



(51) International Patent Classification:
H02G 3/08 (2006.01)

(21) International Application Number:
PCT/US2017/028568

(22) International Filing Date:
20 April 2017 (20.04.2017)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/325,141 20 April 2016 (20.04.2016) US

(71) Applicant: HUBBELL INCORPORATED [US/US]; 40
Waterview Drive, P.o. Box 1000, Shelton, CT 06484 (US).

(72) Inventors: HUFFSTETLER, Jeffrey Scott; 559 Rex
Lane, Friendsville, TN 37737 (US). FOX, Robert Wilton;
7232 N. Trigonía Road, Greenback, TN 37742 (US).

(74) Agent: HEPNER, Kyle; Michael Best & Friedrich, LLP,
601 Pennsylvania Avenue, NW, Suite 700 South, Washing-
ton, DC 20004 (US).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,

HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KH, KN, KP, KR,
KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC,
SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:
— with international search report (Art. 21(3))

(54) Title: PEDESTAL ENCLOSURE FOR UTILITY COMPONENTS

(57) Abstract: A pedestal housing for utility connections includes a lower section having a plurality of walls, an upper surface, and a bottom opening. A first rim is formed on the lower section positioned below the upper surface. A second rim is formed on the lower section positioned below the first rim. An upper section includes a plurality of walls and a top. The upper section is releasably connected to the lower section to form a housing for receiving one or more utility components. The upper section is configured to mate with one of the first rim or the second rim.

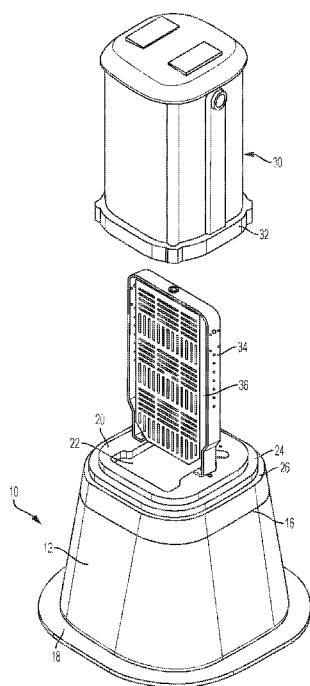


FIG. 5



PATENT APPLICATION
FOR
PEDESTAL ENCLOSURE FOR UTILITY COMPONENTS

RELATED APPLICATION(S)

[0001] This application is based on U.S. provisional application Serial No. 62/325,141, filed April 20, 2016, the disclosure of which is incorporated herein by reference in its entirety and to which priority is claimed.

FIELD

[0002] Various exemplary embodiments relate to pedestals for housing utility transmission components.

BACKGROUND

[0003] Utility grids such as power, communication, or water lines and metering components, require a network of components spread over large areas. At certain points in the network, enclosures and access points are required. For example, at different connection points it is important to provide access to a user or worker to service the connection or run additional lines from the connection point. Examples of typical enclosures include underground vaults and pedestals. Underground vaults provide in ground housing for components while pedestals are typically used for above ground housing and access.

SUMMARY

[0004] According to various exemplary embodiments, a pedestal housing for utility connections includes a lower section having a plurality of walls, an upper surface, and a bottom opening. A first rim is formed on the lower section positioned below the upper surface. A second rim is formed on the lower section positioned

below the first rim. An upper section includes a plurality of walls and a top. The upper section is releasably connected to the lower section to form a housing for receiving one or more utility components. The upper section is configured to mate with one of the first rim or the second rim.

[0005] According to another exemplary embodiment, a base of a pedestal housing for utility connections includes a plurality of walls surrounding an interior and a bottom opening. An upper surface extends from the plurality of walls at least partially over the interior. A first rim is positioned below the upper surface and a second rim positioned below the first rim.

[0006] According to another exemplary embodiment, a pedestal housing for utility connections includes a base and a cover. The base includes a plurality of walls surrounding an interior and a bottom opening. An upper surface extends from the plurality of walls at least partially over the interior. A first rim is positioned below the upper surface. A second rim positioned below the first rim. The cover is configured to mate with the first rim or the second rim.

[0007] According to another exemplary embodiment, a pedestal housing product line for utility connections includes a base, a first cover, and a second cover. The base includes a plurality of walls surrounding an interior and a bottom opening. An upper surface extends from the plurality of walls at least partially over the interior. A first rim is positioned below the upper surface. A second rim is positioned below the first rim. A first cover is configured to mate with the first rim. A second cover is configured to mate with the second rim.

[0008] Another exemplary embodiment is directed to a method of installing a pedestal housing. A base is positioned to receive a utility component. The base includes a plurality of walls surrounding an interior and a bottom opening. An upper surface extends from the plurality of walls at least partially over the interior. A first rim is positioned below the upper surface, and a second rim is positioned below the first rim. A selection is made between one of a first cover and a second cover. The first cover has a first configuration and the second cover has a second configuration. The selected first or second cover is connected to the base.

