as to fit over posts having cross sections which are round, square, oval, or oblong.



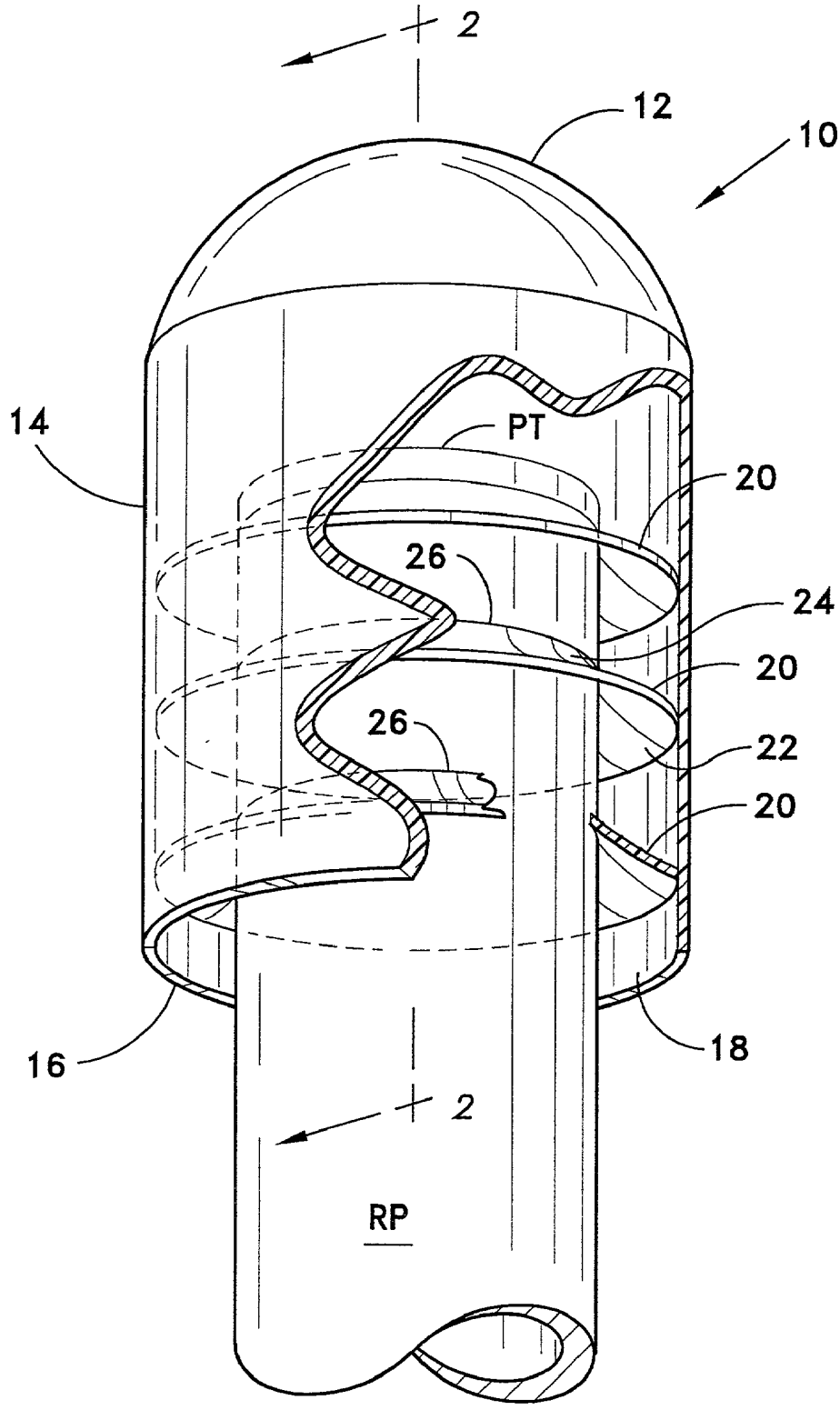



FIG. 1

