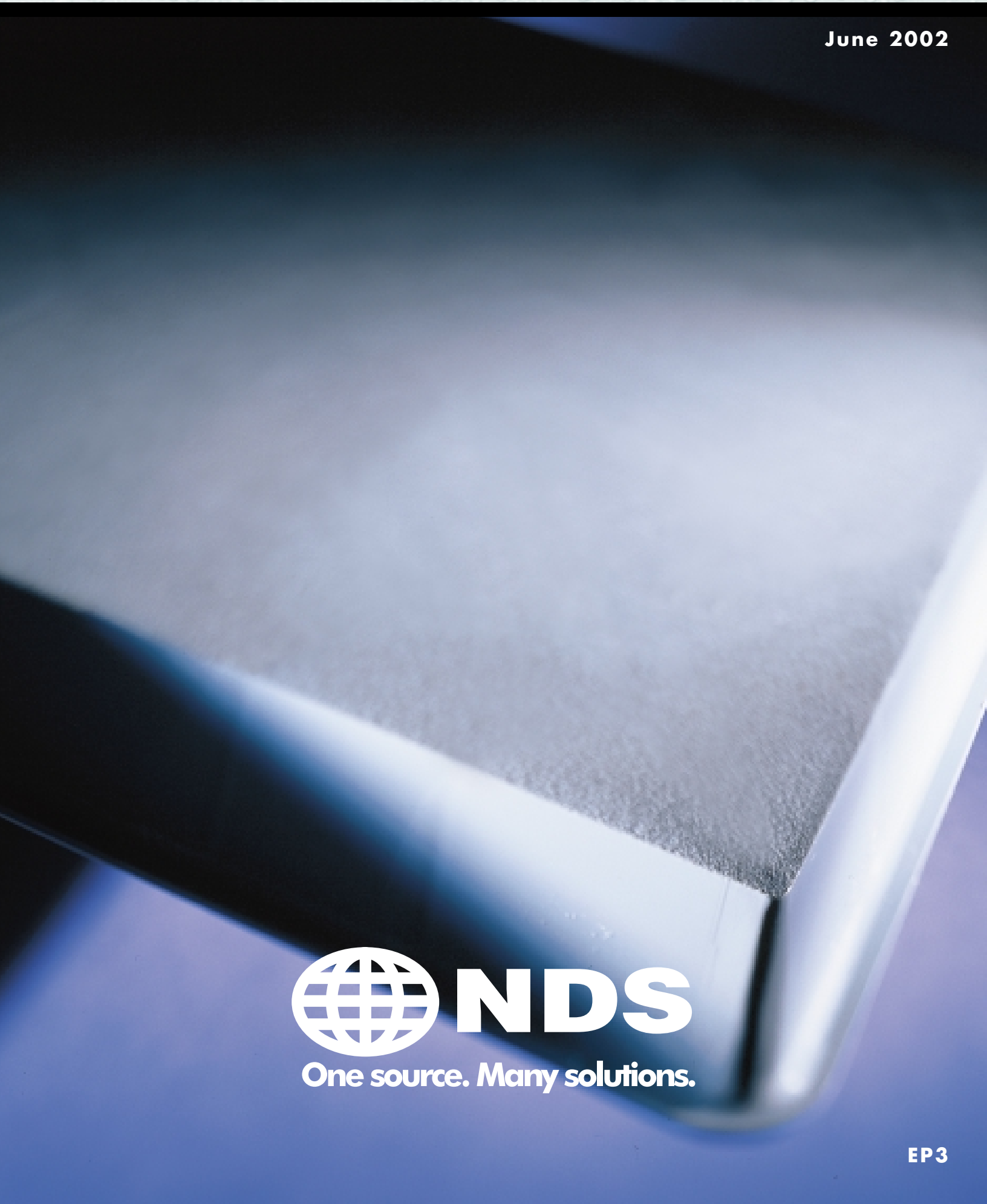
# EXHIBIT A

# EQUIPMENT PAD CATALOG

June 2002



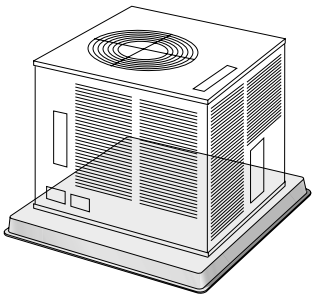
NDS

One source. Many solutions.

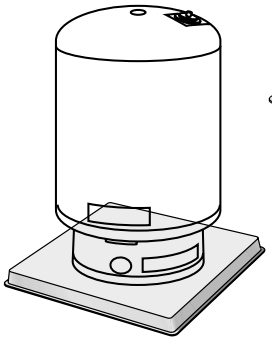
## HEF-T-PADS

The illustrations below demonstrate three of the many applications for the Hef-T-Pad equipment pad.

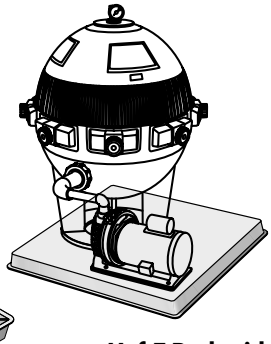
The Hef-T-Pad is injection molded from high impact polyolefin with UV inhibitors making it easy to handle, yet durable and strong. It does not require any additional equipment for moving and handling. It is resistant to impact, ultra violet degradation and weathering and will not crack, flake or warp. The Hef-T-Pad is virtually impervious to climatic variations. It is drillable to permit installation of refrigerant and electrical lines under and through the pad and to allow equipment to be easily secured to the pad. The Hef-T-Pad features a unique non-creep surface which allows it to absorb vibration, noise and keep the equipment in its original position.



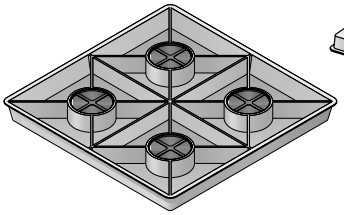
**Hef-T-Pad with A/C Unit**



**Hef-T-Pad with Diaphragm Tank**



**Hef-T-Pad with Pool Pump & Filter**



**Underside of Hef-T-Pad showing support ribs, stabilization pads and stabilization flange.**

## 2" HEF-T-PADS

Product Class 40PD

| Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | List Price (ea.) |
|---|---|---|---|---|---|
| X2424211 | 24"x24"x2" One Piece | Gray | 24 | 6.60 | 15.05 |
| X2430211 | 24"x30"x2" One Piece | Gray | 24 | 8.39 | 19.50 |
| X2436211 | 24"x36"x2" One Piece | Gray | 24 | 10.00 | 23.99 |
| X2442201 | 24"x42"x2" Modular | Gray | 24 | 13.46 | 28.50 |
| X2448201 | 24"x48"x2" Modular | Gray | 24 | 15.58 | 33.05 |
| X2454201 | 24"x54"x2" Modular | Gray | 24 | 17.70 | 37.75 |
| X2460201 | 24"x60"x2" Modular | Gray | 24 | 19.82 | 42.45 |
| X3232211 | 32"x32"x2" One Piece | Gray | 24 | 10.90 | 24.60 |
| X3244211 | 32"x44"x2" One Piece | Gray | 24 | 13.85 | 32.15 |
| X3830211 | 38"x30"x2" One Piece | Gray | 24 | 13.65 | 25.99 |
| X3836211 | 38"x36"x2" One Piece | Gray | 24 | 13.60 | 33.10 |
| X3842211 | 38"x42"x2" One Piece | Gray | 24 | 17.26 | 40.30 |
| X3848201 | 38"x48"x2" Modular | Gray | 24 | 27.97 | 48.05 |
| X3854201 | 38"x54"x2" Modular | Gray | 24 | 32.60 | 54.60 |
| X3860201 | 38"x60"x2" Modular | Gray | 24 | 37.23 | 61.65 |

## 3" HEF-T-PADS

Product Class 40PD

| Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | List Price (ea.) |
|---|---|---|---|---|---|
| X2424311 | 24"x24"x3" One Piece | Gray | 16 | 9.40 | 18.45 |
| X2430301 | 24"x30"x3" Modular | Gray | 16 | 23.74 | 24.05 |
| X2436311 | 24"x36"x3" One Piece | Gray | 16 | 12.00 | 29.50 |
| X2442301 | 24"x42"x3" Modular | Gray | 16 | 13.46 | 34.70 |
| X2448301 | 24"x48"x3" Modular | Gray | 16 | 28.56 | 40.30 |
| X2454301 | 24"x54"x3" Modular | Gray | 16 | 30.97 | 46.10 |
| X2460301 | 24"x60"x3" Modular | Gray | 16 | 33.37 | 51.60 |
| X3030311 | 30"x30"x3" One Piece | Gray | 16 | 13.40 | 24.45 |
| X3232311 | 32"x32"x3" One Piece | Gray | 16 | 15.60 | 27.95 |
| X3238311 | 32"x38"x3" One Piece | Gray | 16 | 15.37 | 36.05 |
| X3244311 | 32"x44"x3" One Piece | Gray | 16 | 13.91 | 39.30 |
| X3636311 | 36"x36"x3" One Piece | Gray | 16 | 16.80 | 38.95 |
| X3848311 | 38"x48"x3" One Piece | Gray | 16 | 23.60 | 49.75 |
| X5055301 | 50"x55"x3" Modular | Gray | 16 | 42.10 | 88.99 |
| X6255301 | 62"x55"x3" Modular | Gray | 16 | 56.92 | 121.70 |
| X7455301 | 74"x55"x3" Modular | Gray | 16 | 71.74 | 153.99 |
| X8655301 | 86"x55"x3" Modular | Gray | 16 | 86.56 | 186.45 |
| X2600311 | 26" Diameter Round One Piece | Gray | 16 | 3.50 | 17.75 |
| X3600311 | 36" Diameter Round One Piece | Gray | 16 | 16.60 | 36.95 |

## ASTM SPECIFICATIONS HEF-T-PAD

| Properties | Rockwell Hardness | Tensile Strength | Flexural Strength | Impact Strength | Stiffness in Flexure | Melting Point | Heat Distortion |
|---|---|---|---|---|---|---|---|
| ASTM Test | D-785 | D-638 | D-790 | D-256 | D-747 | BO 21-2 | D-648 |
| Results | R-68 | 3900 psi | 3890 psi | 24 lbs/in | 118,000 psi | 323.6°F | 186.6°F |

Other test results available upon request.

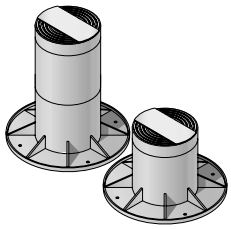
Note: All dimensions are nominal. All weights are for shipping purposes only. Prices are subject to change.

# HEF-T-PAD TESTING INFORMATION

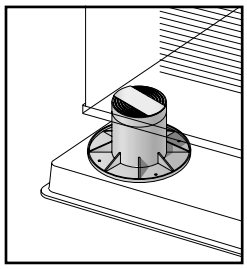
**APPROVALS**
- ICBO Evaluation Report #4869
- Tennessee Valley Authority Report #9-88 (MR 35 75E-C)
- City of Los Angeles Report #RR 7756
- City of Fort Worth Report #4-93

**TESTING**
- Uniform Load – 2" and 3" Height 46,389 lbs. Of applied force
- Concentrated Load – 883 - 2,067 lbs. Force sustained (1" dia. Pad with 1/32" rounded edges)
- Ignition Properties of Plastic
- Chemical Resistance – See NDS Chemical Resistance Guide

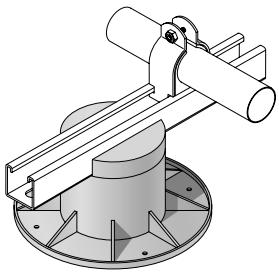
Meets or exceeds the requirement of:
- Uniform Building Code Std. No. 52-2
  Density of Smoke from the Burning or Composition of Plastic Material
- Uniform Building Code Section 417 (ASTM D1929-75)
  Ignition Properties of Plastic



**Column Rizers with Non-Slip Pads**



**Column Rizer on Hef-T-Pad**



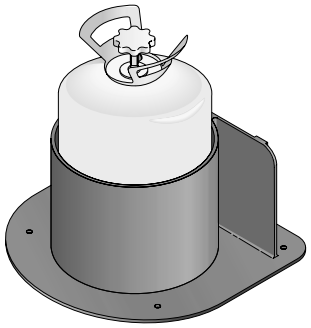
**Slotted Rizer with Support Channel and Pipe Clamp**

## COLUMN RIZERS

Product Class 40PD

- Available in 4", 8", 12", and 16" heights. 2" and 4" Rizer for insert available.
- Allows heat pumps to be raised for proper ventilation.
- Available with slot for for A/C channel brackets.
- Injection molded from high performance polyolefin with UV inhibitors for durability and strength.

| Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | List Price (ea.) |
|---|---|---|---|---|---|
| X401 | 4" Rizer | Gray | 48 | 0.63 | 3.10 |
| X401SP | 4" Bracket Rizer | Gray | 48 | 0.61 | 5.12 |
| X801 | 8" Rizer | Gray | 24 | 1.04 | 3.99 |
| X1201 | 12" Rizer | Gray | 16 | 1.25 | 5.35 |
| X1601 | 16" Rizer | Gray | 16 | 1.39 | 7.60 |
| X441 | 4" Rizer Insert | Gray | 48 | 0.30 | 2.90 |
| X221 | 2" Rizer Insert | Gray | 96 | 0.15 | 2.90 |



**No Drum Roll with Refrigerant Cylinder**

## NO DRUM ROLLS

Product Class 40PD

- Available to carry 30# refrigerant cylinders.
- Eliminate the hazard and damage from sliding and tumbling of unsecured cylinders.
- Unique design will allow it to be free standing or permanently mounted.
- Injection molded from high performance polyolefin with UV inhibitors for durability and strength.

| Part No. | Description | Color | Pkg. Qty. | Wt. Ea. (lbs.) | List Price (ea.) |
|---|---|---|---|---|---|
| X2850100 | 30# | Black | 6 | 5.36 | 22.20 |
| X2850200 | 30# | White | 6 | 5.36 | 22.20 |

Note: All dimensions are nominal. All weights are for shipping purposes only. Prices are subject to change.

## TERMS AND CONDITIONS OF SALE

**Terms of Payment:** Standard terms are 2%, 10 days, NET 30. A 1 1/2% per month (18% per annum) service charge will be added to all past due accounts. All invoices are to be paid in US Currency.

**Freight Allowance:** CA, AZ, and NV: Freight prepaid on orders of $650.00 NET or more. Freight prepaid on orders containing only equipment pads of $1500.00 NET or more. Freight prepaid on orders containing only couplings only orders of 126 pieces or more. Custom DuraCast only orders freight prepaid on orders of $2500.00 NET or more.

**All other states:** Freight prepaid on orders of $1000.00 NET or more. Freight prepaid on orders containing only equipment pads of $1500.00 NET or more. Freight prepaid on orders containing only Flo Control Products of $700.00 NET or more. Freight prepaid on flexible couplings only orders of 126 pieces or more. Custom DuraCast only orders freight prepaid on orders of $2500.00 NET or more. Custom orders may require a higher prepaid freight level. Prepaid freight levels are based on shipments to one location only. It is the responsibility of the customer to determine if his purchase order meets the minimum freight allowance required. NDS reserves the right to select the carrier and point of shipment.

**Errors & Claims:** All claims for shortage in shipment or damaged material must be noted on the "Bill of Lading" and a written request for credit submitted to NDS within 15 days of shipment. NDS responsibility ceases upon delivery to the carrier.

**Returned Goods:** Returned goods will be accepted only after written approval and shipping instructions are received from NDS. A return goods authorization number is required and must be on all cartons, documents, and correspondence. All returns are subject to a 15% restocking charge, freight cost of returned goods (plus "out freight if applicable"). A higher restocking charge may be assessed against any return requiring extraordinary handling costs.

**Minimum Order:** $50.00 minimum order net billing. A 15% broken box charge will be added for other than full box quantities.

**Limited One Year Warranty:** The liabilities of NDS are limited solely and exclusively to replacement as set forth in our standard "Statement of Warranty", alone and do not include any liability for incidental, consequential or other damage of any kind whatsoever, whether any claim is based upon theories of contract, warranty, negligence or tort and without any limitations and do not include shipping charges, labor, installation or any other losses or expenses incurred in operation of any replacement specialty item or fitting. NDS drainage products are designed to be used for exterior surface drainage only.

**Limited Lifetime Warranty:** NDS warrants to the original owner of its NDS catch basins, grates, channel and Pro Series valve boxes, subject to the conditions set forth in this warranty, that NDS catch basins, grates, channel and Pro Series valve boxes will remain free from manufacturing defects.

All NDS products are guaranteed against defects resulting from faulty workmanship or materials. Claims for labor costs and other expenses required to replace defective products or repair of any damage resulting from the use thereof will not be allowed by NDS. Our liability is limited to replacement of products acknowledged by NDS to be defective.

**Exclusive Warranties and Remedies:** The FOREGOING REMEDIES ARE EXCLUSIVE AND ARE GIVEN AND ACCEPTED IN LIEU OF (I) ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE; AND (II) ANY OBLIGATION, LIABILITY, RIGHT, CLAIM OR REMEDY IN CONTRACT OR TORT, WHETHER OR NOT ARISING FROM NDS, INC.'S NEGLIGENCE, ACTUAL OR IMPUTED. The remedies of customer shall be limited to those provided herein to the exclusion of any and all other remedies including, without limitation, incidental or consequential damages. No agreement varying or extending the foregoing warranties or these limitations will be binding on NDS, Inc., unless such is signed in writing by an authorized officer of NDS, Inc.

The liability of NDS, Inc., hereunder shall be limited to restoring to good working order, provided that NDS, Inc., is not required to restore the product to good working order when such failure is due to causes beyond NDS, Inc.'s control, including but not limited to, acts of God, acts of civil or military authority, priorities, strikes, floods, epidemics, war, riots, and other causes that are beyond the manufacturers control.

These provisions are complete and exclusive statements of all terms and conditions between NDS, Inc., and the consumer. These provisions may not be varied, supplemented, qualified or interpreted by any prior course of dealings, written or oral or by trade usage. No NDS, Inc. agent, officer or employee has authority to make any representation, promise or warranty concerning these provisions.

# NDS

**One source. Many solutions.**

- **Catch Basins & Grates**
- **Channel Drains**
- **Agrifim Drip Irrigation**
- **Equipment Pads**
- **Flo-well Stormwater Leaching Systems**
- **Flo Control Specialty Fittings**
- **Flo Control Check Valves**
- **Flo Control Ball Valves**
- **Backwater & Diverter Valves**
- **Sewer & Drain Fittings**
- **Grass Pavers**
- **Root Barriers**
- **Valve & Meter Boxes**
- **Flexible Couplings**
- **Flexible Saddles**

**NDS Product Catalogs**

Drainage Catalog • Drip & Micro Irrigation Product Catalog • Equipment Pad Catalog • Fittings Catalog
Landscape Product Catalog • Specialty Valves and Fittings Catalog • Valve and Meter Box Catalog

## PARTIAL CLIENT LIST

The White House
Los Angeles Country Club
Pebble Beach
Cypress Point
Spyglass Hill
PGA West Stadium Golf Course
Princeville Golf Course
Ritz Carlton
Santa Barbara Zoo
Sheraton Hotels
Sherwood Country Club
Soldier Field
Del Webb & Sun City Country Clubs
Westin Hotels
Riviera Country Club
Buchart Gardens
Disney World
Disneyland
Florida University
Harbortown Golf Links
Hyatt Grand Champions
La Quinta Resort
Marriott Hotels
MGM Grand Hotel & Theme Park
Mirage Hotel
Jack La Lane Athletic Clubs
Olympic Training Center

Address/Telephone
P.O. Box 339 • 851 N. Harvard Avenue
Lindsay, CA 93247
Phone: 800-726-1994
Fax: 800-726-1998
International Phone: 559-562-9888
International Fax: 559-562-4488
e-mail: NDS@NDSPRO.com

**www.NDSPRO.com**

Regional Warehouses:
- Lindsay, CA
- Dallas, TX
- Atlanta, GA
- Seattle, WA
- Philadelphia, PA
- Chicago, IL
- Orlando, FL
- Puerto Rico

# EXHIBIT B

HVACRDB

# DiversiTech Acquires the Hef-T-Pad Product Line

Feb. 1, 2009

DiversiTech Corporation has acquired the Hef-T-Pad and related equipment support products from NDS, Inc. Both DiversiTech and NDS are closely held private

DiversiTech Corporation has acquired the Hef-T-Pad™ and related equipment support products from NDS, Inc. Both DiversiTech and NDS are closely held private corporations. The manufacture of the Hef-T-Pad product will be relocated to DiversiTech's polymer products manufacturing facilities in Conyers, GA.

Speaking of the acquisition, CEO Charles Lipman stated “The acquisition of the Hef-T-Pad will complement DiversiTech's broad offering of equipment pads and accessories. This acquisition is another step in reducing HVACR distributor product procurement costs through consolidated purchasing. Enabling our distribution partners to reduce their transactional costs through consolidated purchasing is a core strategic objective for DiversiTech.”

The addition of the Hef-T-Pad to DiversiTech's equipment pad offering brings the broadest selection of equipment pad styles under a single supplier. DiversiTech manufactures the lightweight concrete pad, UltraLite® pad; traditional concrete pads under the CladLite® and Hunk brands; and plastic pads under the E-Lite®, The Black Pad® and the Hef-T-Pad brands.

## LATEST FROM HVACRDB

SPONSORED CONTENT

### Transforming Sustainability Commitments to Action:

## Ferguson Leads HVAC Pros through the A2L Refrigerant Transition

Nov. 13, 2024

SPONSORED CONTENT

## Heat Pump Water Heaters are Hot

Oct. 17, 2024


## BDR boosts the benefits of training with exclusive Distributor Partnership Program

Aug. 15, 2024

## Mid-City Supply Opens Renovated Indiana Location

Aug. 8, 2024


## F.W. Webb Named GE Appliances' Exclusive Northeast Distributor

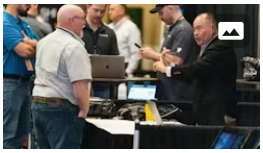
Aug. 5, 2024


## Cochrane Supply Opens Houston Branch

July 31, 2024

## Marcone Restructures Leadership Team

July 31, 2024



## Marcone HVAC Distributors Gather to Learn and Network

July 1, 2024

Contracting Business





ENDEAVOR BUSINESS MEDIA

# EXHIBIT C

# DiversiTech Products Patents

***Revised: January 31, 2025***

**Equipment Mounting**

| Product | Patent Number(s) |
|---|---|
| EcoPad and E Lite Plastic Equipment Pads | US9,016,653; US11,794,440 |
| Heat Pump Pad (HP3232-8, HP3636-8) | 7,891,635 |

**Condensate Management**

| Product | Patent Number(s) |
|---|---|
| CVMINI Mini-Split Condensate Pump | 8,182,243 |
| High Rise Drain Pan (6-HK2748, 6-HK2766, 6-HK3050, 6-HK3060) | 9,074,812; 9,557,094; 10,753,641 |
| Heavy Duty High Rise Drain Pan (6-HK3050HD, 6-HK3060HK, 6-HK3070HD) | 9,074,812; 9,557,094; 10,753,641 |
| Furnace Pan (6-HK3364FUR, 6-HK3378FUR) | 9,074,812; 9,557,094; 10,753,641 |
| IQP and ThinkTank Series Pumps (IQP-120, IQP-120T, LCV-120) | US8,602,744B2 |

**Tools**

| Product | Patent Number(s) |
|---|---|
| hilmor Lineset Cleaner (HLC007) | US12,138,672; US11,203,o47B1 |
| Compact Swage Tool (hilmor 1839015, 1964041) | 9,987,672; 10,870,142; 11,351,594 |
| Hammer Head In-Line Wire Stripper (hilmor 1885425, Imperial 69E) | 10,601,206; 10,700,500; 11,843,230 |
| SWOOSH Double Shot Drain Gun (SG-2KIT) | US10,744,525B1; US11,731,152B2 |
| Mini-Split Bib (MSB-360-KIT, MSB-KIT) | CA2,983,369C; AU 2021202606; EP 3 286 516 B1 |

**Components and Consumables**

| Product | Patent Number(s) |
|---|---|
| Pro-Flush (PF-KIT, PF-16, PF-8, PF-AER-32, PF-AER-KIT, PF-AER-16) | US8,557,759B2 |

# EXHIBIT D

US009016653B1

(12) **United States Patent**
**Cox, Jr. et al.**

(10) **Patent No.: US 9,016,653 B1**
(45) **Date of Patent: Apr. 28, 2015**

(54) **MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS**

(71) Applicant: **Diversitech Corporation**, Duluth, GA (US)

(72) Inventors: **Charles Walter Cox, Jr.**, Lawrenceville, GA (US); **Keith Platt**, Snellville, GA (US); **Jonathan Sada**, Decatur, GA (US)

(73) Assignee: **Diversitech Corporation**, Duluth, GA (US)

( * ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 66 days.

(21) Appl. No.: **13/874,727**

(22) Filed: **May 1, 2013**

**Related U.S. Application Data**

(60) Provisional application No. 61/641,937, filed on May 3, 2012.

(51) **Int. Cl.**

| | |
|---|---|
| ***F16M 5/00*** | (2006.01) |
| ***F16M 9/00*** | (2006.01) |
| ***F24F 13/32*** | (2006.01) |
| ***F16M 13/00*** | (2006.01) |

(52) **U.S. Cl.**
CPC ..... ***F16M 13/00*** (2013.01); *B65D 2519/00318* (2013.01); *B65D 2519/00288* (2013.01); *B65D 2519/00069* (2013.01); *F16M 5/00* (2013.01); *F16M 9/00* (2013.01); *F24F 13/32* (2013.01)

(58) **Field of Classification Search**
CPC ..... F24F 13/32; F16M 5/00; F16M 9/00; B65D 19/002; B65D 2519/00069; B65D 2519/00288; B65D 2519/00318; B65D 2519/00407
USPC ..... 248/346.02, 678, 346.01, 676, 903; 206/389, 391; 52/292, 309.1, 197
See application file for complete search history.

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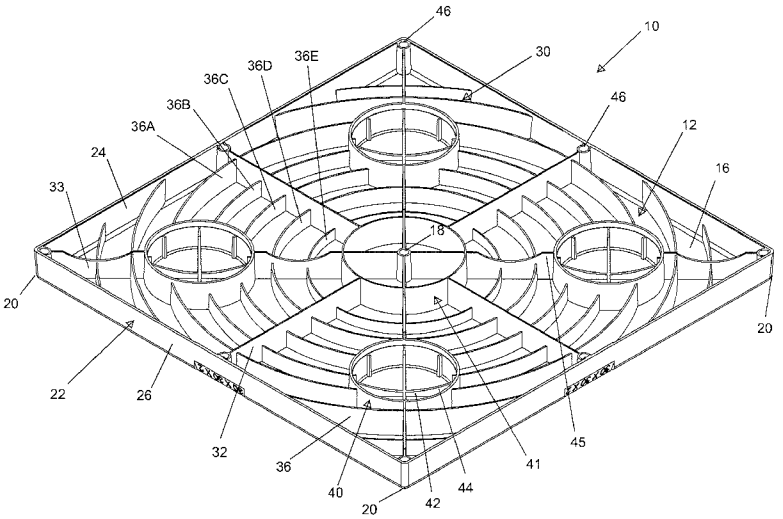
(Continued)

*Primary Examiner* — Tan Le
(74) *Attorney, Agent, or Firm* — Smith Gambrell & Russell LLP

(57) **ABSTRACT**

A molded equipment pad having a top deck, side walls, underlying reinforcing radial ribs, and underlying reinforcing arc-shaped ribs. The arc-shaped ribs may include a series of concentric arc-shaped ribs that are centered on the center of the equipment pad and that extend toward the side walls of the pad and a number of distributed circular hubs. Alternatively, the arc-shaped ribs may include a series of concentric arc-shaped ribs that are centered on the center of the equipment pad that end short of the side walls, a series of opposing arc-shaped ribs that are centered on the corners of the equipment pad, and a number of distributed circular hubs.