[0009] Another exemplary embodiment is directed to a method of making a pedestal housing. A base is formed having, a plurality of walls surrounding an interior and a bottom opening, and an upper surface extending from the plurality of walls at least partially over the interior. A first rim is formed below the upper surface, and a second rim is formed below the first rim. A first cover configured to mate with the first rim is formed. A second cover configured to mate with the second rim is formed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The aspects and features of various exemplary embodiments will be more apparent from the description of those exemplary embodiments taken with reference to the accompanying drawings, in which:

[0011] FIG. 1 is a top perspective view of an exemplary pedestal base;

[0012] FIG. 2 is a bottom perspective view of FIG. 1;

[0013] FIG. 3 is a top view of FIG. 1;

[0014] FIG. 4 is a side, sectional view of FIG. 1;

[0015] FIG. 5 is a perspective view of the base of FIG. 1 and a first exemplary cover;

[0016] FIG. 6 is a side, sectional view of FIG. 5 with the cover connected to the base;

[0017] FIG. 7 is a perspective view of the base of FIG. 1 and a second exemplary cover; and

[0018] FIG. 8 is a side, sectional view of FIG. 7 with the cover connected to the base.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

[0019] FIGS. 1-6 show exemplary embodiments that can be incorporated into a pedestal configured to contain various utility components. The pedestal can be secured to the ground or connected to another structure, such as an underground vault. Pedestal housings can be entirely above ground or recessed in the ground and

extending therefrom. According to an exemplary embodiment, the pedestal includes a base 10 and a cover 12 that form a housing.

[0020] FIGS. 1-4 show an exemplary embodiment of a base 10. The base 10 includes a plurality of side walls 12 having rounded corners that surround an interior 14. A bottom opening provides access to the interior 14 from below, allowing utility lines to be run into the base 10. A groove 16 is formed around the side walls 12. A flange 18 extends from a lower portion of the side walls 12. The base 10 includes an upper surface 20 and a central opening 22 that provides access to the interior 14. The upper surface 20 includes one or more mounting features, for example openings, for connecting components to the base 10. In various exemplary embodiments, the number of side walls 12 can vary and can include a single, curvilinear side wall 12. The size, shape, and configuration of the base 10 can vary depending on the desired usage, for example taking into consideration space and load requirements. The base 10 can be made from a material that includes a polymer, such as a thermoplastic, concrete, a polymer-concrete blend, fiberglass or other suitable materials. The base 10 can be formed through a molding or casting procedure.

[0021] In an exemplary embodiment, the base 10 includes a first rim 24 and a second rim 26. The first rim 24 is positioned below the upper surface 20 and positioned above the second rim 26. The second rim 26 extends out from the first rim 24 in a stepped fashion to be wider than the first rim 24. Typically a pedestal base is designed to work with a single type and size of cover. The first and second rims 24, 26 allow the base 10 to accommodate different types of covers and different types of interior components than could be used in other pedestals. The first and second rims 24, 26 receive various covers and help prevent objects and debris from entering the housing.

[0022] FIGS. 5 and 6 show an exemplary embodiment of a first cover 30 and a set of components connected to the base 10. The first cover 30 includes a bottom lip 32 designed to mate with the first rim 24 of the base. The components include a bracket 34 and an insert 36. Other accessories can be incorporated as would be understood by one of ordinary skill in the art. The bracket 34 connects to the upper surface 20 of

the base 10, for example through one or more fasteners. In an exemplary embodiment, the insert 36 includes a mounting plate that receives one or more utility connectors, for example terminal blocks or splitters. The first cover 30 can be made from a material that includes polymer, such as a thermoplastic, concrete, a polymer-concrete blend, fiberglass or other suitable materials. The first cover 30 can be formed through a molding or casting procedure, for example rotational molding.

[0023] FIGS. 7 and 8 show an exemplary embodiment of a second cover 40 and a set of components connected to the base 10. The second cover 40 includes a bottom lip 42 designed to mate with the second rim 26 of the base. Although only a bracket 44 is shown, other accessories can be incorporated as would be understood by one of ordinary skill in the art. The bracket 44 connects to the upper surface of the base, for example through one or more fasteners. The second cover 40 can be made from a material that includes a polymer, such as a thermoplastic, concrete, a polymer-concrete blend, fiberglass or other suitable materials. The second cover 40 can be formed through a molding or casting procedure, for example rotational molding.

[0024] In an exemplary embodiment, the first cover 30 shown in FIG. 5 has a first width and the second cover 40 shown in FIG. 6 has a second width that is greater than the first width. For example, the first cover 30 can have a 10 inch width and the second cover 40 can have a 12 inch width. The first cover 30 can be configured to mate with the first rim 24 while the second cover 40 is configured to mate with the second rim 26.