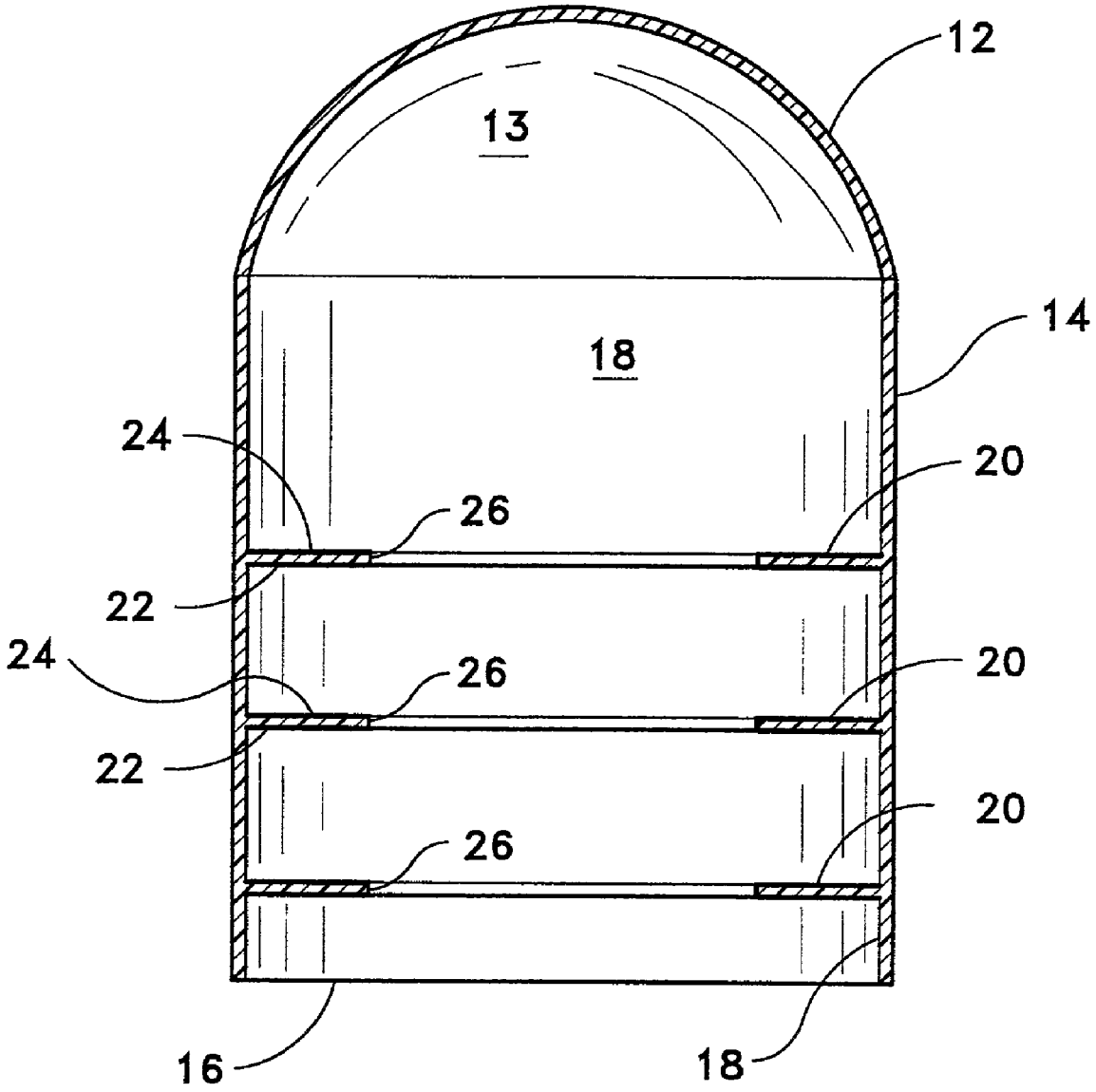



FIG. 2

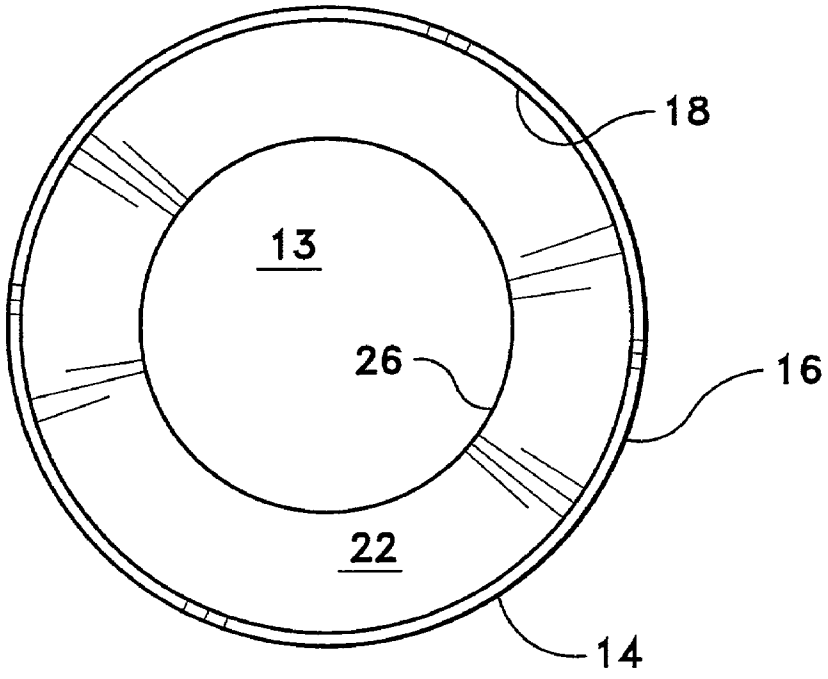



FIG. 3

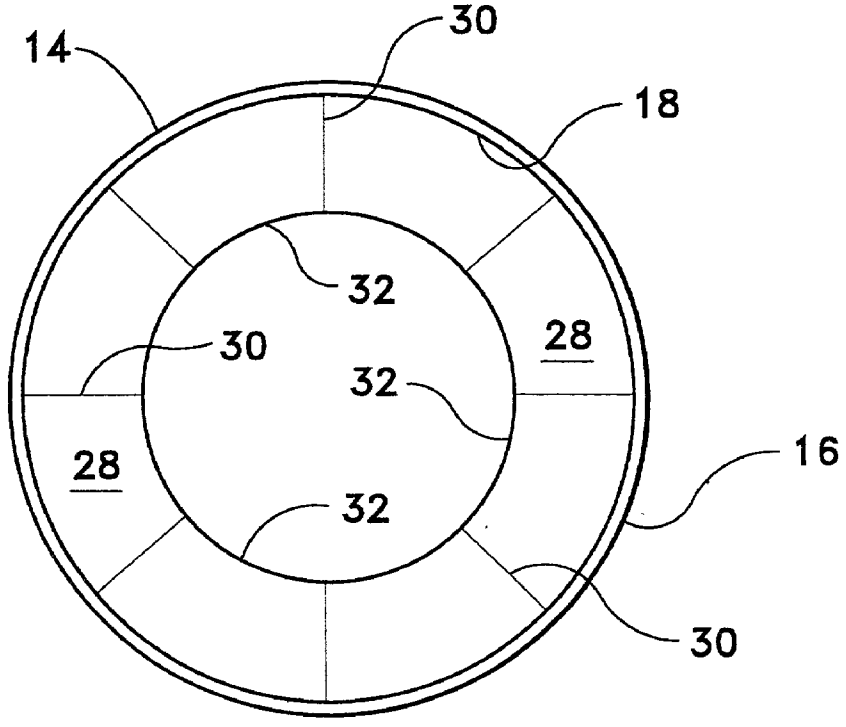