**13 Claims, 27 Drawing Sheets**



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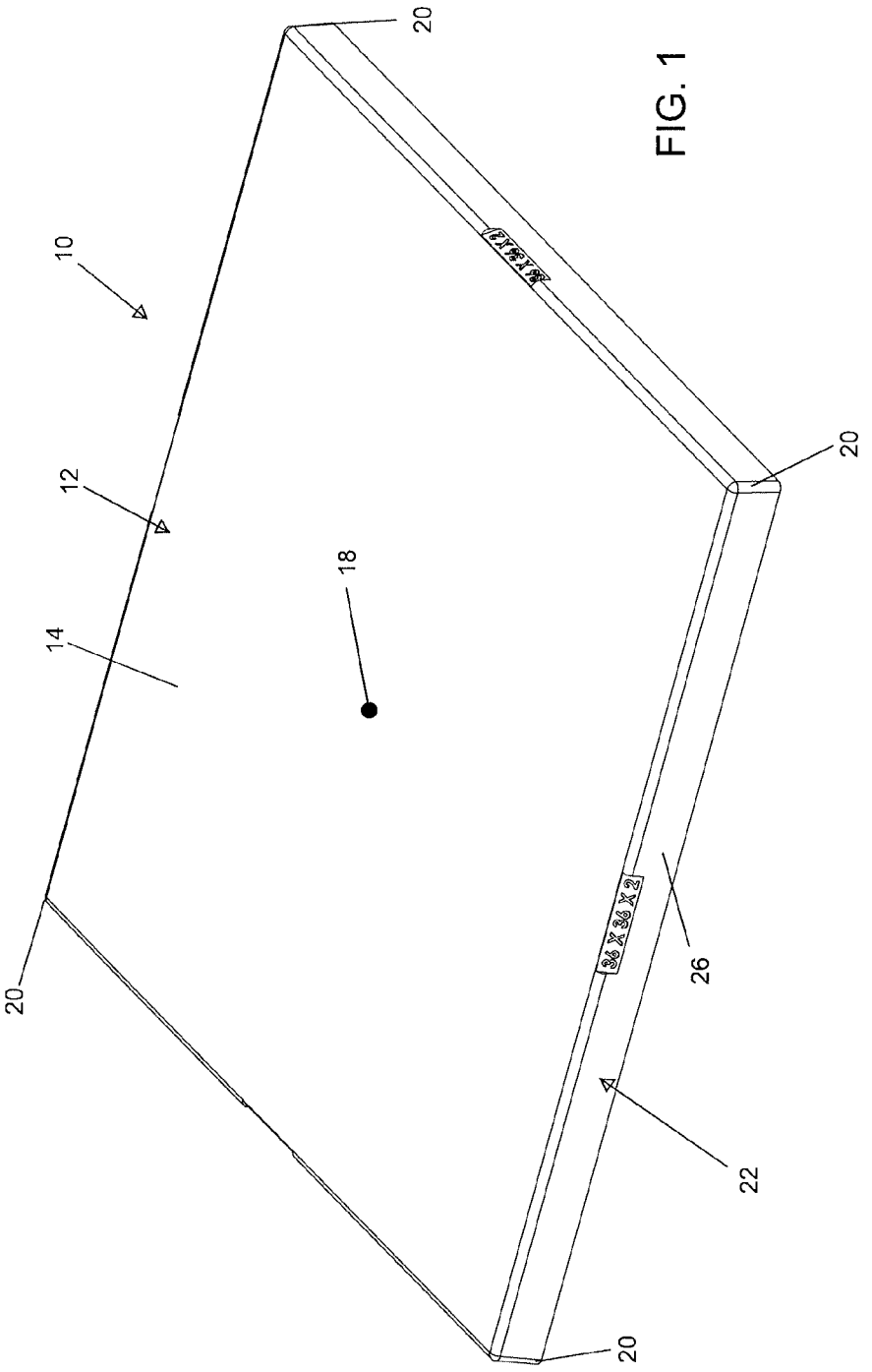


FIG. 1

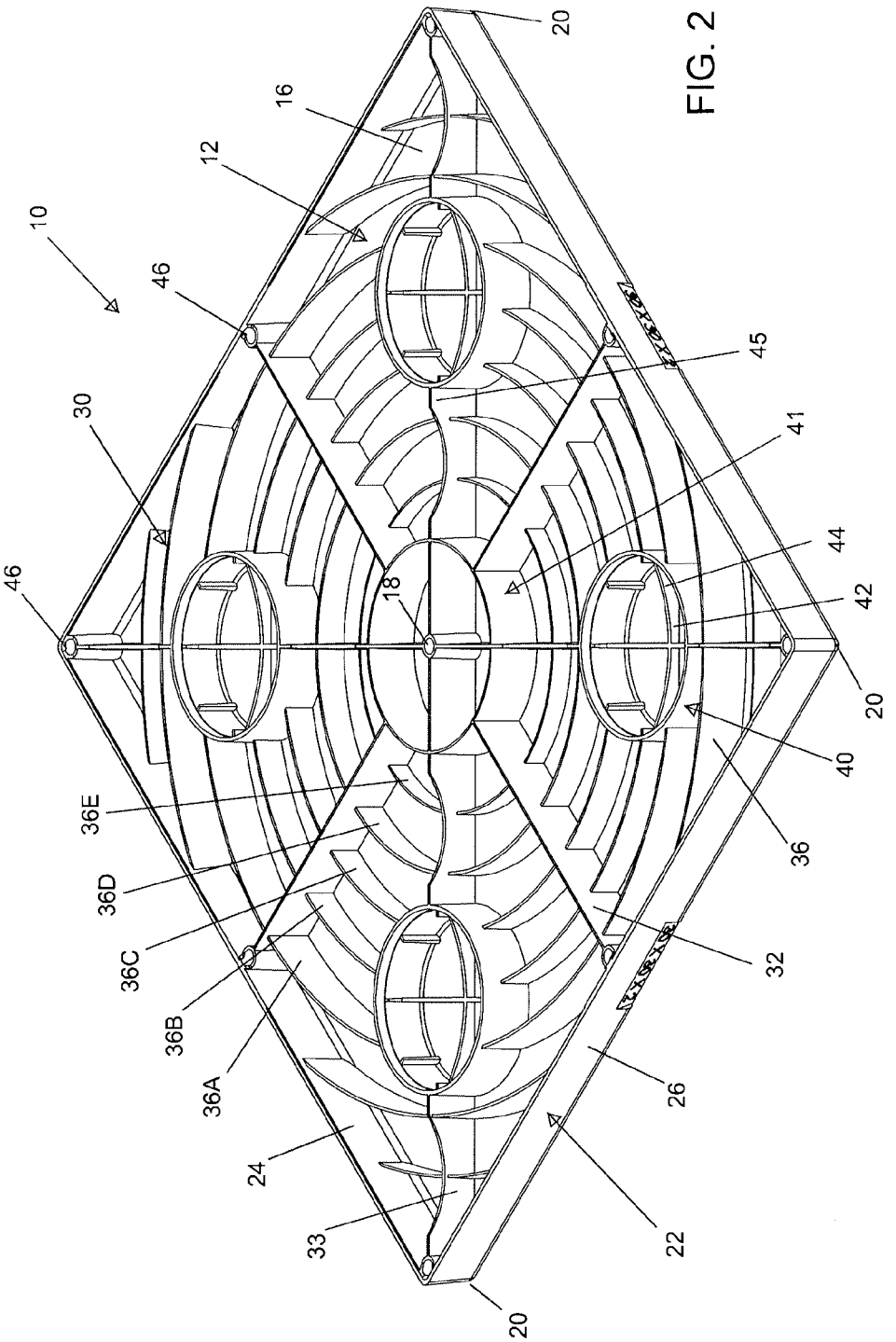
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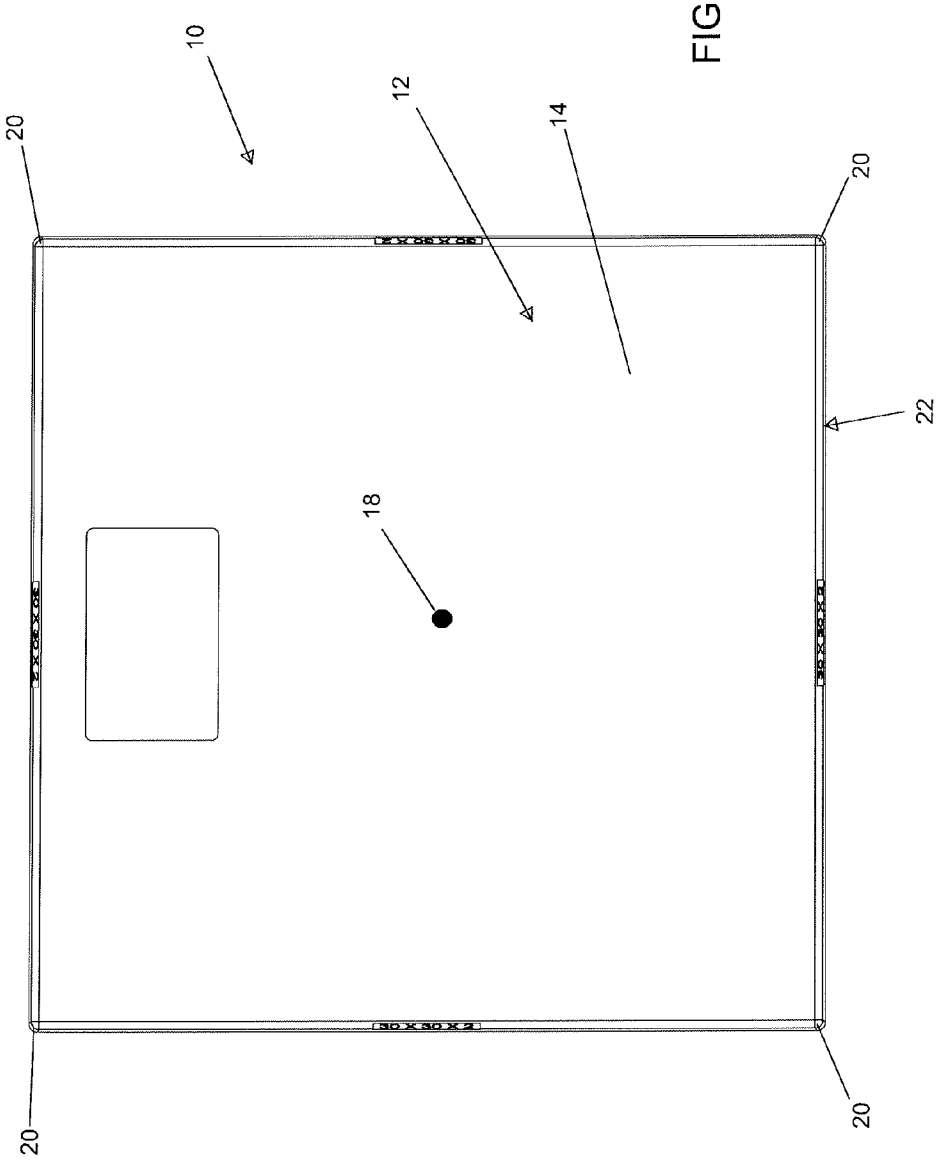
FIG. 2

FIG. 3



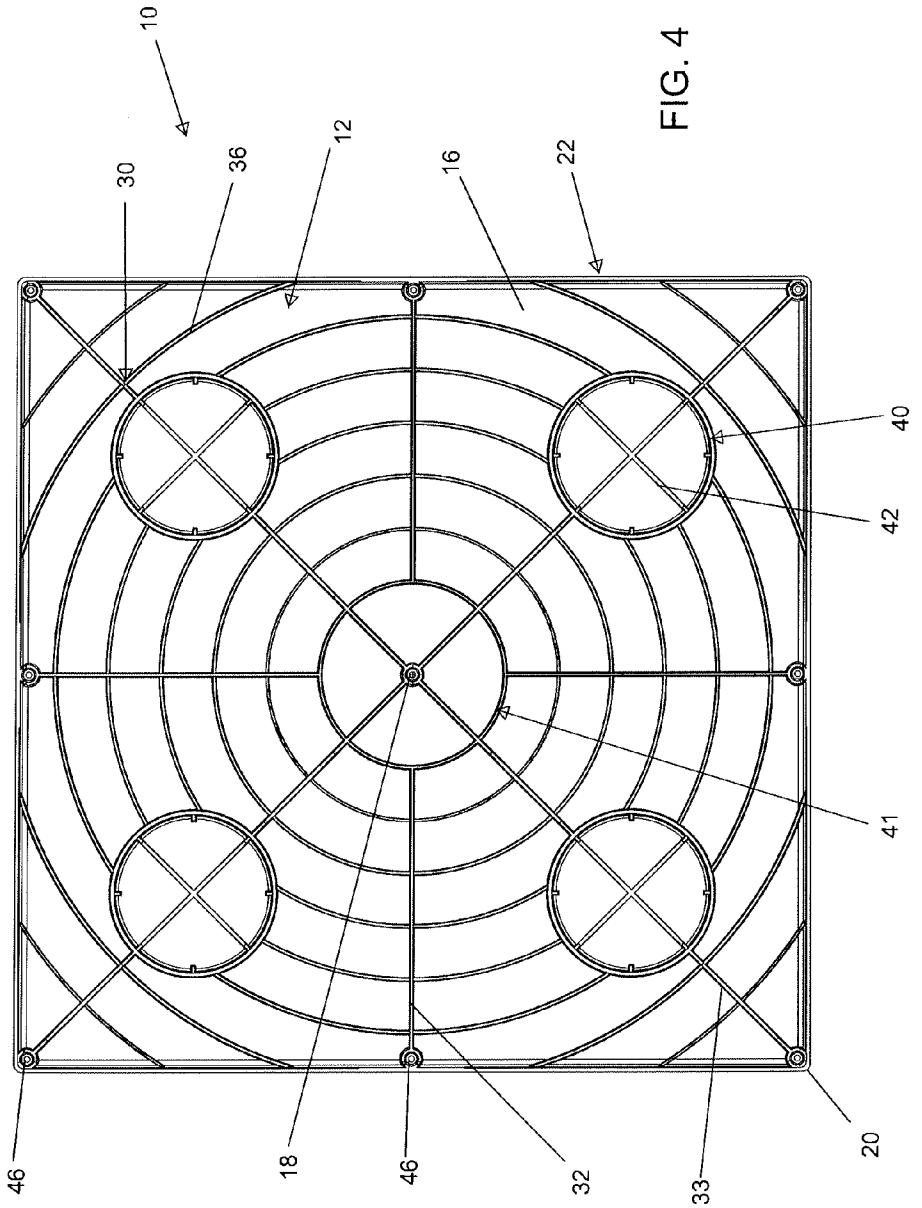



FIG. 4

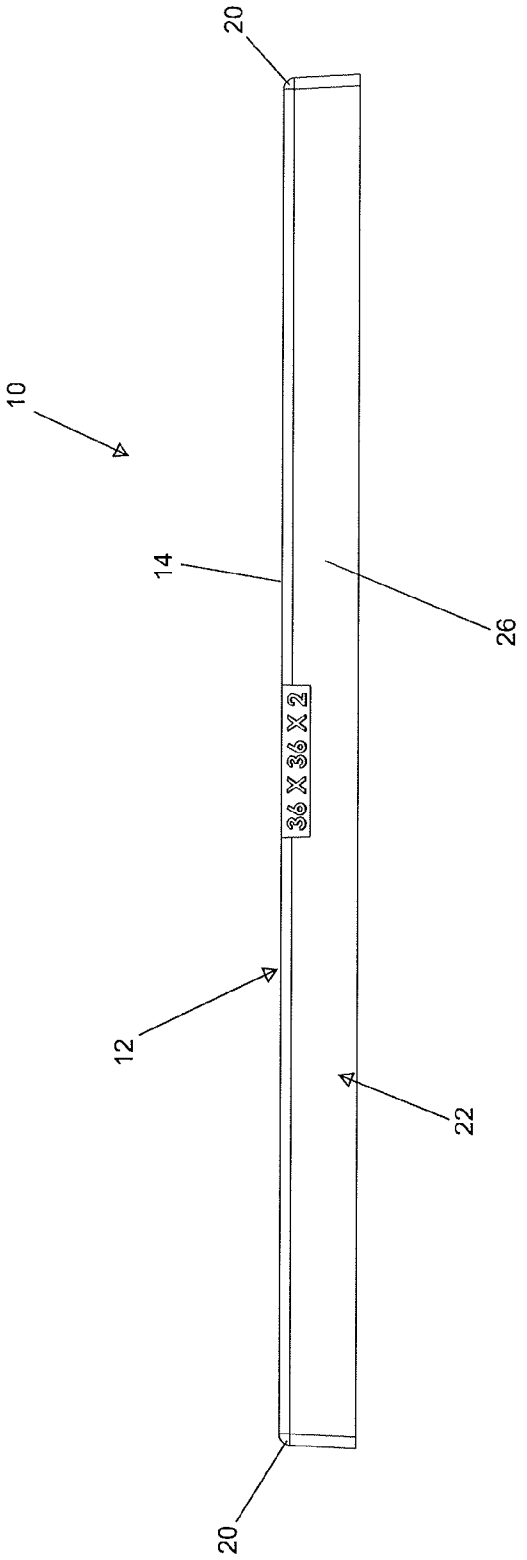



FIG. 5

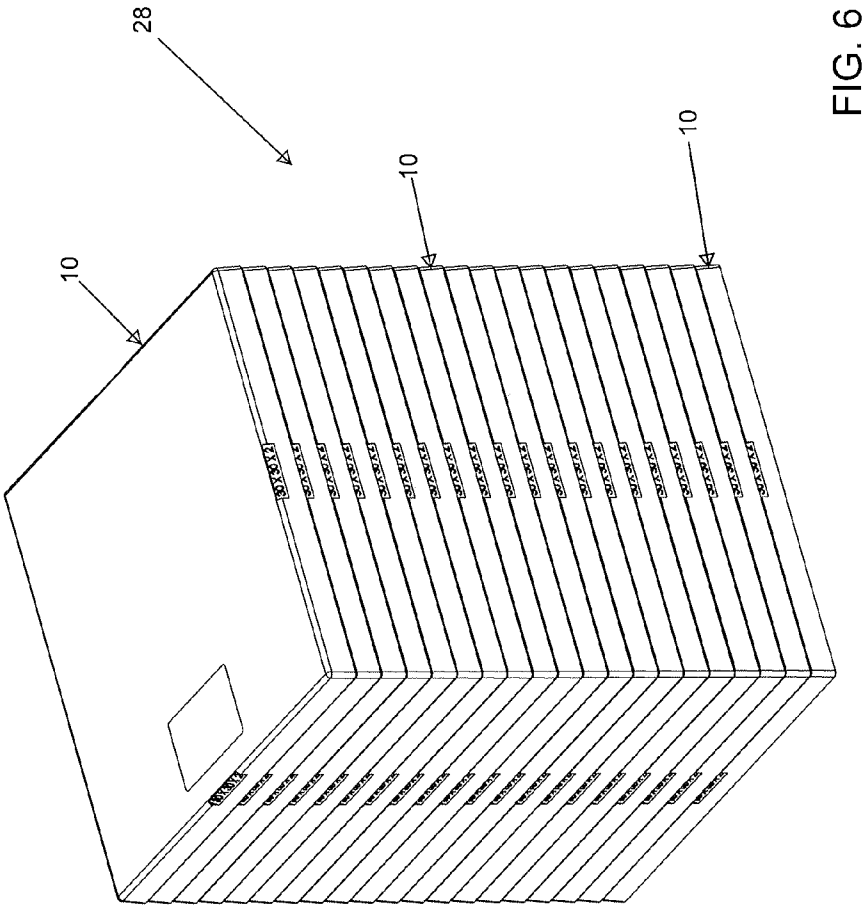
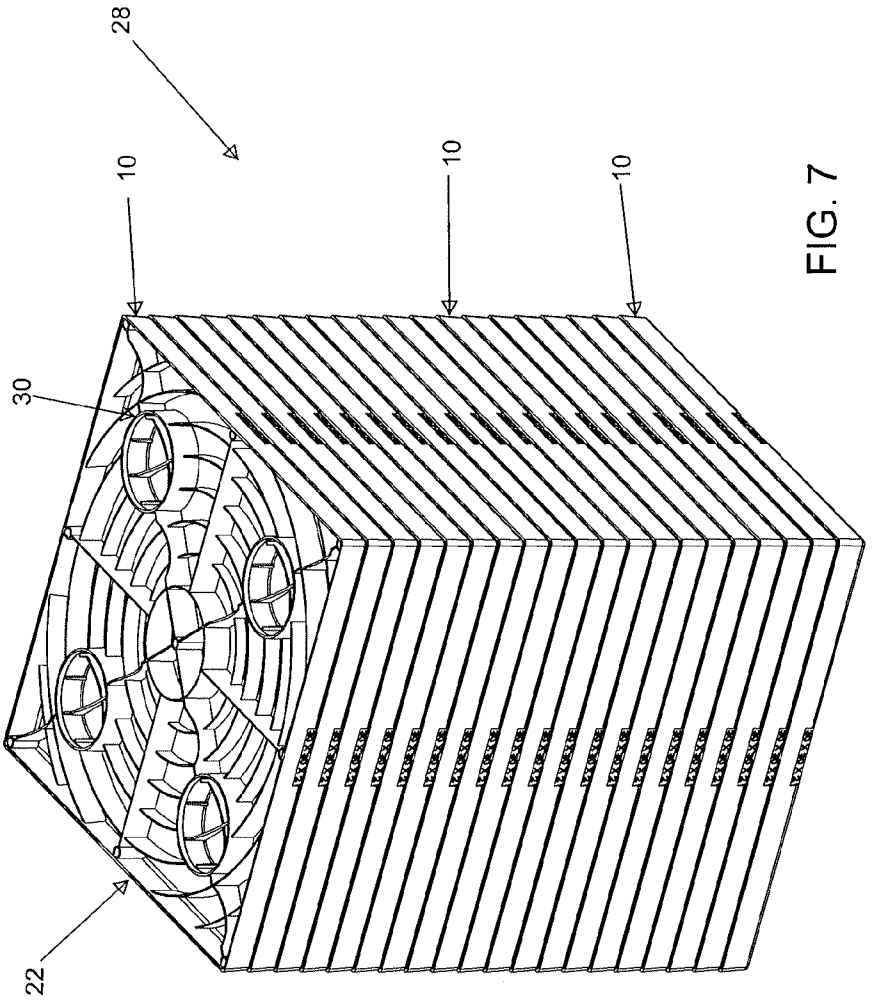



FIG. 6

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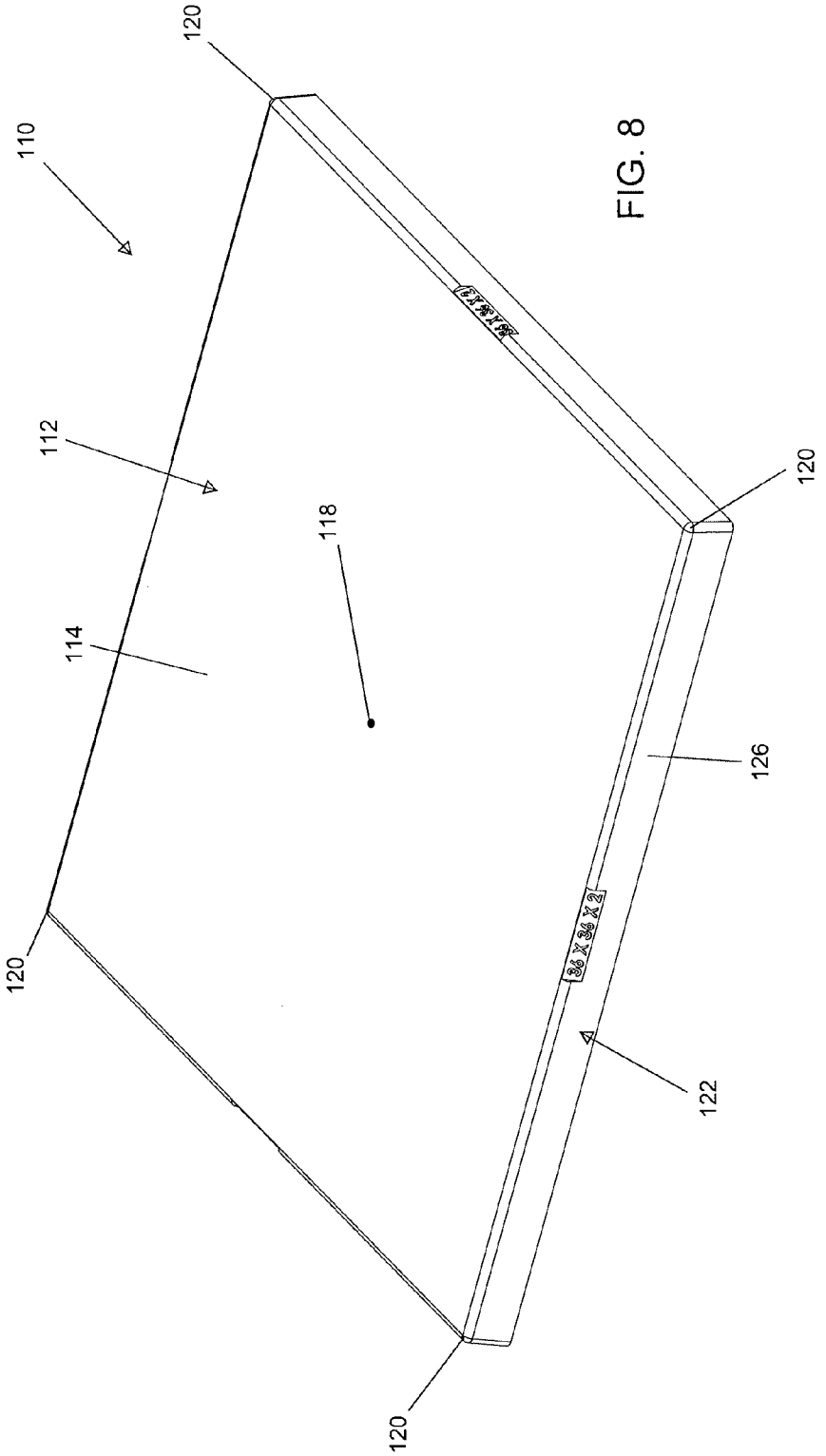


FIG. 8

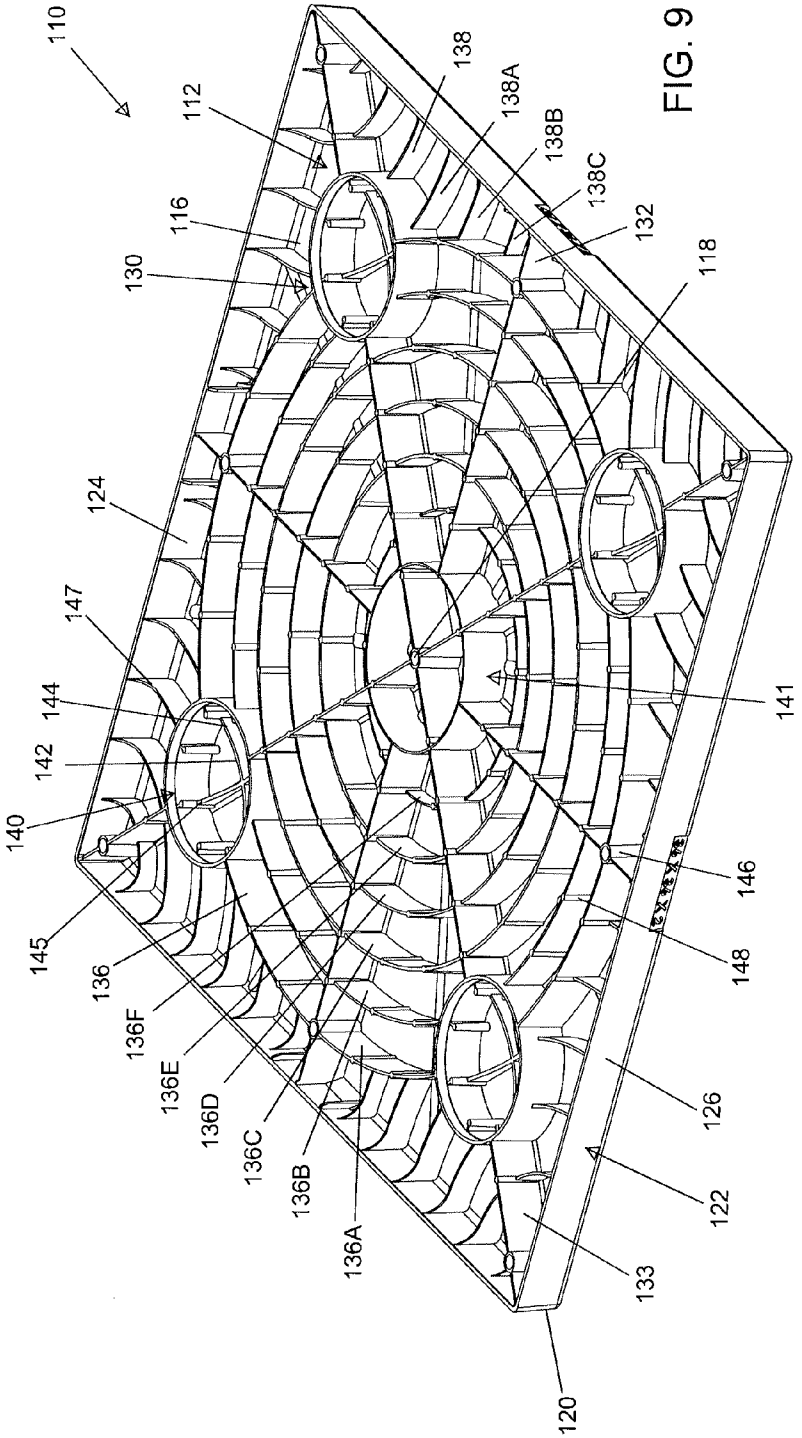
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FIG. 9