[0025] According to an exemplary embodiment the base 10 is made from polymer concrete, the first and second covers 30, 40 are made from polyethylene, for example low-density polyethylene (LDPE), and the brackets 34, 44 are made from aluminum. Because the base 10 is made from polymer concrete, more interior room space is provided, allowing for storage of slack cable or similar application in the fiber optic, telephone, or electric utility industries. The base 10 is also capable of being installed so that up to 4-inches of the base can be left above grade level, allowing for protection of the pedestal from damage caused by mowing equipment.

[0026] In various exemplary embodiments, other parts and accessories can be associated with the pedestal as would be understood by one of ordinary skill in the art. For example a lock mechanism may be provided between the cover and the base. Different types of inserts and connectors other than the ones shown may also be used.

[0027] Various exemplary embodiments are directed to methods of making and installing a pedestal. The base 10 can be formed to include a plurality of side walls 12, an upper surface 20, a first rim 24, and a second rim 26. In an exemplary embodiment the base 10 can be formed from molding or casting. The base 10 can be installed on or in a surface, for example the ground or on top of an underground enclosure. A first cover 30 having a first configuration and a second cover 40 having a second configuration are provided and one of the first cover 30 and the second cover 40 is selected and connected to the base 10. The first rim 24 of the base 10 can be configured to mate with the first cover 30 and the second rim 26 can be configured to mate with the second cover 40. The base 10 and cover 30, 40 form a housing and one or more interior components can be connected to, or positioned in the housing. For example a bracket 34 can be connected to the base 10 and a mounting plate can be connected to the bracket 10. A utility line, for example an electrical conductor or fiber optic line can be run into the base 10 through the bottom opening and connected to the mounting plate through a terminal block or splitter. One or more secondary conductors can also be connected to the mounting plate.

[0028] The foregoing detailed description of the certain exemplary embodiments has been provided for the purpose of explaining the principles of the invention and its practical application, thereby enabling others skilled in the art to understand the invention for various embodiments and with various modifications as are suited to the particular use contemplated. This description is not necessarily intended to be exhaustive or to limit the invention to the exemplary embodiments disclosed. Any of the embodiments and/or elements disclosed herein may be combined with one another to form various additional embodiments not specifically disclosed. Accordingly, additional embodiments are possible and are intended to be

encompassed within this specification and the scope of the appended claims. The specification describes specific examples to accomplish a more general goal that may be accomplished in another way.

[0029] As used in this application, the terms “front,” “rear,” “upper,” “lower,” “upwardly,” “downwardly,” and other orientational descriptors are intended to facilitate the description of the exemplary embodiments of the present invention, and are not intended to limit the structure of the exemplary embodiments of the present invention to any particular position or orientation. Terms of degree, such as “substantially” or “approximately” are understood by those of ordinary skill to refer to reasonable ranges outside of the given value, for example, general tolerances associated with manufacturing, assembly, and use of the described embodiments.

What is claimed:

1. A pedestal housing for utility connections comprising:
 - a lower section having a plurality of walls, an upper surface, and a bottom opening;
 - a first rim formed on the lower section positioned below the upper surface;
 - a second rim formed on the lower section positioned below the first rim;
 - and
 - an upper section having a plurality of walls and a top, the upper section releasably connected to the lower section to form a housing for receiving one or more utility components, the upper section configured to mate with one of the first rim or the second rim.
2. The pedestal housing of claim 1, wherein a flange extends from a lower portion of the walls.
3. The pedestal housing of claim 1, wherein a groove is formed around the plurality of walls.
4. The pedestal housing of claim 1, wherein the upper surface includes a central opening.
5. The pedestal housing of claim 1, wherein the upper surface includes one or more mounting features.
6. The pedestal housing of claim 1, wherein the upper section includes a first cover having a bottom lip configured to mate with the first rim.
7. The pedestal housing of claim 6, wherein the upper section further includes a bracket and an insert.

8. The pedestal housing of claim 7, wherein the bracket is connected to the upper surface and the insert is connected to the bracket.
9. The pedestal housing of claim 7, wherein the insert includes a mounting plate configured to receive one or more utility connectors.
10. The pedestal housing of claim 1, wherein the upper section includes a second cover having a bottom lip configured to mate with the second rim.
11. The pedestal housing of claim 10, wherein
12. A base of a pedestal housing for utility connections comprising:
 - a plurality of walls surrounding an interior and a bottom opening;
 - an upper surface extending from the plurality of walls at least partially over the interior;
 - a first rim positioned below the upper surface; and
 - a second rim positioned below the first rim.
13. The pedestal housing of claim 12, wherein a flange extends from a lower portion of the walls.
14. The pedestal housing of claim 12, wherein a groove is formed around the plurality of walls.
15. The pedestal housing of claim 12, wherein the upper surface includes a central opening.
16. The pedestal housing of claim 12, wherein the upper surface includes one or more mounting features.
17. The pedestal housing of claim 12, wherein the first rim is configured to receive a first cover and the second rim is configured to receive a second cover.

