



US005773756A

United States Patent [19]

[11] Patent Number: **5,773,756**

DiTullio

[45] Date of Patent: ***Jun. 30, 1998**

[54] **LIGHTWEIGHT AND DURABLE UTILITY PULL BOX FOR PROTECTING SPLICES AND JUNCTIONS OF UNDERGROUND COAXIAL CABLES, ELECTRICAL WIRES AND OPTICAL FIBERS**

4,319,998	3/1982	Anderson	210/86
4,689,145	8/1987	Mathews et al.	210/170
4,759,661	7/1988	Nichols et al.	405/48
4,919,568	4/1990	Hurley	405/43
5,087,151	2/1992	DiTullio	405/43
5,129,757	7/1992	Johnson	405/43
5,267,122	11/1993	Glover et al.	361/704
5,361,930	11/1994	Perry	220/565
5,419,838	5/1995	DiTullio	210/747

[75] Inventor: **Robert J. DiTullio**, Brookfield, Conn.

[73] Assignee: **Cultec, Inc.**, Brookfield, Conn.

[*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,419,838.

FOREIGN PATENT DOCUMENTS

1245180	9/1971	United Kingdom	220/565
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Primary Examiner—Hyung S. Soug
Attorney, Agent, or Firm—Ware, Fressola, Van Der Sluys & Adolphson LLP

[21] Appl. No.: **450,613**

[22] Filed: **May 25, 1995**

[57] ABSTRACT

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 236,409, May 2, 1994, Pat. No. 5,419,838.

[51] Int. Cl.⁶ **H02G 9/00**

[52] U.S. Cl. **174/37; 52/79.1**

[58] Field of Search 174/37, 38; 52/14, 52/79.1; 220/4.02, 565, 484, 327, 669, 670, 671, 674, 675; 361/622, 641, 724, 826

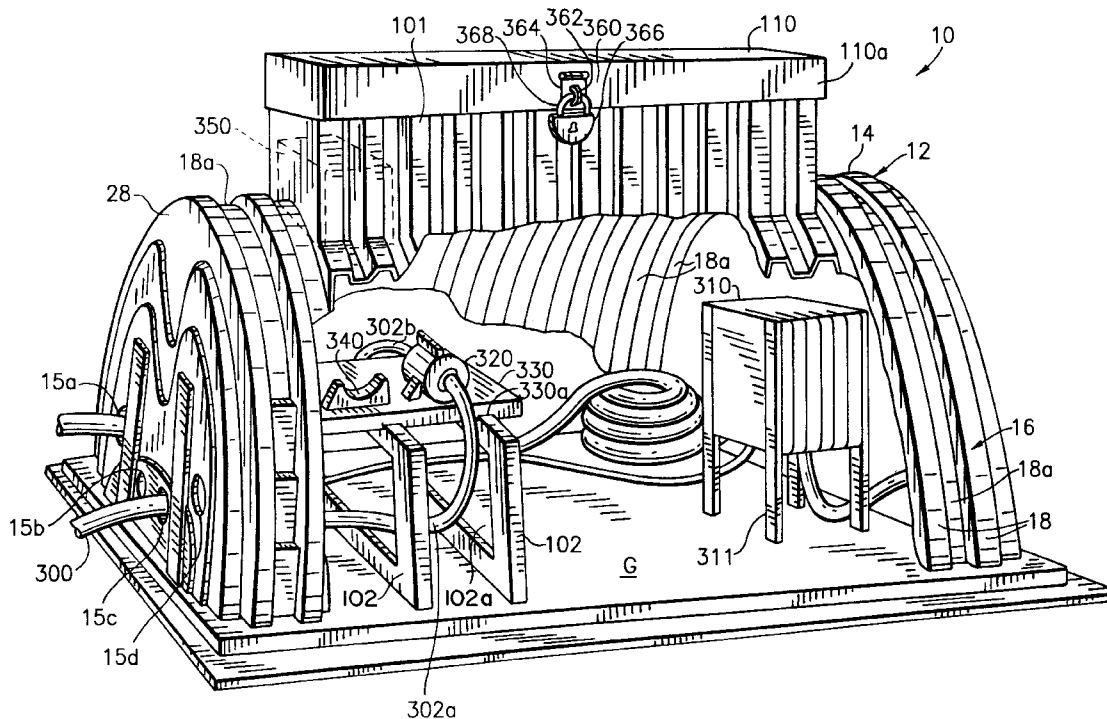
A lightweight and durable utility pull box for storing splices and junctions of underground coaxial cables, electrical wires, and optical fibers, having an elongated main body portion and end walls. The elongated main body portion is made of durable and lightweight plastic material for providing chemical resistance and structural integrity, has side walls with an arch-shaped configuration defining an enlarged inner enclosure for storing splices or junctions for electrical, telephone, coaxial cable or optical fiber cable, and has side walls with outer laterally extending strengthening ribs. The end walls cover the ends of the inner enclosure defined by the elongated main body portion. The elongated main body portion has at least one inlet opening for receiving the electrical, telephone, coaxial cable or optical fiber cable for splicing or joining together and storing inside the enlarged inner enclosure.

[56] References Cited

U.S. PATENT DOCUMENTS

1,349,734	8/1920	Riley	210/155
1,889,325	11/1932	Whaley	210/117
2,996,189	8/1961	Salterbach	210/155
3,282,430	11/1966	Kinne	210/162