FIG. 4A

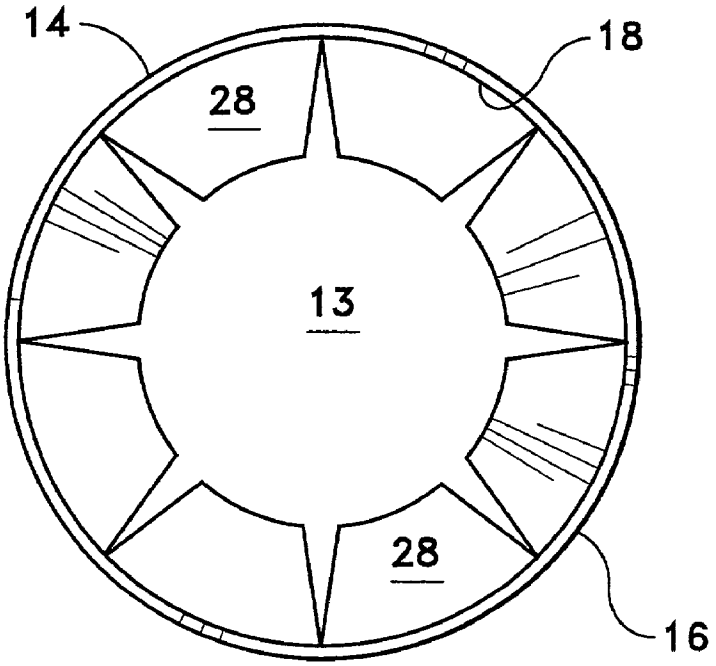



FIG. 4B

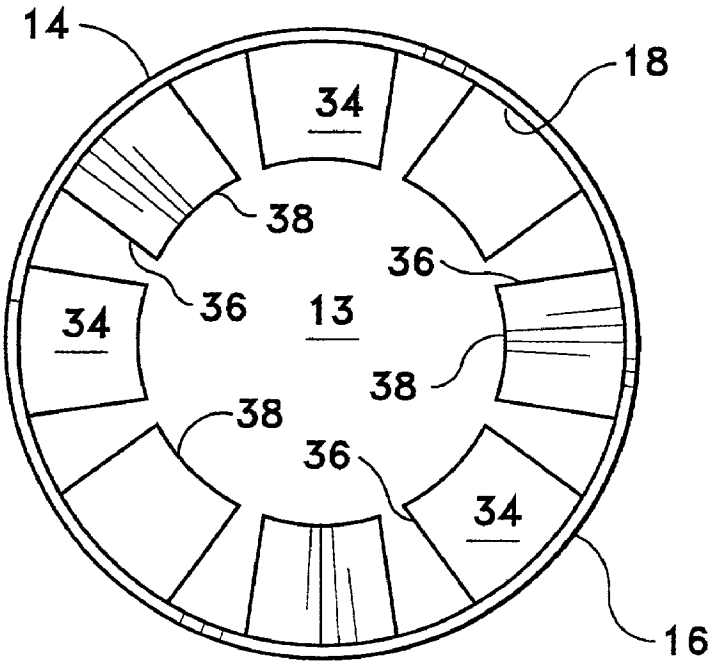



FIG. 5

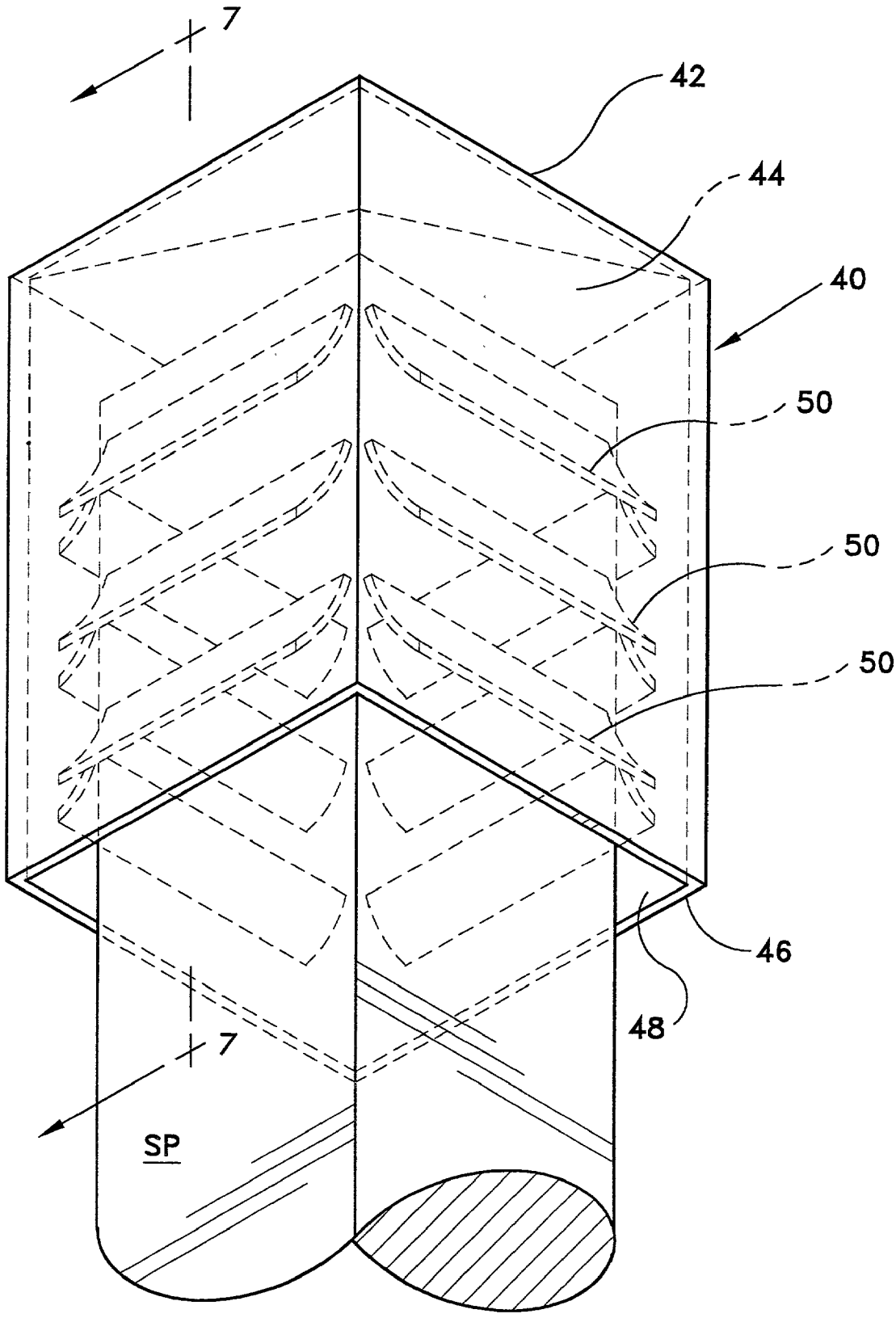