18. The pedestal housing of claim 17, wherein the second cover is wider than the first cover.
19. A pedestal housing for utility connections comprising:
- a base comprising,
 - a plurality of walls surrounding an interior and a bottom opening,
 - an upper surface extending from the plurality of walls at least partially over the interior,
 - a first rim positioned below the upper surface, and
 - a second rim positioned below the first rim; and
 - a cover configured to mate with the first rim or the second rim.
20. The pedestal housing of claim 19, wherein the cover includes a bottom lip configured to mate with the first rim.
21. The pedestal housing of claim 19, further comprising a bracket connected to the upper surface and an insert connected to the bracket.
22. The pedestal housing of claim 21, wherein the insert includes a mounting plate configured to receive one or more utility connectors.
23. The pedestal housing of claim 19, wherein the cover includes a bottom lip configured to mate with the second rim.
24. A pedestal housing product line for utility connections comprising:
- a base comprising,
 - a plurality of walls surrounding an interior and a bottom opening,
 - an upper surface extending from the plurality of walls at least partially over the interior,
 - a first rim positioned below the upper surface, and
 - a second rim positioned below the first rim;

a first cover configured to mate with the first rim; and
a second cover configured to mate with the second rim.

25. The pedestal housing product line of claim 24, wherein the first cover includes a bottom lip configured to mate with the first rim and the second cover includes a bottom lip configured to mate with the second rim.

26. A method of installing a pedestal housing comprising:
positioning a base to receive a utility component, the base having,
a plurality of walls surrounding an interior and a bottom opening,
an upper surface extending from the plurality of walls at least partially over the interior,
a first rim positioned below the upper surface, and
a second rim positioned below the first rim;
selecting one of a first cover and a second cover, wherein the first cover has a first configuration and the second cover has a second configuration;
connecting the selected first or second cover to the base.

27. The method of claim 26, wherein the first cover is configured to mate with the first rim and the second cover is configured to mate with a second rim.

28. The method of claim 26, further comprising connecting a bracket and an insert to the upper surface of the base.

29. A method of making a pedestal housing comprising:
forming a base having,
a plurality of walls surrounding an interior and a bottom opening,

an upper surface extending from the plurality of walls at least partially over the interior,
a first rim positioned below the upper surface, and
a second rim positioned below the first rim;
forming a first cover configured to mate with the first rim; and
forming a second cover configured to mate with the second rim.