23 Claims, 8 Drawing Sheets



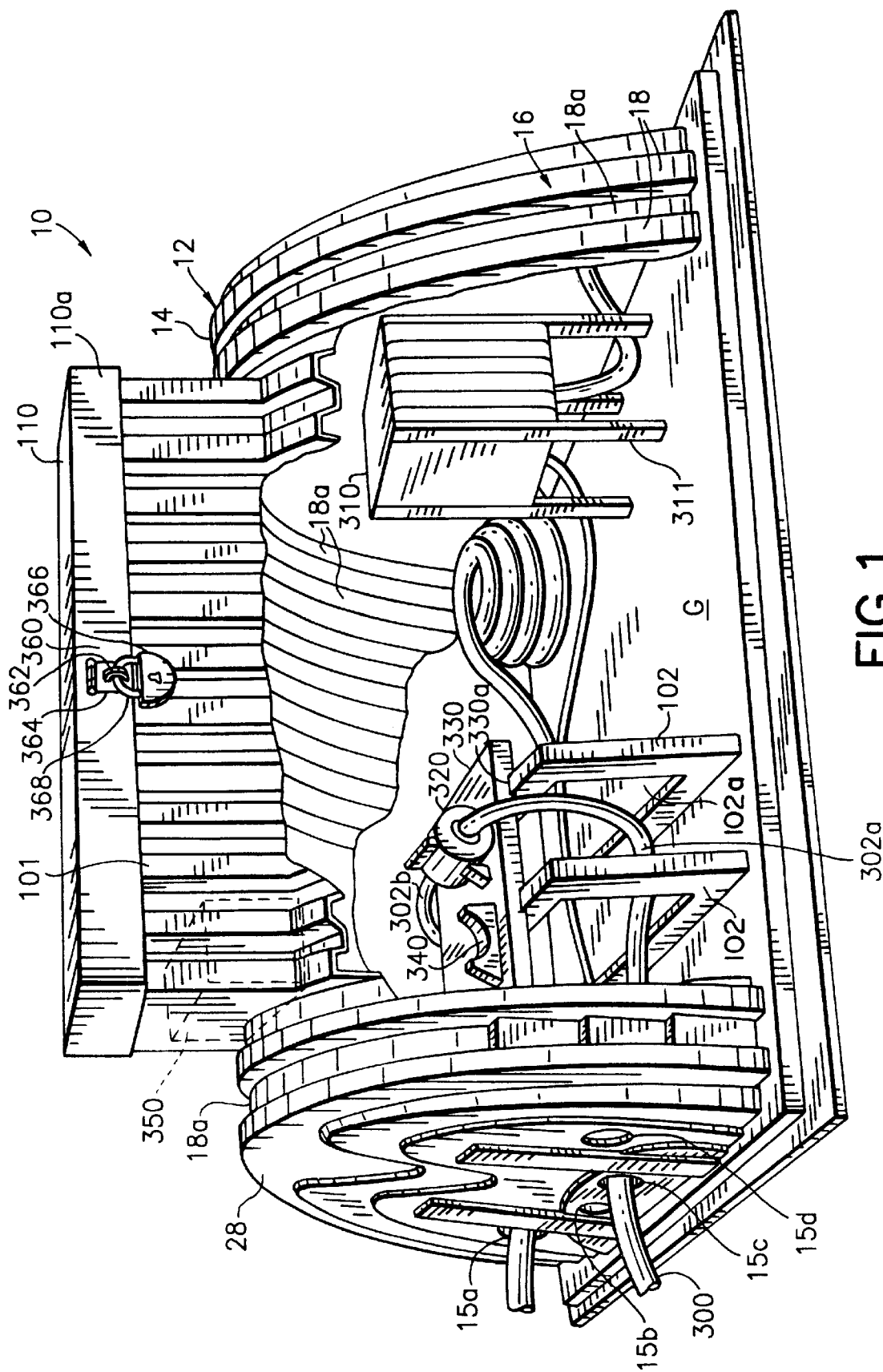


FIG. 1

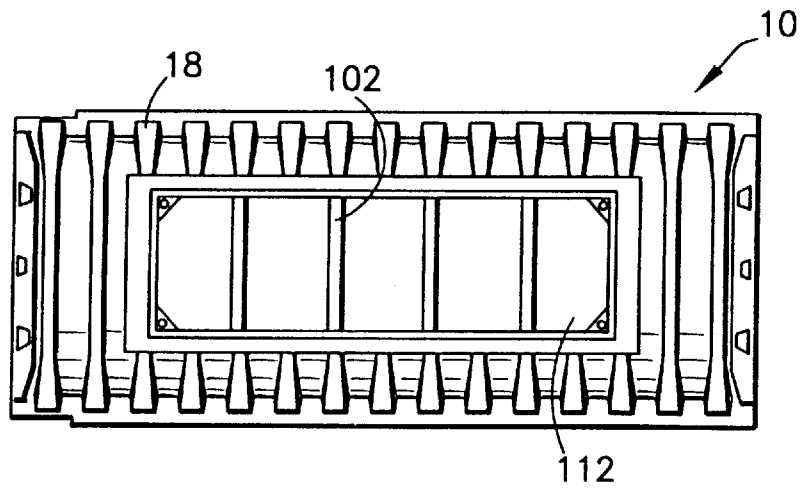


FIG. 2c

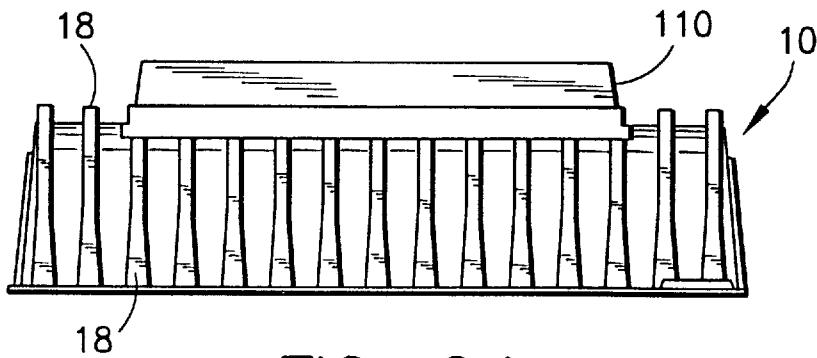


FIG. 2d

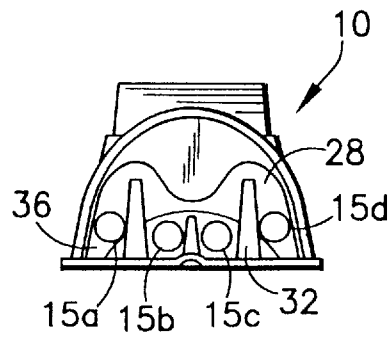


FIG. 2e

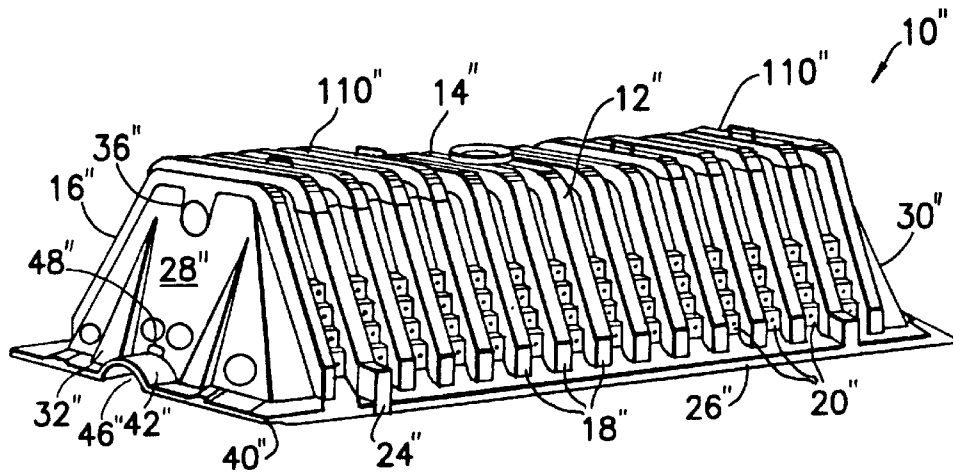


FIG. 3(a)

