



US 20210002910A1

(19) **United States**

(12) **Patent Application Publication**
FORRESTER

(10) **Pub. No.: US 2021/0002910 A1**

(43) **Pub. Date: Jan. 7, 2021**

(54) **POCKET ISOLATING FORM AND LID THEREFOR**

Publication Classification

(51) **Int. Cl.**
E04G 15/04 (2006.01)
(52) **U.S. Cl.**
CPC **E04G 15/04** (2013.01)

(71) Applicant: **Joseph H. FORRESTER**, Auburn, GA (US)

(72) Inventor: **Joseph H. FORRESTER**, Auburn, GA (US)

(21) Appl. No.: **16/918,476**

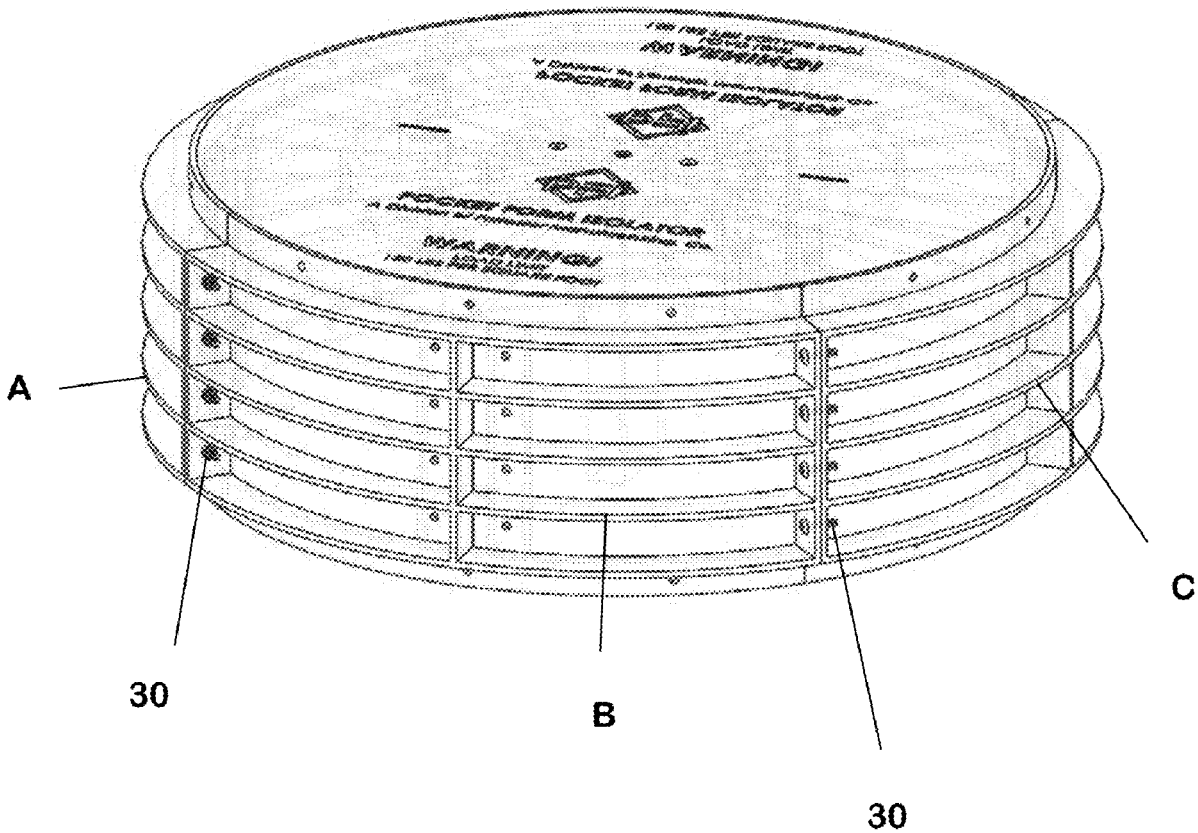
(22) Filed: **Jul. 1, 2020**

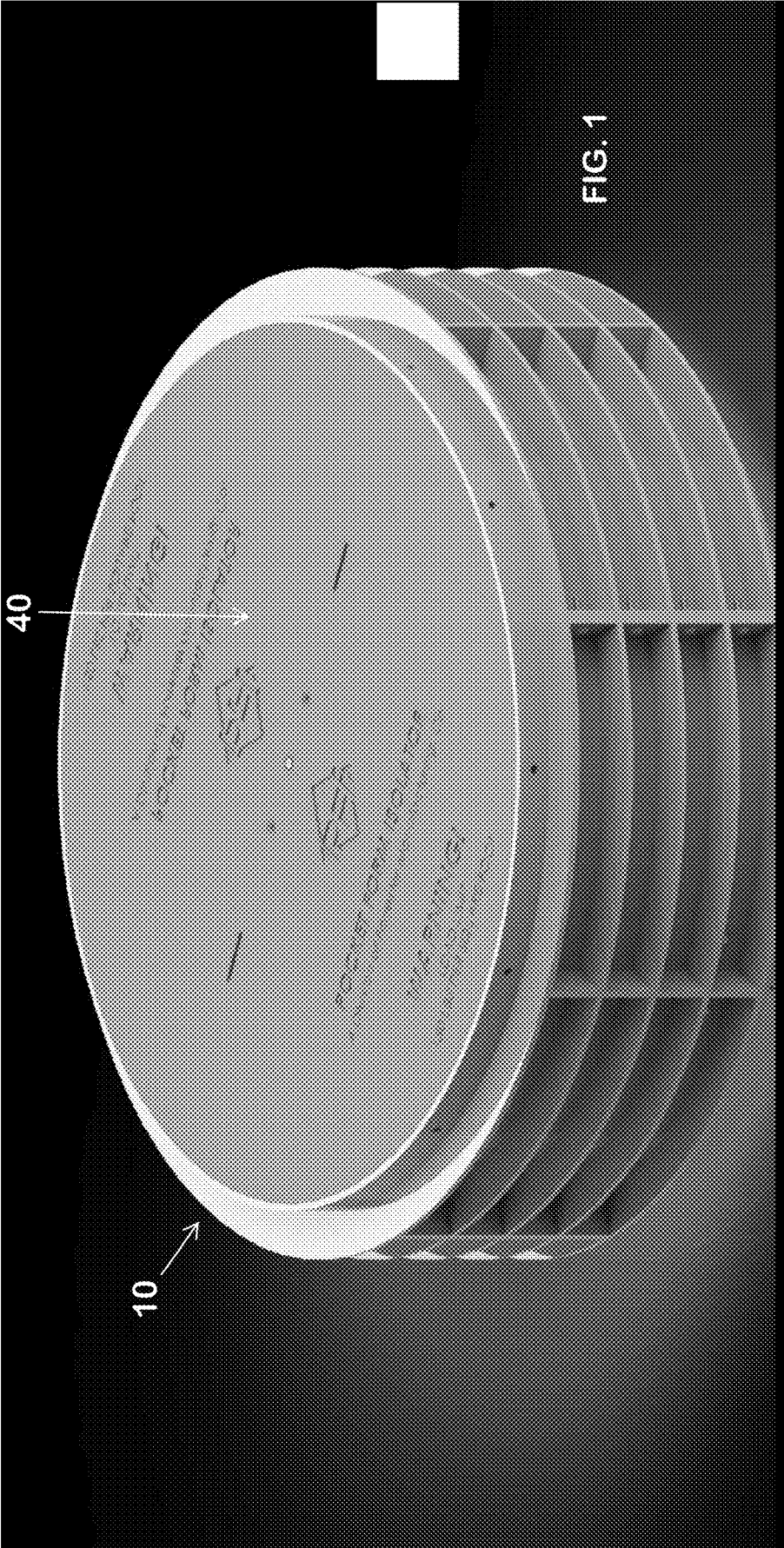
Related U.S. Application Data

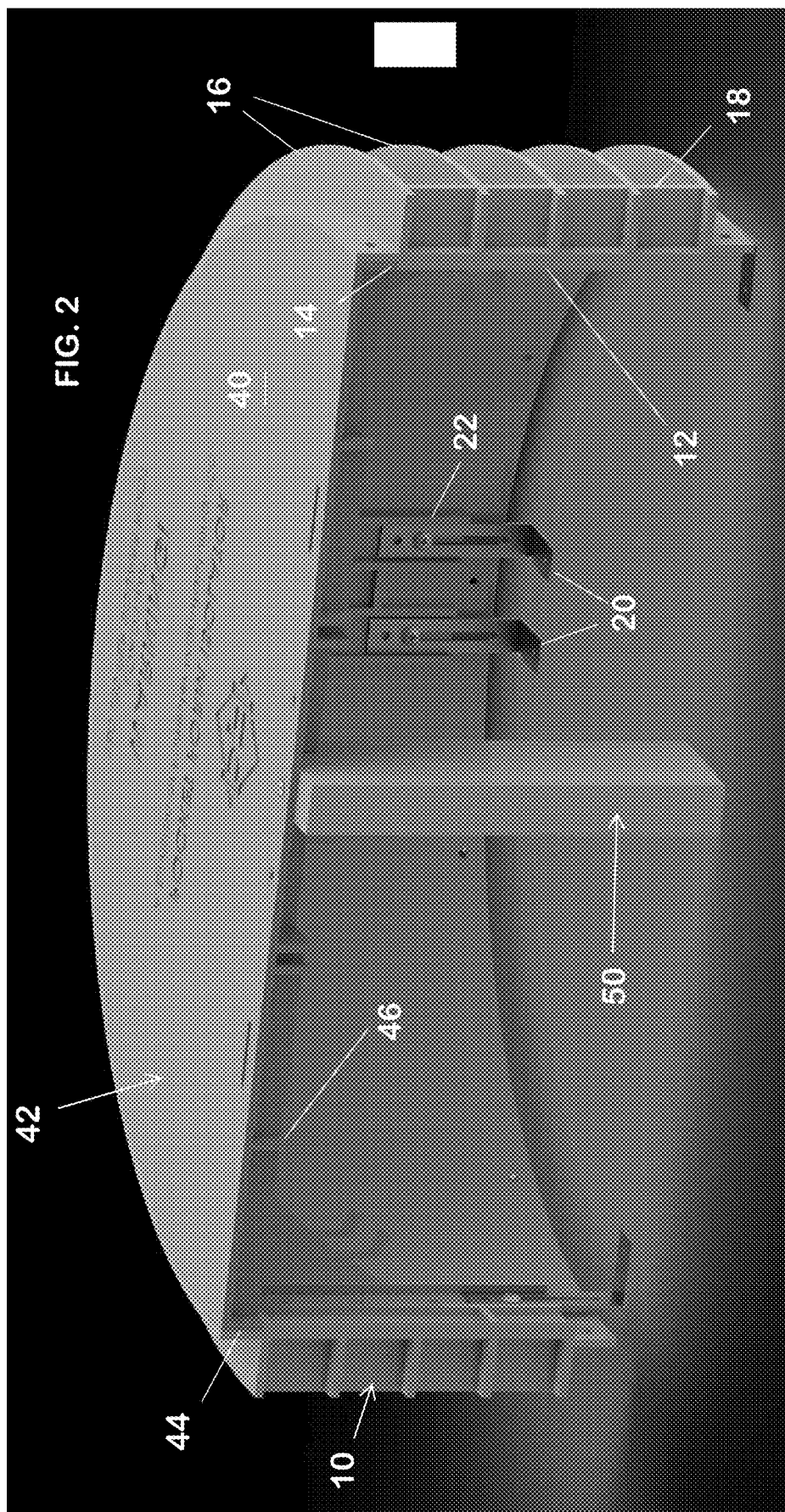
(60) Provisional application No. 62/869,284, filed on Jul. 1, 2019.