30. The method of claim 29, wherein forming the base includes molding a material containing polyethylene.

1/6

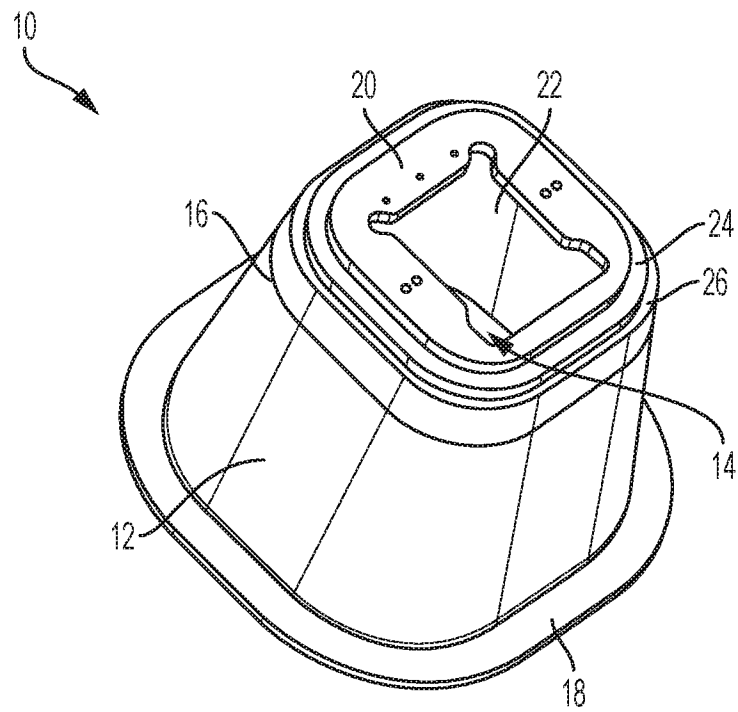


FIG. 1

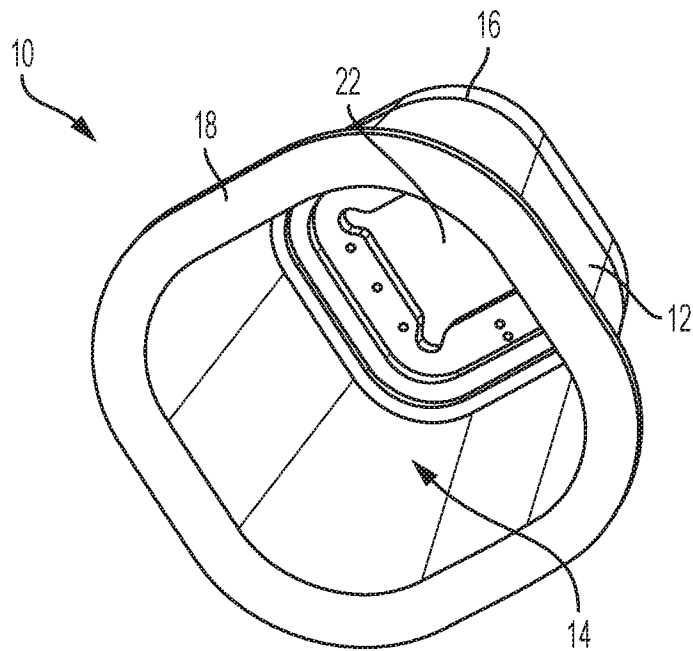


FIG. 2

2/6

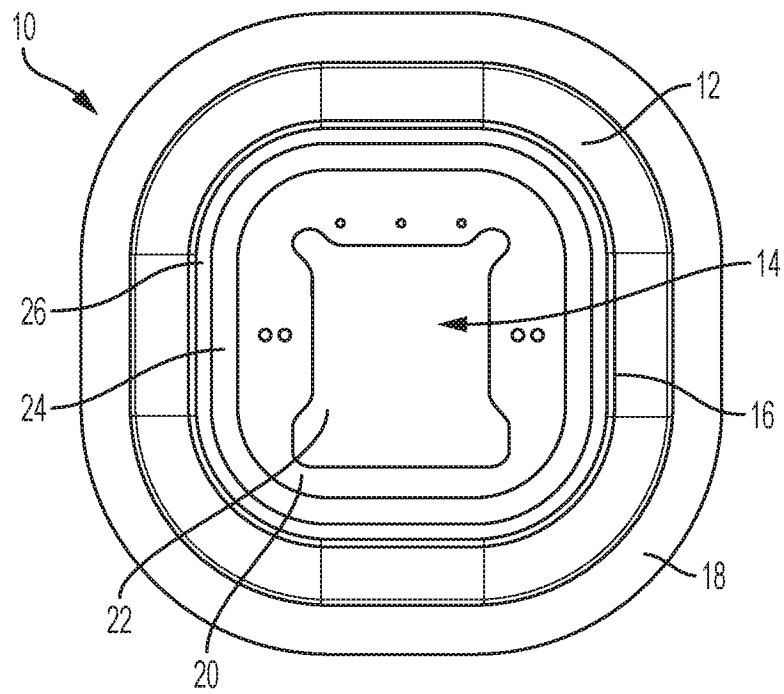


FIG. 3

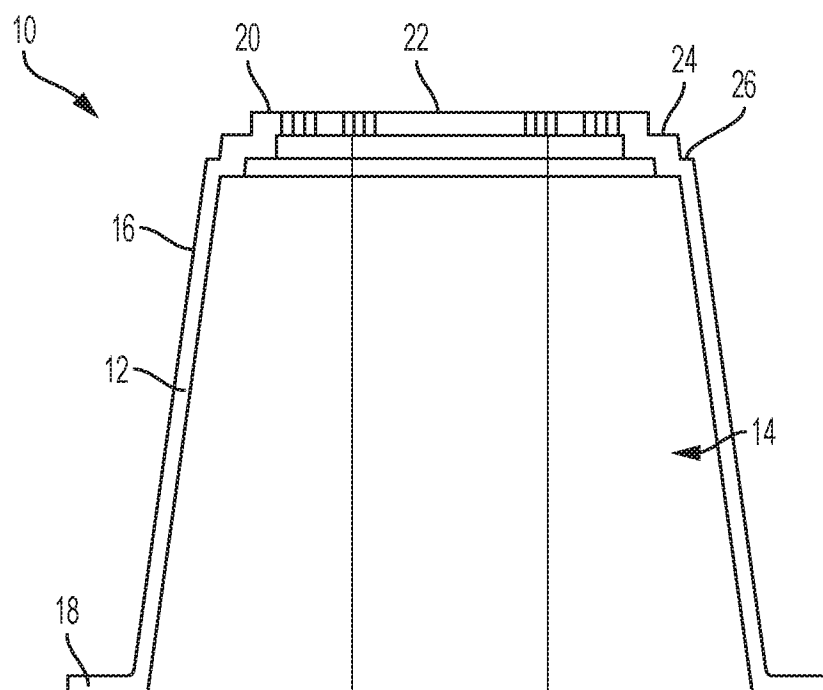


FIG. 4

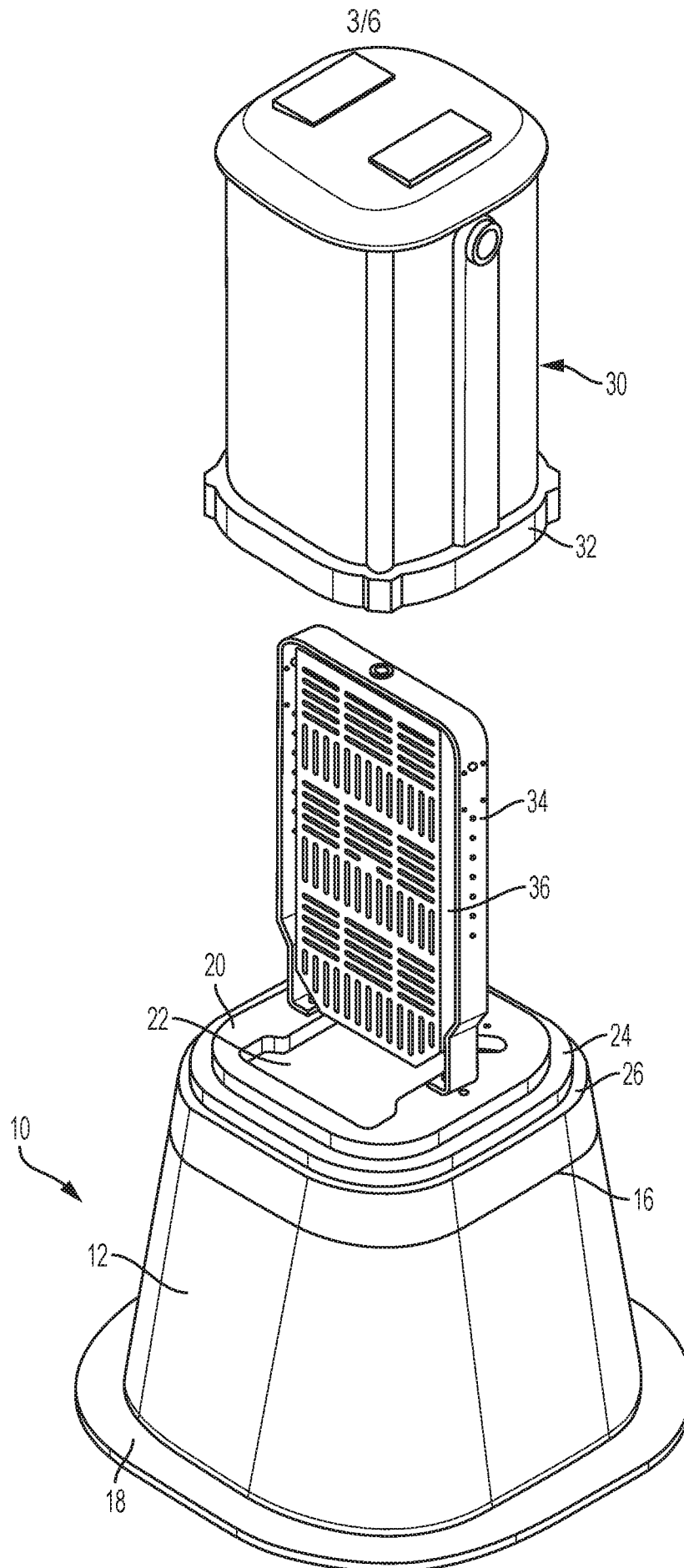


FIG. 5

4/6

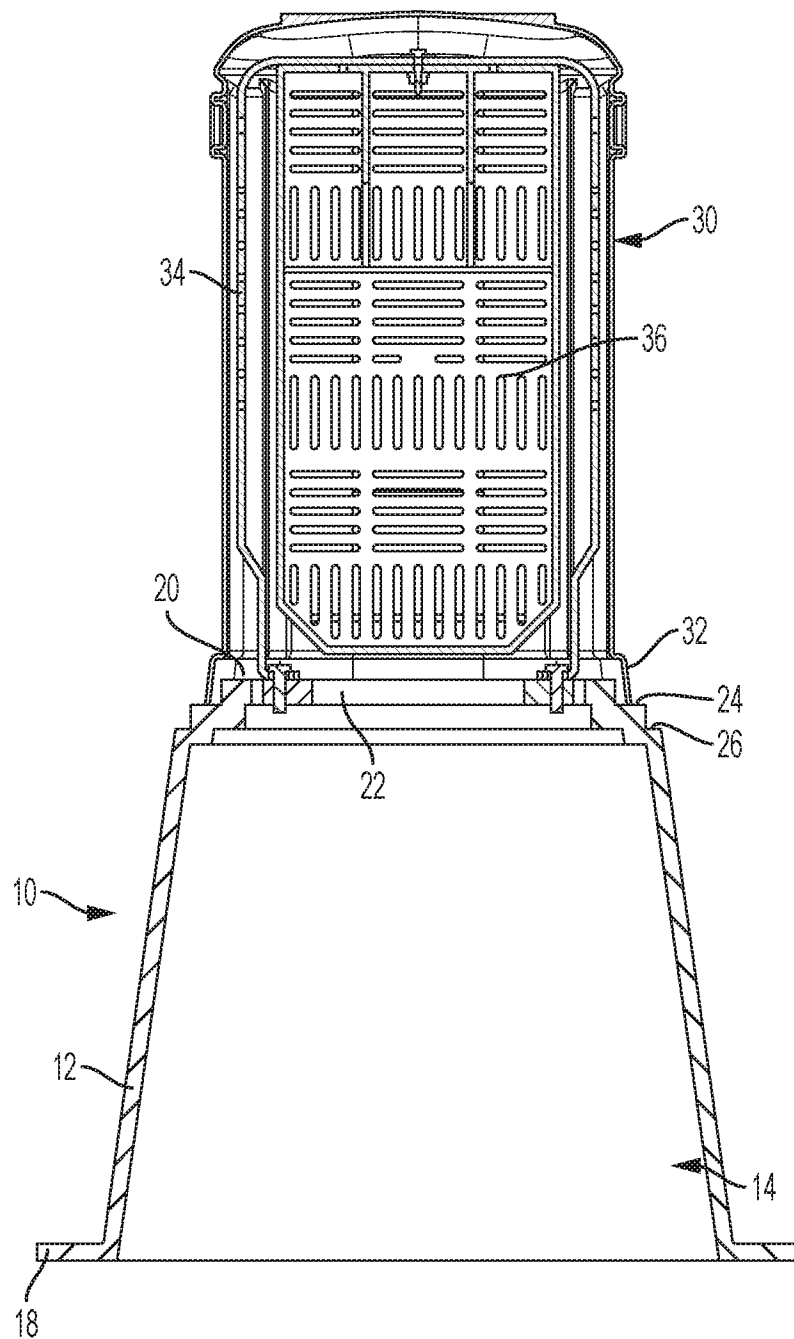


FIG. 6

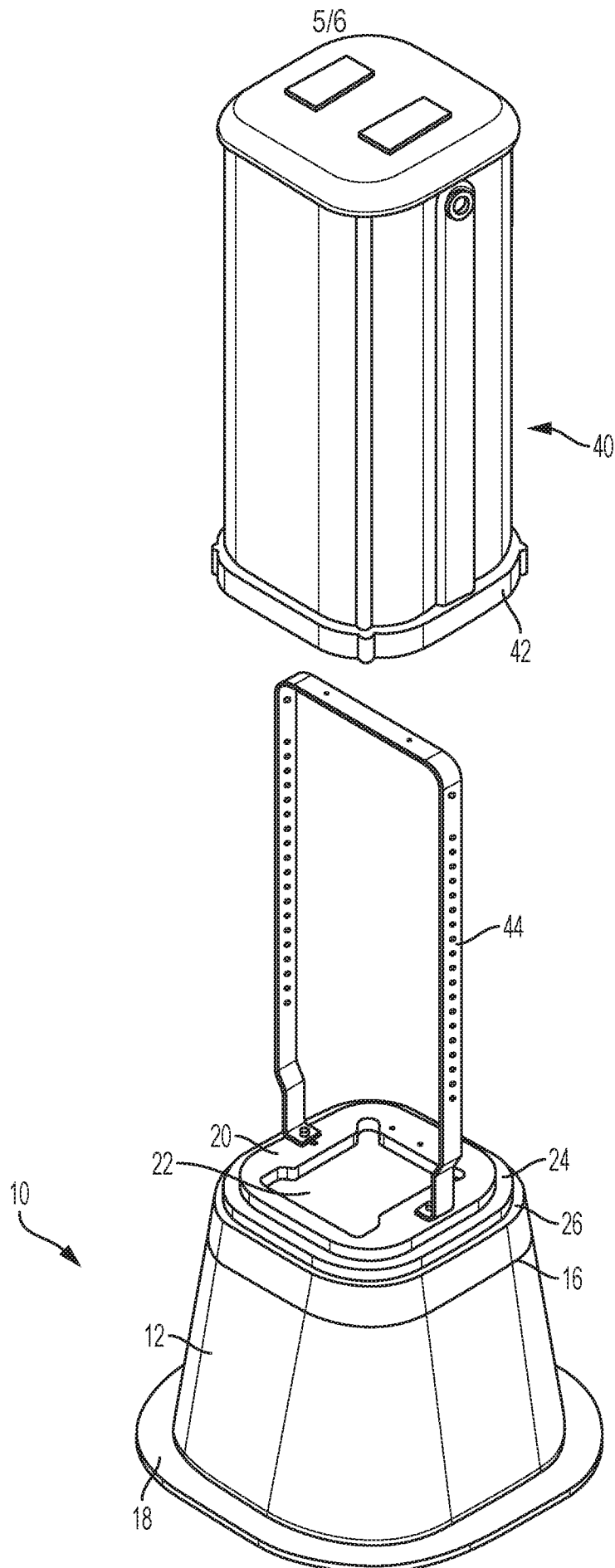


FIG. 7

6/6

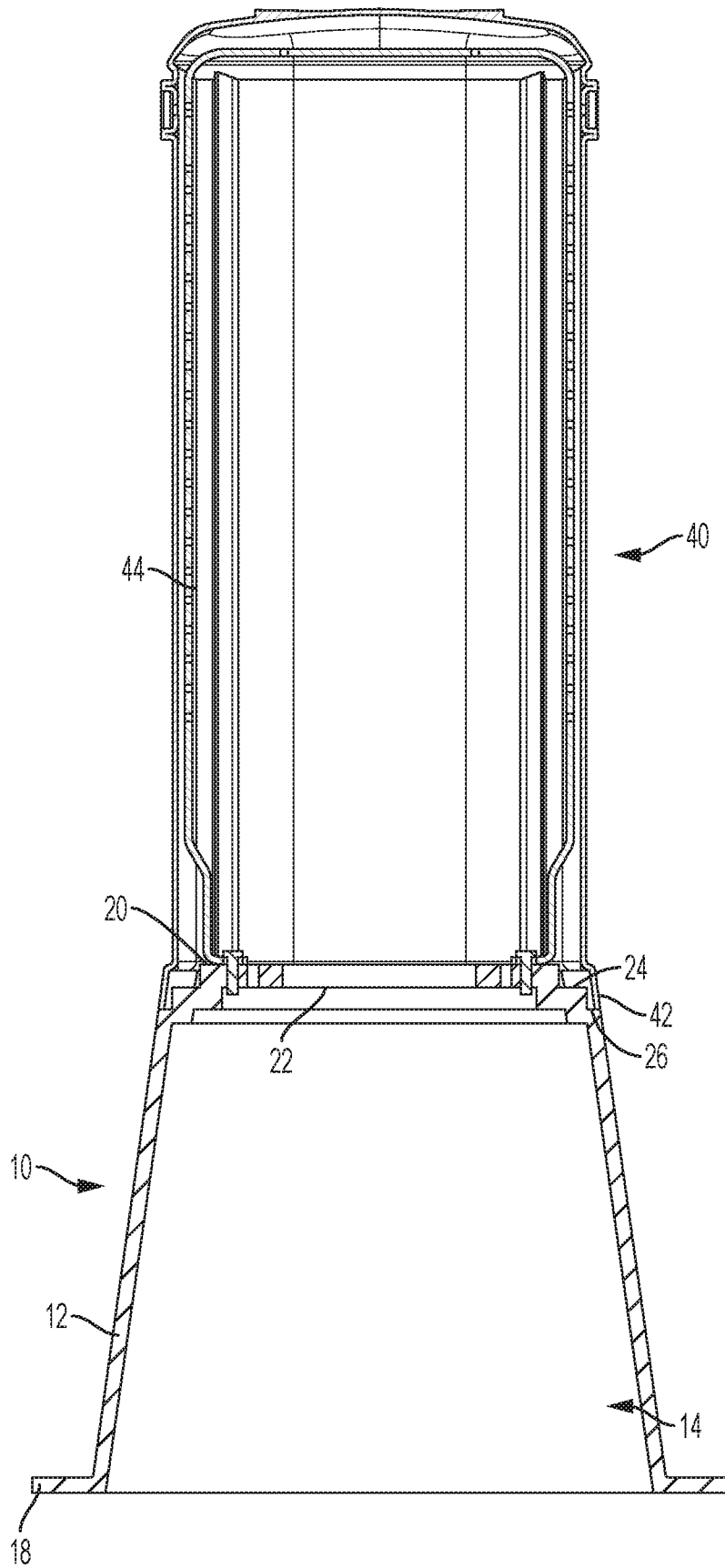


FIG. 8