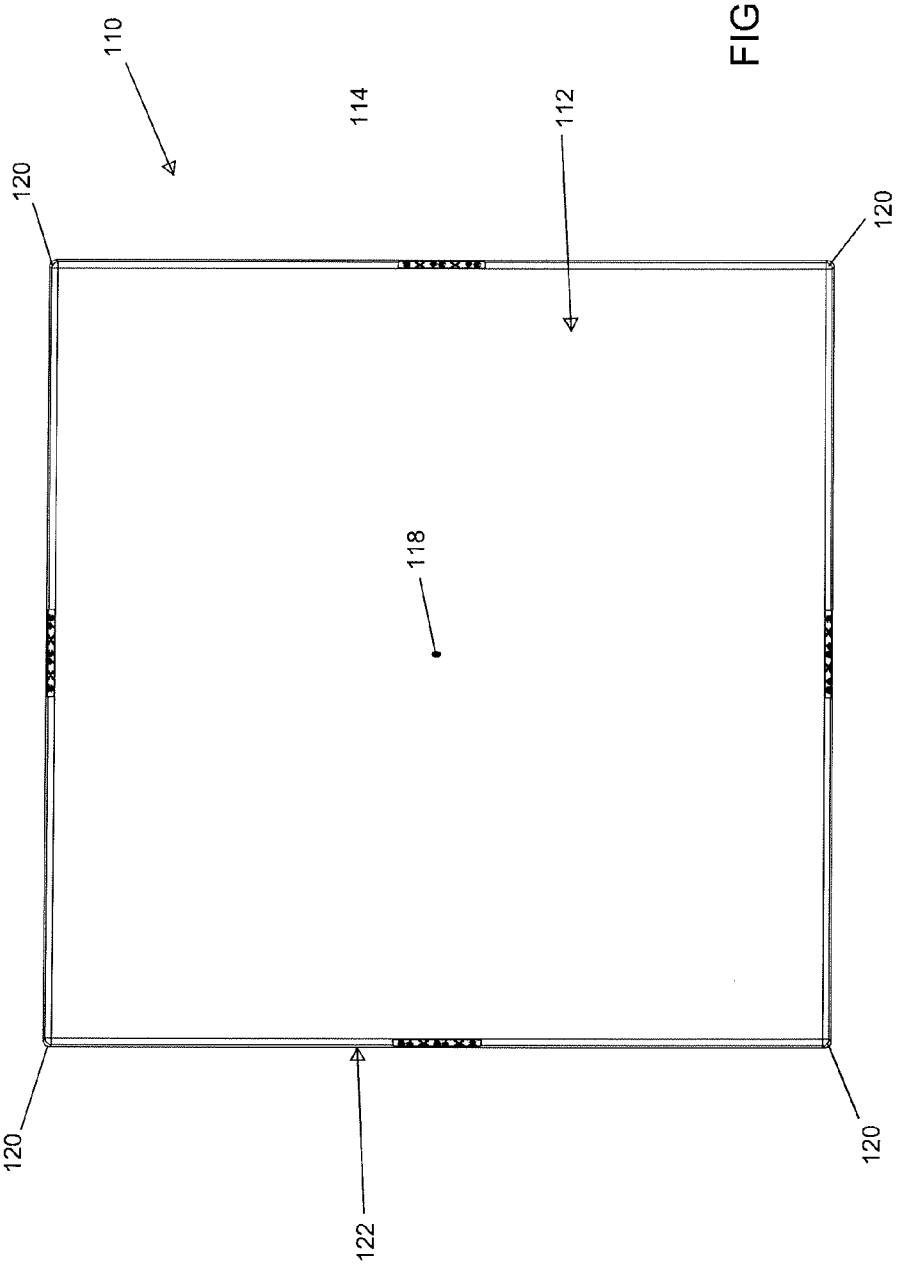
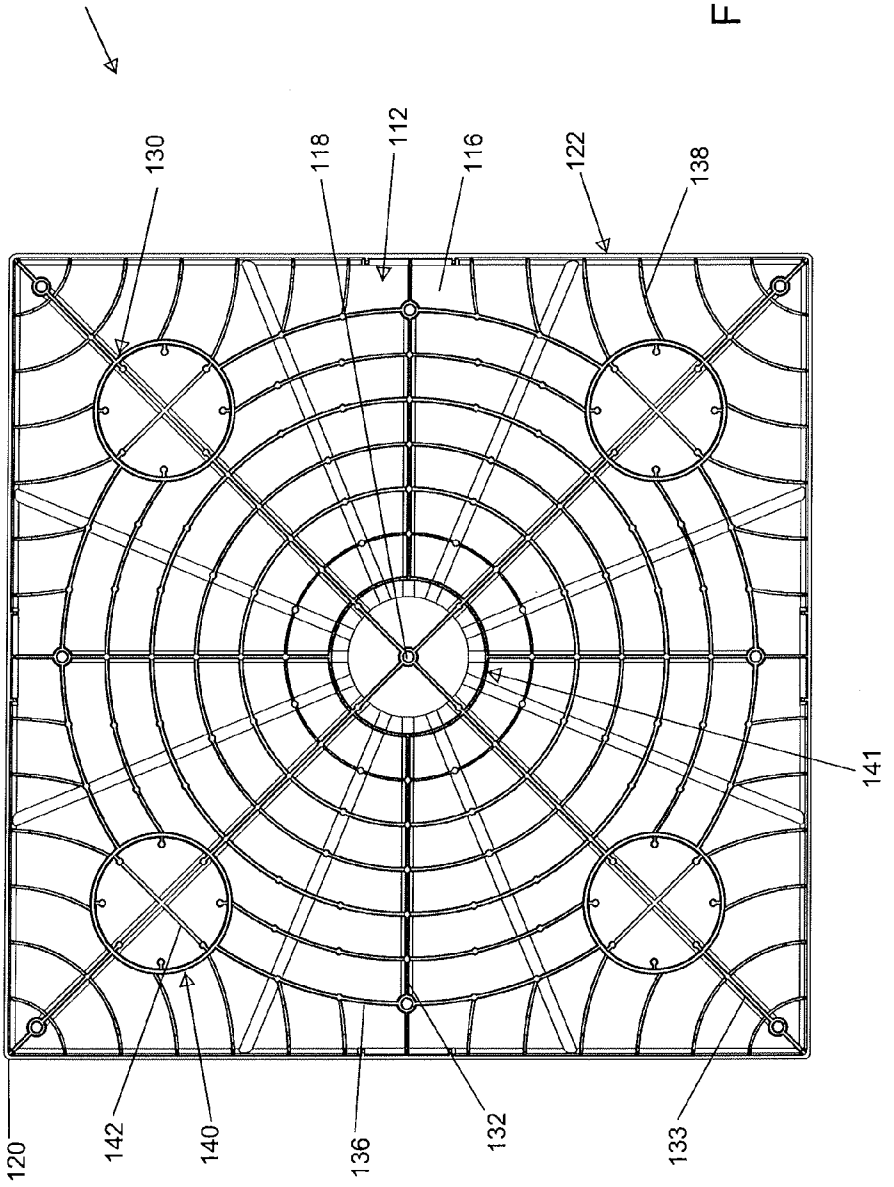



FIG. 10

FIG. 11



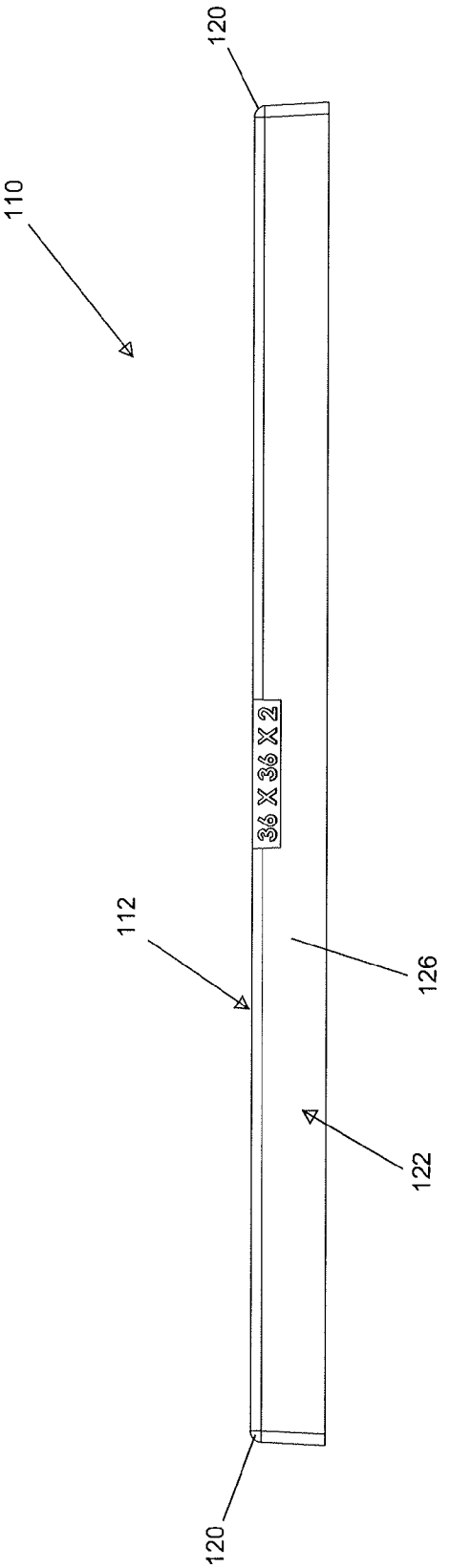



FIG. 12

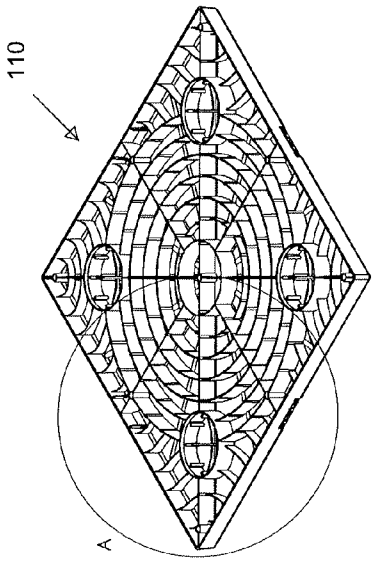



FIG. 13A

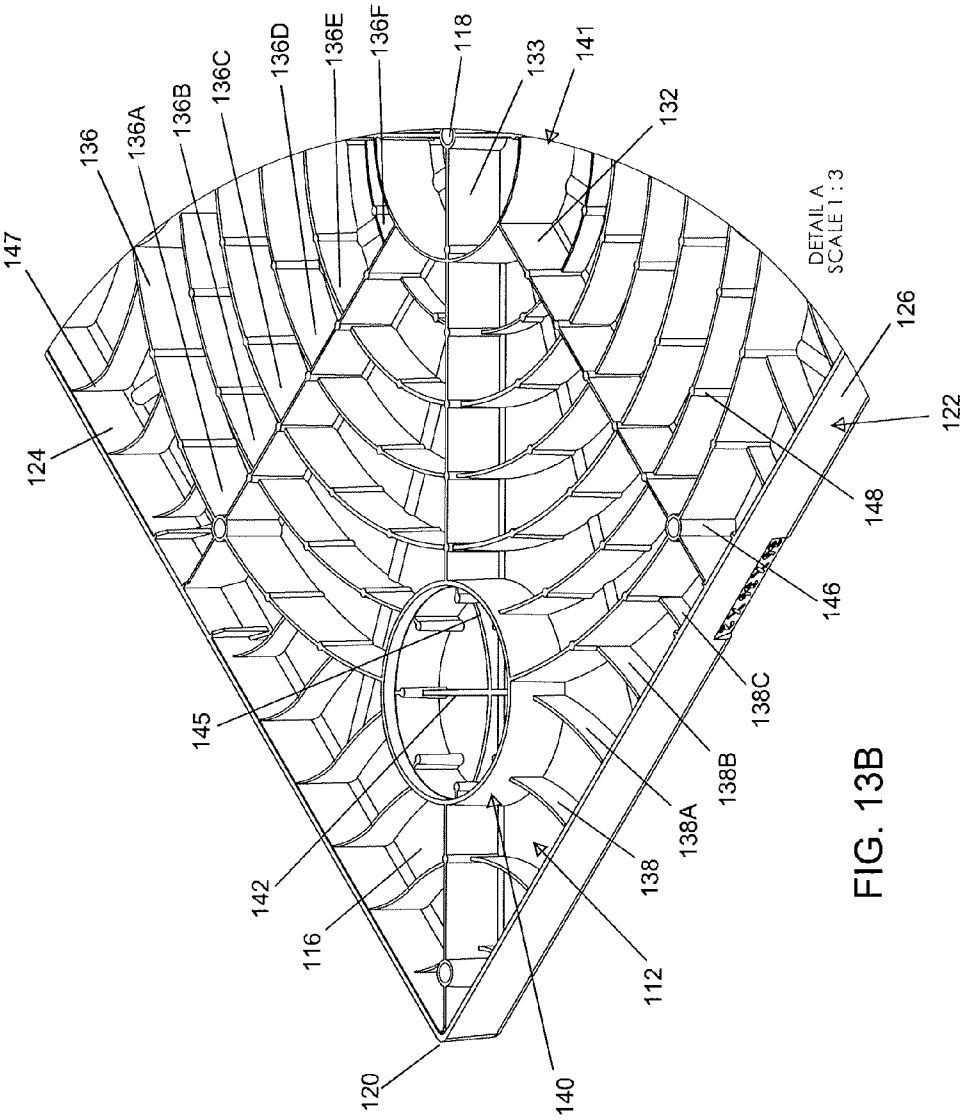



FIG. 13B

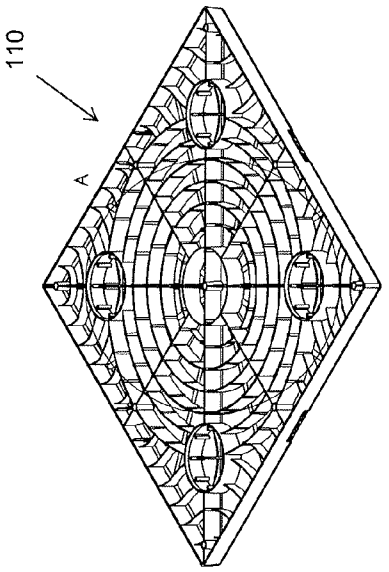



FIG. 14A

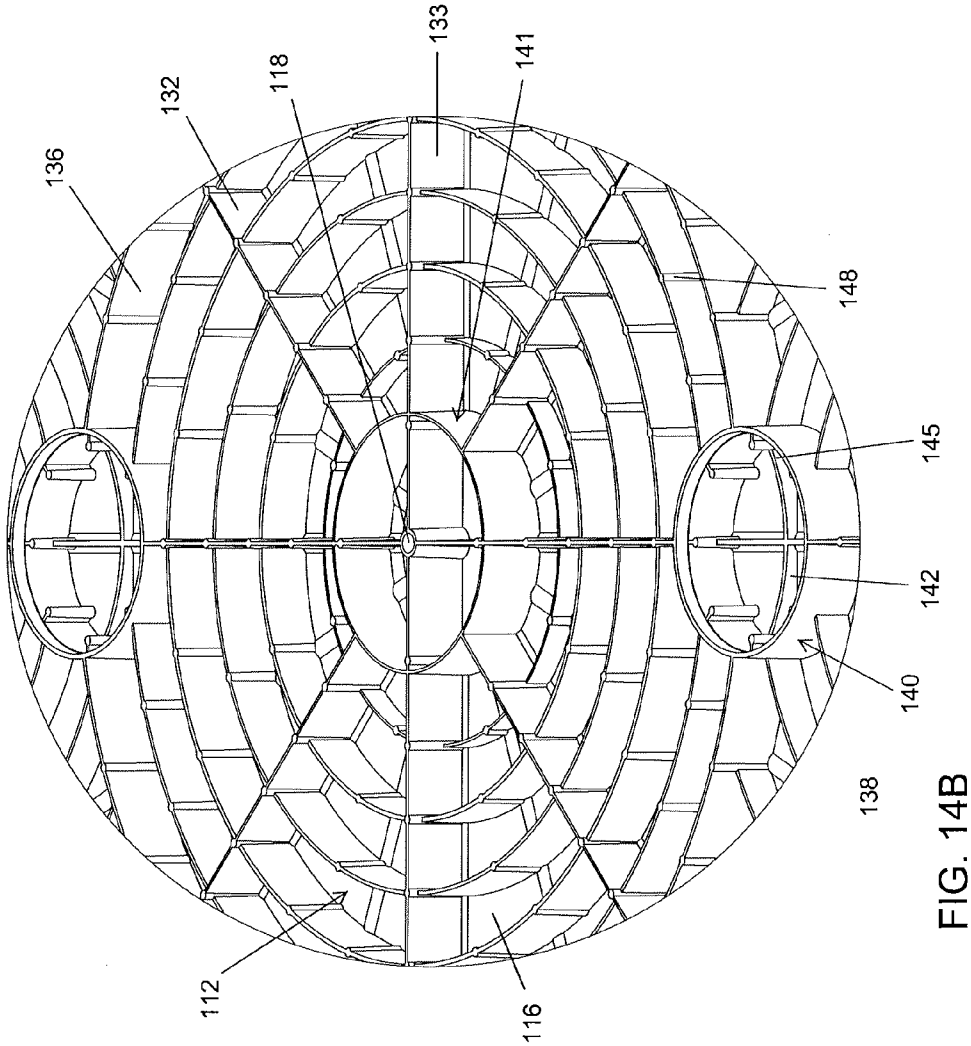



FIG. 14B

FIG. 15

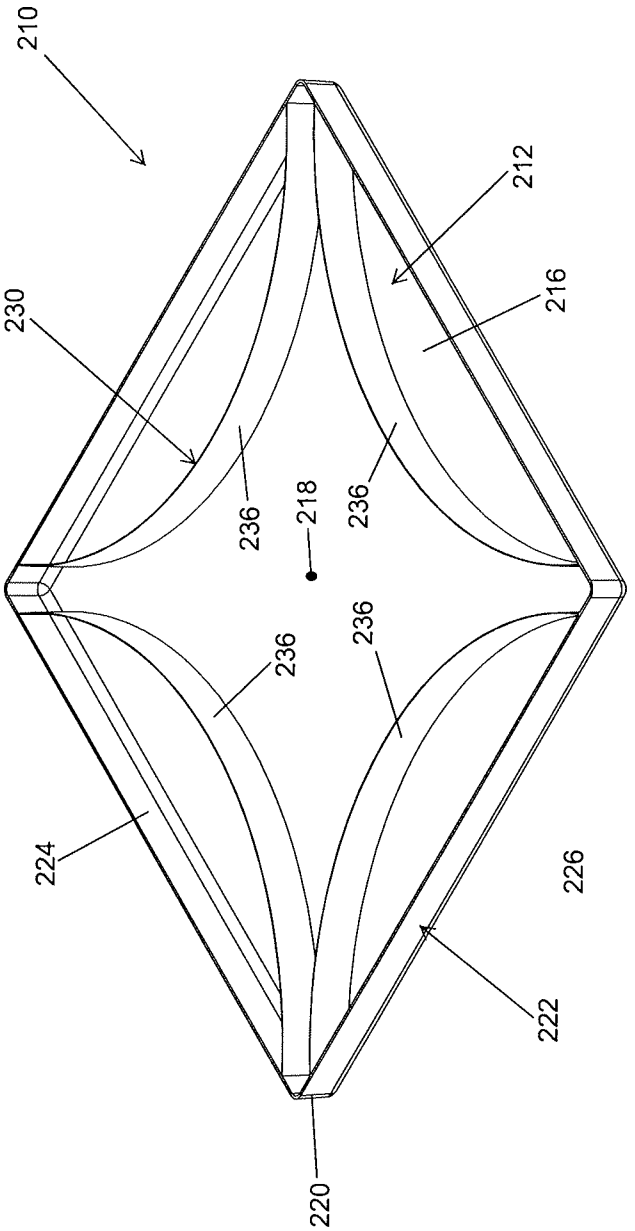
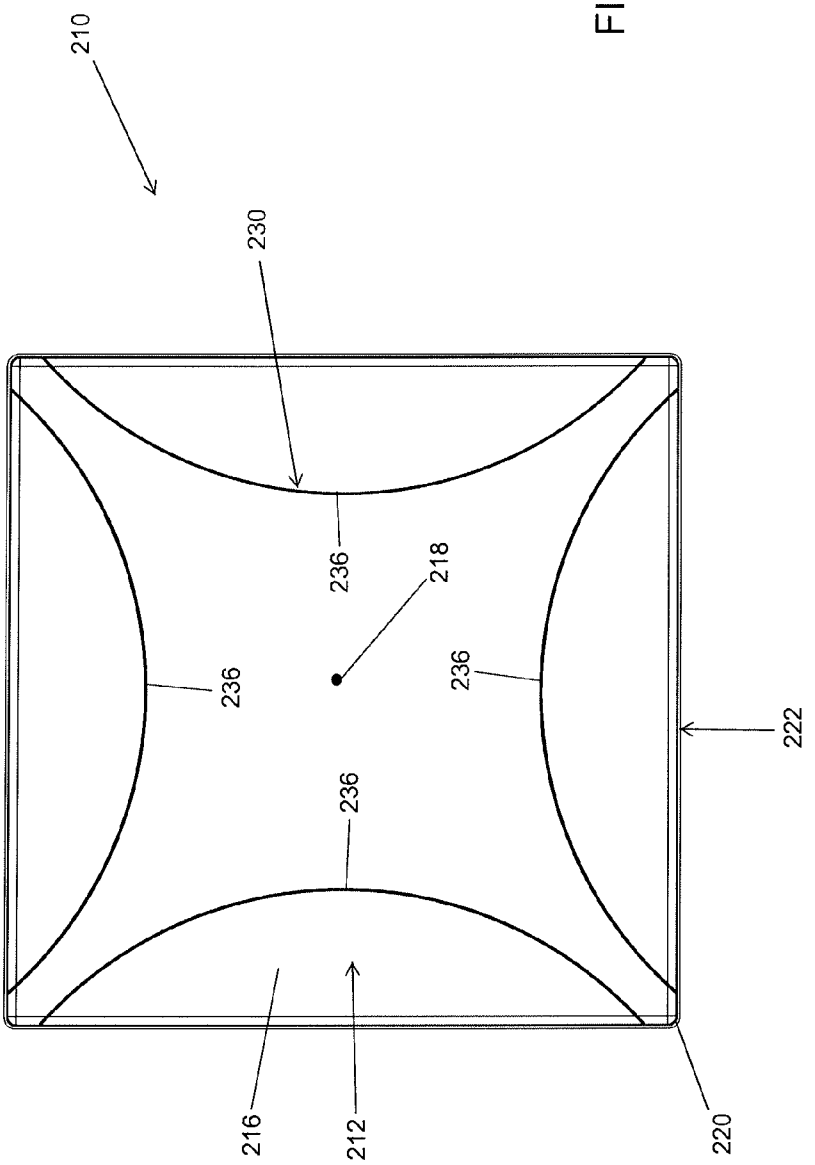


FIG. 16



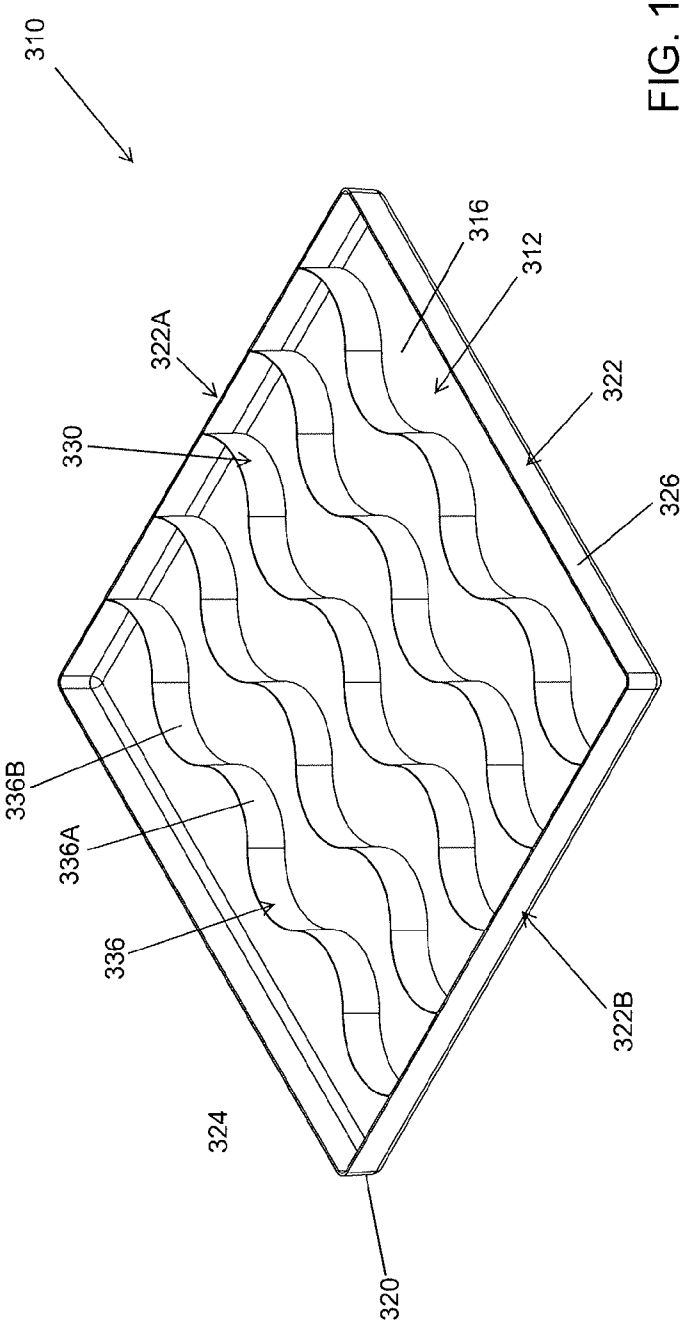
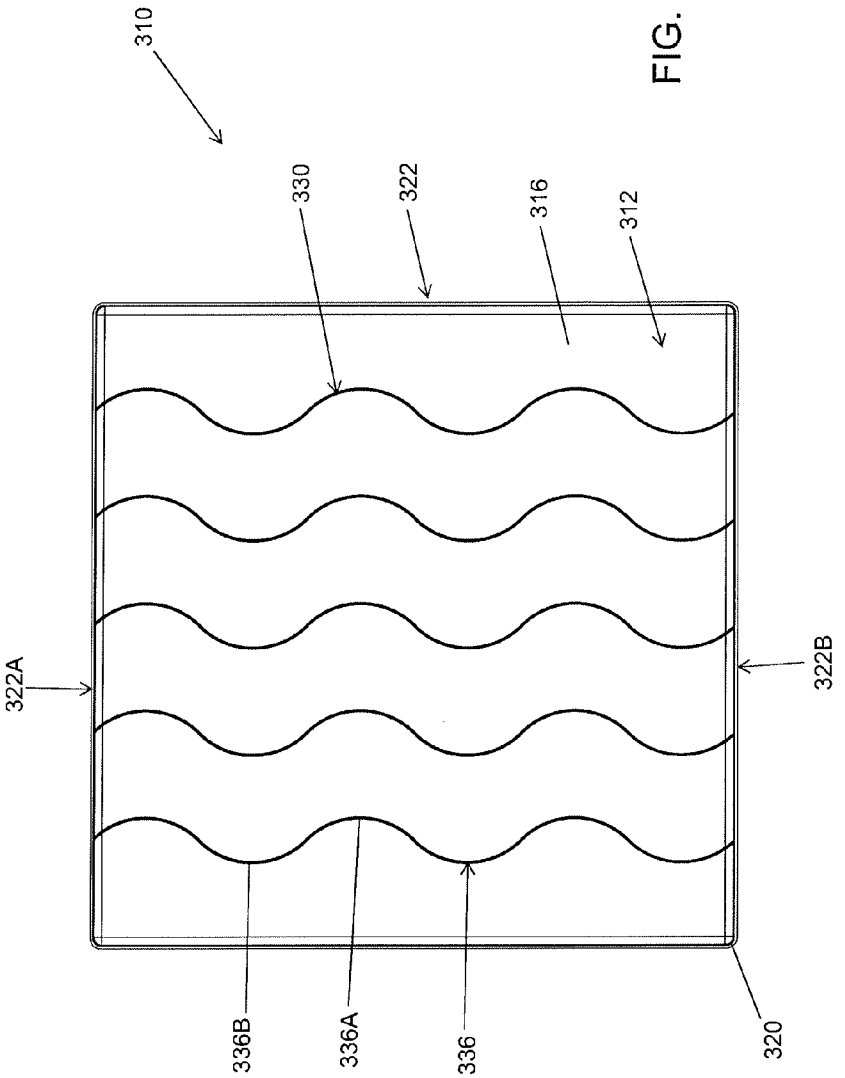