FIG. 6

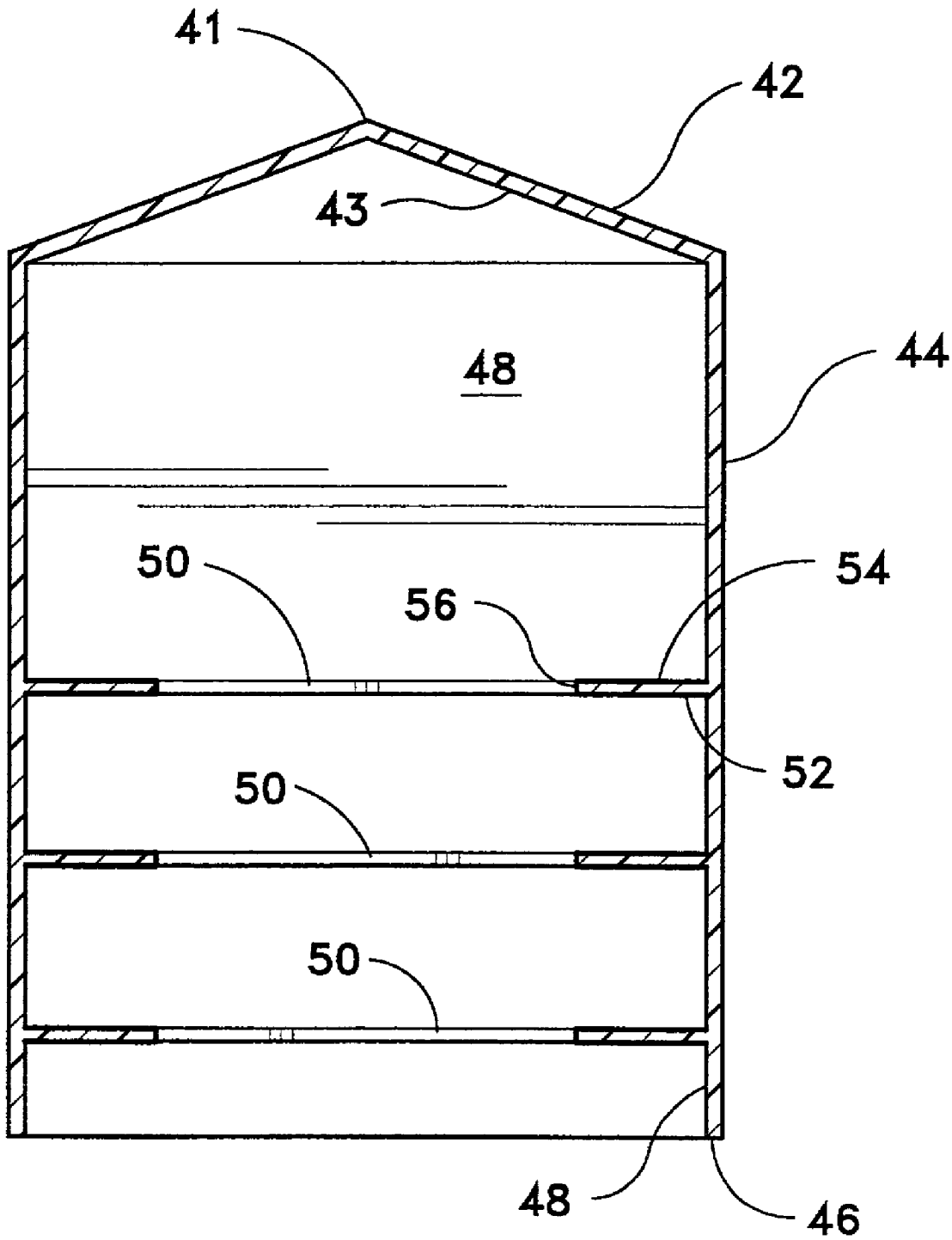



FIG. 7

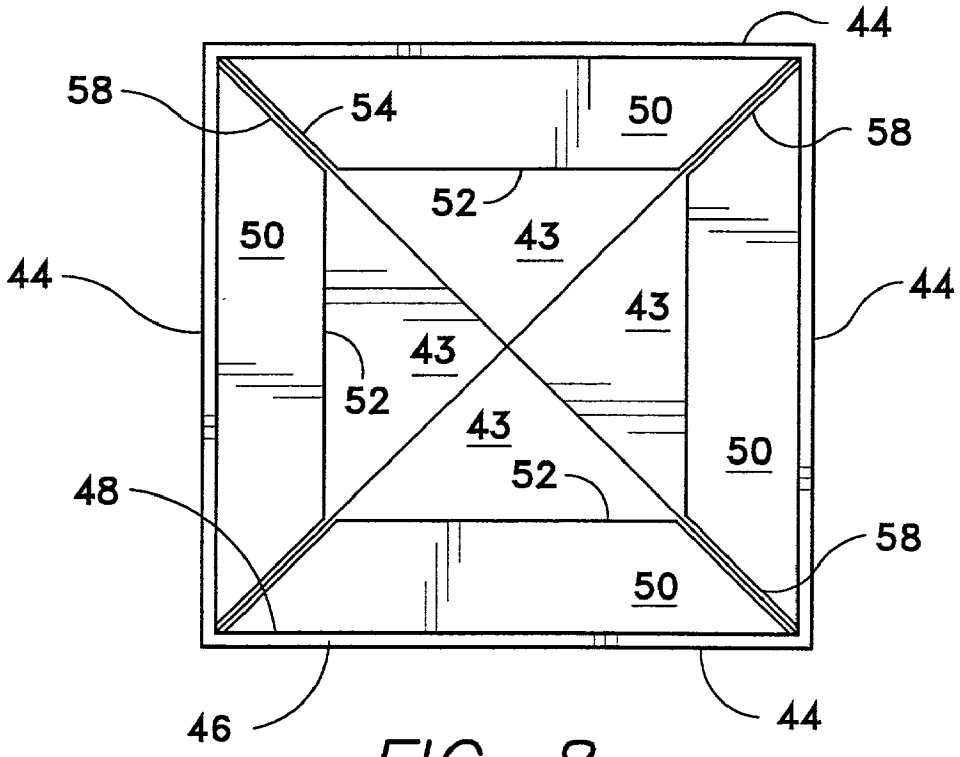