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 17/28568

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H02G 3/08 (2017.01)

CPC - H02G 3/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History Document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History Document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History Document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7,385,137 B2 (BURKE et al) 10 June 2008 (10.06.2008), entire document, especially Abstract, Figs 1-10, col. 3, ln. 50, col. 4, lns. 29-35, col. 7, lns. 25-30 and 36-45	1-9, 12-16, 19-22, 26 and 28
A		10, 17, 18, 23-25, 27, 29, and 30
A	US 2005/0215090 A1 (HARWOOD) 29 September 2005 (29.09.2005), entire document, especially Abstract and Fig 1	10, 17, 18, 23-25, 27, 29, and 30
A	US 2005/0275319 A1 (WITTMEIER et al) 15 December 2005 (15.12.2005), entire document, especially Abstract and Fig 1	10, 17, 18, 23-25, 27, 29, and 30
A	US 2006/0090917 A1 (LOWE et al) 04 May 2006 (04.05.2006), entire document, especially Abstract and Fig 1	10, 17, 18, 23-25, 27, 29, and 30
A	US 2014/0196380 A1 (BURKE) 17 July 2014 (17.07.2014), entire document, especially Abstract and Fig 1	10, 17, 18, 23-25, 27, 29, and 30

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

18 June 2017

Date of mailing of the international search report

21 JUL 2017

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-8300

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 17/28568

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 11
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Claim 11 is incomplete.
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.