FIG. 17

FIG. 18



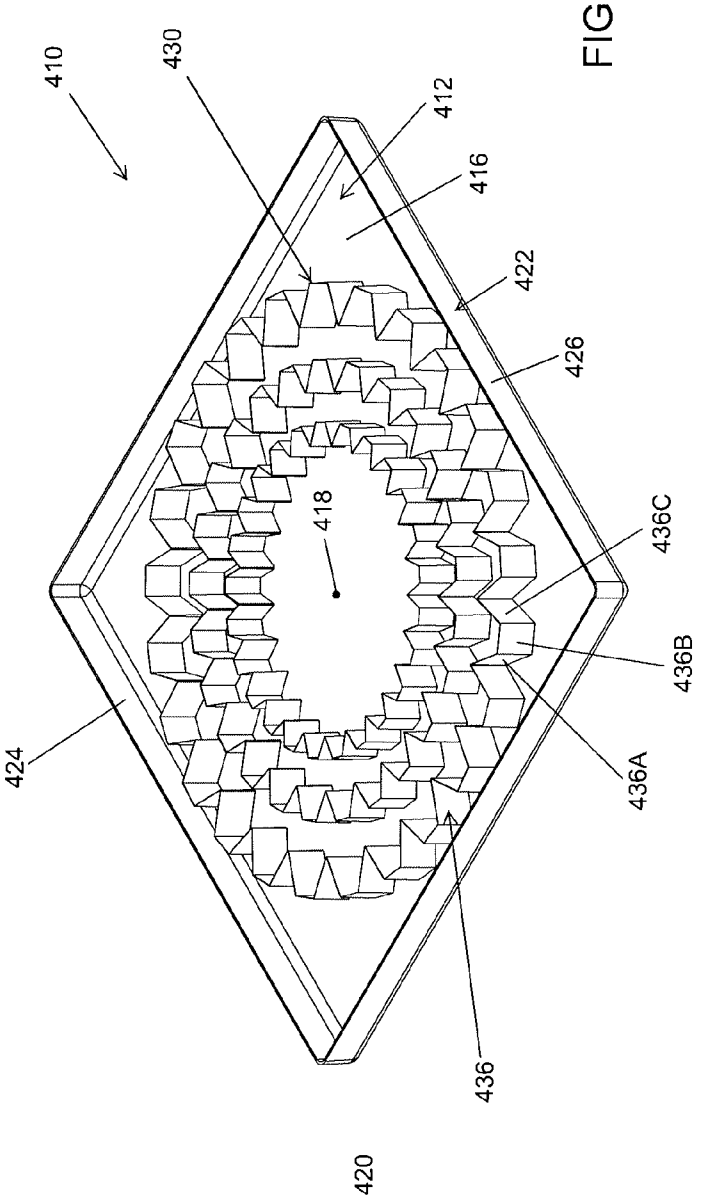



FIG. 19

FIG. 20

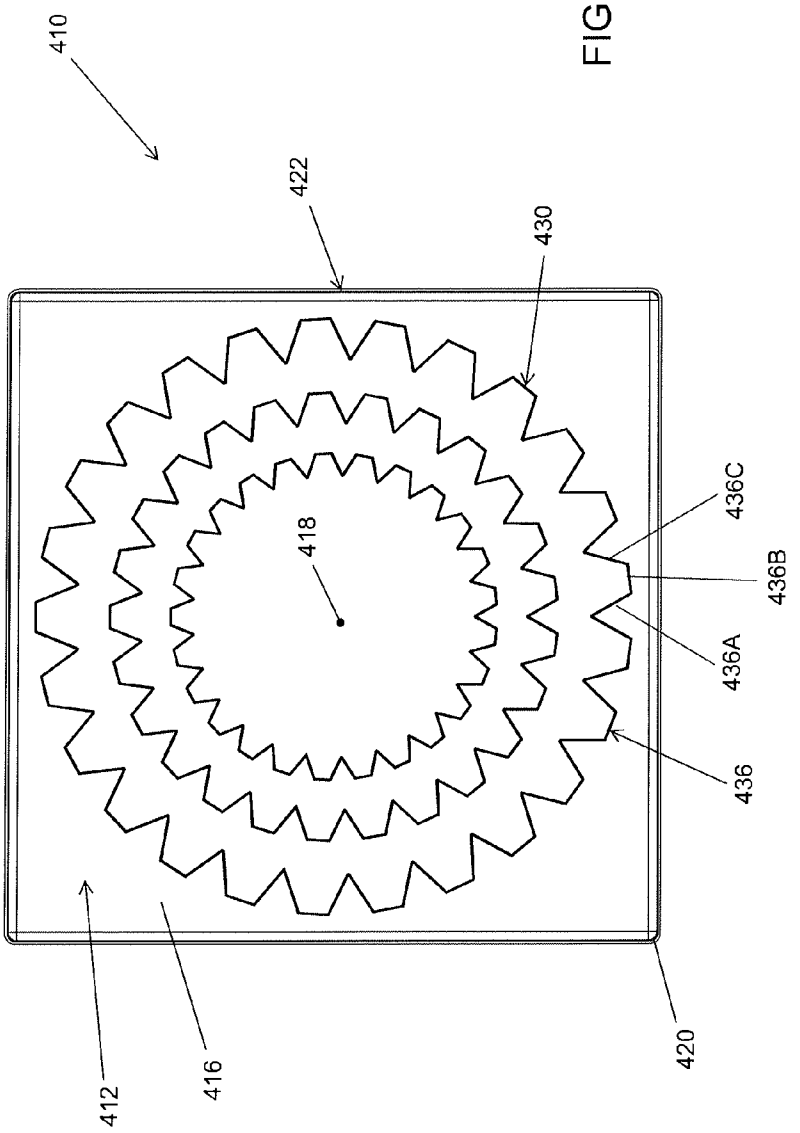


FIG. 21

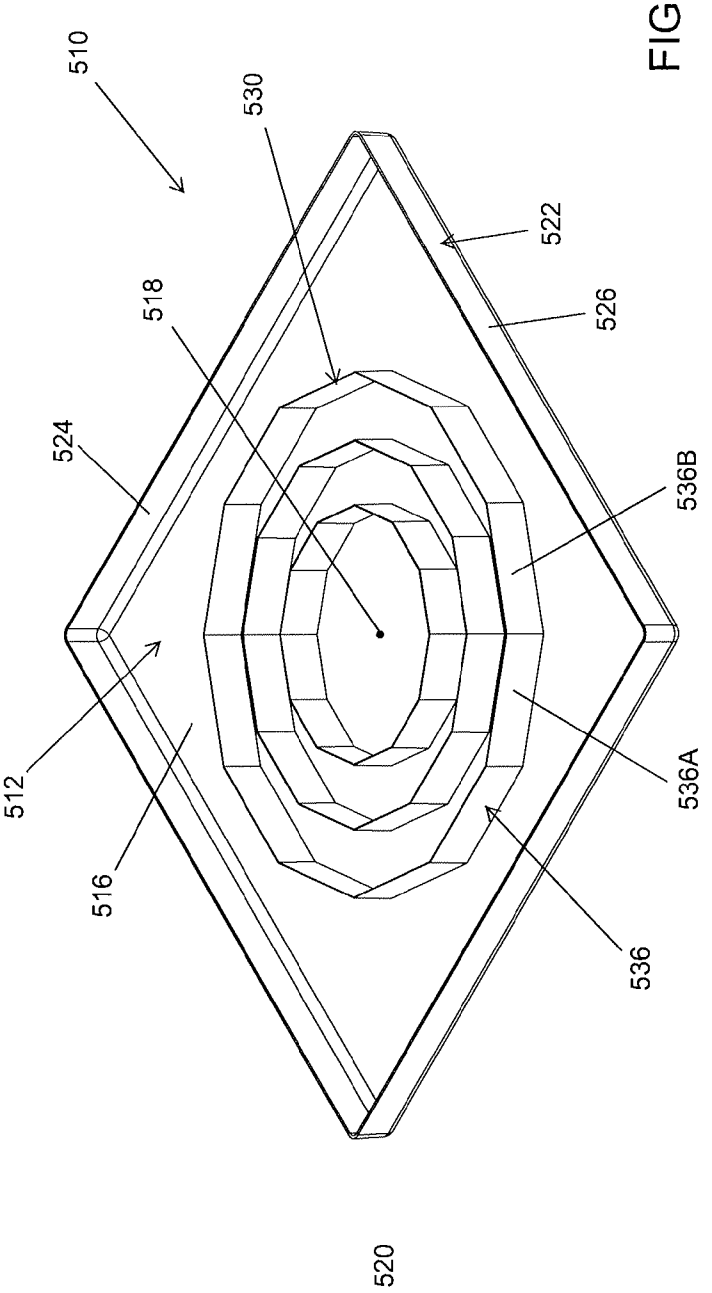
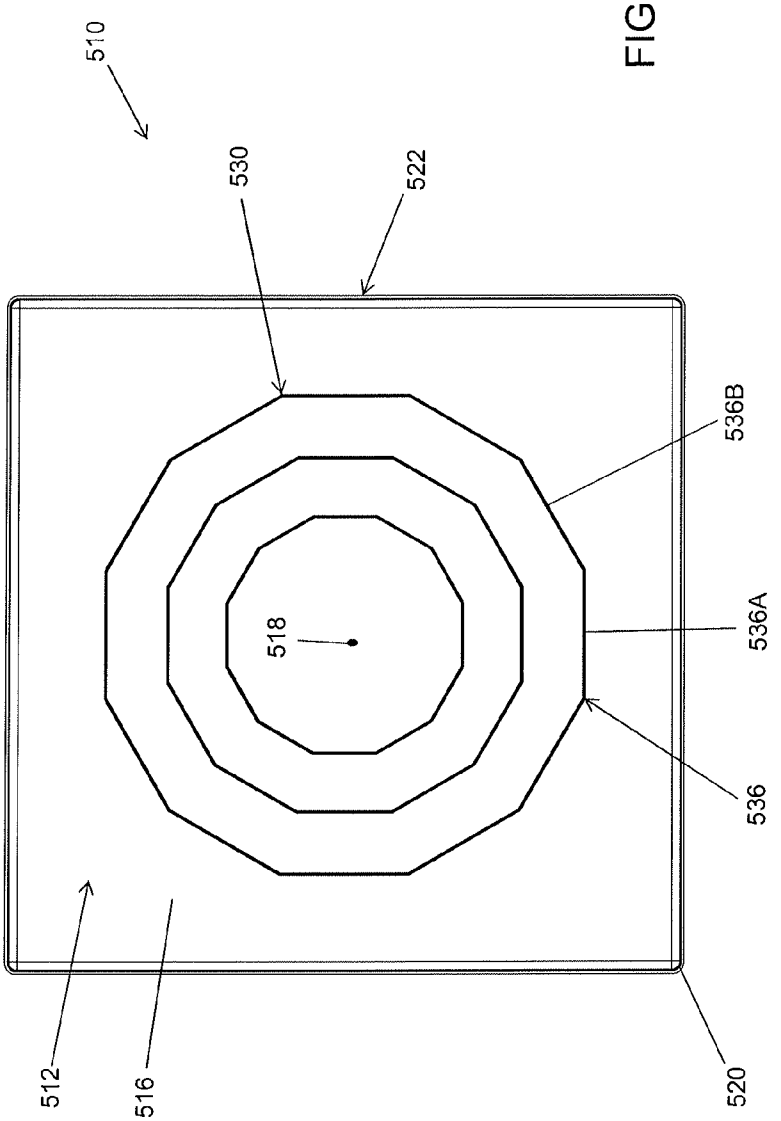


FIG. 22



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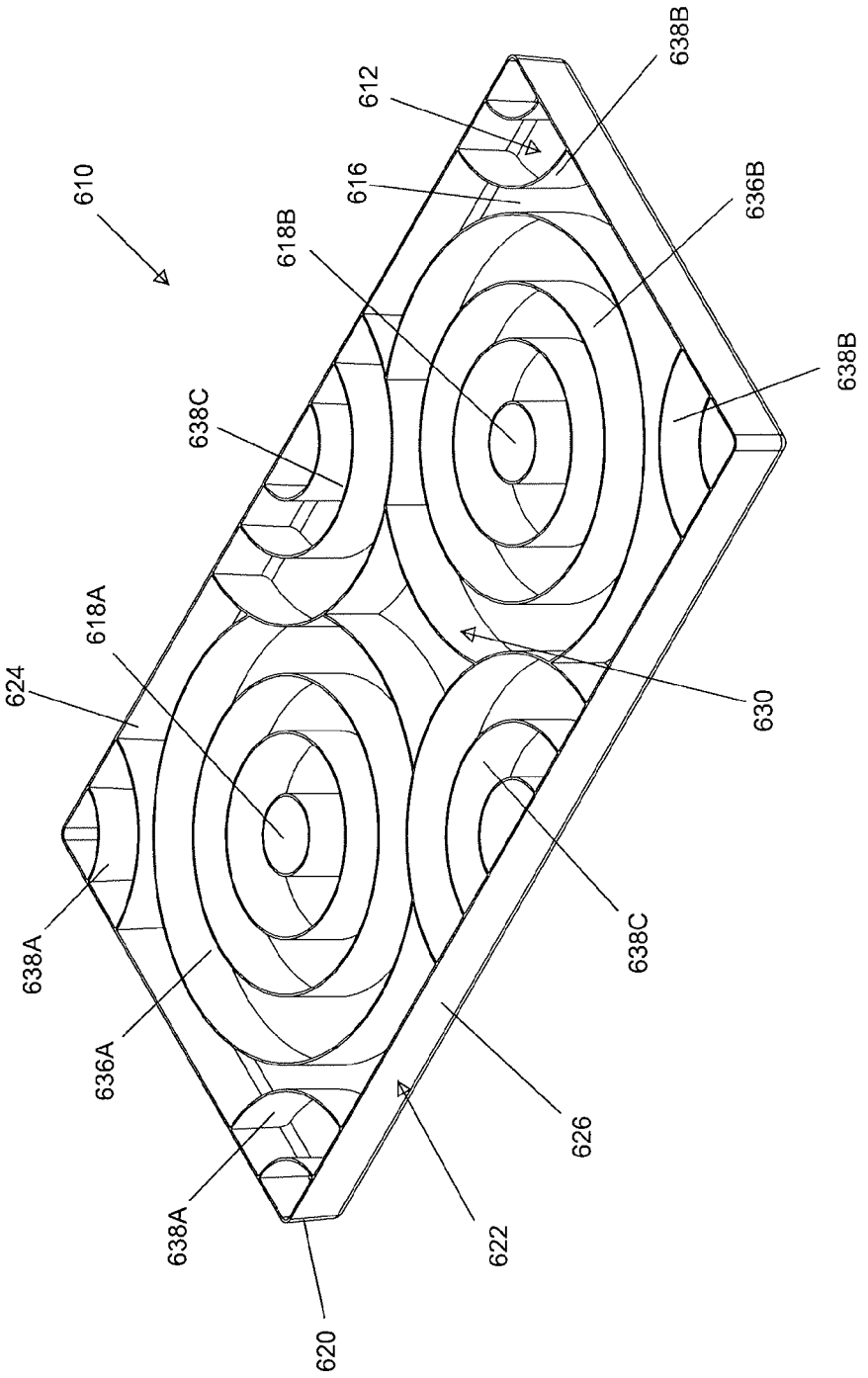
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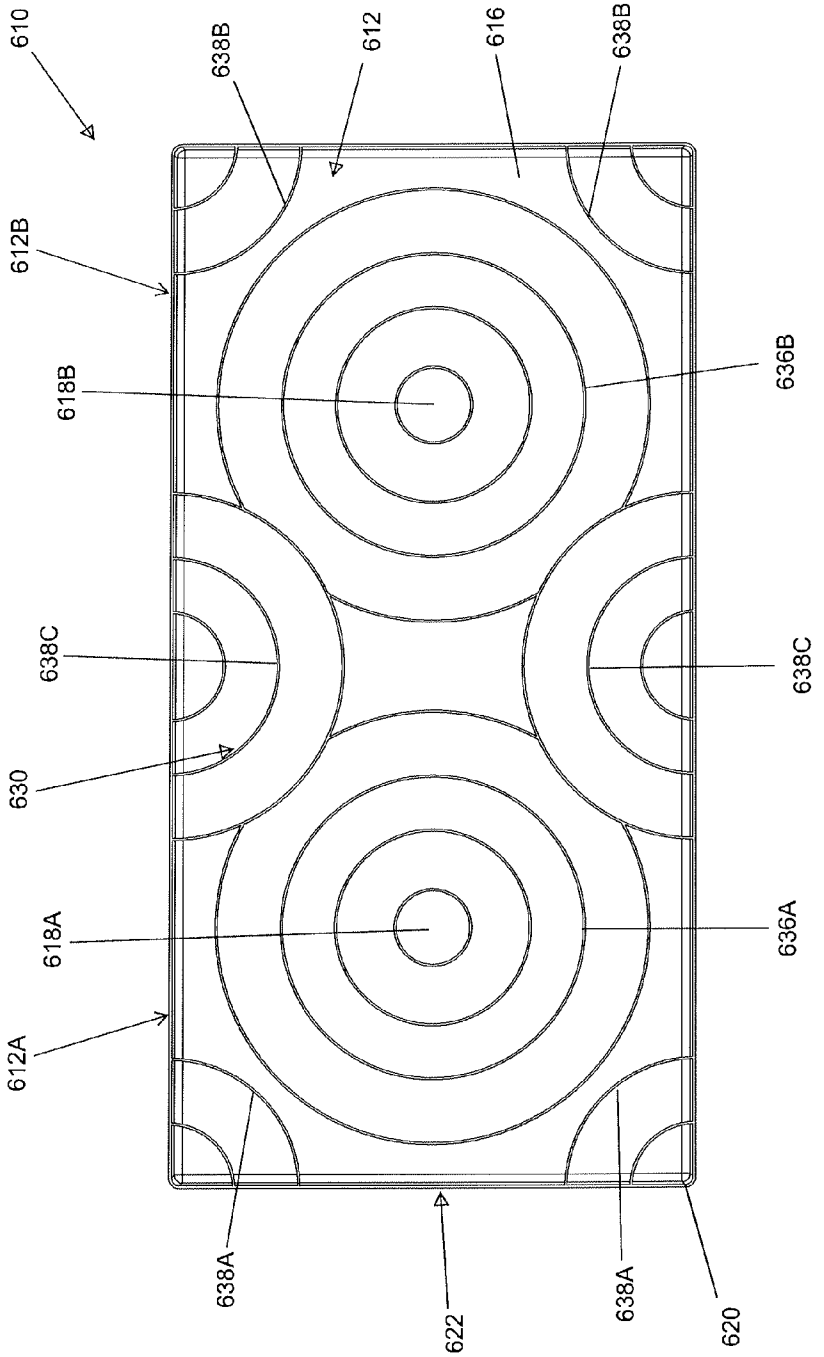
FIG. 24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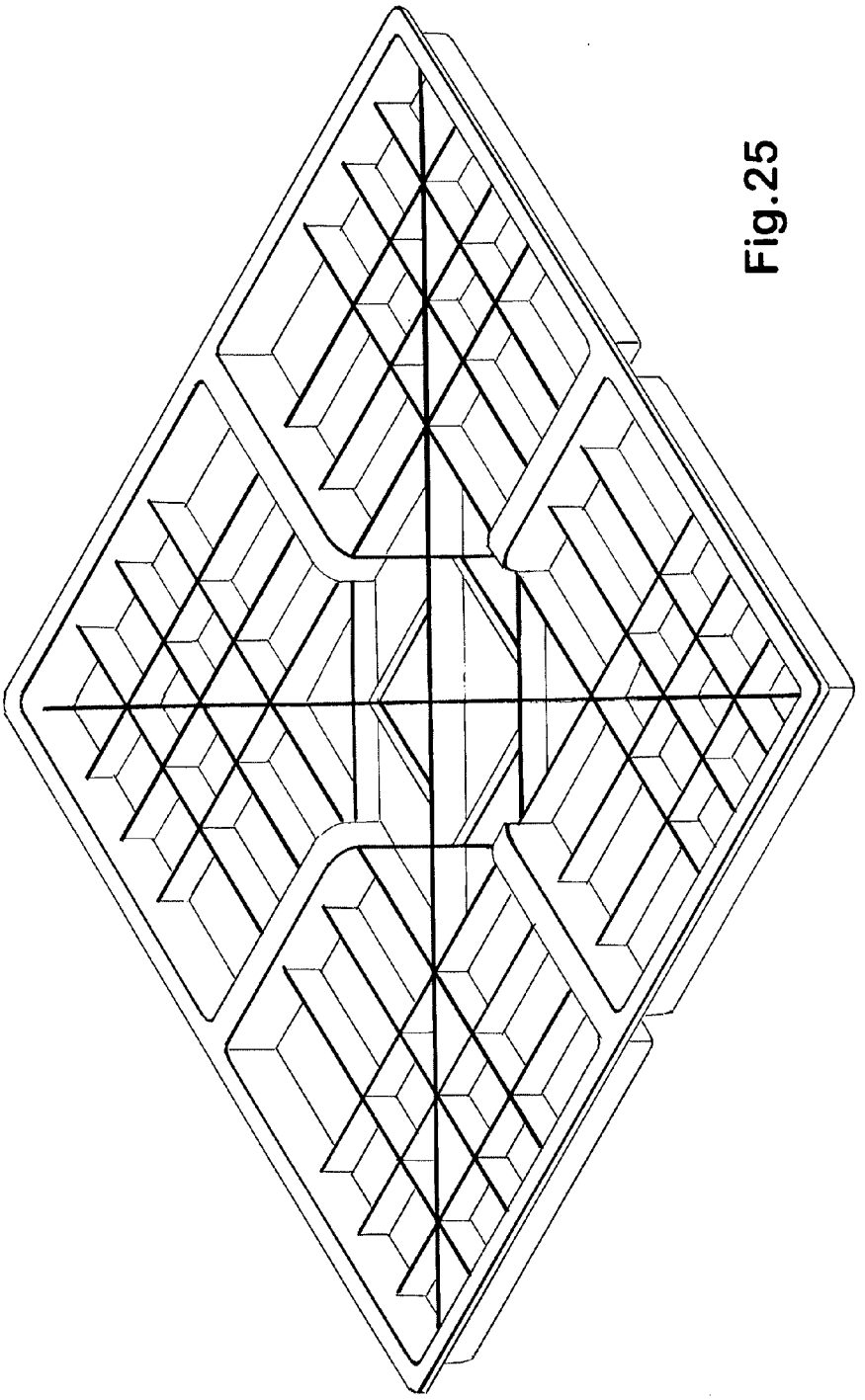

Fig.25

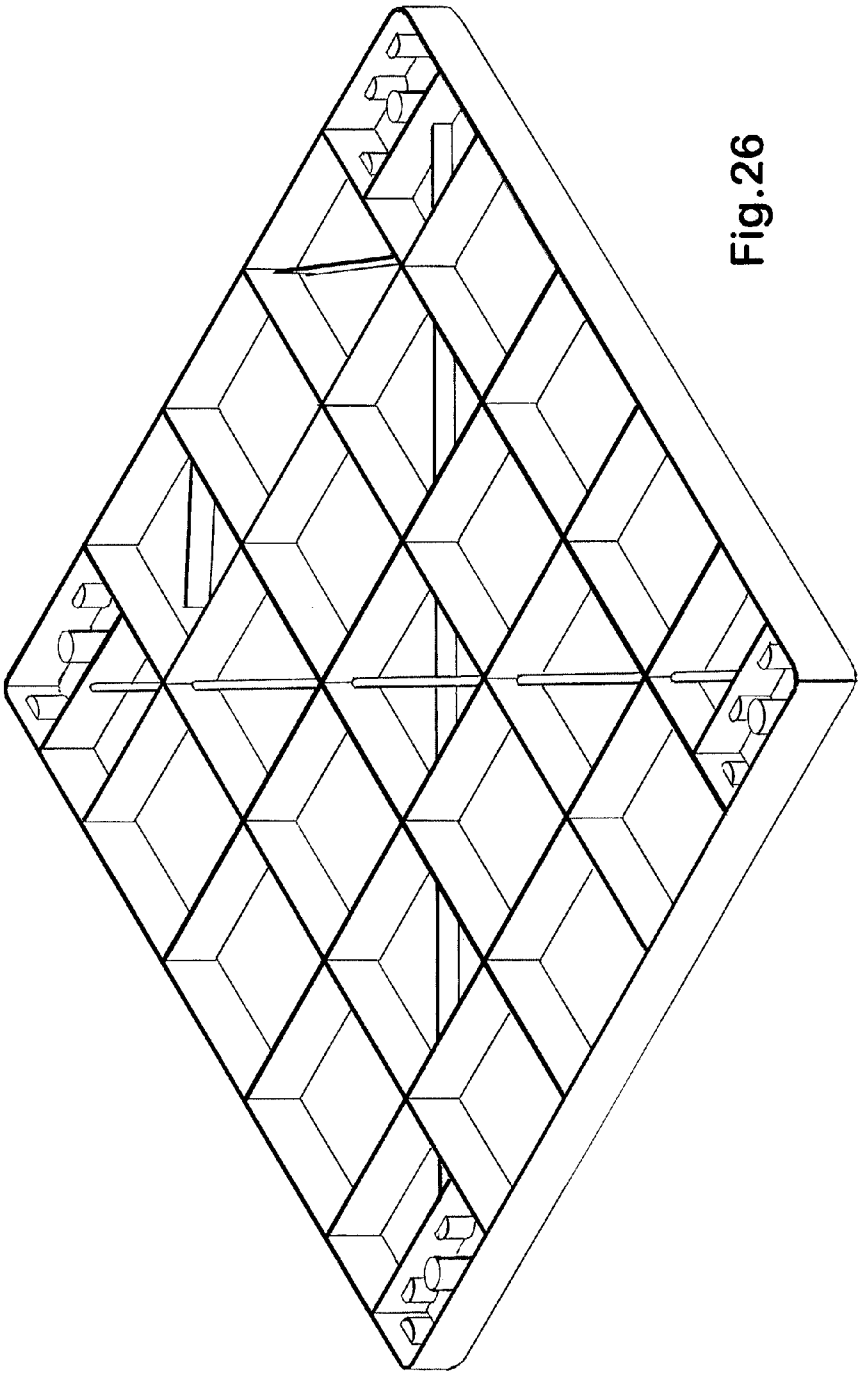

Fig.26

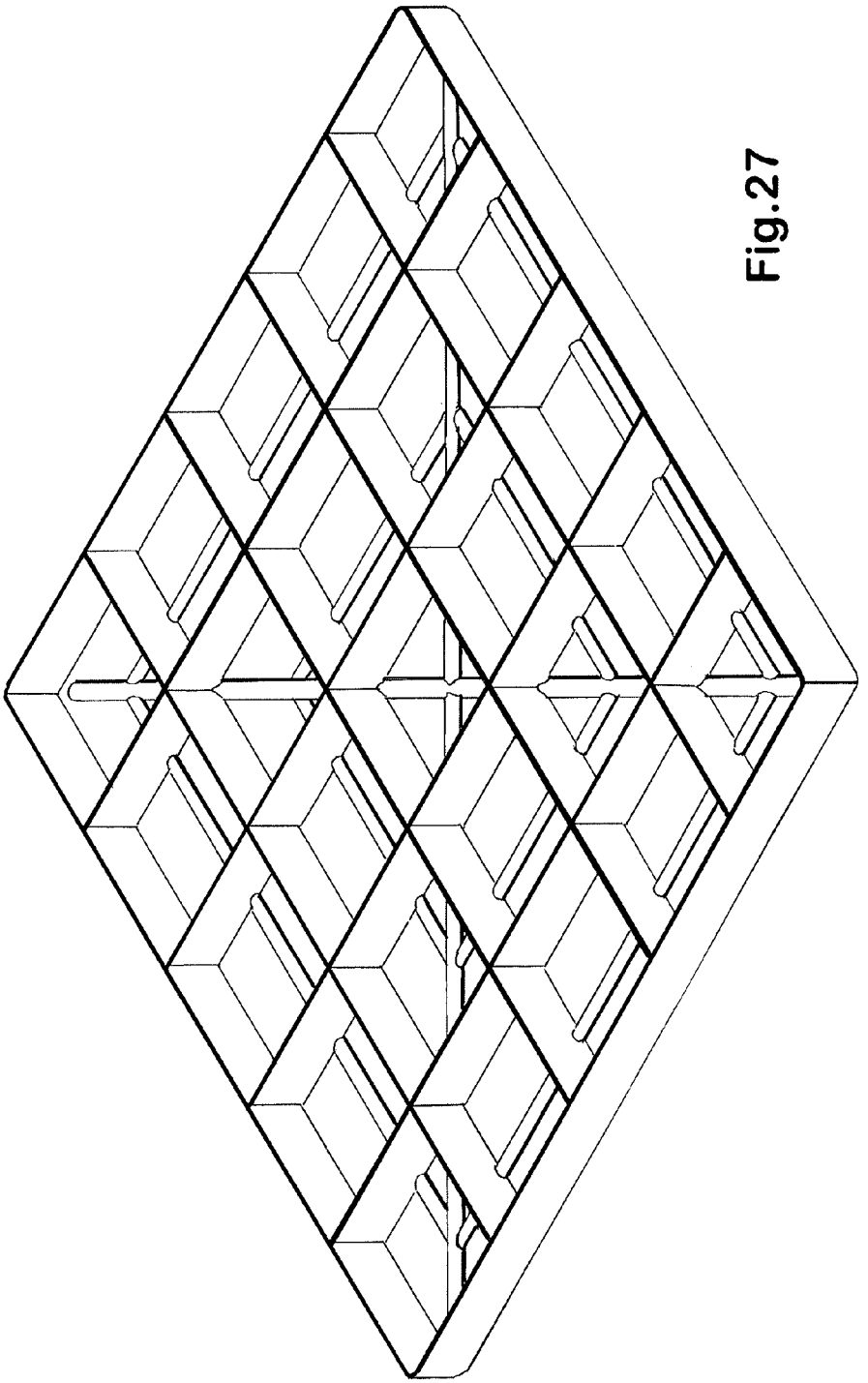

Fig.27

# MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS

## CROSS REFERENCE TO RELATED PATENT APPLICATIONS

This invention claims priority from U.S. Provisional Patent Application No. 61/641,937, filed May 3, 2012, which is hereby incorporated by reference.

## FIELD OF THE INVENTION

This invention relates to equipment pads, and more specifically to a molded equipment pad with underlying reinforcing arc-shaped ribs.

## BACKGROUND OF THE INVENTION

Molded equipment pads are molded using thermoplastic, thermoset, and concrete materials and are designed to support heavy equipment, such as an air conditioning unit. In connection with such a molded equipment pad, the equipment pad must be designed with sufficient strength to support the heavy equipment while at the same time minimizing the amount of material used in the manufacturing of the equipment pad.

## SUMMARY OF THE INVENTION

Consequently, there is a need for a molded equipment pad that has sufficient strength to support heavy equipment while at the same time minimizing the amount of material used to construct the equipment pad. Minimizing the amount of material used in the construction of the equipment pad saves on cost, saves on weight, and minimizes the environmental impact of the manufacturing process of the equipment pad, the distribution of the equipment pad, and the ultimate disposal of the equipment pad.

The equipment pad of the present invention is molded of a thermoplastic, thermoset, or concrete material and is designed to support heavy equipment such as an air conditioner unit while minimizing the amount of material used in the construction of the equipment pad. The material used to mold the equipment pad of the present invention may be any conventional thermoplastic, thermoset, or concrete materials material used for molding equipment pads. A molded equipment pad in accordance with the present invention has a continuous equipment support deck, perimeter side walls, and an underlying network of arc-shaped reinforcing ribs.