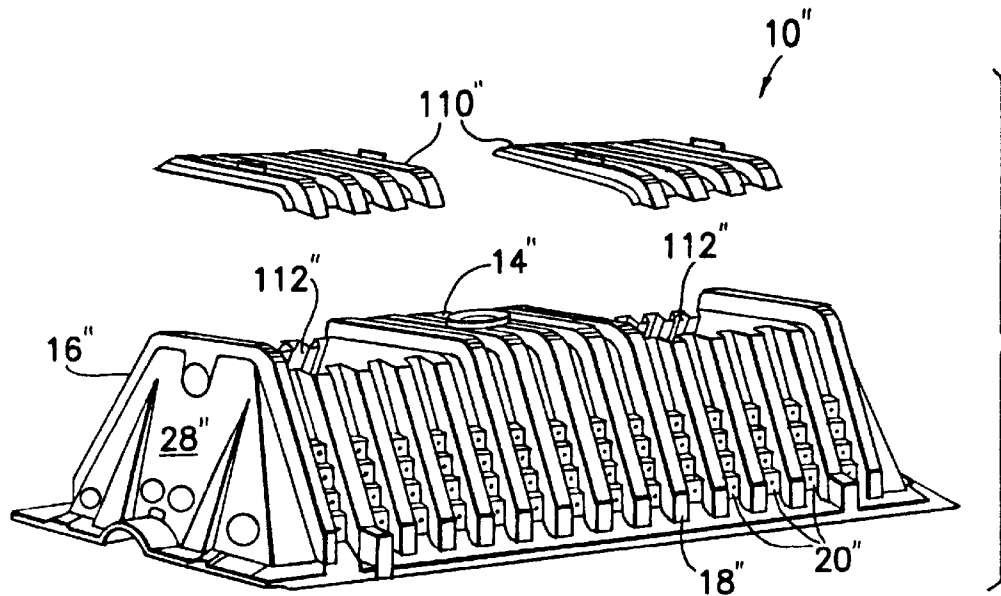


FIG. 3(b)

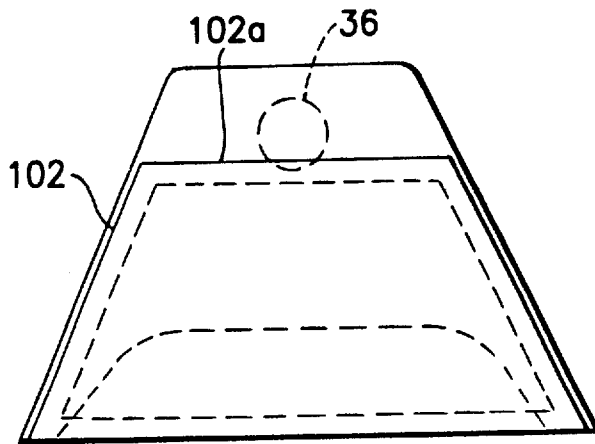


FIG. 4

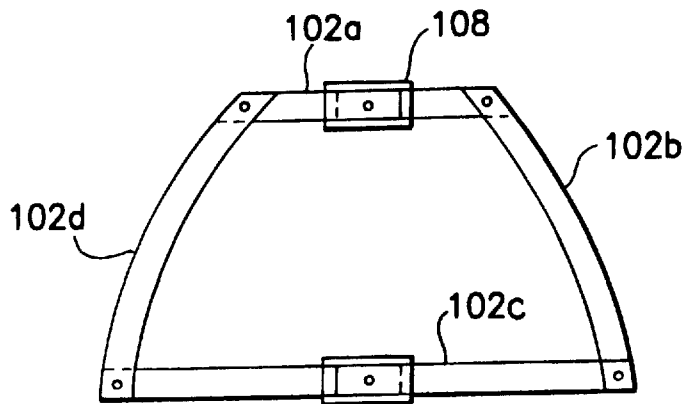


FIG. 5(a)

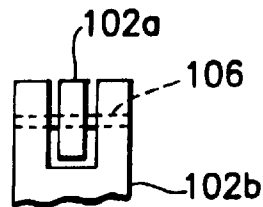


FIG. 5(b)

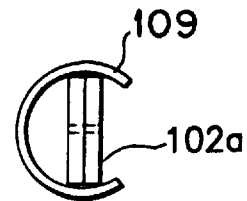


FIG. 5(c)