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FIG. 8

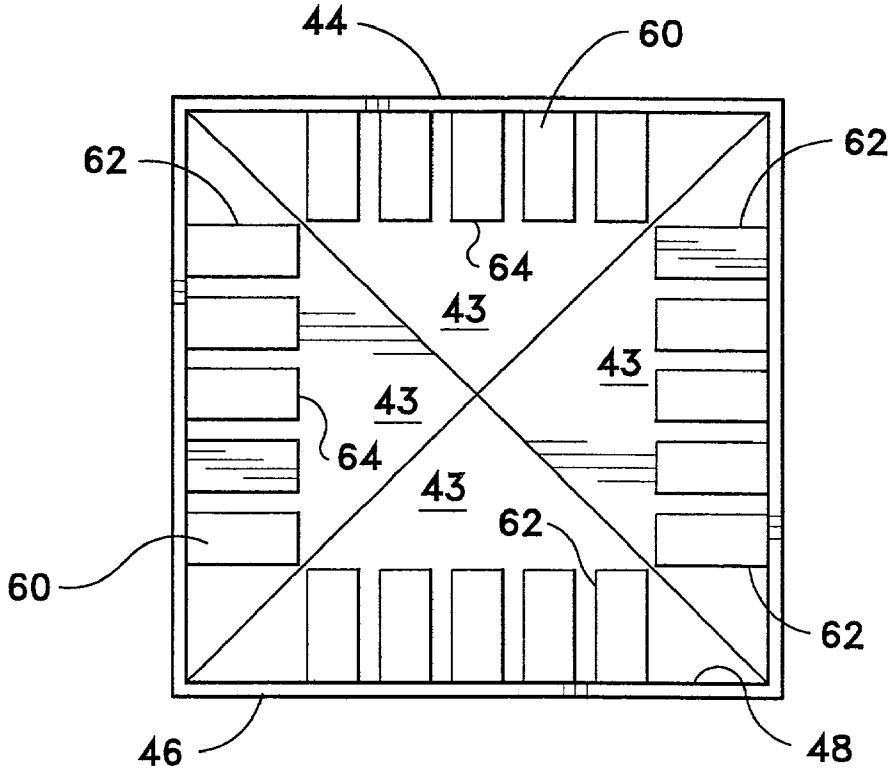
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FIG. 9