In one embodiment of the present invention, the underlying network of reinforcing ribs includes both radial ribs and arc-shaped ribs. Particularly, the radial ribs are straight and radiate from the center point of the equipment pad. The arc-shaped ribs include a series of concentric arc-shaped ribs (centered on the center point of the equipment pad) and a number of distributed circular hubs. The concentric arc-shaped ribs radiate in concentric circles toward the side walls of the equipment pad, and the outermost concentric arc-shaped ribs intersect the side walls of the equipment pad. The concentric arc-shaped ribs may constitute a segment of a circle, a segment of an ellipse, or a segment of any other curved line, including smooth curved lines and curved lines with irregular curvature.

In a second embodiment of the invention, the molded equipment pad has radial ribs, arc-shaped ribs, and a number of distributed circular hubs. The arc-shaped ribs comprise a series of concentric arc-shaped ribs (centered on the center point of the equipment pad) and a series of opposing arc-shaped ribs (centered on the corners of the equipment pad).



The concentric arc-shaped ribs radiate in concentric circles toward the side walls, but the outermost concentric arc-shaped ribs end short of the side walls of the equipment pad. The opposing arc-shaped ribs are centered on the corners of the equipment pad, radiate in concentric circles toward the center of the equipment pad, and intersect the side walls, the radial ribs, and the concentric arc-shaped ribs. The center arc-shaped ribs and the opposing arc-shaped ribs may constitute segments of a circle, segments of an ellipse, or segments of any other curved line, including smooth curved lines and curved lines with irregular curvature.

Where the radial ribs, the concentric arc-shaped ribs, and the opposing arc-shaped ribs intersect each other and intersect the side walls, the ribs may have gussets resulting from adding height to the rib at the intersection. Moreover, where the ribs intersect each other, the intersection may be in the form of a post-shaped fillet to increase the strength of the intersection. Such gusseted and filleted intersections allow the height of the ribs between the gusseted and filleted intersections to be reduced with the attendant reduction of material.

When the pad is loaded as intended, a force is exerted perpendicular to the top deck. The concentric arc-shaped ribs and the opposing arc-shaped ribs react to the perpendicular force by "flattening" and supporting the top deck more evenly than conventional straight-line ribs. The nature of the arc shape allows the ribs to react to the applied forces in a compound manner on multiple planes of support. The "flattening" of the network of arc-shaped ribs is counteracted by the straight-line radial ribs. The radial ribs also tie the network of arc-shaped ribs together, which furthers the arc-shaped ribs' ability to counteract downward forces on the top deck.

In the second embodiment of the invention, the outer opposing arc-shaped ribs of the molded equipment pad reinforce the outermost concentric arc-shaped ribs in a fashion similar to the reinforcement provided by the straight radial ribs. The design of the opposing arc-shaped ribs also provides a more frequent support interval to the substantially perpendicular perimeter side walls than if the pattern of concentric arc-shaped ribs were propagated all the way to the side walls of the equipment pad as configured in the first embodiment of the invention. The outer opposing arc-shaped ribs are also gusseted where they meet the equipment pad side walls to reinforce the side walls of the pad.

In both the first and second embodiments, distributed circular hubs are located in each of the quadrants of the equipment pad. The radial ribs extend through the circular hubs, and the circular hubs have straight hub cross ribs positioned within the distributed circular hubs. The straight hub cross ribs and the portions of the radial ribs within the circular hubs support the top deck at the centers of the circular hubs. The straight hub cross ribs and the portions of the radial ribs within the circular hubs are gusseted where the straight hub cross ribs and the radial ribs intersect the inside of the circular hubs.

The height of the concentric arch-shaped ribs and of the opposing arc-shaped ribs varies according to the length of the arc-shaped ribs with longer ribs being taller to compensate for the increase in forces applied over the length. By varying rib heights, the amount of material for the ribs can be optimized. With the ribs optimized, the top deck can be substantially thinner because the deck strength is not dictated solely by the thickness of the deck. Particularly, the equipment pad in accordance with the present invention has a number of short ribs to compensate for the lost stiffness by thinning the top deck. The equipment pad in accordance with the present

invention has a top deck that is twice as stiff (measured by maximum deflection at a fixed load) as conventional pad with a deck that is more than twice as thick. The invention thus results in an equipment pad that is lighter with increased structural strength by using less polymer material.

In a third embodiment of the present invention, the molded equipment pad has corner originating arc-shaped ribs each of which is the arc of a circle having its center point located midway between the corners of the equipment pad and outside the side walls of the equipment pad.

In a fourth embodiment of the present invention, the molded equipment pad has a series of arc-shaped ribs each in the form of a sine wave extending across either the length or the width of the equipment pad or extending across both the length and the width of the equipment pad.

In a fifth embodiment of the present invention, the molded equipment pad has a series of concentric arc-shaped ribs (centered on the pad center point). Each of the concentric arc-shaped ribs has an irregular shaped curvature made up of short segments to create an undulating curvature for the concentric arc-shaped ribs.

In a sixth embodiment of the present invention, the molded equipment pad has a series of concentric arc-shaped ribs (centered on the pad center point). Each of the concentric arc-shaped ribs has an irregular shaped curvature made up of short segments connected at obtuse angles to each other to create a segmented curvature for the concentric arc-shaped ribs.

In a seventh embodiment of the present invention, the molded equipment pad has two (or more) sections with a center point for each section. The molded equipment pad has concentric arc-shaped ribs centered on the center points of the equipment pad, corner opposing arc-shaped ribs centered on the corners of the equipment pad, and side opposing arc-shaped ribs centered on center points along the sides and positioned between the corners of the equipment pad. The concentric arc-shaped ribs radiate outwardly from the center points and may or may not intersect the side walls of the equipment pad. The corner opposing arc-shaped ribs may or may not intersect the concentric arcs-shaped ribs, and the side opposing arc-shaped ribs may or may not intersect the concentric arc-shaped ribs. The center arc-shaped ribs, the corner opposing arc-shaped ribs, and the side opposing arc-shaped ribs may constitute segments of a circle, segments of an ellipse, or segments of any other curved line, including smooth curved lines and curved lines with irregular curvature. The seventh embodiment of the present invention may also have radial ribs radiating from each of the center points.

Further objects, features and advantages will become apparent upon consideration of the following detailed description of the invention when taken in conjunction with the drawings and the appended claims.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a top perspective view of an equipment pad in accordance with a first embodiment of the present invention.

FIG. **2** is a bottom perspective view of the equipment pad in accordance with the first embodiment of the present invention.

FIG. **3** is a top plan view of the equipment pad in accordance with the first embodiment of the present invention.

FIG. **4** is a bottom plan view of the equipment pad in accordance with the first embodiment of the present invention.



FIG. **5** is a side elevation view of the equipment pad in accordance with the first embodiment of the present invention.

FIG. **6** is a top perspective view of a stack of equipment pads, stacked for shipping and storage, in accordance with a first embodiment of the present invention.

FIG. **7** is a bottom perspective view of the stack of equipment pads, stacked for shipping and storage, in accordance with the first embodiment of the present invention.

FIG. **8** is a top perspective view of an equipment pad in accordance with a second embodiment of the present invention.

FIG. **9** is a bottom perspective view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **10** is a top plan view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **11** is a bottom plan view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **12** is a side elevation view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **13**A is a bottom perspective view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **13**B is an enlarged bottom perspective view of the equipment pad (circled in FIG. **13**A) in accordance with the second embodiment of the present invention.

FIG. **14**A is a bottom perspective view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **14**B is an enlarged bottom perspective view of the equipment pad (circled in FIG. **14**A) in accordance with the second embodiment of the present invention.

FIG. **15** is a bottom perspective view of an equipment pad in accordance with a third embodiment of the present invention.

FIG. **16** is a bottom plan view of the equipment pad in accordance with the third embodiment of the present invention.

FIG. **17** is a bottom perspective view of an equipment pad in accordance with a fourth embodiment of the present invention.

FIG. **18** is a bottom plan view of the equipment pad in accordance with the fourth embodiment of the present invention.

FIG. **19** is a bottom perspective view of an equipment pad in accordance with a fifth embodiment of the present invention.

FIG. **20** is a bottom plan view of the equipment pad in accordance with the fifth embodiment of the present invention.

FIG. **21** is a bottom perspective view of an equipment pad in accordance with a sixth embodiment of the present invention.

FIG. **22** is a bottom plan view of the equipment pad in accordance with the sixth embodiment of the present invention.

FIG. **23** is a bottom perspective view of an equipment pad in accordance with a seventh embodiment of the present invention.

FIG. **24** is a bottom plan view of the equipment pad in accordance with the seventh embodiment of the present invention.

FIG. **25** is a bottom perspective view of a competitive equipment pad, Brand A.

FIG. **26** is a bottom perspective view of a competitive equipment pad, Brand B.

FIG. **27** is a bottom perspective view of a competitive equipment pad, Brand C.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGS. **1-7** illustrate a first embodiment of a molded equipment pad with, reinforcing radial ribs, reinforcing concentric arc-shaped ribs, and distributed hubs.

FIGS. **8-14** illustrate a second embodiment of a molded equipment pad with, reinforcing radial ribs, reinforcing concentric arc-shaped ribs, reinforcing opposing arc-shaped ribs, and distributed hubs.

FIGS. **15-16** illustrate a third embodiment of a molded equipment pad with reinforcing corner originating arc-shaped ribs.

FIGS. **17-18** illustrate a fourth embodiment of a molded equipment pad with reinforcing sine wave arc-shaped ribs.

FIGS. **19-20** illustrate a fifth embodiment of a molded equipment pad with reinforcing concentric arc-shaped ribs with irregular undulating curvature.

FIGS. **21-22** illustrate a sixth embodiment of a molded equipment pad with reinforcing concentric arc-shaped ribs with irregular segmented curvature.

FIGS. **23-24** illustrate a seventh embodiment of a molded equipment pad two sections, each section with reinforcing concentric arc-shaped ribs, side opposing arc-shaped ribs and corner opposing arc-shaped ribs.

Turning to FIGS. **1-5**, a molded equipment pad **10** comprises an equipment support deck **12** having a deck top surface **14** and a deck bottom surface **16**, side walls **22** having internal surfaces **24** and external services **26**, and an underlying network **30** of reinforcing ribs attached to the bottom surface **16** of the deck **12**. The material used to mold the equipment pad **10** of the present invention may include virtually any moldable material. Suitable materials may include without limitation, thermoplastics (including polyethylene, polypropylene, ABS, styrene, and nylon), thermosets, and concrete (including polymer concrete, self consolidating concrete, and conventional concrete).

The equipment support deck **12** is generally rectangular with a center point **18** generally equidistant from the side walls **22**. The equipment support deck **12** may also be other geometric shapes including but not limited to square, triangular, hexagonal, octagonal, circular, or elliptical. The top surface **14** of the deck **12** is generally planar. The four side walls **22** are attached to the edges of the deck **12** and extend downwardly. The four side walls **22** are joined at their edges to form corners **20** of the pad **10**.

As shown in FIGS. **2** and **4**, a network **30** of reinforcing ribs is attached to the bottom surface **16** of the deck **12** and occupies the space between the side walls **22**. The network **30** of reinforcing ribs includes segments of straight radial ribs **32** that extend from the side walls **22** toward the center point **18** and segments of straight radial ribs **33** that extend from the corners **20** toward the center point **18**. Post-shaped fillets **46** are used at the intersections of the straight radial ribs **32** and the internal surface **24** of the side walls **22** to reinforce the intersection. The post shaped fillets **46** also have openings to accept anti-vibration rubber bumpers (not shown). Likewise, post-shaped fillets **46** are used at the intersections of the straight radial ribs **33** and the corners **20** to reinforce the intersections. The network **30** of reinforcing ribs further includes segments of a series of concentric arc-shaped ribs **36** that are centered on the center point **18**. The concentric arc-shaped ribs **36** intersect the straight radial ribs **32** and **33**, and the outermost segments of the arc-shaped ribs **36** intersect the internal surface **24** on the side walls **22**. As the concentric arc-shaped ribs **36** are positioned further from the center point **18**, the height of the concentric arc-shaped ribs **36** increases to provide greater strength in the longer segments of the concentric arc-shaped ribs **36** between the straight radial ribs **32** and **33**. For example, the outermost segment **36**A of the concentric arc-shaped ribs **36** has a greater height than the innermost segment **36**E with the segments **36**A-**36**E gradually decreasing in height as the segments become shorter between the straight radial ribs **32** and **33**.



With continuing reference to FIGS. **2** and **4**, the network **30** of reinforcing ribs further includes distributed circular hubs **40** and a center hub **41**. In the embodiment shown in FIGS. **2** and **4**, the center circular hub **41** is centered on the center point **18** of the network **30** of reinforcing ribs, and the four distributed hubs **40** are each located in the four quadrants of the network **30** of reinforcing ribs. With reference to FIG. **2**, the straight radial ribs **33** extended through and intersect the distributed hubs **40**, and therefore reinforce the walls of the distributed hubs **40**. Inside the distributed hubs **40** the straight radial ribs **33** are of reduced height because the reinforcement of the deck **12** by the distributed hubs **40** reduces the reinforcement requirements of the straight radial ribs **33** inside the distributed hubs **40**. In addition, hub cross ribs **42** are positioned at essentially right angles to the segments of the radial ribs **33** inside the distributed hubs **40**. The hub cross ribs **42** lend additional support to the deck **12** inside the distributed hubs **40**. The hub cross ribs **42** are of reduced height because of the support provided by the distributed hubs **40** themselves. The hub cross ribs **42** and the segments of the straight radial ribs **33** inside the distributed hubs **40** have increased height or gussets **44** where the hub cross ribs **42** and the segments of the straight radial ribs **33** intersect the distributed hubs **40** to add additional strength to the intersection points. Similarly, the portions of the radial ribs **33** outside of the distributed hubs **40** have increased height or gussets **45** where the radial ribs **33** intersect the outside of the distributed hubs **40** to increase the strength of the intersection. The segments of the radial ribs **33** inside the center circular hub **41** are the same height as the walls of the center circular hub **41**. The segments of the radial ribs **33** outside the center circular hub **41** are of reduced height with a gusset where the segments of the radial ribs **33** intersect the outside wall of the center circular hub **41**.

As shown in FIGS. **6** and **7**, the equipment pads **10** are nestable when stacked to form a stack **28** because the side walls **22** are flared outwardly and the height of the reinforcing network **30** of reinforcing ribs is less than the height of the side walls **22**.

With reference to FIGS. **8-14**, a second embodiment of a molded equipment pad **110** comprises an equipment support deck **112** having a deck top surface **114** and a deck bottom surface **116**, side walls **122** having internal surfaces **124** and external surfaces **126**, and an underlying network **130** of reinforcing ribs attached to the bottom surface **116** of the deck **112**.

The equipment support deck **112** is generally rectangular with a center point **118** generally equidistant from the side walls **122**. The equipment support deck **112** may also be other geometric shapes including but not limited to square, triangular, hexagonal, octagonal, circular, or elliptical. The top surface **114** of the deck **112** is generally planar. The four side walls **122** are attached to the edges of the deck **112** and extend downwardly. The four side walls **122** are joined at their edges to form corners **120** of the equipment pad **110**.

As shown in FIGS. **9**, **11**, **13**B, and **14**B, the network **130** of reinforcing ribs is attached to the bottom surface **116** of the deck **112** and occupies the space between the side walls **122**. The network **130** of reinforcing ribs includes segments of straight radial ribs **132** that extend from side walls **122** toward the center point **118** and segments of straight radial ribs **133** that extend from the corners **120** toward the center point **118**. The network **130** of reinforcing ribs also includes segments of a series of concentric arc-shaped ribs **136** that are centered on the center point **118**. The concentric arc-shaped ribs **136** intersect the straight radial ribs **132** and **133**. As the concentric arc-shaped ribs **136** are positioned further from the center point **118**, the height of the concentric arc-shaped ribs **136** increases to provide greater strength in the longer segments of the concentric arc-shaped ribs **136** between the straight radial ribs **132** and **133**. For example, the outermost segment **136**A of the concentric arc-shaped ribs **136** has a greater height than the innermost segment **136**F with the segments **136**A-**136**F gradually decreasing in height as the segments become shorter between the straight radial ribs **132** and **133**. In this second embodiment, the outermost segments **136**A of the concentric arc-shaped ribs **136** do not intersect the internal surface **124** on the side walls **122**. Instead, the network **130** of reinforcing ribs includes segments of opposing arc-shaped ribs **138** that are centered on the corners **120** of the pad **110**. The opposing arc-shaped ribs **138** also have varying heights depending on the length of the segments of the opposing arc-shaped ribs **138**. For example, opposing arc-shaped ribs at **138**A, **138**B, and **138**C decrease in height as the length of the segment decreases.

With continuing reference to FIGS. **9**, **11**, **13**B, and **14**B, the network **130** of reinforcing ribs further includes distributed circular hubs **140** and a center hub **141**. In the embodiment shown in FIGS. **9** and **11**, the center circular hub **141** is centered on the center point **118** of the network **130** of reinforcing ribs, and the four distributed hubs **140** are each located in the four quadrants of the network **130** of reinforcing ribs. With reference to FIGS. **9**, **11**, **13**B, and **14**B, the straight radial ribs **133** extended through and intersect the distributed hubs **140**, and therefore reinforce the walls of the distributed hubs **140**. Inside the distributed hubs **140** the straight radial ribs **133** are of reduced height because the reinforcement of the deck **112** by the distributed hubs **140** reduces the reinforcement requirements of the straight radial ribs **133** inside the distributed hubs **140**. In addition, hub cross ribs **142** are positioned at essentially right angles to the segments of the radial ribs **133** inside the distributed hubs **140**. The hub cross ribs **142** lend additional support to the deck **112** inside the distributed hubs **140**. The hub cross ribs **142** are of reduced height because of the support provided by the distributed hubs **140** themselves. The hub cross ribs **142** and the segments of the straight radial ribs **133** inside the distributed hubs **140** have increased height or gussets **144** where the hub cross ribs **142** and the segments of the straight radial ribs **133** intersect the distributed hubs **140** to add additional strength to the intersection. The segments of the radial ribs **133** inside the center circular huh **141** are the same height as the walls of the center circular hub **141**. The segments of the radial ribs **133** outside the center circular hub **141** are the same height as the walls of the center circular hub **141**. The straight radial ribs **132** are the same height as the wall of the center circular hub **141** along their length.

The straight radial ribs **133** intersect the corners **120**, the opposing arc-shaped ribs **138**, the concentric arc-shaped ribs **136**, the distributed circular hubs MO, and the center circular hub **141**. The opposing arc-shaped ribs **138** intersect the internal surface **124** of the side walls **122**, the straight radial ribs **133**, the concentric arc-shaped ribs **136**, and the distributed hubs **140** located in each of the four quadrants of the equipment pad **110**. The concentric arc-shaped ribs **136** intersect the straight radial ribs **133**, the straight radial ribs **132**, the opposing arc-shaped **138**, and the distributed hubs **140**. Where the ribs, the sidewalls, and the hubs intersect, gussets, such as gussets **145** inside the distributed hubs **140** and gussets **147** where the opposing arc-shaped ribs **138** meet the side walls **122**, strengthen the intersections. In addition, post-shaped fillets, such as fillets **146** strengthen the intersection between concentric arc-shaped ribs **136**, opposing arc-shaped ribs **138**, straight radial ribs **132** and **133**. The post shaped fillets **146** also have openings to accept anti-vibration rubber bumpers (not shown). Additional post-shaped fillets, such as fillets **148**, may be placed at points along the length of the ribs to provide additional structural strength.

The equipment pad **110** in accordance with the second embodiment of the present invention has a top deck **112** that is twice as stiff (measured by maximum deflection at a fixed load) as conventional pads with a deck that is more than twice as thick. The invention thus results in an equipment pad that is lighter with increased structural strength by using less polymer material. Three conventional mold equipment pads, Brands A, B, and C, are illustrated in FIGS. **25**, **26**, and **27**, respectively. Table 1 sets forth the relevant deflections of each of the equipment pads including an equipment pad **110** in accordance with the second embodiment of the present invention.

TABLE 1

| Pad Model | Max Deflection (mm) w/150 lb Load |
|---|---|
| Brand A | 0.236 |
| Brand B | 0.057 |
| Brand -C | 0.048 |
| Second Embodiment of the Present Invention (FIGS. 8-14) | 0.022 |

With reference to FIGS. **15** and **16**, a third embodiment of a molded equipment pad **210** comprises an equipment support deck **212** having a deck top surface (not shown) and a deck bottom surface **216**, side walls **222** having internal surfaces **224** and external surfaces **226**, and an underlying network **230** of reinforcing, corner originating arc-shaped ribs **236**. The reinforcing, corner originating arc-shaped ribs **236** originate at each of the four corners **220** and arch toward the center point **218** of the bottom surface **216** of the equipment pad **210**. Each of the corner originating arc-shaped ribs **236** constitutes a segment of a circle having its center centered on the midpoint of each side wall **222** and lying outside of the bounds of the equipment pad **210**. While FIGS. **15** and **16** show four corner originating arc-shaped ribs **236**, additional concentric arc-shaped ribs may be added to the bottom surface **216** of the support deck **212** to add additional strength if necessary.

With reference to FIGS. **17** and **18**, a fourth embodiment of a molded equipment pad **310** comprises an equipment support deck **312** having a deck top surface (not shown) and a deck bottom surface **316**, side walls **322** having internal surfaces **324** and external surfaces **326**, and an underlying network **330** of reinforcing, sinusoidal arc-shaped ribs **336**. The reinforcing, sinusoidal arc-shaped ribs **336** are composed of a series of arc-shaped segments, such as segments **336**A and **336**B. The sinusoidal arc-shaped ribs **336** extend across the width of the space between two opposing side walls **322**A and **322**B. While FIGS. **17** and **18** show a series of substantially

parallel sinusoidal arc-shaped ribs **336** extending in one direction across the bottom surface **316** of the equipment pad **310**, additional sinusoidal-shaped ribs **336** maybe added to the bottom surface **316** of the support deck **312** at essentially right angles to the sinusoidal arc-shaped ribs **336** shown in FIGS. **17** and **18**.

With reference to FIGS. **19** and **20**, a fifth embodiment of a molded equipment pad **410** comprises an equipment support deck **412** having a deck top surface (not shown) and a deck bottom surface **416**, side walls **422** having internal surfaces **424** and external surfaces **426**, and an underlying network **430** of reinforcing, concentric arc-shaped ribs **436** with an irregular undulating curvature. The reinforcing, concentric arc-shaped ribs **436** are centered on the center point **418** of the support deck **412**. The concentric arc-shaped ribs **436** constitute a series of segments, such as repeating segments **436**A, **436**B, and **436**C. While FIGS. **19** and **20** show three concentric arc-shaped ribs **436** with irregular undulating curvature, additional concentric arc-shaped ribs **436** may be added to the bottom surface **416** of the support deck at **412** to add additional strength if necessary.

With reference to FIGS. **21** and **22**, a sixth embodiment of a molded equipment pad **510** comprises an equipment support deck **512** having a deck top surface (not shown) and a deck bottom surface **516**, side walls **522** having internal surfaces **524** and external surfaces **526**, and an underlying network **530** of reinforcing, concentric arc-shaped ribs **536** with a segmented curvature. The reinforcing, concentric arc-shaped ribs **536** with the segmented curvature are centered on the center point **518** of the support deck **512**. The concentric arc-shaped ribs **536** comprise a series of segments, such as repeating segments **536**A and **536**B. While FIGS. **21** and **22** show three concentric arc-shaped ribs **536** with the segmented curvature, additional concentric arc-shaped ribs **536** may be added to the bottom surface **516** of the support deck **512** to add additional strength if necessary.

With reference to FIGS. **23** and **24**, a seventh embodiment of a molded equipment pad **610** comprises an equipment support deck **612** having a deck top surface (not shown) and a deck bottom surface **616**, side walls **622** having internal surfaces **624** and external surfaces **626**, and an underlying network **630** of reinforcing ribs attached to the bottom surface **616** of the deck **612**.

The equipment support deck **612** is generally rectangular with generally square sections **612**A and **612**B. Each of the sections **612**A and **612**B has center points **618**A and **618**B respectively. The equipment support deck **612** may also be other geometric shapes, including but not limited to square, triangular, hexagonal, octagonal, circular, or elliptical. The top surface (not shown) and the bottom surface **616** of the deck **612** are generally planar. The four side walls **622** are attached to the edges of the deck **612** and extend downwardly. The four side walls **622** are joined at their edges to form corners **620** of the equipment pad **610**.

As shown in FIGS. **23** and **24**, the network **630** of reinforcing ribs is attached to the bottom surface **616** of the deck **612** and occupies the space between the side walls **622**. The network **630** of reinforcing ribs includes a series of concentric arc-shaped ribs **636**A and **636**B that are centered on the center points **618**A and **636**B respectively and radiate outwardly toward the side walls **622**. As the concentric arc-shaped ribs **636**A and **636**B are positioned further from the center points **618**A and **636**B, the height of the concentric arc-shaped ribs **636**A and **636**B increases to provide greater strength in the longer segments of the concentric arc-shaped ribs **636**A and **636**B. In this seventh embodiment, the outermost segments of the concentric arc-shaped ribs **636**A and **636**B do not intersect the internal surface **624** on the side walls **622**. Instead, the network **630** of reinforcing ribs includes segments of corner opposing arc-shaped ribs **638**A and **638**B that are centered on the corners **620** of the pad **610**. The corner opposing arc-shaped ribs **638**A and **638**B are of varying heights depending on the length of the segments of the corner opposing arc-shaped ribs **638**A and **638**B. The network **630** of reinforcing ribs also includes segments of side opposing arc-shaped ribs **638**C that are centered on the sides **622** of the pad **610**. The side opposing arc-shaped ribs **638**C are of varying heights depending on the length of the segments of the side opposing arc-shaped ribs **638**C.

As shown FIGS. **23** and **24**, the concentric arc-shaped ribs **636**A and **636**B intersect the side opposing arcs-shaped ribs **638**C but do not intersect the corner opposing arc-shaped ribs **638**A and **638**B nor do the concentric arc-shaped ribs **636**A and **636**B intersect the side walls **622**. The seventh embodiment, however, can be modified so that the concentric arc-shaped ribs **636**A and **636**B, the side opposing arcs-shaped ribs **638**C, and the corner opposing arc-shaped ribs **638**A and **638**B intersect each other. Further, radial ribs passing through the center points **618**A and **618**B may be added to the network **630** of reinforcing ribs.

While this invention has been described with reference to preferred embodiments thereof, it is to be understood that variations and modifications can be affected within the spirit and scope of the invention as described herein and as described in the appended claims.

We claim:

**1**. A molded equipment pad comprising:

a. a continuous top deck, having a planar top surface, a bottom surface, a center point, edges, and corners, for supporting a piece of equipment on the planar top surface;

b. side walls extending downwardly from the edges of the top deck; and

c. an underlying network of reinforcing ribs attached to the bottom surface of the top deck, the network including a series of concentric reinforcing arc-shaped ribs attached to the bottom surface of the top deck that are centered on the center point of the top deck and that radiate outwardly toward the side walls of the equipment pad, wherein the series of reinforcing concentric arc-shaped ribs that are centered on the center point of the top deck radiate outwardly short of the side walls of the equipment pad and wherein the underlying network of reinforcing ribs further includes a series of opposing arc-shaped ribs that are attached to the bottom surface of the top deck, that are centered on the corners of the top deck, and that extend to intersect with the concentric arc-shaped ribs that are centered on the center point of the top deck.

**2**. The molded equipment pad of claim **1**, wherein the underlying network of reinforcing ribs of the molded equipment pad further includes reinforcing radial ribs attached to the bottom surface of the top deck and extending outwardly on a radial line from the center point of the top deck toward the side walls.

**3**. A molded equipment pad comprising:

a. a continuous top deck, having a top surface, a bottom surface, a center point, edges, and corners, for supporting a piece of equipment on the planar top surface;

b. side walls extending downwardly from the edges of the top deck; and

c. an underlying network of reinforcing ribs attached to the bottom surface of the top deck including a series of concentric arc-shaped ribs attached to the bottom sur-

face of the top deck, centered on the center point of the top deck, and radiating outwardly toward the side walls of the equipment pad with the outermost arc-shaped ribs intersecting the sidewalls, wherein the underlying network of reinforcing ribs of the molded equipment pad further includes cylindrical hubs attached to the bottom surface of the top deck.

**4**. The molded equipment pad of claim **3**, wherein the underlying network of reinforcing ribs of the molded equipment pad further includes reinforcing radial ribs attached to the bottom surface of the top deck and extending outwardly on a radial line from the center point of the top deck toward the side walls.

**5**. A molded equipment pad comprising:

a. a continuous top deck, having a top surface, a bottom surface, a center point, edges, and corners, for supporting a piece of equipment on the planar top surface;

b. side walls extending downwardly from the edges of the top deck; and

c. an underlying network of reinforcing ribs attached to the bottom surface of the top deck including a series of concentric arc-shaped ribs attached to the bottom surface of the top deck, centered on the center point of the top deck, and radiating outwardly toward the side walls of the equipment pad with the outermost arc-shaped ribs intersecting the sidewalls, wherein the underlying network of reinforcing ribs further includes a series of opposing arc-shaped ribs that are attached to the bottom surface of the top deck, that are centered on the corners of the top deck, and that extend to intersect the concentric arc-shaped ribs that are centered on the center point of the top deck.

**6**. The molded equipment pad of claim **5**, wherein the underlying network of reinforcing ribs of the molded equipment pad further includes reinforcing radial ribs attached to the bottom surface of the top deck and extending outwardly on a radial line from the center point of the top deck toward the side walls.