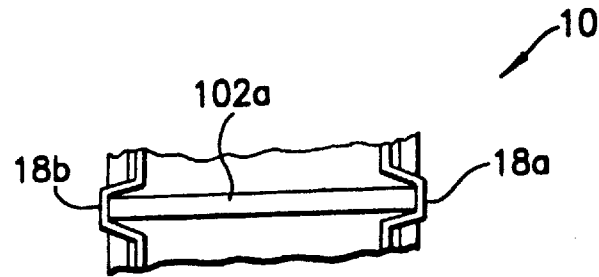


FIG. 6

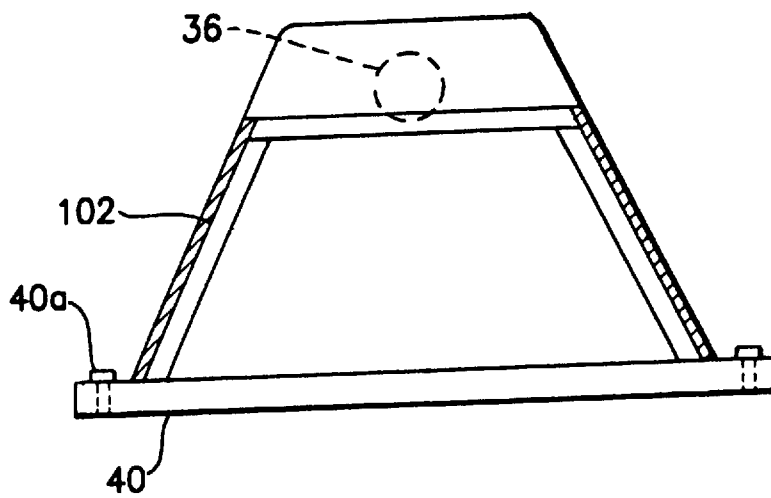


FIG. 7

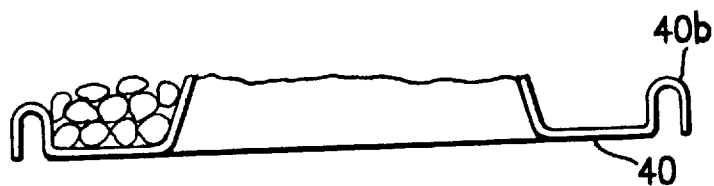
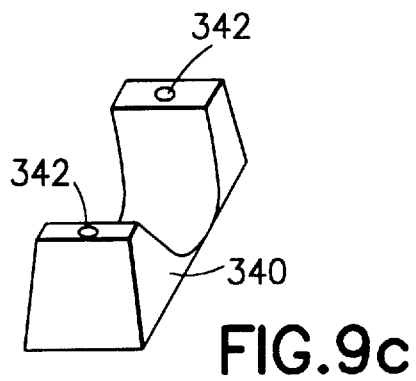
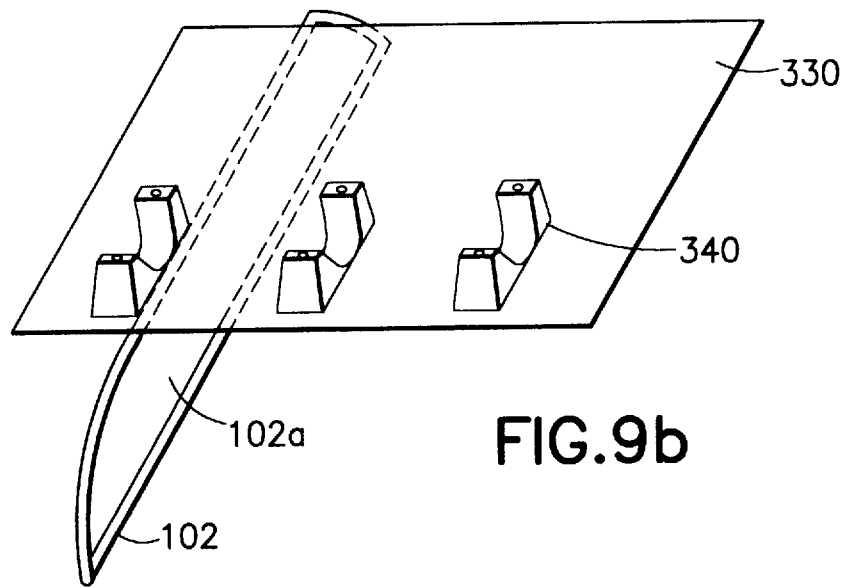
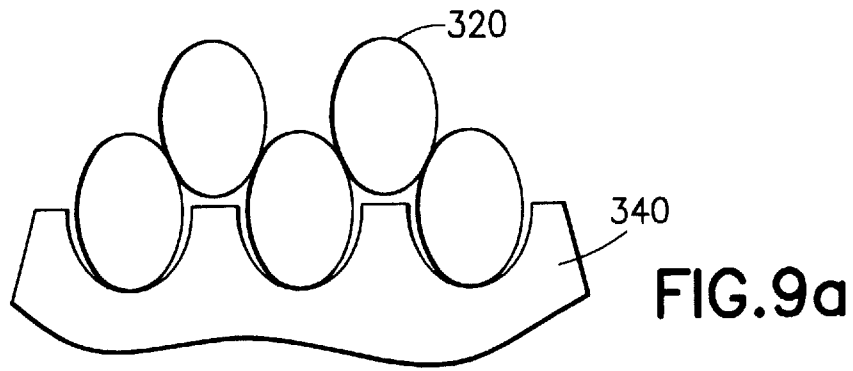