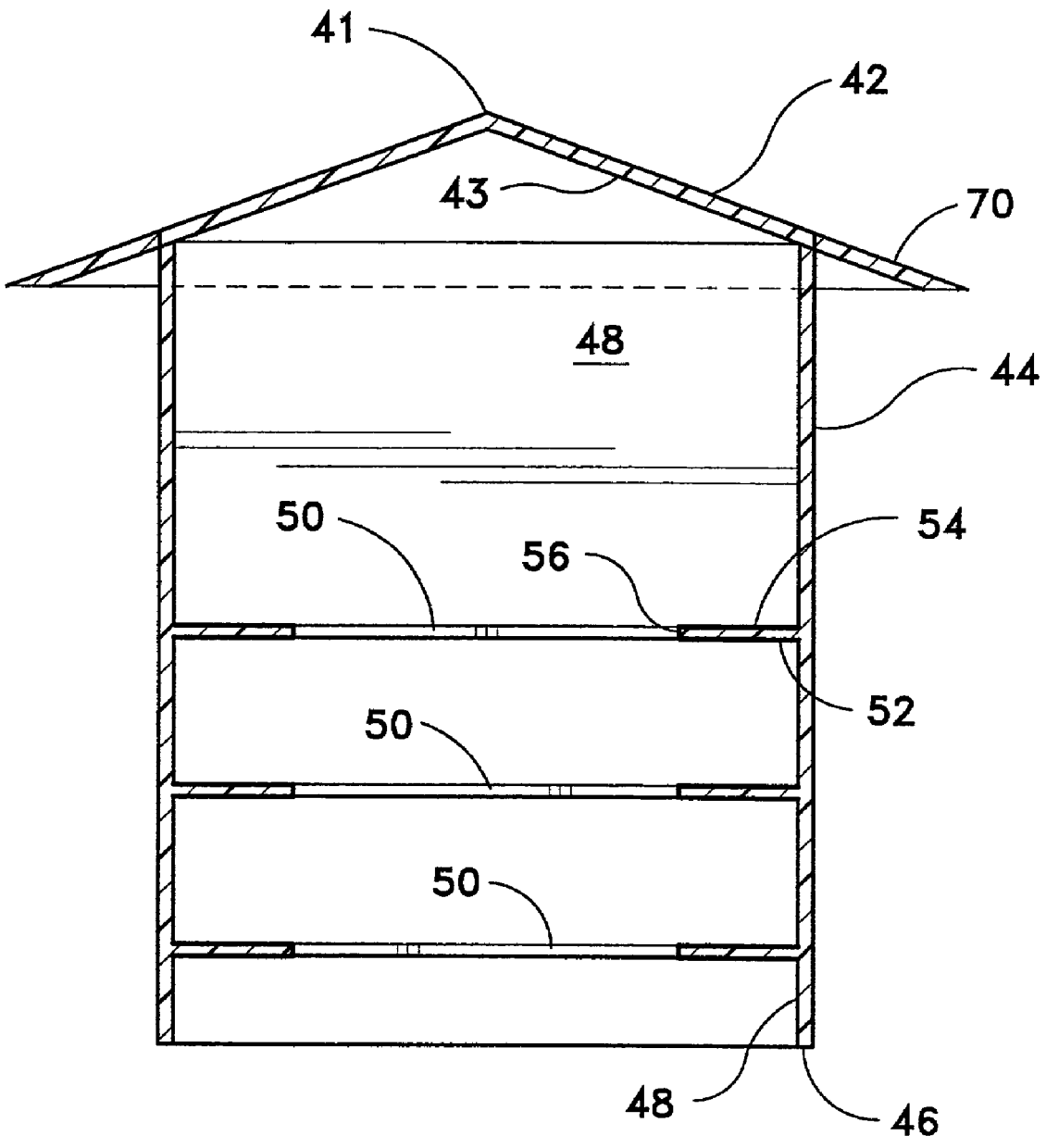


FIG. 10

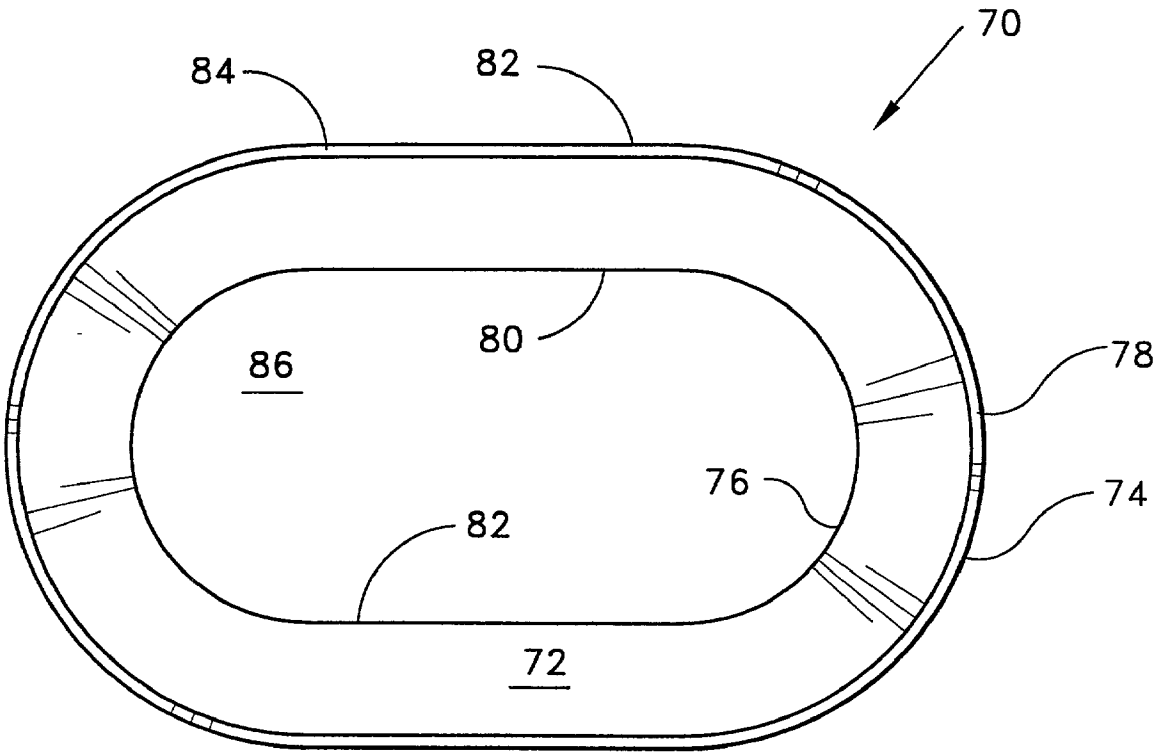


FIG. 11

# POST CAP

## BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to fencing and post accessories. More particularly, the present invention relates to caps for protection of the upper exposed end of wooden posts, utility poles, or pilings.

[0003] 2. Description of the Related Art

[0004] Wooden posts for fencing, utility poles, and pilings for docks represent a substantial investment in money and installation labor. Since the wood grain is open to the elements, unprotected posts are subject to deterioration. Posts are protected by cutting at an angle or shaping the top which represents a partial solution. Covers such as cans, buckets, or old shoes or boots have been used. Also tin or copper covers have been nailed to and shaped around a post or piling, representing substantial cost in materials and labor. Also, materials such as roofing have been installed on the end of the post. Other covers require adhesive or chemicals which may deteriorate or pollute. These protective covers either are unsightly, expensive, or labor intensive to install and maintain. It would be desirable to provide an inexpensive, pre-made cap, preferably made of plastic in one injection-molded piece which may be easily pushed down over each post, providing an attractive, uniform cover. The cover should have internal structure to maintain the cover upright and deter removal.

[0005] U.S. Pat. No. 2,450,345, issued Sep. 28, 1948, to Kervin describes a protective cap for wood posts, poles, and the like. The cap has engaging members on the interior surface to deter removal.