(57) **ABSTRACT**

A round pocket isolating form is placed around column footer before a concrete form is poured, to keep concrete away from anchor bolts protruding upward from the footer. A round lid for the form is also disclosed.







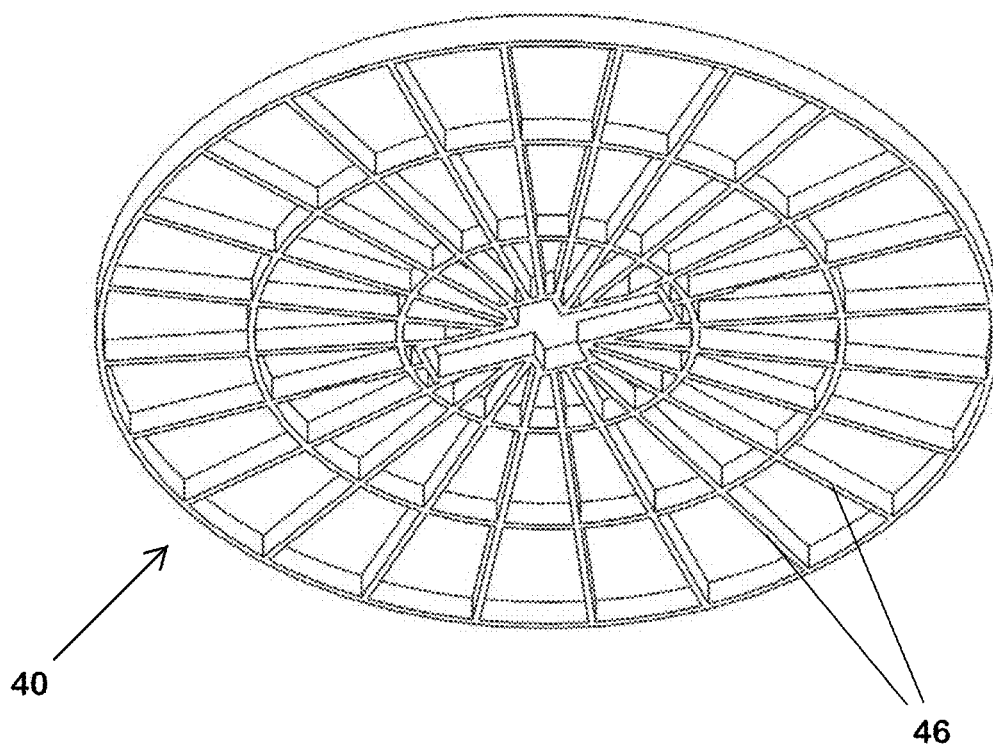


FIG. 3

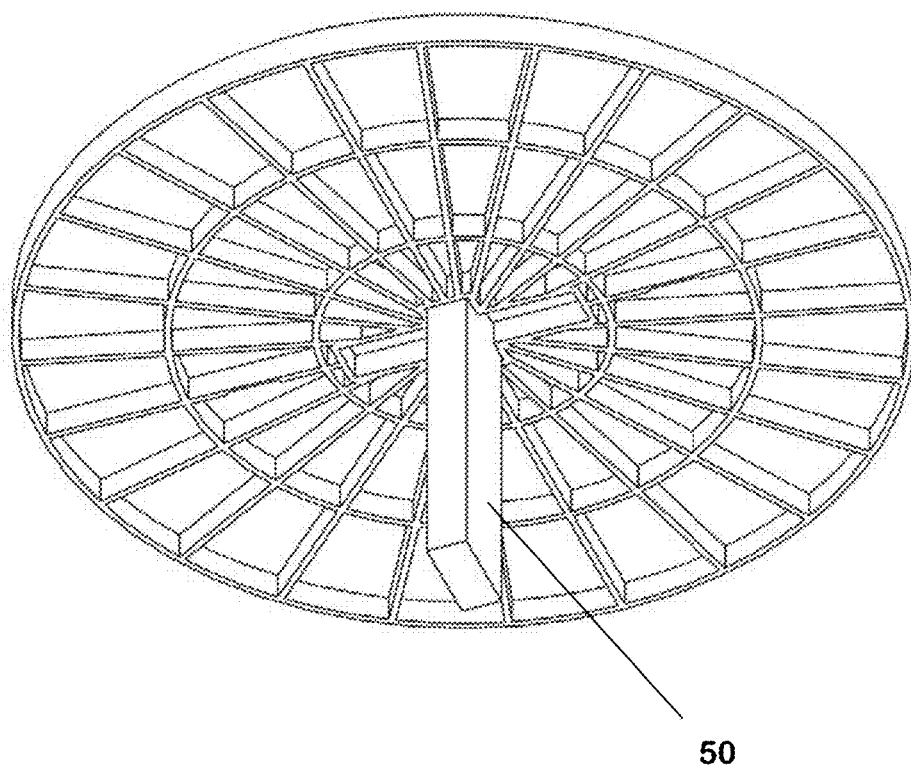


FIG. 4

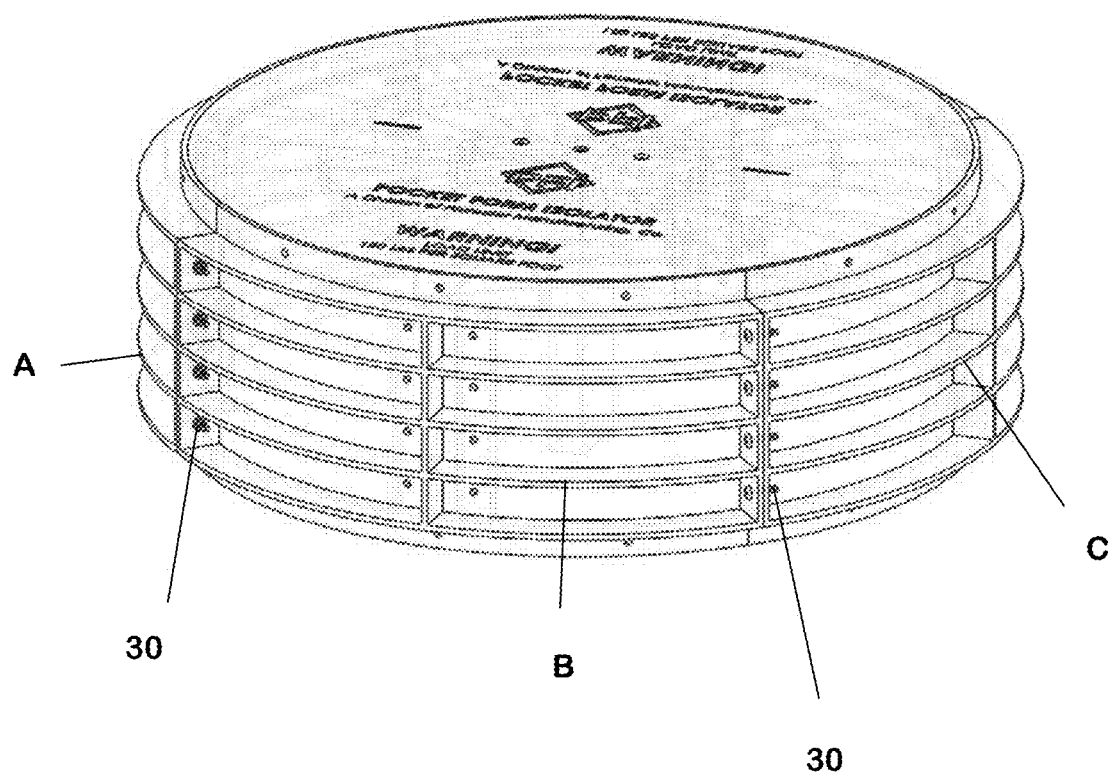


FIG. 5

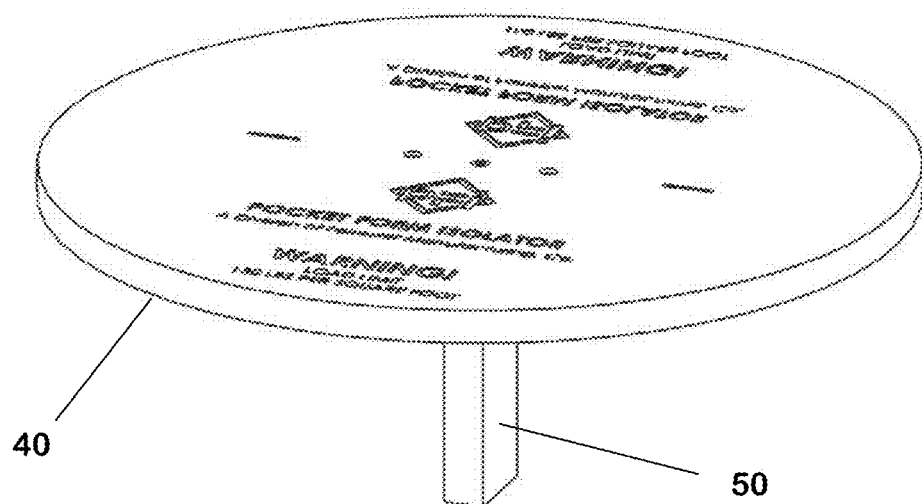


FIG. 6

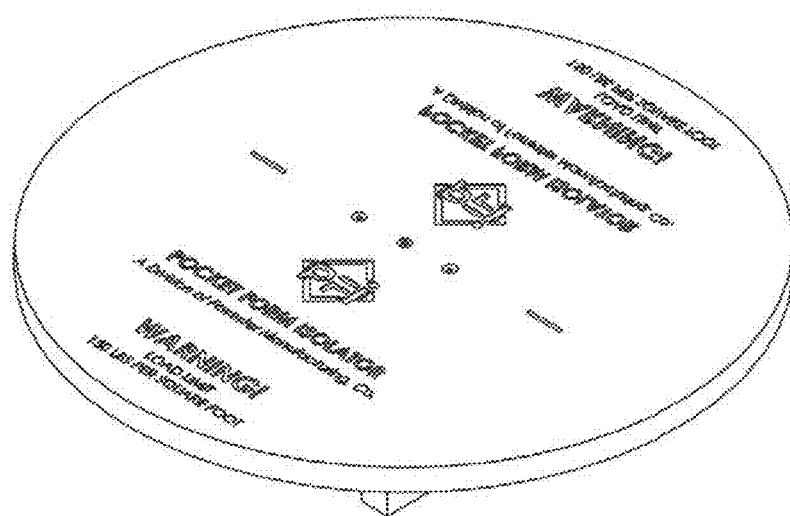


FIG. 7

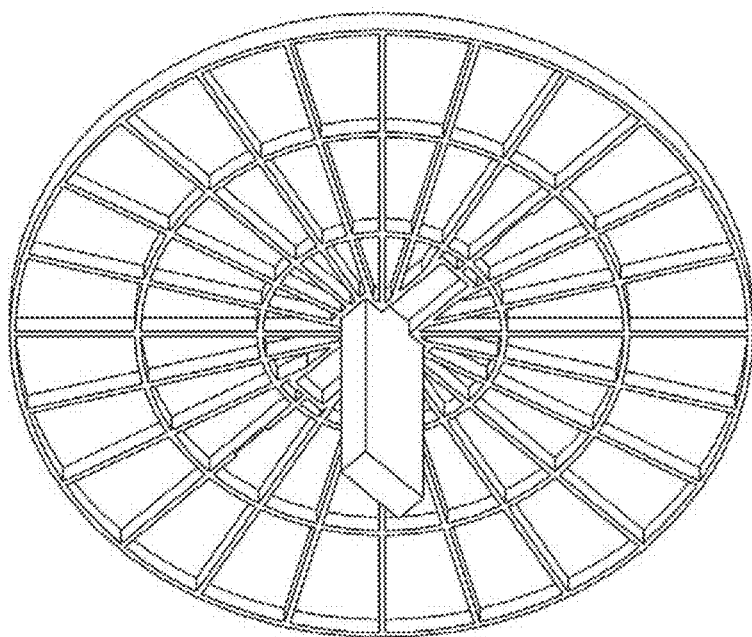


FIG. 8

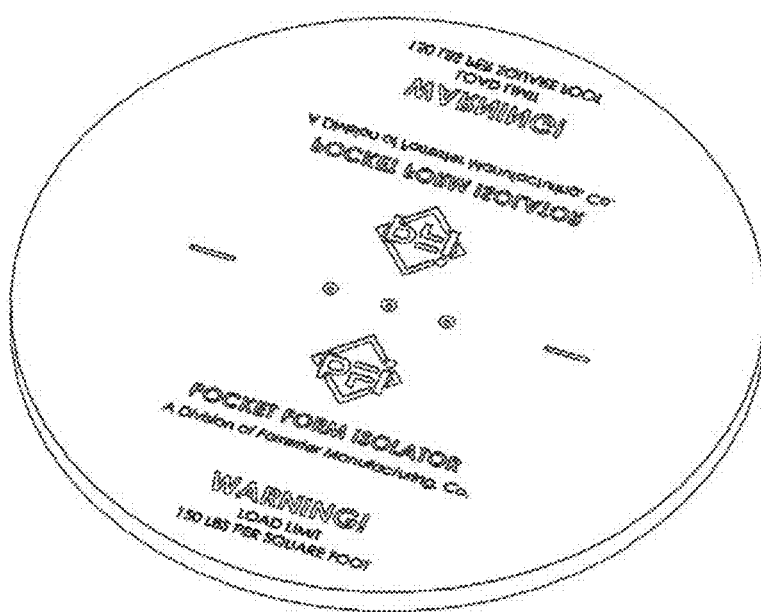


FIG. 9