FIG. 8



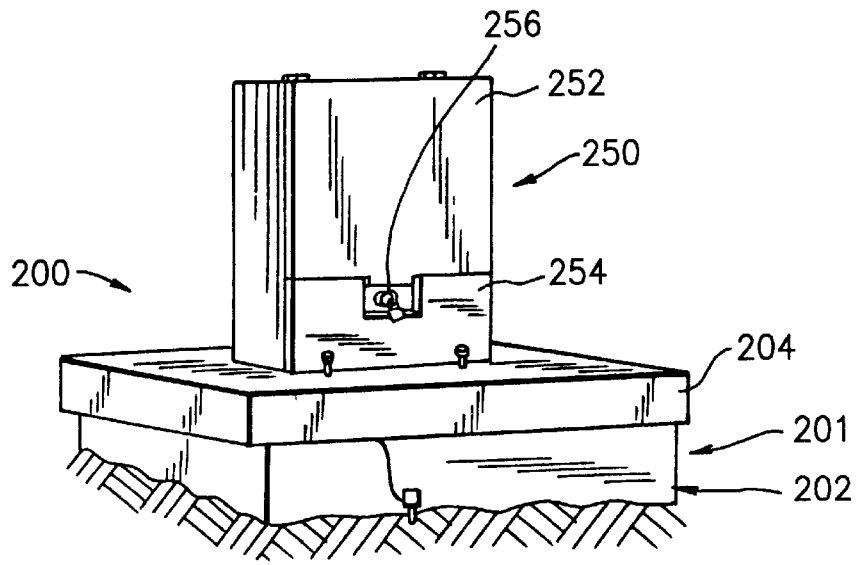


FIG. 10a
PRIOR ART

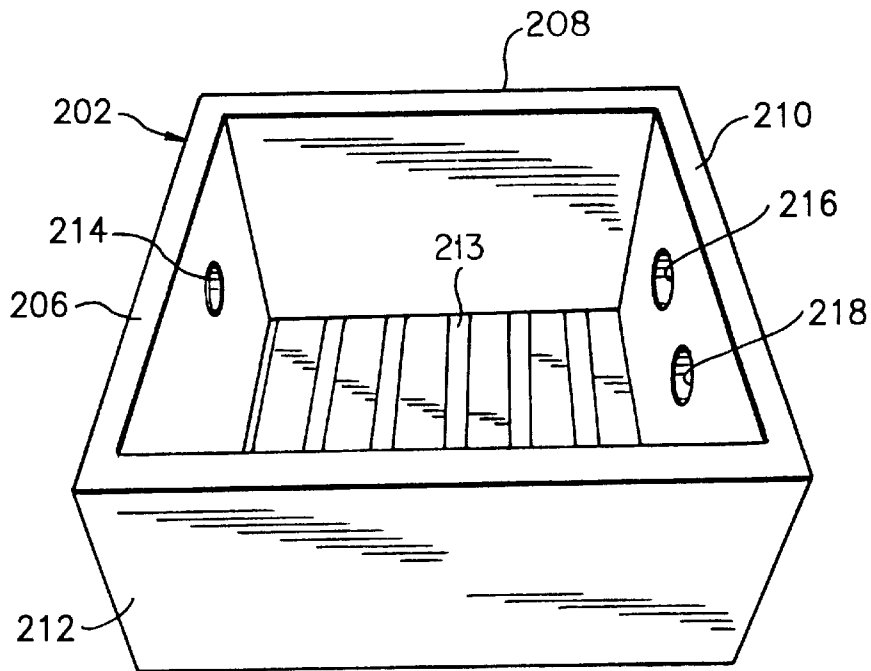


FIG. 10b
PRIOR ART

**LIGHTWEIGHT AND DURABLE UTILITY
PULL BOX FOR PROTECTING SPLICES
AND JUNCTIONS OF UNDERGROUND
COAXIAL CABLES, ELECTRICAL WIRES
AND OPTICAL FIBERS**

This is a continuation-in-part of U.S. application Ser. No. 08/236,409, filed on May 2, 1994, now U.S. Pat. No. 5,419,838 hereby incorporated by reference.

FIELD OF THE INVENTION

The present invention relates generally to a utility pull box, and particularly relates to A utility pull box for storing communication equipment such as an optical network unit, a terminal box, and splices and junctions of underground coaxial cables, electrical wires, and optical fibers.

RELATED PRIOR ART

Utility pull boxes for storing communications equipment including an optical network unit, a terminal box, and splices and junctions of underground coaxial cables, electrical wires, and optical fibers are known in the art. For example, U.S. Pat. No. 5,267,122 in FIG. 12 shows one such underground chamber that is accessible through a hand hole for housing an optical network unit, a splice, and a terminal.

Moreover, FIGS. 10(a) and 10(b) of the instant application show a well-known utility pull box 200 that has a heavy cement lower base 201 and a heavy metal upper lock box 250. As shown in FIG. 10(a), the heavy cement lower base 201 has a lower box portion 202 partially buried in the ground and has a base cover portion 204. As shown in FIG. 10(b), the lower box portion 202 has cement side walls 206, 208, 210, 212, and a wooden floor 213. The cement side wall 206 has an opening 214, and the cement side wall 210 has an opening 216, 218. The openings 214, 216, 218 allow the underground coaxial cables, electrical wires, and optical fiber cables (not shown) to pass into a cavity of the lower box portion 202, where they are joined in a splice or junction (not shown) by a technician. The cavity of the lower box portion 202 stores splices or junctions (not shown) in addition to many extra yards of coaxial cables, electrical wires, and optical fiber cables (not shown). The extra yards are typically necessary so the splice or junction can be pulled out of the lower box portion 202 and away from the pull box 200 so the splice or junction can be worked on by technicians for example in a roadside vehicle, and then replaced in the pull box 200 when the work is done. The base cover portion 204 has an opening therein (not shown) and the heavy metal upper lock box 250 is mounted therein. The heavy metal upper lock box 250 has a metal box 252, a hingedly-connected door 254 and a lock 256 for preventing the swinging door 254 from being opened by unauthorized persons.

One of the important disadvantage of the prior art utility pull boxes is that it is made from concrete, is very heavy, requires heavy machinery such as aerial cranes and many works workers to install it on site, and is typically very costly and time consuming.

SUMMARY OF THE INVENTION

The invention features a molded gallery for storing splices or junctions for electrical, telephone, coaxial cable or optical fiber cable, having an elongated main body portion with side walls and end walls, and being made of durable and lightweight plastic material for providing chemical resistance

and structural integrity. The elongated main body portion has an arch-shaped configuration defining an enlarged inner enclosure for storing splices or junctions for electrical, telephone, coaxial cable or optical fiber cable. The side walls are formed with stiffening rib and groove corrugations forming upstanding outer laterally extending strengthening ribs alternating with inwardly protruding grooves. The end walls enclose the ends of the inner enclosure in the elongated main body portion. The elongated main body portion has at least one inlet opening for receiving the electrical, telephone, coaxial cable or optical fiber cable for splicing or joining together and storing inside the enlarged inner enclosure.

Accordingly, a principal object of the present invention is to provide a lightweight and durable utility pull box for storing and protecting splices and junctions of underground coaxial cables, electrical wires, and optical fiber cables.

A principal advantage of the present invention is to provide a utility pull box that is economical and convenience to install.

None of the known patents discussed above suggests apparatus having such an economical and convenient means.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the features of construction, combination of elements, and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the invention will be indicated in the claims.

A DESCRIPTION OF THE DRAWING

For a fuller understanding of the nature and objects of the invention, reference should be made to the following detailed description taken in connection with the accompanying drawings, not in scale, in which:

FIG. 1 shows a cut-away illustration of a utility pull box of the present invention.

FIGS. 2(a), 2(b), 2(c), 2(d), 2(e) are illustrations of the utility pull box, including two perspective views 2(a) and 2(b) and top, side and front views 2(c), (d) (e).

FIGS. 3(a) and (b) are perspective views of another embodiment of the utility pull box of the present invention, respectfully assembled and exploded.

FIG. 4 is a cross-sectional end diagrammatic view of the utility pull box shown in FIG. 3 having a filter frame arranged therein.

FIGS. 5(a), (b) and (c) are diagrammatic views of the filter frame shown in FIG. 4.

FIG. 6 is a partial, cutaway top view of the filter frame shown in FIG. 4, installed in the pull box.

FIG. 7 is a cross-sectional diagrammatic end view of the utility pull box shown in FIGS. 3(a) and 3(b) having a filter frame arranged therein.

FIG. 8 is a fragmentary cross-sectional end elevation view of another embodiment of the utility pull box.

FIGS. 9(a), (b) and (c) show diagrams of the cradle shown in FIG. 1.