**7**. A molded equipment pad comprising:

a. a continuous top deck, having a top surface, a bottom surface, a center point, edges, and corners, for supporting a piece of equipment on the planar top surface;

b. side walls extending downwardly from the edges of the top deck; and

c. an underlying network of reinforcing ribs attached to the bottom surface of the top deck including a series of concentric arc-shaped ribs attached to the bottom surface of the top deck, centered on the center point of the top deck, and radiating outwardly toward the side walls of the equipment pad with the outermost arc-shaped ribs intersecting the sidewalls, wherein intersections between the reinforcing arc-shaped ribs and the side walls include gussets resulting from adding height to the reinforcing arc-shaped ribs at the intersections with the side walls.

**8**. The molded equipment pad of claim **7**, wherein the underlying network of reinforcing ribs of the molded equipment pad further includes reinforcing radial ribs attached to the bottom surface of the top deck and extending outwardly on a radial line from the center point of the top deck toward the side walls.

**9**. A molded equipment pad comprising:

a. a continuous top deck, having a top surface, a bottom surface, a center point, edges, and corners, for supporting a piece of equipment on the planar top surface;

b. side walls extending downwardly from the edges of the top deck; and

c. an underlying network of reinforcing ribs attached to the bottom surface of the top deck including a series of concentric arc-shaped ribs attached to the bottom surface of the top deck, which arc-shaped ribs are centered on the center point of the top deck and radiate outwardly toward the side walls of the equipment pad with the outermost arc-shaped ribs intersecting the sidewalls and the underlying network including reinforcing radial ribs attached to the bottom surface of the top deck and extending outwardly on a radial line from the center point of the top deck toward the side walls, wherein the reinforcing arc-shaped ribs have segments with heights and lengths between the radial ribs, and the height of a segment increases as the length of the segment between the radial ribs increases.

**10**. The molded equipment pad of claim **9**, wherein the underlying network of reinforcing ribs of the molded equipment pad further includes cylindrical hubs attached to the bottom surface of the top deck.

**11**. A molded equipment pad comprising:

a. a continuous top deck, having a planar top surface, a bottom surface, a center point, edges, and corners, for supporting a piece of equipment on the planar top surface;

b. side walls extending downwardly from the edges of the top deck; and

c. an underlying network of reinforcing ribs attached to the bottom surface of the top deck, the underlying network includes a series of concentric reinforcing arc-shaped ribs attached to the bottom surface of the top deck, which arc-shaped ribs are centered on the center point of the top deck and radiate outwardly toward the side walls of the equipment pad, and the underlying network includes reinforcing radial ribs attached to the bottom surface of the top deck and extending outwardly on a radial line from the center point of the top deck toward the side walls, wherein the reinforcing arc-shaped ribs have segments with heights and lengths between the radial ribs, and the height of a segment increases as the length of the segment between the radial ribs increases.

**12**. A molded equipment pad comprising:

a. a continuous top deck, having a planar top surface, a bottom surface, a center point, edges, and corners, for supporting a piece of equipment on the planar top surface;

b. side walls extending downwardly from the edges of the top deck; and

c. an underlying network of reinforcing ribs attached to the bottom surface of the top deck, the underlying network includes a series of concentric reinforcing arc-shaped ribs attached to the bottom surface of the top deck, which arc-shaped ribs are centered on the center point of the top deck and radiate outwardly toward the side walls of the equipment pad, wherein the underlying network of reinforcing ribs of the molded equipment pad further includes cylindrical hubs attached to the bottom surface of the top deck.

**13**. The molded equipment pad of claim **12**, wherein the underlying network of reinforcing ribs of the molded equipment pad further includes reinforcing radial ribs attached to the bottom surface of the top deck and extending outwardly on a radial line from the center point of the top deck toward the side walls.

* * * * *

# EXHIBIT E

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**Cox, Jr. et al.**

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(54) **MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS**

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| | |
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| ***F24F 13/32*** | (2006.01) |
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CPC ..... ***B32B 3/14*** (2013.01); ***F24F 1/10*** (2013.01); ***F24F 13/32*** (2013.01); *F24F 1/16* (2013.01); *F24F 1/60* (2013.01); *F24F 13/24* (2013.01)

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CPC ..... B32B 3/14; F24F 13/32; F24F 1/10; F24F 1/16; F24F 1/60; F24F 13/24
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See application file for complete search history.

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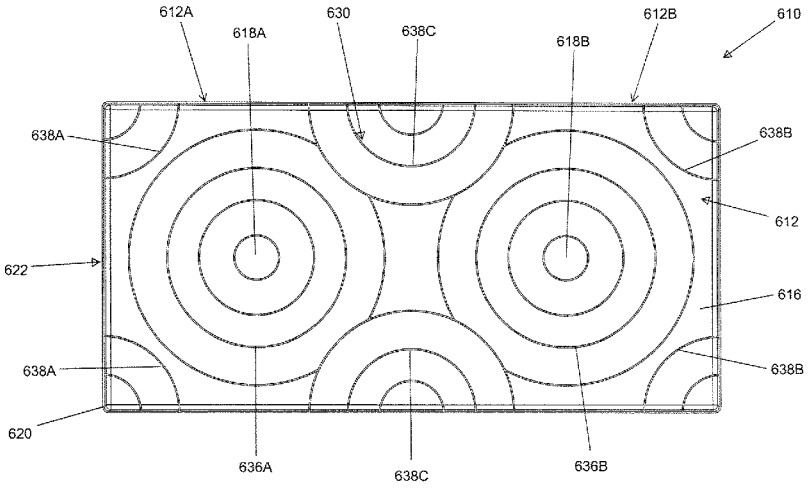
(57) **ABSTRACT**

A molded equipment pad having a top deck, side walls, underlying reinforcing radial ribs, and underlying reinforcing arc-shaped ribs. The arc-shaped ribs may include a series of concentric arc-shaped ribs that are centered on the center of the equipment pad and that extend toward the side walls of the pad and a number of distributed circular hubs. Alternatively, the arc-shaped ribs may include a series of concentric arc-shaped ribs that are centered on the center of the equipment pad that end short of the side walls, a series of opposing arc-shaped ribs that are centered on the corners of the equipment pad, and a number of distributed circular hubs.

**6 Claims, 27 Drawing Sheets**



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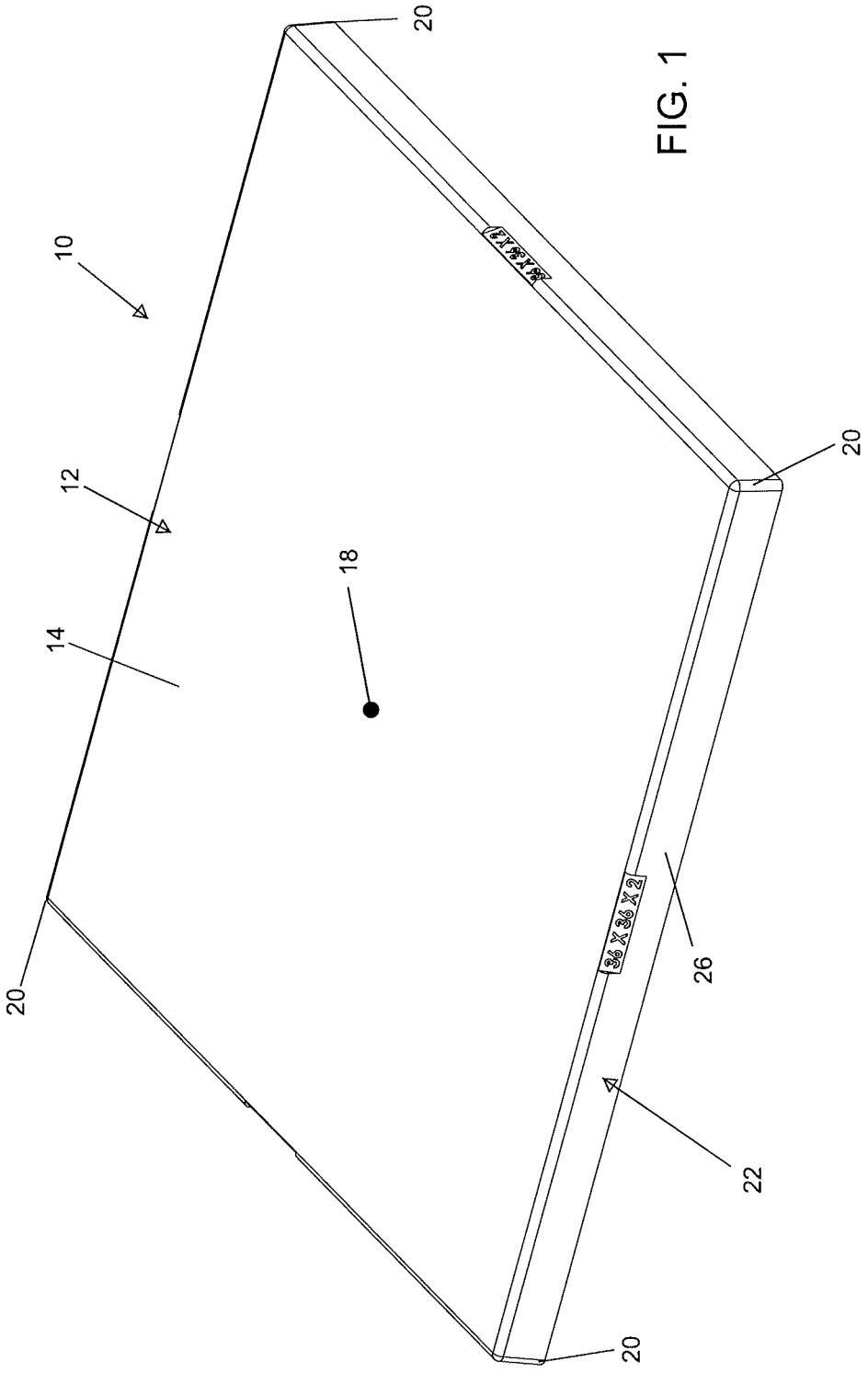


FIG. 1

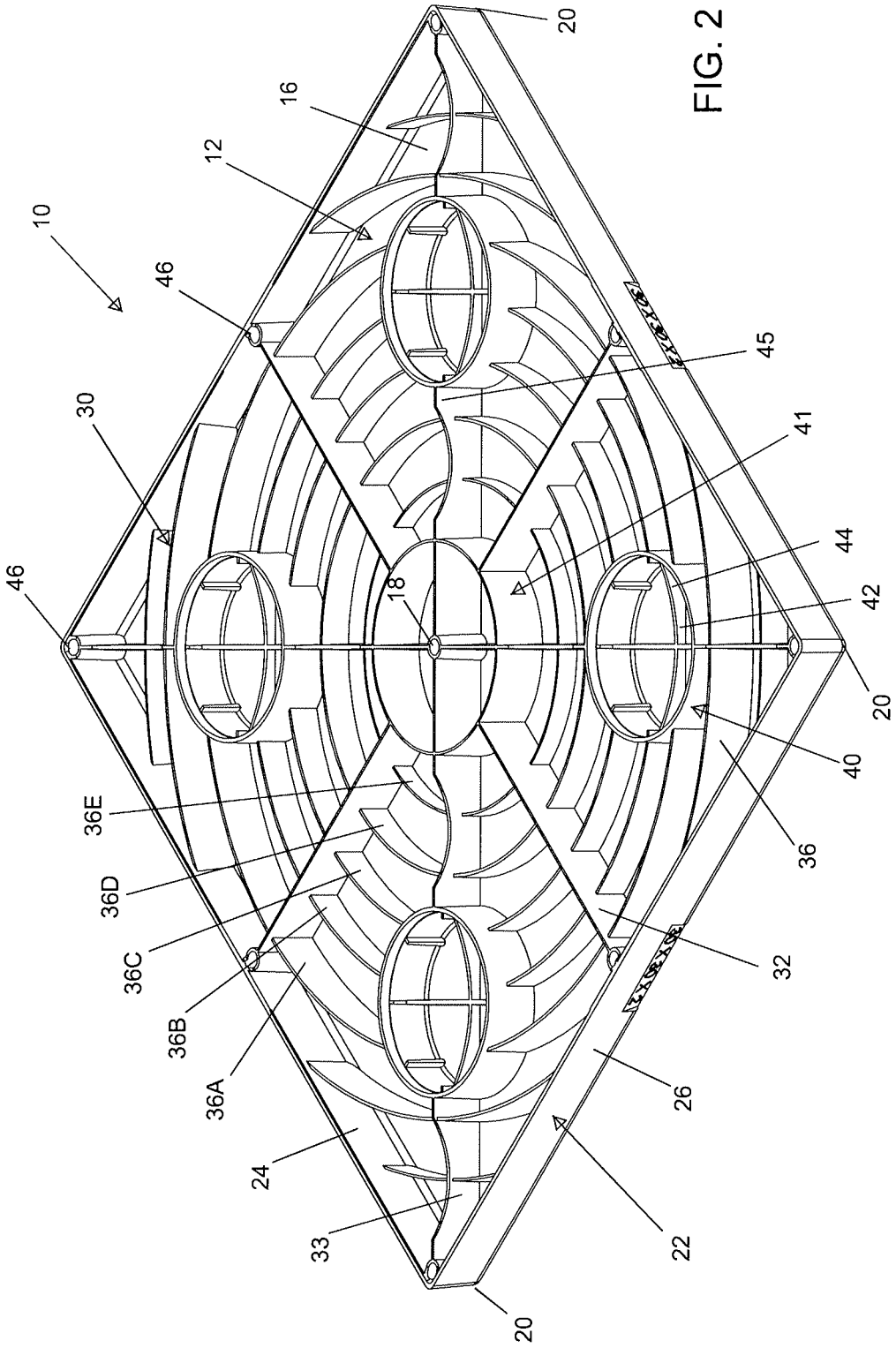
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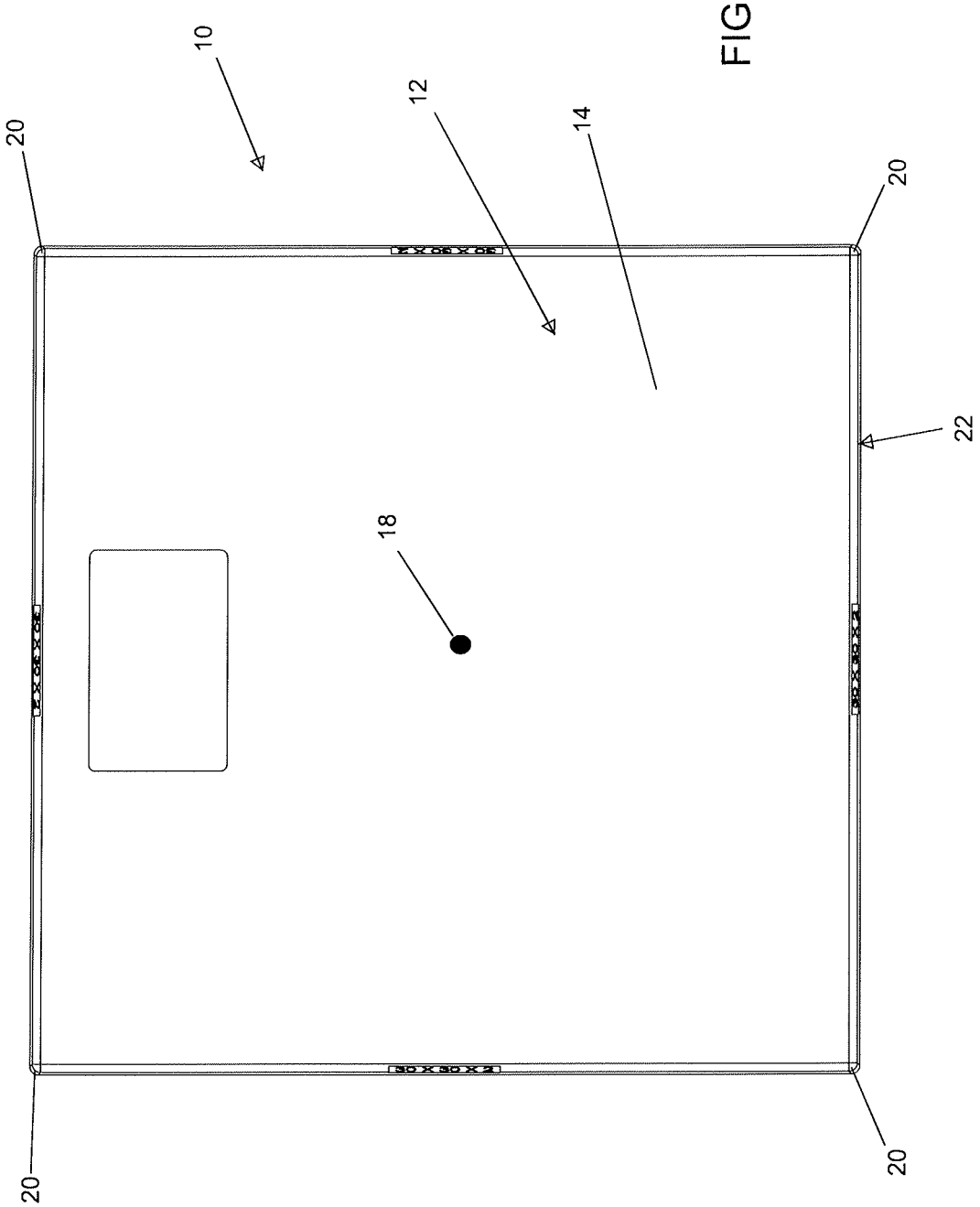
FIG. 2

FIG. 3



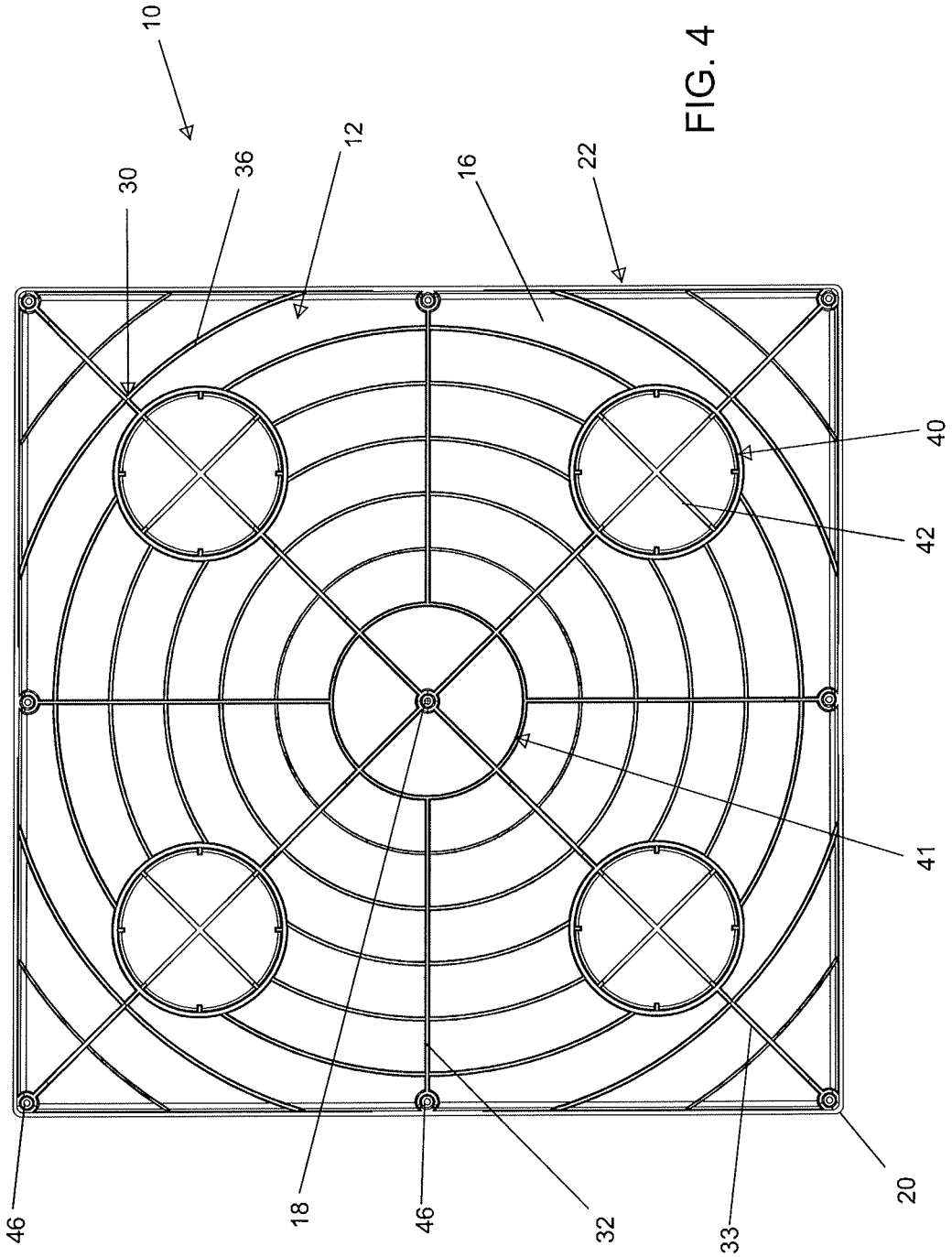



FIG. 4

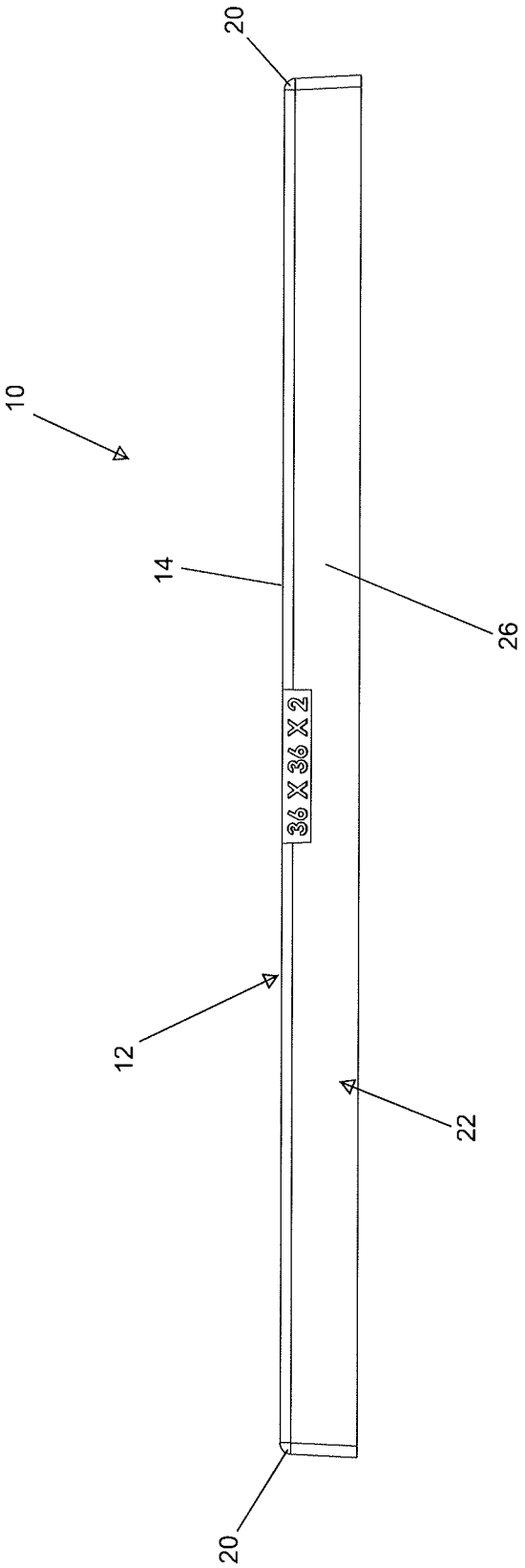
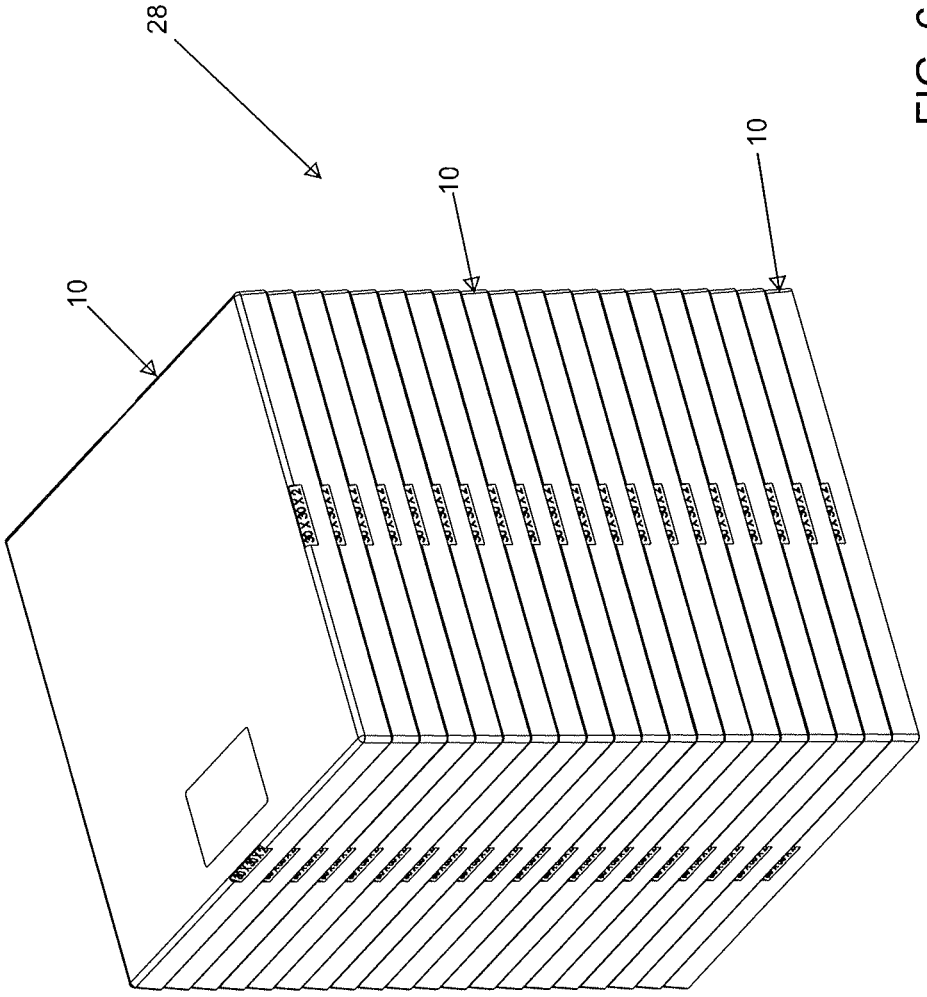



FIG. 5

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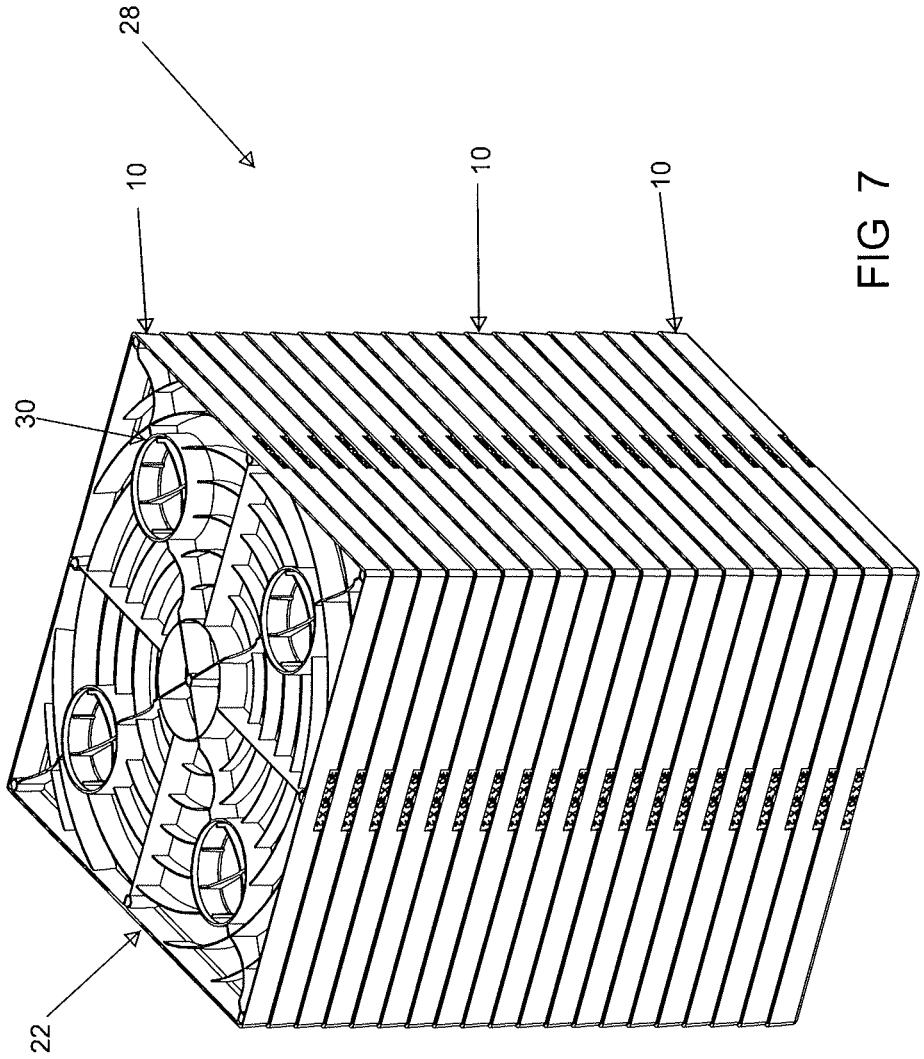