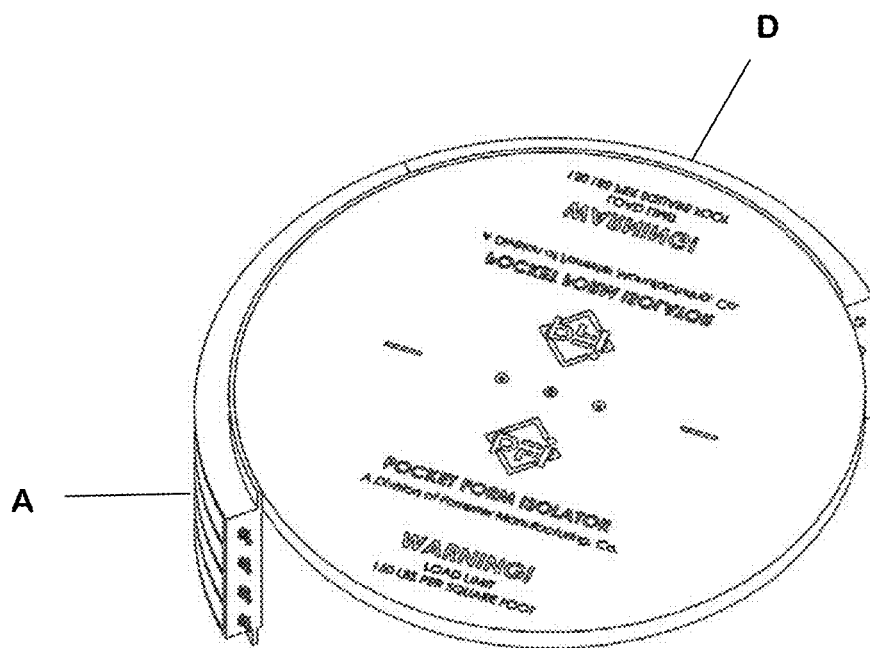


FIG.10

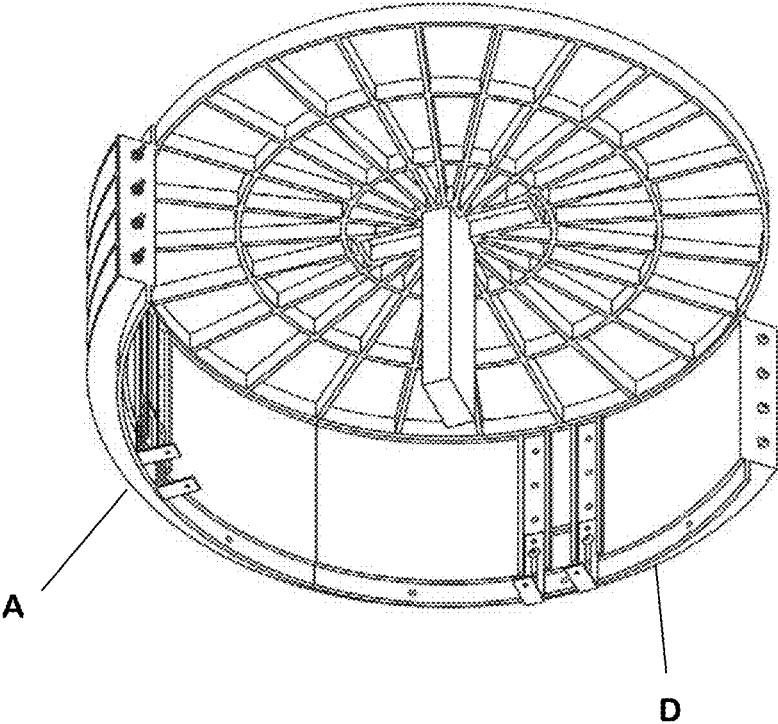


FIG. 11

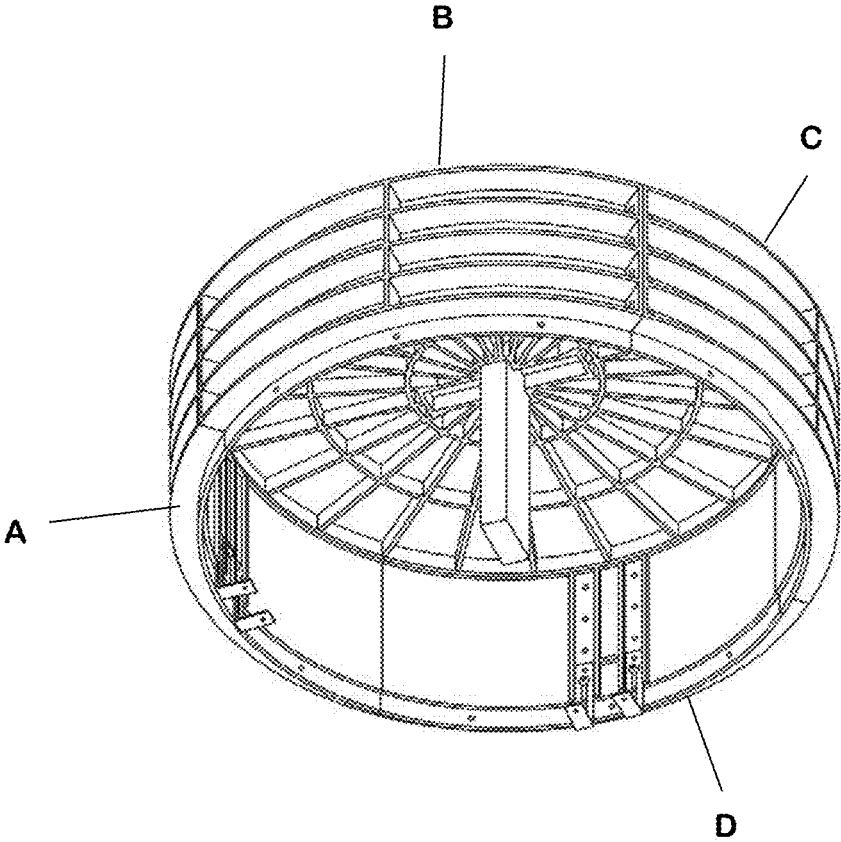


FIG. 12

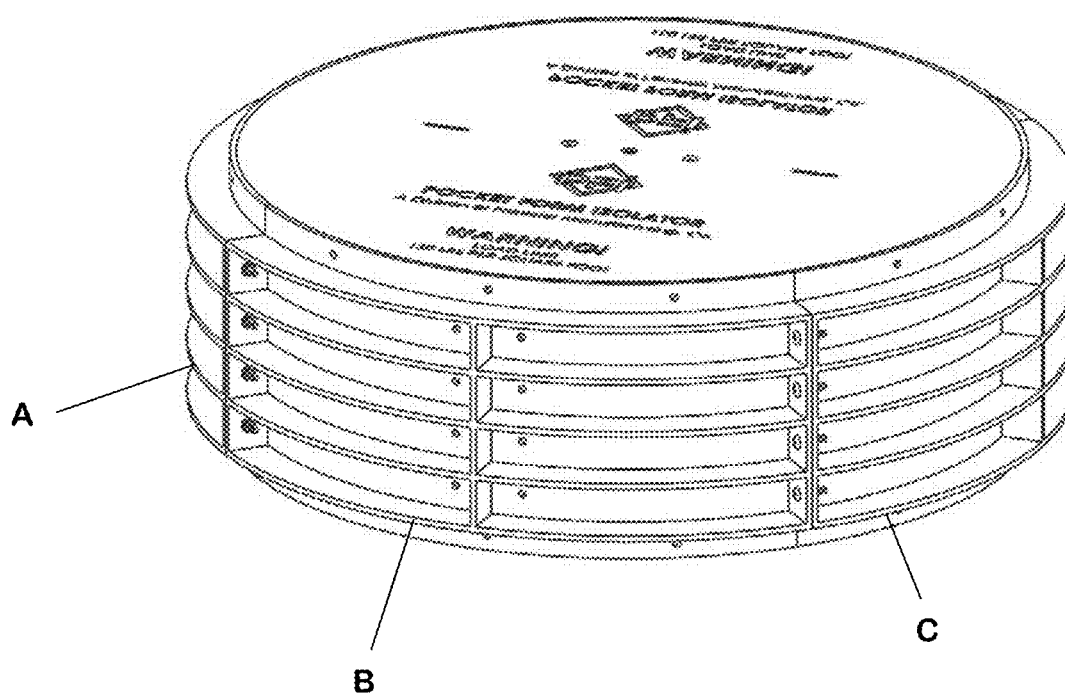


FIG. 13

POCKET ISOLATING FORM AND LID THEREFOR

[0001] This application claims benefit of provisional patent application 62/869,284, filed Jul. 1, 2019.

BACKGROUND OF THE INVENTION

[0002] The invention is useful in the construction of large buildings of the type in which the structure of the building is supported by vertical columns embedded in and extending upwardly from a concrete floor slab.