FIGS. 10(a) and 10(b) are perspective views of a utility pull box known in the prior art.

BEST MODE FOR CARRYING OUT THE
INVENTION

FIG. 1 shows a gallery described in the aforementioned U.S. application Ser. No. 08/236,409, now U.S. Pat. No.

5,419,838 which can also be used as a utility pull box for storing and protecting communication equipment such as an optical network unit, a terminal and a junction or splice for electrical, telephone, CATV or optical fiber cables. The utility pull box is generally indicated as **10**.

In FIG. 1, the utility pull box **10** is formed by an elongated main body portion **12** having an arched-shape configuration defining an enlarged inner enclosure for storing splices or junctions for electrical, telephone, coaxial cable or optical fiber cable. The elongated main body portion **12** has a top domed wall **14** and two downwardly inclined sidewalls **16** with stiffening ribs and groove corrugations forming upstanding, laterally extending strengthening ribs **18** alternating with inwardly protruding grooves spaced longitudinally along the sidewalls **16**. The elongated main body portion **12** also has corresponding inner groove corrugations **18a**. The upstanding, laterally extending outer strengthening ribs **18** and the corresponding inner strengthening groove corrugations **18a** provide structural strength and integrity to the utility pull box **10** for supporting top-down and lateral loads when the utility pull box **10** is buried underground.

The utility pull box **10** is made from high density polyethylene for chemical resistance and structural integrity. It weighs about 100 pounds, and has typical dimensions of about 54 inches wide, about 94 inches long, and about 38 inches deep, and has about 60 cubic feet of storage space, although the scope of the invention is not intended to be limited to such dimensions. Embodiments are envisioned having larger or smaller dimensions with substantially the same proportions. With such dimensions, many such utility pull boxes can be transported in a single standard pickup truck.

As shown in FIGS. 1 and 2, the utility pull box **10** has end walls **28, 30** with rib-like stiffening protuberances **32** and **39** located on the ends of the main body portion **12**. As shown, the end wall **28** and protuberance **39** have 4 access openings **15a, 15b, 15c, 15d** for receiving underground coaxial cables, electrical wires, and optical fibers indicated as **300** in FIG. 1. The end wall **30** and the protuberance **39** on the other end wall (not shown) of the utility pull box **10** may also have similar access openings (not shown). As shown, the access openings **15a, 15b, 15c, 15d** are wide enough for fitting a 4 inch diameter cable. However, the scope of the invention is not intended to be limited to where the access opening are located on the elongated main body portion or any such dimensionality of the access openings **15a, 15b, 15c, 15d** or the cable. Embodiments are envisioned having the access openings in the side walls **16** or the top wall **14**. The coaxial cables, electrical wires, and optical fibers **300** may carry video signals, telephony signals, electrical, etc.

As shown, the utility pull box **10** has a splice or junction **320** arranged inside the enlarged inner enclosure. Typically, coaxial cables, electrical wires, and optical fibers **300** can only be manufactured to be so long. Therefore, hundreds or thousands of different coaxial cables, electrical wires, and optical fibers **300** may have to be spliced together over great distances to connect the geographic location where a cable, electrical or telephone signal originates to the geographic location where the residential subscriber receives the signal. Because of this, coaxial cables, electrical wires, and optical fibers have to be spliced or joined together in order to carry electric, telephony and video signals over great distances. As shown, the utility pull box **10** has a splice or junction **320** arranged therein which typically connects, for example, one coaxial cable **302a** to another coaxial cable **302b**, or one electrical wire another electrical wire, or one optical fiber to another optical fiber. Forming such a splice or junction **320**

is a highly technical and delicate process, which is typically performed by technicians with highly specialized tools in a roadside vehicle which can be as far as 100 foot away from where the utility pull box **10** is buried in the ground. Because of this, the utility pull box **10** must store about 150 feet of the coaxial cable, electrical wire, or optical fiber **300** for reaching the nearby roadside vehicle. When the splice or junction **320** is complete, it must be carefully arranged back inside the utility pull box **10**. The utility pull box **10** protects the splice or junction from undesirable influence caused by adverse weather conditions or mischievous tampering by third parties.

In addition, the utility pull box **10** has a raised top wall **101** with a raised access portal **112** (FIG. 2(a)) on the domed top wall **14**. The raised access portal **112** is about 20 inches wide and 46 inches long and large enough for a workman to fit through readily, and can be dimensioned to be large enough so the technician can access the splice or junction **320** from within the enlarged inner enclosure and perform the splice or junction right inside the utility pull box. As discussed above, the scope of the invention is not intended to be limited to these dimensions, because embodiments are envisioned having larger or smaller dimensions with substantially the same proportions. A removable cover **110** is provided for covering the raised access portal **112**. As shown in FIG. 1, the removable cover **110** can be hinged on one side. The utility pull box **10** also has a bottom opening for accessing the enlarged inner enclosure, although embodiments are envisioned having a bottom cover, not shown.

As shown in FIG. 1, the utility pull box **10** also has a locking means generally indicated as **360** for locking the removable cover **110**. As shown, the locking means **360** includes a staple or bail **362**, a hasp **364** and a padlock **366**. The staple or bail **362** is secured to the raised upper wall **101**. The hasp **364** is connected to a side panel **110a** of the removable cover **110** and has an opening for receiving the staple or bail, and the padlock **366** has a bolt member **368** that passes through the staple or bail **362** for locking the removable cover **110**. However, the scope of the invention is not intended to be limited to any such particular locking means.

Inside, the utility pull box **10** also includes a splice or junction table **330** mounted on two or three open frames **102**, for supporting and elevating the splice or junction **320** thereon. The frame **102** also enhances the overall strength and the structural integrity of the utility pull box **10**. The table **330** has corresponding notches generally indicated as **330a** on its underside for receiving the frames **102** to prevent the splice or junction table **330** from sliding off the two frames **102**. The splice or junction table **330** has at least one splice cradle **340** secured thereto, each for securing the splice or junction to the table **330**. The splice cradles **340** are also shown in FIGS. 9(a), (b) and (c) and each have holes **342** for quick ties or security cables (not shown) to secure the splice or junction **320** to the table **330**.

Each open frame **102** is engaged in a respective pair of the laterally extending inner strengthening corrugations **18b**. As shown in FIGS. 1 and 5(a), (b) and (c), the open frames **102** can be passed through the raised access portal **112** (FIG. 2(a)). The open frames **102** each have a central opening generally indicated as **102a** so the electrical, telephone, coaxial cable or optical fiber cable can pass through each of the frames **102**.