FIG 7

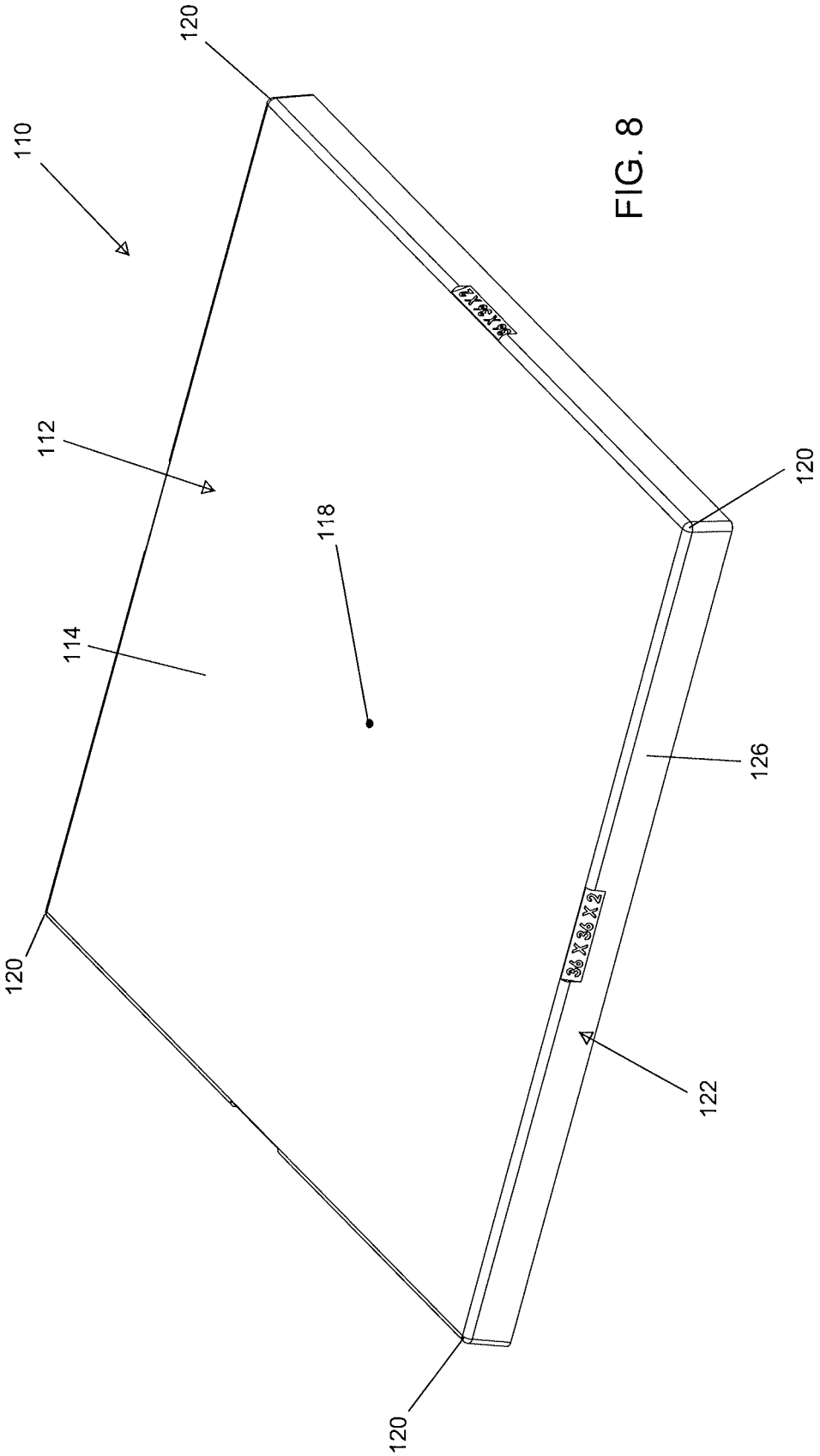


FIG. 8

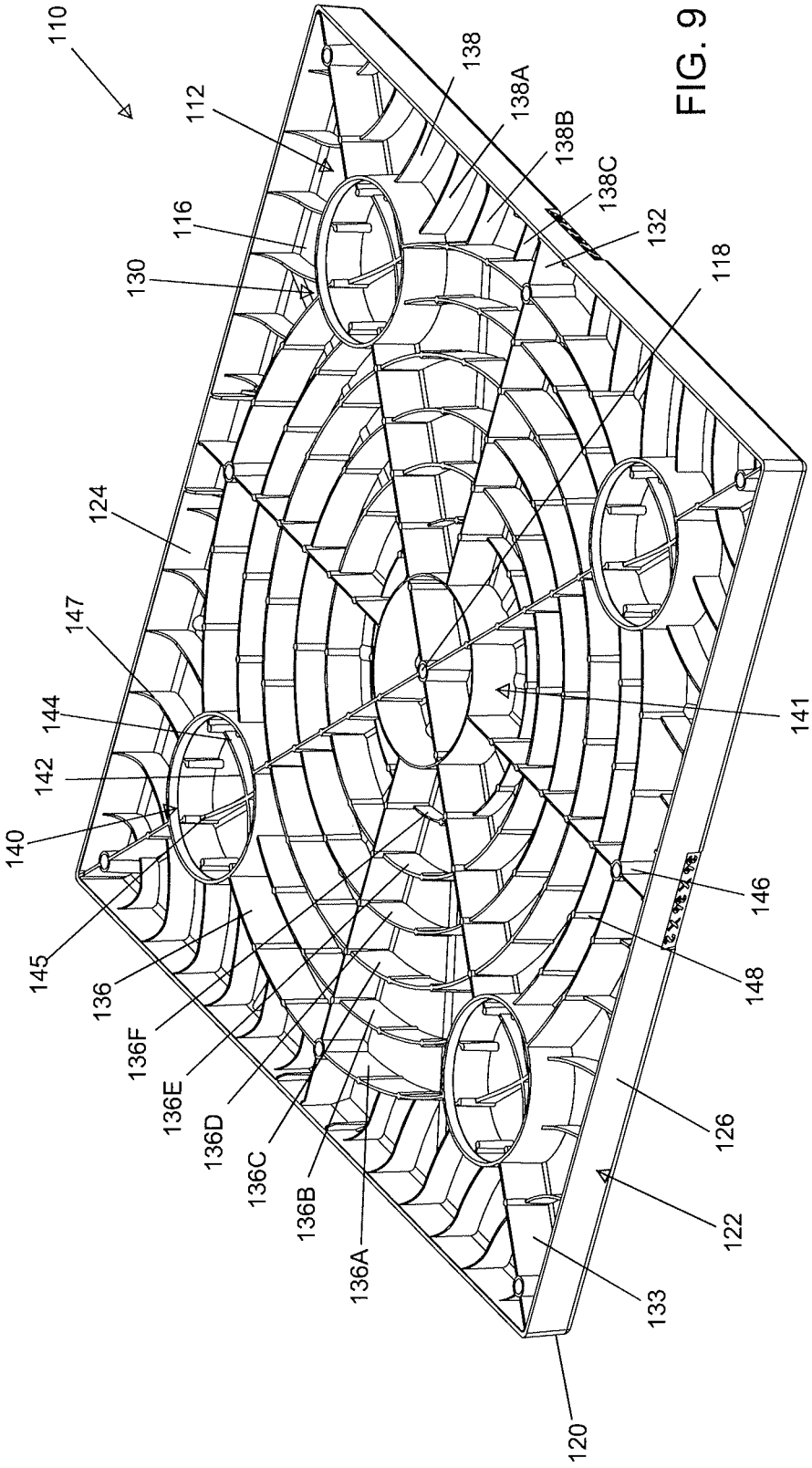
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FIG. 9

FIG. 10

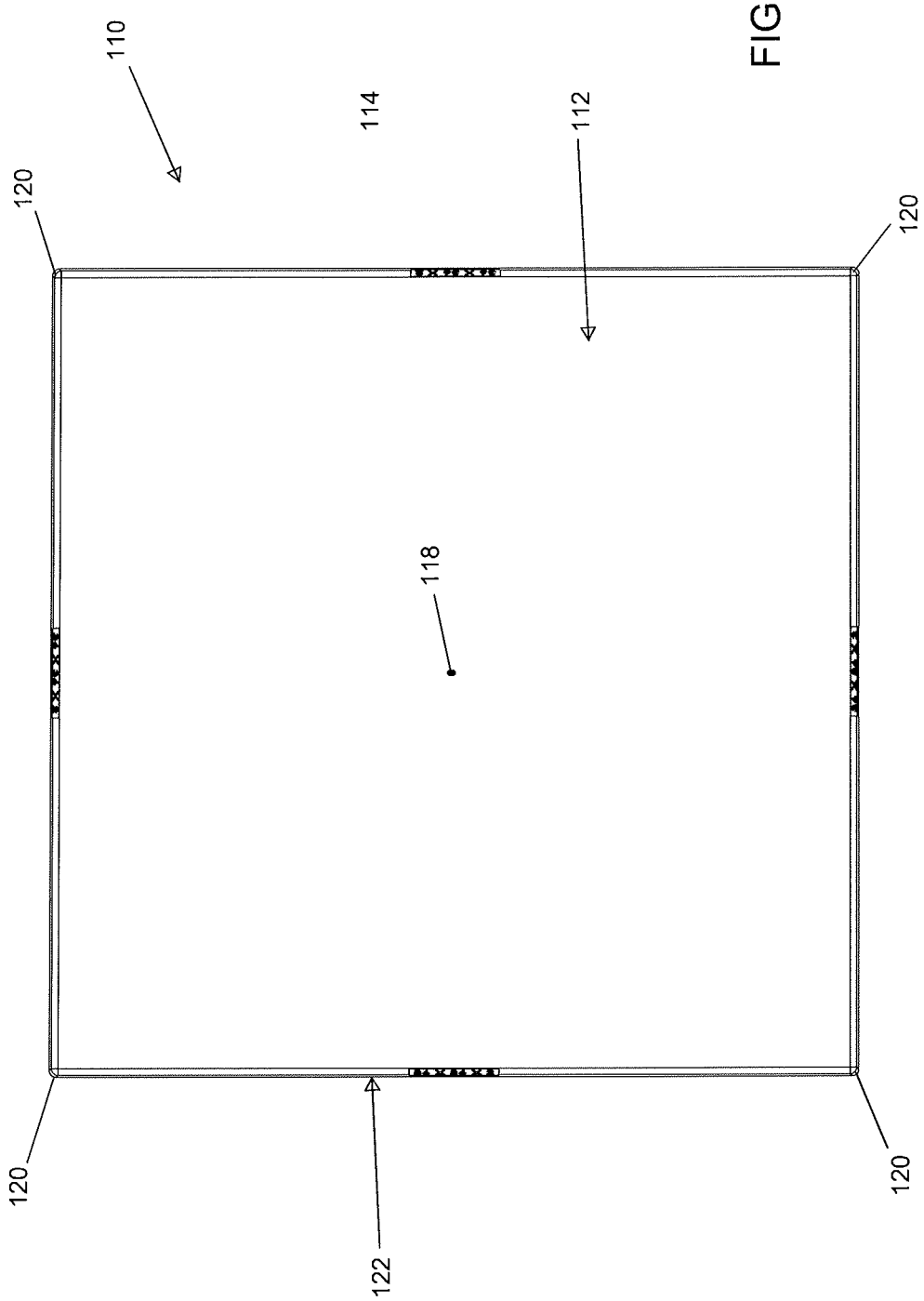


FIG. 11

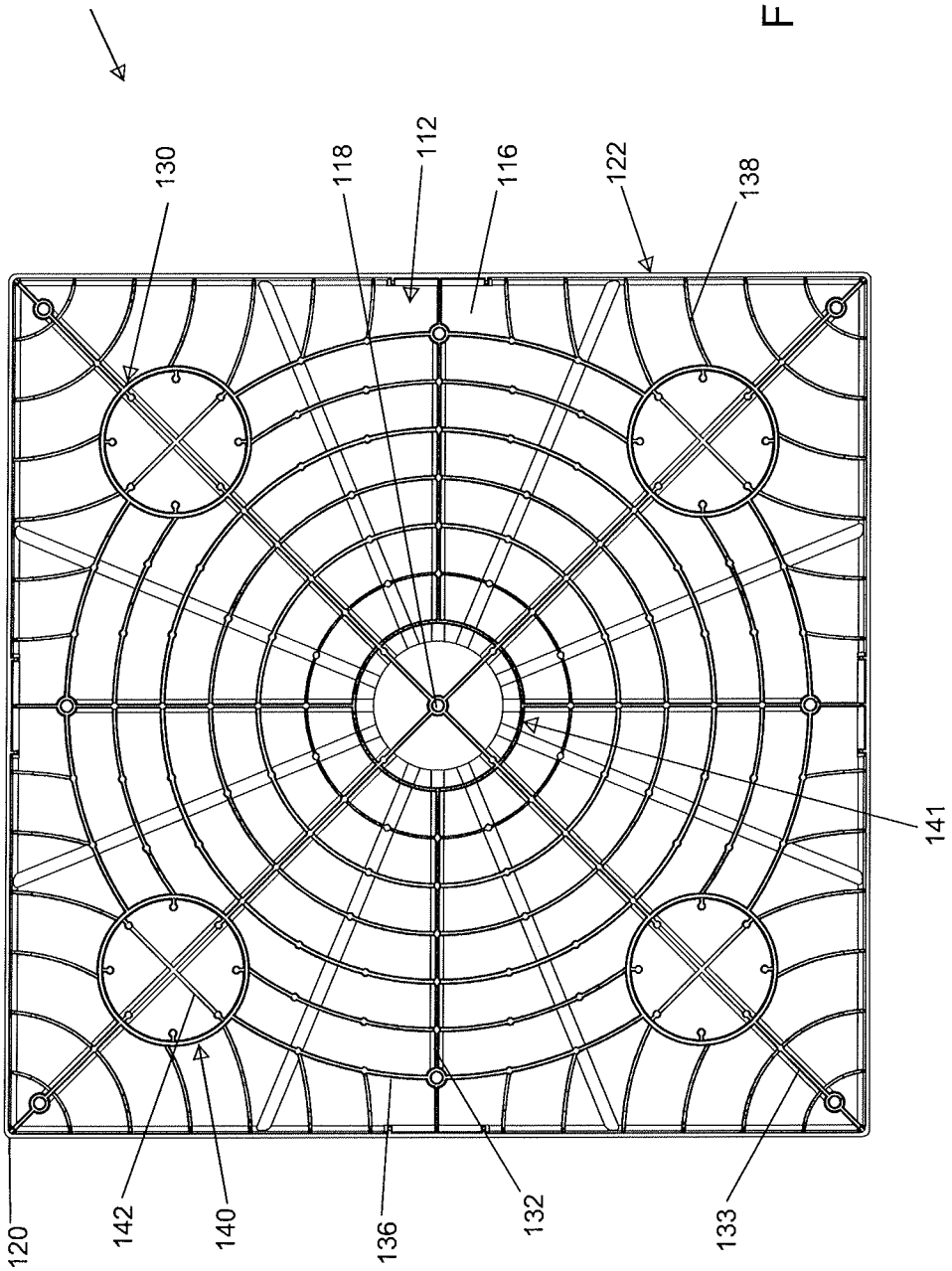
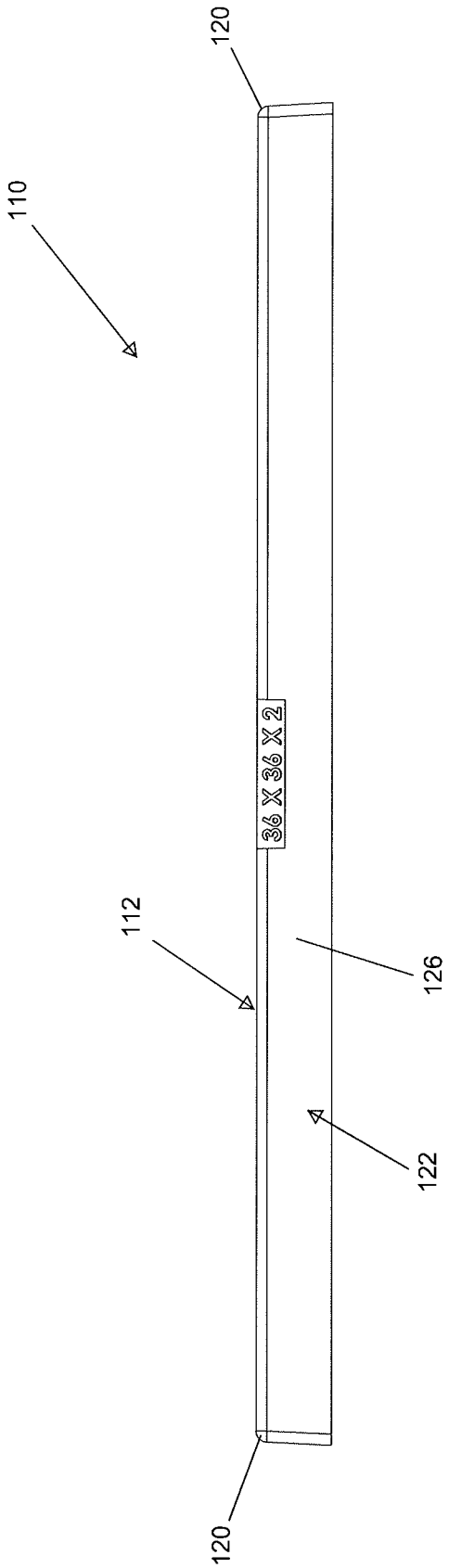


FIG 12



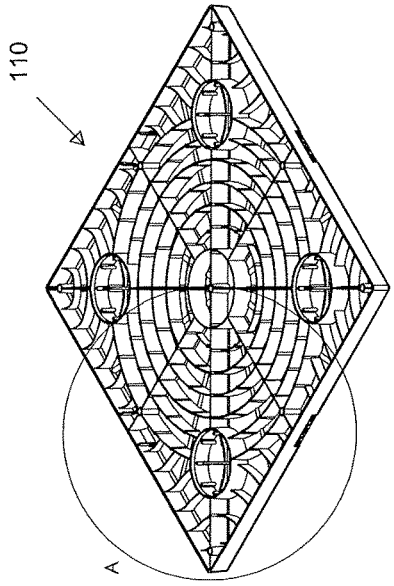



FIG. 13A

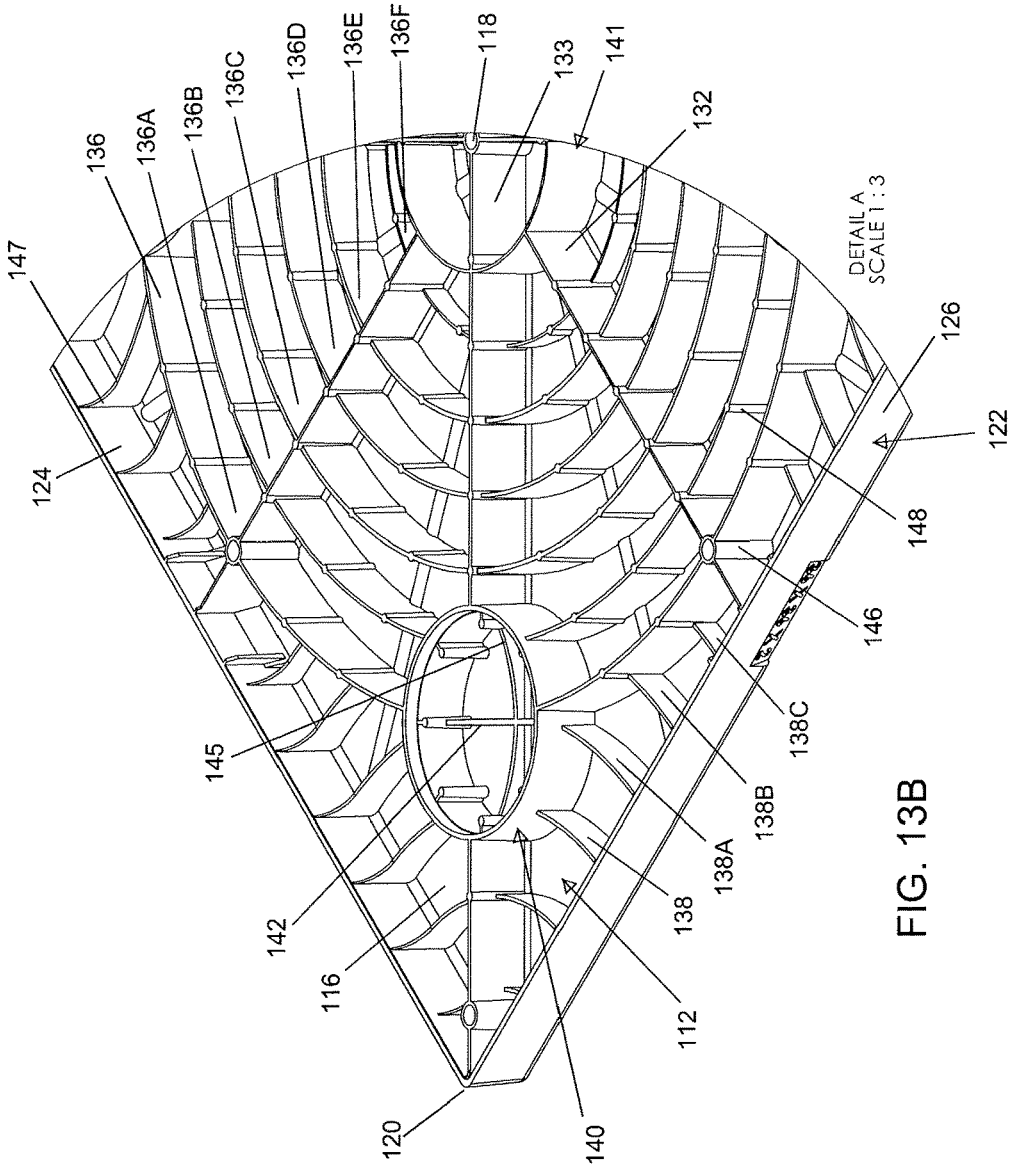



FIG. 13B

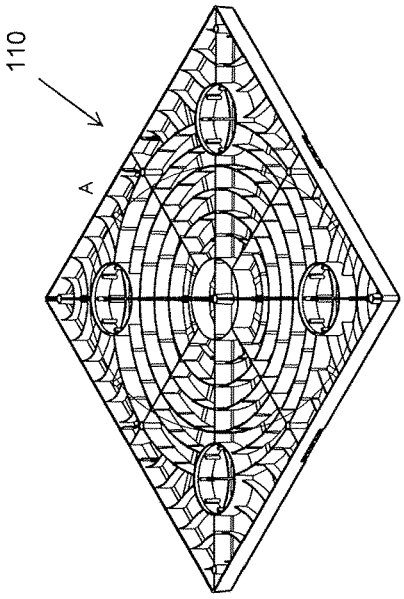



FIG. 14A

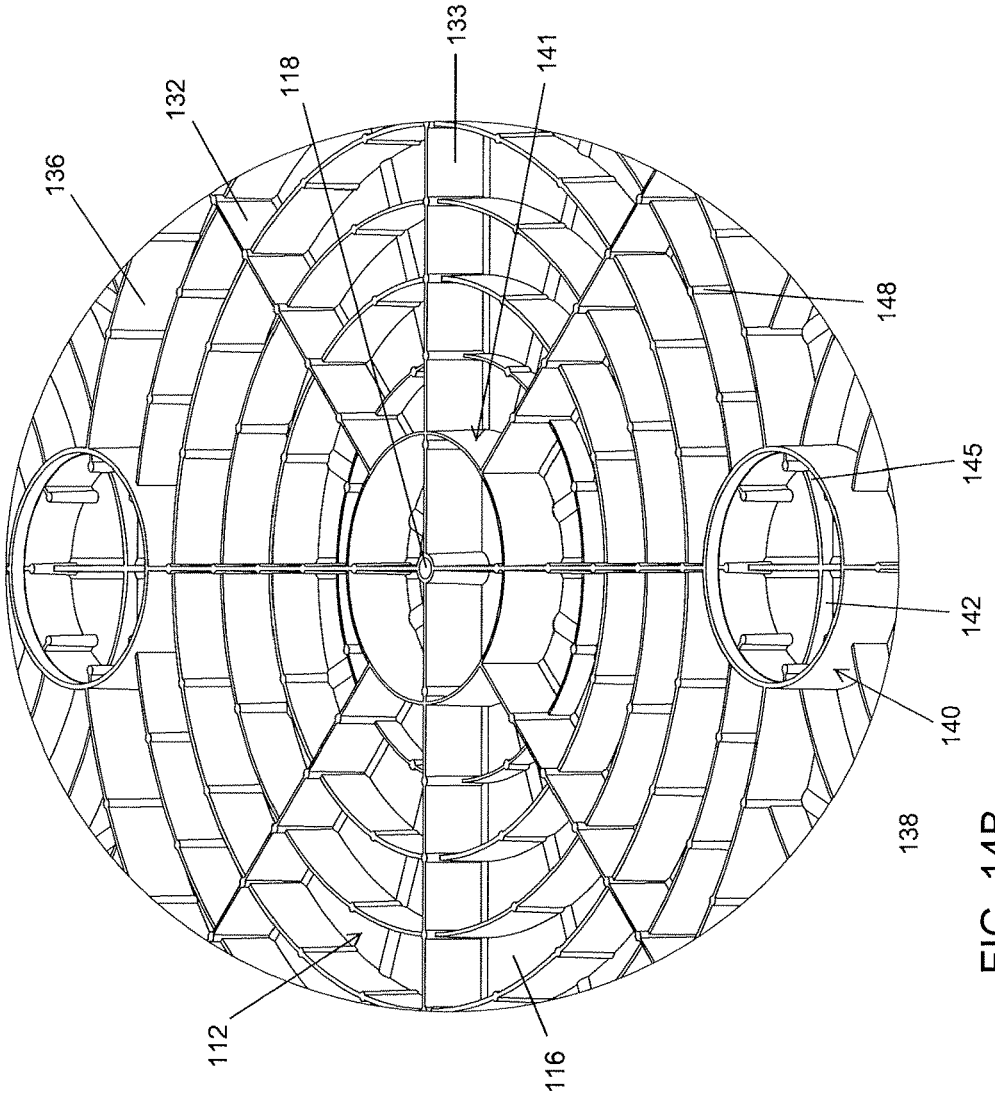



FIG. 14B

FIG. 15

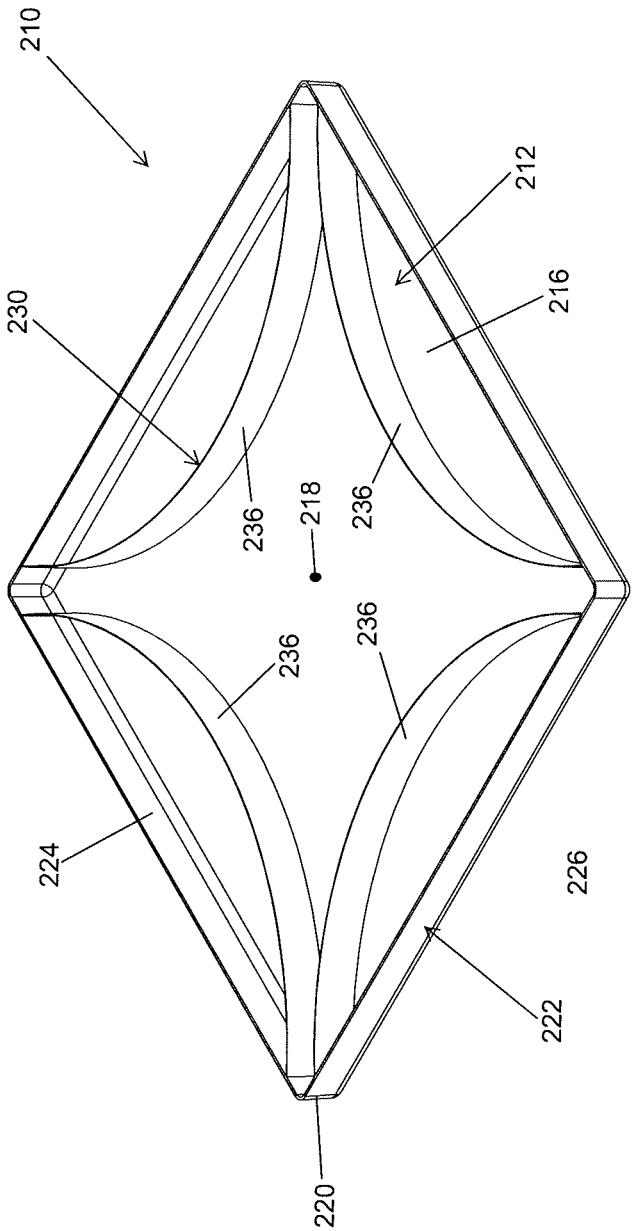
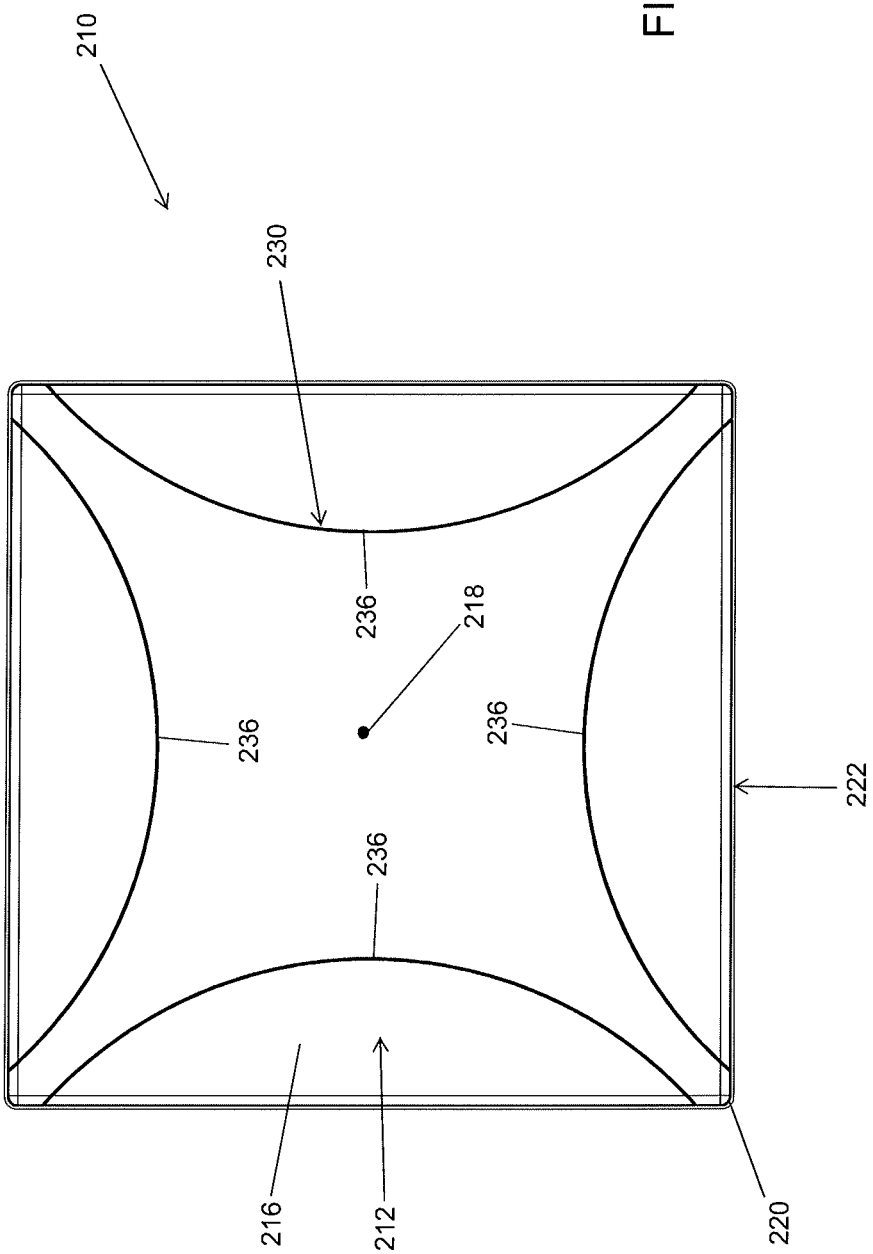