[0003] When constructing such buildings, concrete footings are generally cast in the ground at the prospective locations of the support columns with the footings having upper surfaces bearing anchor bolts to which the column bases are ultimately secured.

[0004] When the footings have thoroughly hardened, the vertically extending steel support columns are secured to the footings by means of the anchor bolts and the remaining steel superstructure of the building is constructed atop the columns.

[0005] At one time, box-shaped wooden forms known as column block-outs were built around the footings after the superstructure was constructed. The floor of the building was then prepared by grading, leveling, and compacting subbase material; the subbase was then compacted around the exterior surfaces of the wooden column block-outs, which isolated the column bases from the subbase material. A concrete slab was then poured on top of the subbase to the upper rims of the wooden forms and allowed to harden thoroughly. The wooden forms then had to be removed.

[0006] The present pocket form isolator is designed to be left in the slab rather than having to be "wrecked" out after the slab is poured and before the inside of the pocket is poured.

[0007] Pocket form isolators made of plastic, which did not have to be removed from the floor, are described in prior patents, one of which is U.S. Pat. No. 5,224,313. The disclosure of that patent is hereby incorporated by reference.

SUMMARY OF THE INVENTION

[0008] The present invention is a round pocket form isolator, which is used to block out the anchor bolts in constructing a building having support columns which support the roof of the structure. With this invention, the column anchor bolts, which are below the finished floor level, are isolated and shielded from concrete when the slab, or floor, is poured.