FIG. 5(a) shows an embodiment in which the open frame **102** is collapsible and which folds up to pass through the raised top portal **112**. FIG. 6 best shows how the frame **102**

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is engaged in the inner corrugations **18a** of the side wall **16** of gallery **10**. Each open collapsible frame **102** has a hinge and a locking means for holding to prevent the hinge from flexing or bending. The locking means includes a PVC pipe with a 90 degree cut for fitting over and surrounding the hinge and said PVC pipe is turned **90** degrees to prevent said hinge from bending.

As shown in FIG. **1**, the utility pull box **10** may have an optical network unit **310** installed inside the enlarged inner enclosure, which separates multiplexed video and telephony signals carried by coaxial cables or optical fibers for delivery to different subscriber residences (not shown). The optical network unit **310** is shown and described in U.S. Pat. No. 5,267,122, which is hereby incorporated by reference. As shown in FIG. **1**, the optical network unit **310** is arranged on a pedestal **311** so it is elevated above the ground, generally indicated by the label G. The utility pull box **10** also may have a terminal box **350** mounted on the side wall **16**. Typically, the terminal box **350** connects the separate multiplexed video and telephony signals from the optical network unit for delivery to the subscriber residence. In an alternative embodiment not shown, the optical network unit **310** or terminal box **350** can also be arranged on the splice and junction table **330**.

FIGS. **2(a)**, **2(b)**, **2(c)**, **2(d)** and **2(e)** show the utility pull box substantially similar to the gallery shown in FIGS. **2(a)**, **2(b)** and **2(c)** of U.S. application Ser. No. 08/236,409, which described how the gallery shown in FIGS. **2(a)**, **2(b)**, **2(c)**, **2(d)** and **2(e)** can be adapted as a utility pull box, which is similar in many respects to the galleries shown in FIG. **1** of Pat. No. 5,087,151. The instant application The references numerals used to describe the utility pull box in FIGS. **2(a)**, **2(b)**, **2(c)**, **2(d)** and **2(e)** substantially correspond to the reference numerals used to describe the gallery in U.S. application Ser. No. 08/236,409, and U.S. Pat. No. 5,087,151, subject to the addition or subtraction of an additional single or double apostrophe. The subject matter of U.S. Pat. No. 5,087,151 is hereby incorporated herein by reference.

FIGS. **2(a)**, **2(b)**, **2(c)**, **2(d)**, **2(e)** and FIGS. **3(a)** and **3(b)** show in more detail the utility pull boxes **10** and **10''** used for storing splices and junctions of underground coaxial cables, electrical wires, and optical fibers, particularly for telephone company applications. In FIGS. **2(a)**, **2(b)**, **2(c)**, **2(d)** and **2(e)**, the utility pull box **10** forms an enclosure and has an arched or domed shape. The arched shape allows for molding draft and nesting type stacking and provides structural integrity for the gallery. The utility pull box **10''** shown in FIGS. **3(a)** and **3(b)** has a trapezoidal shape. The utility pull boxes **10**, **10''** can have either an open bottom or a closed bottom depending on the application. In FIGS. **3(a)** and **(b)**, the utility pull box **10''** has sidewalls **16''** which also include nesting lugs **24''** to allow the gallery **10''** to be nested with other similar utility pull boxes without firmly locking thereto and facilitating separation thereof. In FIGS. **2(a)**, **2(b)**, **2(c)**, **2(d)**, **2(e)**, the base portion **26** is designed to support the gallery **10** on the ground. Each end wall **28**, **30** has vertically extending structurally supporting raised ribs or struts **32** thereon. The vertically extending structurally supporting raised struts **32** provide structural support for the end walls **28**, **30** to increase their load carrying capacity. The flange **40** extends outwardly from the end wall **28** and includes an upstanding protuberance **39** dimensionally sized to mate with associated protuberances on an adjoining gallery (not shown). The protuberance **39** also includes an enlarged centrally located locking lug **42**. The other features of the utility pull box **10** are described in detail in Pat. No. 5,087,151, as they pertain to using it as a gallery for storm water management.

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The utility pull box **10** also has a bottom opening, for accessing an enlarged inner enclosure best shown in FIG. **1**.

In other embodiments shown in FIGS. **7** and **8**, the flange **40** has an opening in at least one corner for receiving a set screw **40a** for securing the utility pull box **10** to another surface (not shown). As shown in FIG. **8**, the flange **40** has a ribbed outer rim **40b** for retaining crushed stone piled thereon for anchoring said gallery in place.

It will thus be seen that the objects set forth above, and those made apparent from the preceding description, are efficiently attained and, since certain changes may be made in the above construction without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

What is claimed is:

1. A gallery for storing splices or junctions for electrical, telephone, coaxial cable or optical fiber cable, comprising: an elongated main body portion made of durable and lightweight plastic material for providing chemical resistance and structural integrity, having an arch-shaped configuration defining an enlarged inner enclosure for storing communication equipment such as a splice or junction for electrical, telephone, coaxial cable or optical fiber cable, having side walls formed with stiffening ribs and groove corrugations forming upstanding outer laterally extending strengthening ribs alternating with inwardly protruding grooves, and having end walls enclosing an end of the enclosure in the elongated main body portion; and means for forming at least one inlet opening in the elongated main body portion for receiving the electrical, telephone, coaxial cable or optical fiber cable for splicing or joining together and storing inside the enlarged inner enclosure of the elongated main body portion;

wherein said gallery further comprises a raised top wall having four sides defining a raised top manhole portal to accommodate a person's body for accessing the communication equipment or connection in the enlarged inner enclosure, the raised top wall having stiffening ribs and groove corrugations forming columnar upstanding outer laterally extending strengthening ribs alternating with inwardly protruding grooves, and wherein said gallery also further comprises a removable cover dimensioned to close the raised top manhole portal and lockable in place to close securely the raised top manhole portal.

2. A gallery according to claim **1**, wherein said end walls have strengthening corrugations.

3. A gallery according to claim **1**, wherein said side walls have inwardly extending strengthening corrugations.

4. A gallery according to claim **1**, wherein the gallery further comprises at least two open frames, each engaging in a respective pair of inwardly extending strengthening corrugations.

5. A gallery according to claim **1**, wherein said gallery has a flange around its base for receiving gravel to secure the gallery.

6. A gallery according to claim **1**, wherein the gallery is shaped so as to be stackable with other correspondingly-shaped galleries for conveniently and economically transporting a multiplicity on the back of a single standard pickup truck.