[0006] U.S. Pat. No. 3,250,050, issued May 10, 1966, to Finger et al. describes a circular pole cap for protecting a utility pole.

[0007] U.S. Pat. No. 5,421,556, issued Jun. 6, 1995, to Dodge et al. describes a square post cover having a pyramidal shape for covering a square cross section post.

[0008] U.S. Pat. No. 5,853,167, issued Dec. 29, 1998, to West et al. describes a decorative cover for posts.

[0009] U.S. Pat. No. 164,979, issued Jun. 29, 1875, to Davenport, describes a decorative metal cap for wooden posts.

[0010] None of the above inventions and patents, taken either singularly or in combination, is seen to describe the instant invention as claimed. Thus, a post cap solving the aforementioned problems is desired.

## SUMMARY OF THE INVENTION

[0011] The present invention is a one piece, injection molded, cap for covering the upper end of wooden posts, poles, and pilings. The cap is made in discrete, sizes and shapes having internal structure to allow installation of each size over a range of diameters or dimensions of posts. The caps are made to cove; shapes generally used in posts, such as round and square. The caps are decorative and the internal structure assures the caps remain in a desired vertical uniform position relative to the post so a row of posts has an attractive appearance. The internal structure comprises tiered rows of collars or fingers which are expanded or forced upward at their internal edge or ends so as to engage the post and resist removal of the cap. The external shell of the cap is larger than the post and the internal fingers bridge the gap. This allows for a single sized to be useful for posts within a range of diameters. A series of sizes of caps is provided to cover a large range of post sizes. The caps may be provided in common shapes so as to fit over posts having cross sections which are round, square, oval, or oblong. Caps could also be sized to fit over vertical pipe or hydrants.

[0012] Accordingly, it is a principal object of the invention to provide a protective cap for covering a post, utility pole, or piling.

[0013] It is another object of the invention to provide a cap as above which is easily installed.

[0014] It is a further object of the invention to provide a cap as above which has internal structure to maintain the cap in a uniform upright position.

[0015] Still another object of the invention is to provide a cap which is one piece design made of injection molded plastic.

[0016] Yet another object of the invention is to provide a cap as above which has internal structure to resist removal of the cap once installed.

[0017] It is an object of the invention to provide improved elements and arrangements thereof for the purposes described which is inexpensive, dependable and fully effective in accomplishing its intended purposes.

[0018] These and other objects of the present invention will become readily apparent upon further review of the following specification and drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0019] **FIG. 1** is an environmental, perspective, broken away view of a round post cap mounted on a round post according to the present invention.

[0020] **FIG. 2** is a section view of the post cap drawn along lines **2-2** of **FIG. 1**.

[0021] **FIG. 3** is a bottom view of the post cap of **FIG. 1** prior to mounting on a post.

[0022] **FIG. 4A** is a bottom view of a post cap similar to that of **FIG. 3** having radially slitted rings.

[0023] **FIG. 4B** is a bottom view of the post cap of **FIG. 4A** illustrating the configuration of the slitted rings as installed on a post.

[0024] **FIG. 5** is a bottom view of a post cap similar to that of **FIG. 3** having spaced fingers.

[0025] **FIG. 6** is an environmental, perspective, broken away view of a square post cap mounted on a square post according to the present invention.

[0026] **FIG. 7** is a section view of the post cap drawn along lines **7-7** of **FIG. 6**.

[0027] **FIG. 8** is a bottom view of the post cap of **FIG. 6** prior to mounting on a post.

[0028] **FIG. 9** is a bottom view of the post cap similar to that of **FIG. 6** having spaced fingers.

[0029] **FIG. 10** is a view similar to that of **FIG. 7** illustrating an embodiment of the invention having an overhanging eave.

[0030] **FIG. 11** is a bottom view similar to that of **FIG. 3** illustrating a post cap for a post with two flat side and rounded ends.

[0031] Similar reference characters denote corresponding features consistently throughout the attached drawings.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0032] The present invention is one piece, injection molded, cap for cover the upper end of wooden posts, poles, and pilings. The cap is made in discrete, sizes and shapes and having internal structure to allow installation of each size over a range of diameters or dimensions of posts. The caps are made to cover shapes generally used in posts, such as round and square. The caps are decorative and the internal structure assures the caps remain in a desired vertical uniform position relative to the post so a row of posts has an attractive appearance.

[0033] Referring to FIGS. **1-5** there are shown various views and embodiments of the present invention for protecting the post top end of a round post. Round post RP having post top end PT is covered by round post cap **10**. Post cap **10** comprises a domed or hemispherically shaped head **12** having a head inner wall **13** and a cylindrical sidewall **14** extending downward and depending from the periphery of head **12** and ending at post cap lower edge **16**. Post cap **10** has an inner sidewall **18** reaching upward to domed head inner wall **13**. Post cap **10** has an inner structure such as post cap gripping rings **20**, horizontally disposed and vertically spaced along inner sidewall **18** and are preferably integral therewith. There are preferably at least two gripping rings and preferably three rings provided to assure a vertical orientation of the post cap and sufficient grip to resist removal from a post. Post cap gripping rings **20** each have a lower side **22**, an upper side **24**, and an inner edge **26**. The gripping ring may be a solid collar (see FIGS. **1-3**), a radially slitted collar(see **FIGS. 4A and 4B**) or may comprise a plurality of spaced teeth(see **FIG. 5**). Comparing **FIG. 1** and **FIG. 2**, the gripping ring **20** is of such a material as a soft or elastic plastic material such that the inner edge **26** is expansible and stretches to fit over the round post RP when the cap **10** is pushed downward over the post during installation. The gripping ring inner edge **26** is urged against the post, thus maintaining the cap in an upright position and providing resistance to removal of the cap **10** from the post. The stretching capability of gripping ring **20** allows a single size of post cap to be effective in gripping and covering a range of diameters of posts. All standard sizes of posts or pilings may thus be covered by a relatively small number of standard sizes of post cap according to the invention.