[0009] This invention is an improvement over prior patents in that it provides a round pocket isolator form. A round pocket isolator form provides the following benefits not available with square or conventional pocket isolator forms:

[0010] The round shape provides superior strength to weight ratio.

[0011] The round shape eliminates the need to orient the pockets with respect to the outside walls of the building, saving time and money.

[0012] The pocket isolator can be manufactured to any height.

[0013] Monolithic pours, i.e., pouring concrete inside and outside of the form at the same time, are possible. This is not possible with forms that must be removed or wrecked out.

[0014] The form's adjustable feet mounting devices make installation quick and easy.

[0015] Eliminates the need for thickening the slab.

[0016] As a result of these differences, the present invention is more cost effective than conventional pockets.

[0017] An object of the present invention is to provide a method of constructing isolation pockets that eliminates the labor intensive construction and removal of isolation pocket forms.

[0018] Another object is to provide a round pocket isolator which need not be oriented with respect to the building plan.

[0019] Further objects, features, and advantages of the present invention will become more apparent upon review of the following detailed description taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] FIG. 1 is a perspective view of a round isolation pocket form embodying the invention.

[0021] FIG. 2 is a sectional perspective expanded view thereof, taken on a vertical plane bisecting the form.

[0022] FIG. 3 is a perspective view of the lid, showing the bottom surface thereof.

[0023] FIG. 4 is a view like FIG. 3, with a vertical support fastened at the center of the lid.

[0024] FIG. 5 is a view like FIG. 1.

[0025] FIG. 6 is a perspective view of the lid, with the vertical support, showing the top surface of the lid.

[0026] FIG. 7 is a view like FIG. 6, taken from a higher angle.

[0027] FIG. 8 is a view like FIG. 4, taken from a lower angle.

[0028] FIG. 9 is a view like FIG. 7, taken from an even higher angle.

[0029] FIG. 10 is a view like FIG. 9, showing two segments of the form beneath the lid.

[0030] FIG. 11 is a view like FIG. 10, taken from below the lid.

[0031] FIG. 12 is a view like FIG. 11, showing all four segments of the form assembled.

[0032] FIG. 13 is a view like FIG. 2.

DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

[0033] As shown in the drawings, a round open top form 10 is defined by a generally cylindrical wall 12. Preferably, the form 10 is assembled from four identical 90° segments A, B, C, D on site. Note the screws 30, FIG. 5.

[0034] A round lid 40 fits within the wall at its upper edge, seated on an annular shoulder 14. The lid and the form are preferably formed by injection molding of high density polyethylene (HDPE). Alternatively, another corrosion resistant plastic material such as polyethylene, polypropylene or polystyrene could be used.

[0035] To reinforce the wall, and to anchor it in the concrete which is poured around it, the wall has integral external reinforcing elements. These elements include plural, axially spaced, circumferential ribs 16 extending around the wall and plural vertical ribs 18 circumferentially spaced around the wall.

[0036] As seen in FIGS. 2, 11 and 12, a plurality of height-adjustable feet 20 are mounted inside the wall. Guide structures 22 are integrally molded on the inside surface of

the wall, and the feet are slidably received by the guide structures. Each foot has a vertical slot through which a retaining screw is inserted. The screw is tightened once the foot has been set at the desired height.

[0037] FIG. 1 also shows a round lid 40 seated on the shoulder 14 at the top of the wall. The lid has a generally flat top surface 42 and a circular periphery 44. As seen in FIGS. 3 and 4, an array of integral ribs 46, extending perpendicularly downward from the bottom of the lid, strengthen the lid and give it good load bearing ability. The ribs preferably comprise a number of (e.g., twelve) straight ribs extending radially from the center of the lid, and a plurality of circumferential ribs intersecting the radial ribs. In addition, as shown in FIG. 2, the lid has structure for receiving a vertical support 50, which may be fastened to the lid at the center of the lid, extending downward from the bottom surface of the lid. The support is cut to a length substantially equal to the height of the wall, so that the support reaches the ground. The support, which may be a short piece of dimensional lumber, greatly improves the load bearing capacity of the lid.

[0038] Like the wall of the invention, the lid is made by injection molding of a plastic material, preferably high density polyethylene, although other polymers might be used.

[0039] The invention has been described herein in terms of a particularly preferred embodiment. However, additions, deletions, and modifications might well be made to the embodiment illustrated above without departing from the scope of the invention defined by the claims below.

I claim:

1. A lid for a round pocket isolator form, said lid having a generally flat top, a circular periphery, and reinforcing structure on the bottom surface of the lid to enable the lid to withstand traffic thereon.
2. The invention of claim 1, further comprising a vertical support fastened to the lid at the center of the lid, and extending downward from the bottom surface of the lid a distance substantially equal to the height of the wall.
3. The invention of claim 1, wherein the lid is made by injection molding of a plastic material.
4. The invention of claim 3, wherein said plastic material is a high density polyethylene.
5. The invention of claim 1, wherein the reinforcing structure is an array of ribs.
6. The invention of claim 5, wherein the array of ribs comprises a plurality of circumferential ribs and a plurality of radial ribs extending from the center of the lid.

* * * * *