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7. A gallery according to claim 1, wherein said means for forming at least one inlet opening includes an inlet opening in at least one of said end walls.

8. A gallery according to claim 1, wherein said means for forming at least one inlet opening includes an inlet opening in said side walls.

9. A gallery for storing splices or junctions for electrical, telephone, coaxial cable or optical fiber cable, comprising: an elongated main body portion made of durable and lightweight plastic material for providing chemical resistance and structural integrity, having an arch-shaped configuration defining an enlarged inner enclosure for storing communication equipment such as a splice or junction for electrical telephone, coaxial cable or optical fiber cable, having side walls formed with stiffening ribs and groove corrugations forming upstanding outer laterally extending strengthening ribs alternating with inwardly protruding grooves, and having end walls enclosing an end of the enclosure in the elongated main body portion; and means for forming at least one inlet opening in the elongated main body portion for receiving the electrical, telephone, coaxial cable or optical fiber cable for splicing or joining together and storing inside the enlarged inner enclosure of the elongated main body portion;

wherein the gallery further comprises at least two open frames, each engaging in a respective pair of inwardly extending strengthening corrugations; and

wherein the gallery further comprises a splice or junction table overlying said at least two open frames for supporting and elevating at least one splice or junction thereon.

10. A gallery according to claim 9, wherein said gallery further comprises a raised top wall having four sides defining a raised top portal for reaching into and accessing the splice or junction in the enlarged inner enclosure, and a removable cover dimensioned to close said raised top portal.

11. A gallery according to claim 10, wherein said removable cover is hinged.

12. A gallery according to claim 9, wherein said splice or junction table has corresponding notches on its underside for engaging said at least two open frames to prevent the splice or junction table from sliding off said open frames.

13. A gallery according to claim 9, wherein said splice or junction table has at least one splice cradle secured thereto, each for securing a splice or junction to the splice or junction table.

14. A gallery according to claim 13, wherein said at least one splice cradle has holes for anchoring ties or security cables.

15. A gallery according to claim 9, wherein said at least two open frames have a central opening so said electrical, telephone, coaxial cable or optical fiber cable can pass through said at least two open frames.

16. A gallery according to claim 15, wherein said at least two open frames are hingeably collapsible for passing through a raised top access portal.

17. A gallery according to claim 16, wherein said at least two open frames have a hinge and a locking means for holding to prevent the hinge from flexing.

18. A gallery according to claim 17, wherein said locking means is a PVC pipe with a 90 degree cut for fitting over and surrounding the hinge and said PVC pipe is turned 90 degrees to prevent said hinge from bending.

19. A gallery according to claim 9, wherein said gallery has a bottom opening for accessing the enlarged inner enclosure.

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20. A gallery for storing splices or functions for electrical, telephone, coaxial cable or optical fiber cable, comprising:

an elongated main body portion made of durable and lightweight plastic material for providing chemical resistance and structural integrity, having an arch-shaped configuration defining an enlarged inner enclosure for storing communication equipment such as a splice or junction for electrical, telephone, coaxial cable or optical fiber cable, having side walls formed with stiffening ribs and groove corrugations forming upstanding outer laterally extending strengthening ribs alternating with inwardly protruding grooves, and having end walls enclosing an end of the enclosure in the elongated main body portion; and means for forming at least one inlet opening in the elongated main body portion for receiving the electrical, telephone, coaxial cable or optical fiber cable for splicing or joining together and storing inside the enlarged inner enclosure of the elongated main body portion;

wherein the gallery further comprises an optical network unit arranged inside the enlarged inner enclosure, for separating multiplexed video and telephony signals for delivery to subscriber residences.

21. A gallery according to claim 20, wherein said optical network unit is arranged on a pedestal.

22. A gallery for storing splices or junctions for electrical, telephone, coaxial cable or optical fiber cable, comprising:

an elongated main body portion made of durable and lightweight plastic material for providing chemical resistance and structural integrity, having an arch-shaped configuration defining an enlarged inner enclosure for storing communication equipment such as a splice or junction for electrical, telephone, coaxial cable or optical fiber cable, having side walls formed with stiffening ribs and groove corrugations forming upstanding outer laterally extending strengthening ribs alternating with inwardly protruding grooves, and having end walls enclosing an end of the enclosure in the elongated main body portion; and means for forming at least one inlet opening in the elongated main body portion for receiving the electrical, telephone, coaxial cable or optical fiber cable for splicing or joining together and storing inside the enlarged inner enclosure of the elongated main body portion;

wherein said gallery further comprises a terminal box mounted inside the elongated main body portion.

23. A gallery for storing splices or functions for electrical, telephone, coaxial cable or optical fiber cable, comprising:

an elongated main body portion made of durable and lightweight plastic material for providing chemical resistance and structural integrity, having an arch-shaped configuration defining an enlarged inner enclosure for storing communication equipment or connection such as a splice or junction for electrical, telephone, coaxial cable or optical fiber cable, having side walls formed with stiffening ribs and groove corrugations forming upstanding outer laterally extending strengthening ribs alternating with inwardly protruding grooves, and having end walls enclosing an end of the enclosure in the elongated main body portion; and means for forming at least one inlet opening in the elongated main body portion for receiving the electrical, telephone, coaxial cable or optical fiber cable

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for splicing or joining together and storing inside the enlarged inner enclosure of the elongated main body portion,
wherein said gallery further comprises a raised top wall having four sides defining a raised top manhole portal to accommodate a person's body for accessing the communication equipment or connection in the enlarged inner enclosure, and a removable cover dimensioned to close the raised top manhole portal,

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wherein the gallery further comprises at least two open frames,
wherein said elongated main body portion has a trapezoidal shape in cross-section, and
wherein the at least two open frames have a corresponding trapezoidal shape.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 5,773,756

DATED : June 30, 1998

INVENTOR(S) : DiTullio

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 2, line 38 delete "th present invention" and insert

--the present invention--

Column 2, line 41 delete "2(c), (d) (e)" and insert

--2(c), (d), (e)--

Column 2, line 56 delete "elevation vie" and insert --elevation
view--

Column 7, claim 9, line 14 delete "junction for electrical telephone"
and insert --junction for electrical, telephone--

Column 8, claim 20, line 1 delete "functions for electrical" and insert
--junctions for electrical,--

Signed and Sealed this

Twenty-ninth Day of December, 1998

Attest:



BRUCE LEHMAN

Attesting Officer

Commissioner of Patents and Trademarks