[0034] An alternative embodiment of the invention as shown in **FIG. 4A** has radial slits cut radially through the gripping ring forming gripping ring portions **28** having ring portion side edges **30** and ring portion inner edges **32**. This embodiment allows the use of stiffer, less elastic material to be used for the post cap. **FIG. 4B** shows how the ring portions **28** would be spread when installed over a post(not shown).

[0035] Another embodiment of the invention as shown in **FIG. 5** has spaced gripping fingers **34** serving as the gripping rings. Gripping fingers **34** have side edges **36**, and inner edges **38** for gripping the post surface. The gripping fingers **34** may be vertically aligned at different levels, or they may be mutually vertically offset (not shown).

[0036] Referring to FIGS. **6-10**, there are shown various views and embodiments of the inventive cap post as configured to cover square posts. Square post cap **40** covers the upper end of square post SP. Square post cap **40** is preferably of a pyramidal design with four triangular portions forming a peak **41** of cap head **42**. Cap head **42** has a conforming peaked inner head walls **43** and is connected with four side walls **44** at the periphery of cap head **42**. Side walls **44** extend downward from the periphery, forming a depending vertical tube having a square cross section and ending at lower edge **46**. Square post cap **40** has inner walls **48** and horizontally disposed gripping flaps **50**, vertically spaced along side walls **44**. Gripping flaps **50** have an inner edge **52** for engagement with the square post SP. Gripping flaps **50** have lower sides **52**, upper sides **54** and inner edges **56** and may be in the form of a solid collar (not shown) of expansible material as in the round embodiment of **FIG. 3**, or a collar with slits at the corners to form corner edges **58** (see **FIG. 8**).

[0037] Another embodiment of the invention is shown in **FIG. 9**, wherein the gripping collars or flaps **50** are replaced by spaced fingers **60** which have side edges **62** and engage the square post with inner edges **64**. As in the embodiment of **FIG. 5**, The gripping fingers **60** may be vertically aligned at different levels, or they may be mutually vertically offset (not shown).

[0038] The embodiment of **FIG. 10** is identical to that of **FIGS. 6 and 7** with the addition of an overhanging eave **70**. The eave **70** provides a pleasing, decorative appearance.

[0039] As in the embodiments for round posts, those for square posts require each cover a range of post sizes.

[0040] Referring to **FIG. 11**, there is shown a bottom view similar to that of **FIG. 3** of another embodiment of the invention wherein there is provided a cap for a post having opposing parallel flat sides and opposing rounded ends. Post cap **70** has horizontally disposed, vertically spaced, expansible gripping collars **72**. Post cap **70** has opposing rounded side walls **74**, ending in curved lower ends **78**. Gripping collars **72** have rounded, expandable opposing inner edges **76**. Likewise, post cap **70** has opposing flat side walls **82**, ending in straight lower ends **84**. Gripping collars **72** have opposing flat expandible inner edges **80** and **82**.

[0041] As is clear from the above embodiments, post caps may be made for any desired shape of post or piling according to the invention. The preferred material of the inventive caps is plastic which is preferably injection molded in a single piece to form the desired cap. Other materials, such as aluminum or other metal may by employed in the construction of the inventive post caps. In the case of metal, spaced finger internal structures are preferred due to the inelasticity of metals. A variety of sizes of post caps for popular shaped posts may be kept in inventory at a supply store, and custom shapes may be made on order.

[0042] It is to be understood that the present invention is not limited to the embodiments described above, but encompasses any and all embodiments within the scope of the following claims.

I claim:

**1**. A post cap comprising:

a post cap head portion having a periphery generally conforming with an upper end cross section of said post;

a vertical wall depending from said periphery having an outer side wall and an inner side wall, and ending in a lower edge,

an inner structure comprising a plurality of horizontally disposed gripping rings, spaced along said inner side wall and having an inner edge;

said gripping rings being of such construction that said inner edge is expansible so as to forcefully engage the upper portion of a post sidewall when said post cap is urged downward over the upper end of said post;

whereby said post cap is held in a vertical position relative to said post upper end;

whereby said post cap is held tightly to said post so as to deter removal; and

whereby said post cap protects said post upper end from damage by exposure to the weather.

**2**. The post cap of claim 1, wherein said post is round in cross section and said post cap head portion is in the general form of a hemisphere, said vertical wall being cylindrical in form.

**3**. The post cap of claim 2, wherein said gripping rings are radially slit to form gripping ring portions, said gripping ring portions engaging said post.

**4**. The post cap of claim 2, wherein said gripping ring comprise spaced gripping fingers, said gripping fingers engaging said post.

**5**. The post cap of claim 4, wherein said gripping fingers are mutually vertically offset.

**6**. The post cap of claim 4, wherein said gripping fingers are vertically aligned.

**7**. The post cap of claim 1, wherein said post is square in cross section and said post cap head portion is in the general form of a pyramid, said depending vertical wall being tubular in form and having a square cross section.

**8**. The post cap of claim 7, wherein said gripping rings are in the form of squares, said squares conforming to said depending vertical wall and engaging said post along corresponding flat surfaces thereof.

**9**. The post cap of claim 8, wherein said squares are slit at each of four corners of said square to form gripping flaps engaging said post.

**10**. The post cap of claim 8, wherein said squares comprise gripping spaced fingers having inner edges engaging said post.

**11**. The post cap of claim 1, wherein said post has opposing curved sides and opposing flat sides in cross section and said post cap head portion is in the general form of an oblong hemisphere, said depending vertical wall being oblong in form.

**12**. The post cap of claim 11, wherein said gripping rings are horizontally disposed and vertically spaced along said depending oblong wall.

**13**. The post cap of claim 12, wherein said gripping rings are comprised of spaced gripping fingers having inner edges engaged with said post.

**14**. The post cap of claim 1, wherein said cap is a one piece integral structure.

**15**. The post cap of claim 1, wherein said cap is injection molded plastic.

* * * * *