FIG. 16



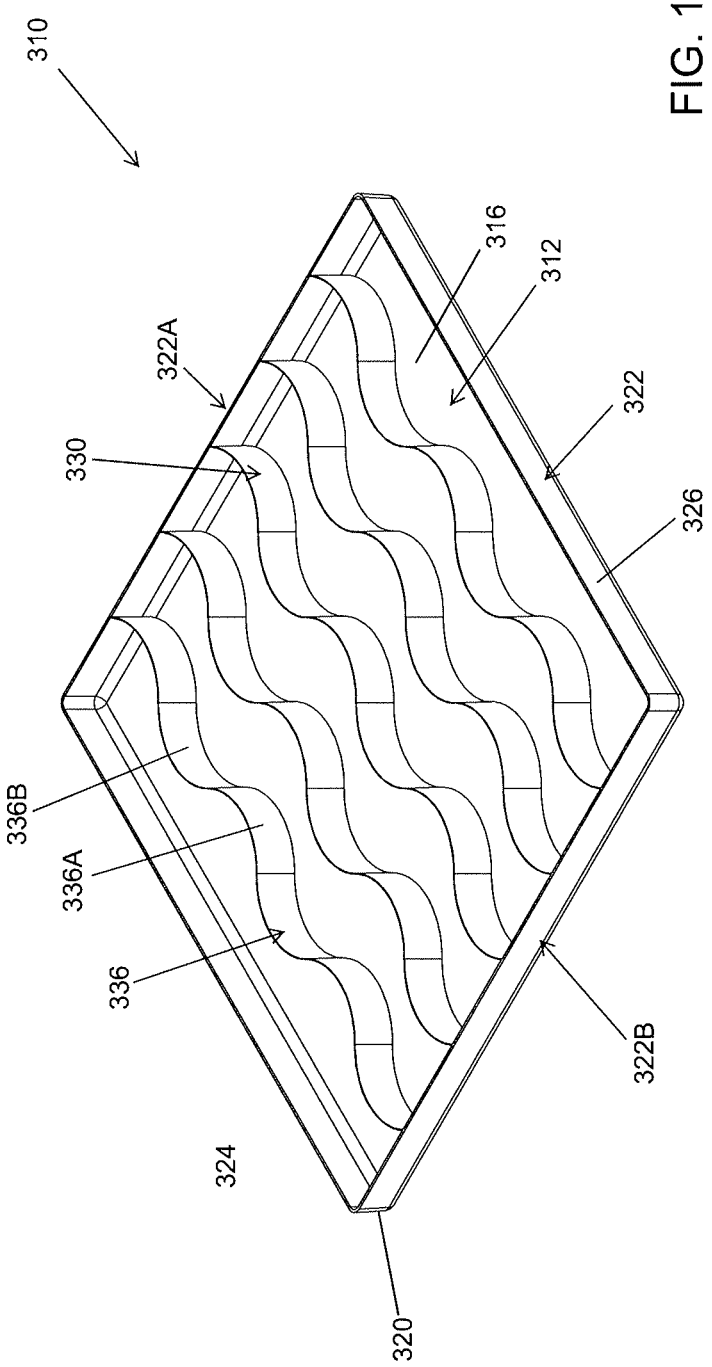
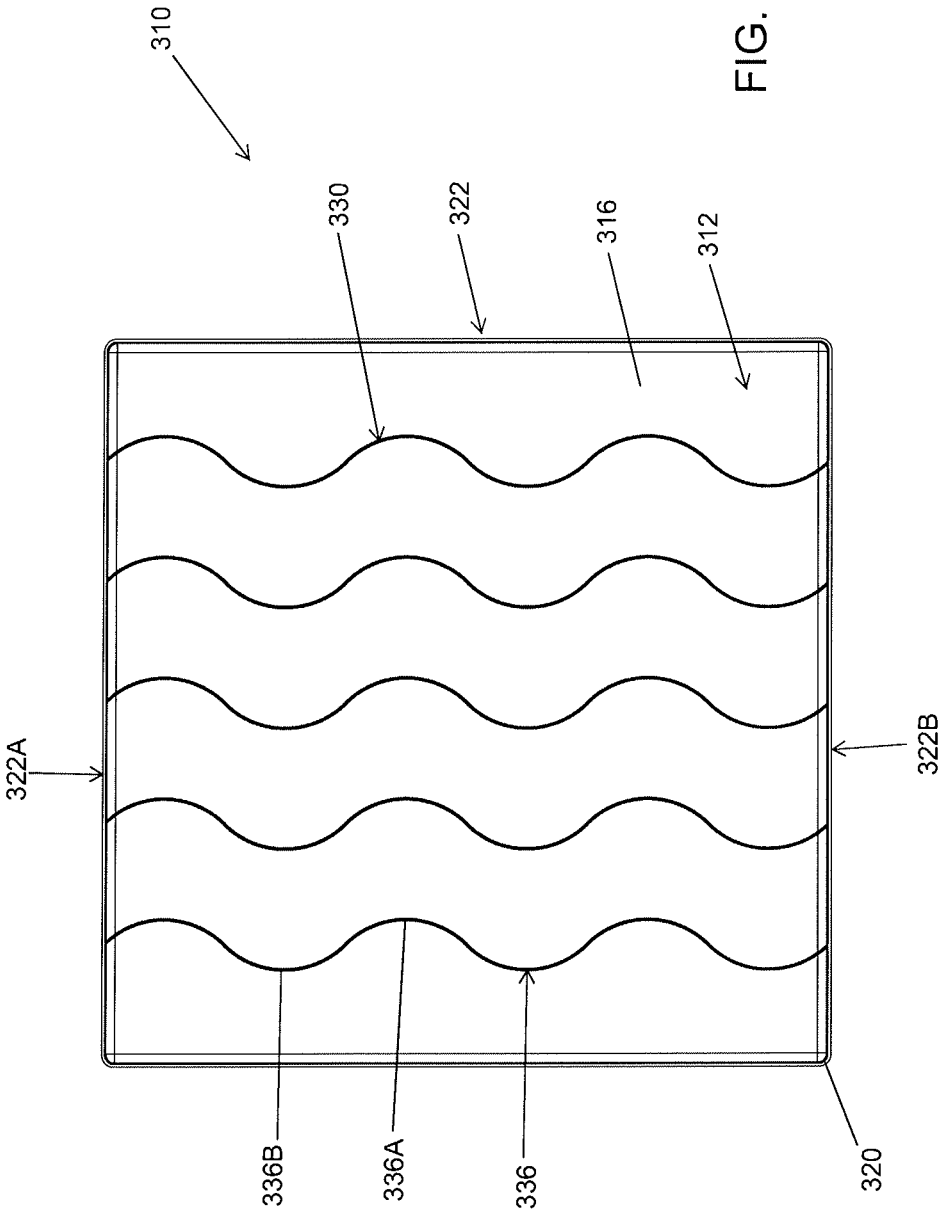



FIG. 17

FIG. 18



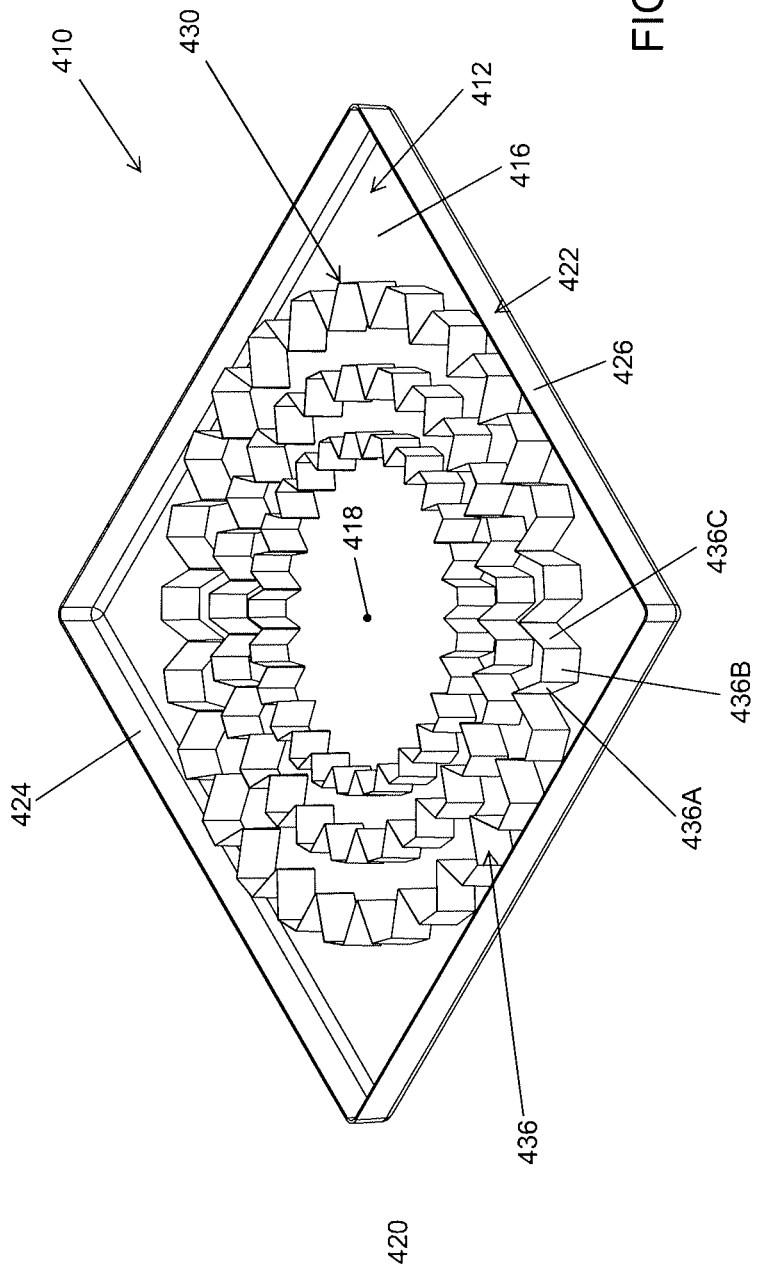
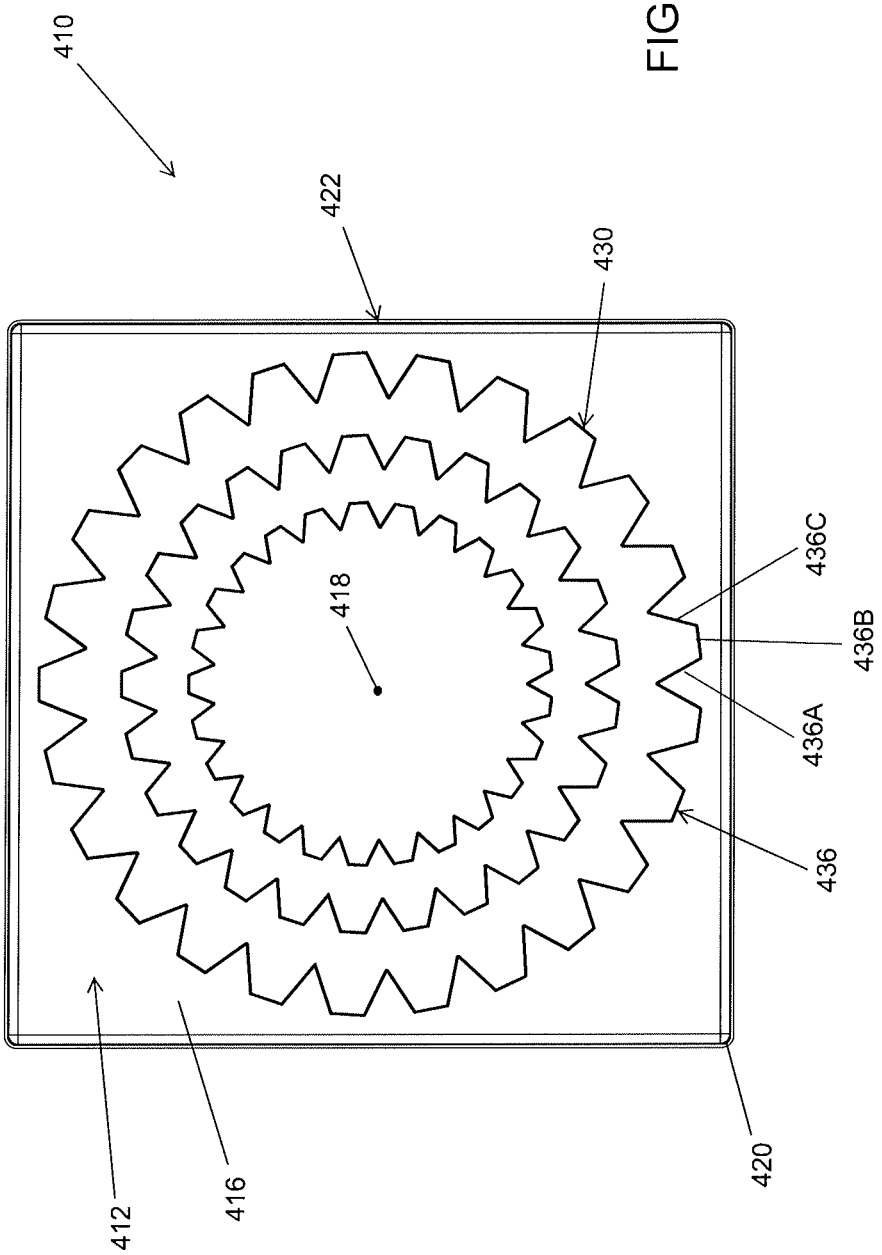



FIG. 19

FIG. 20



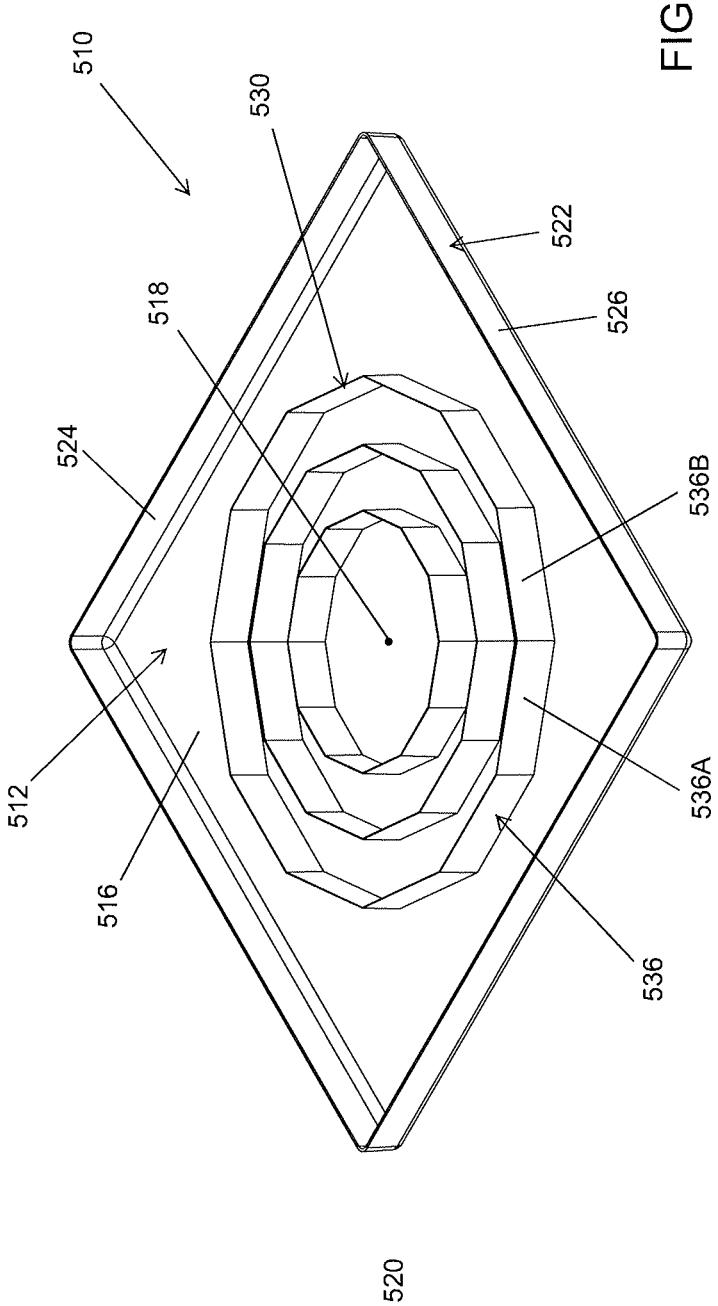



FIG. 21

FIG. 22

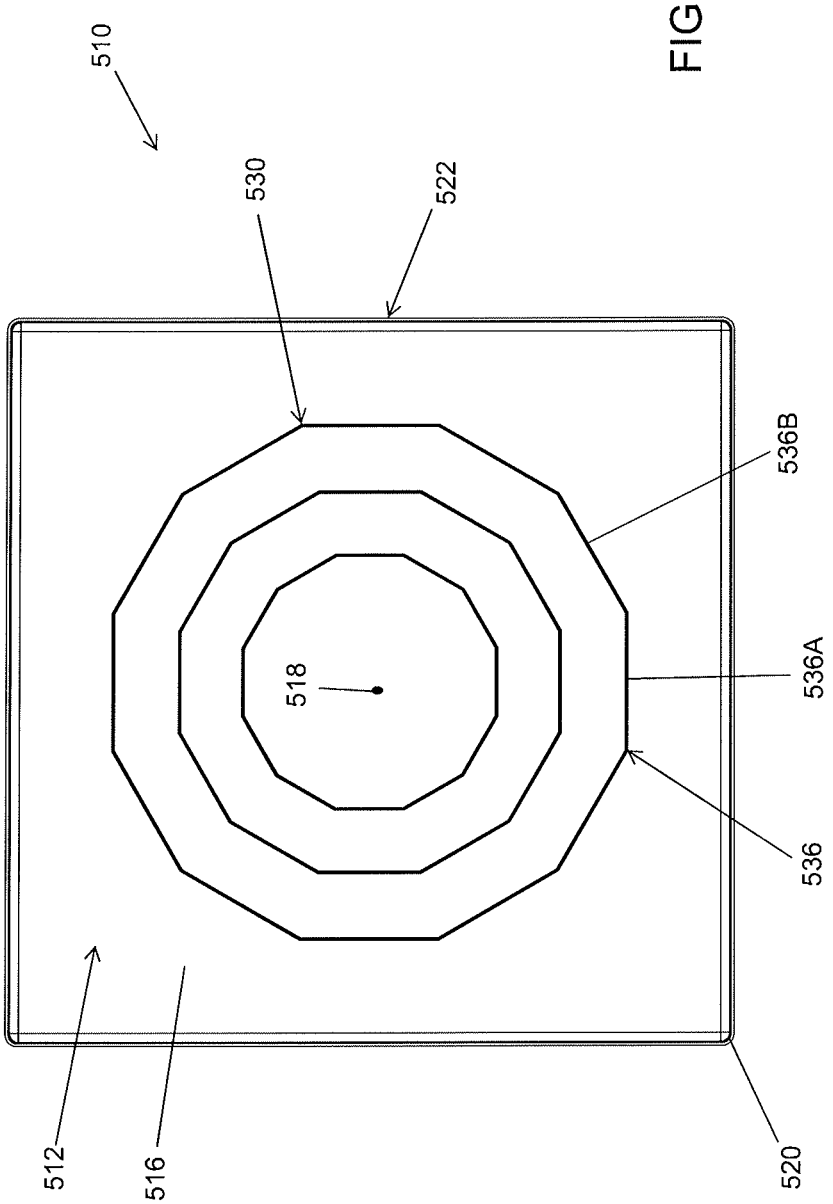


FIG. 23

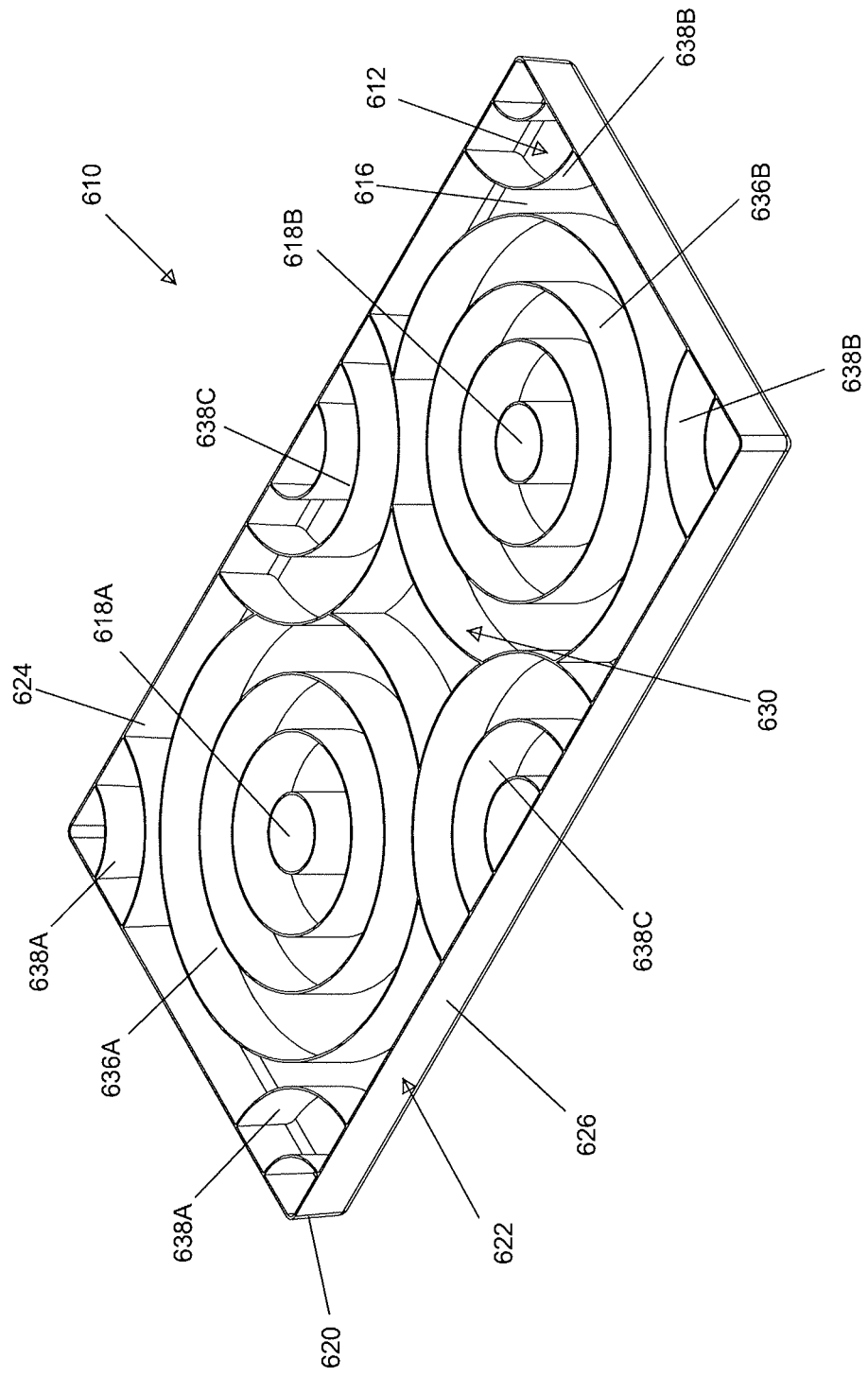

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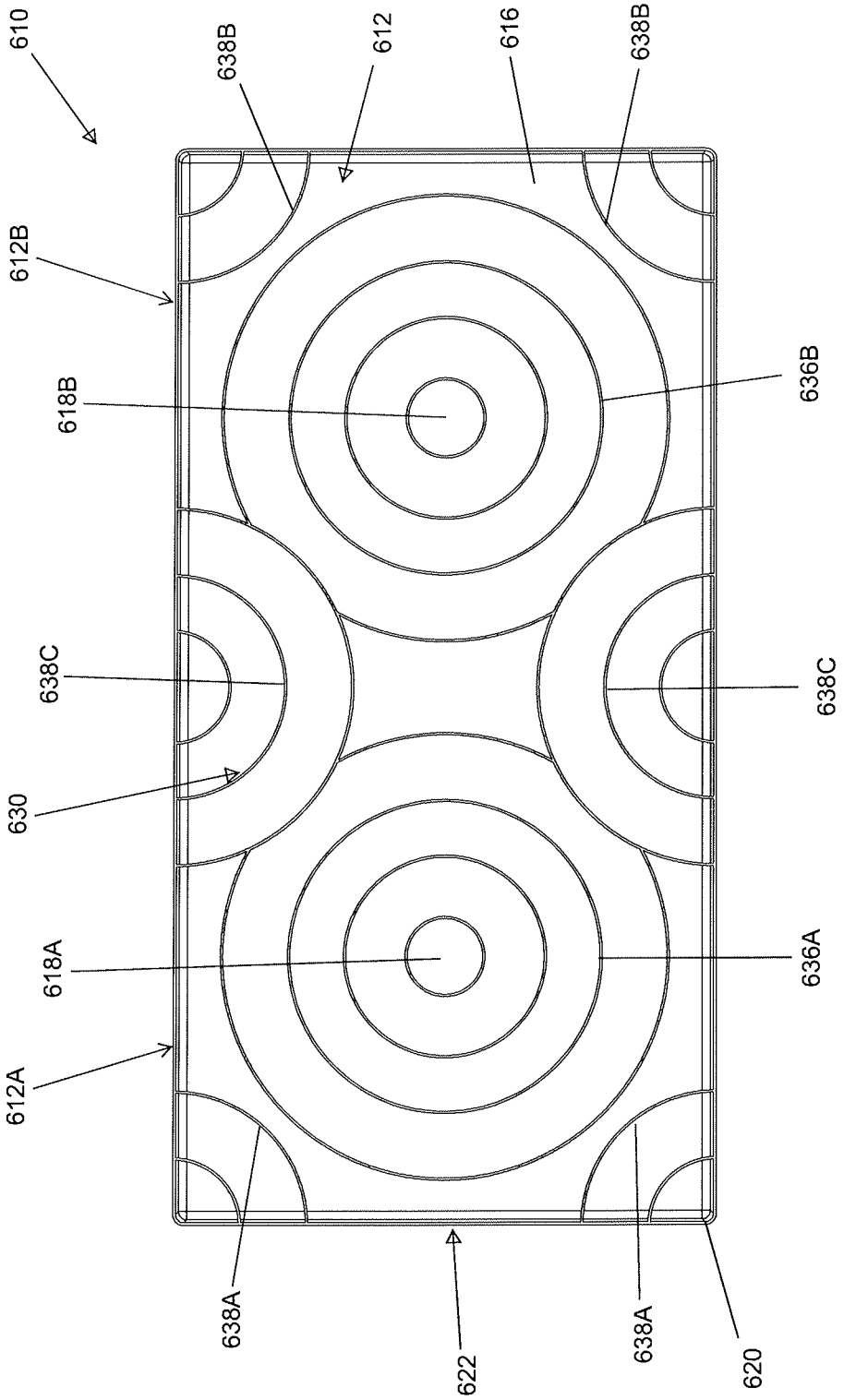
FIG. 24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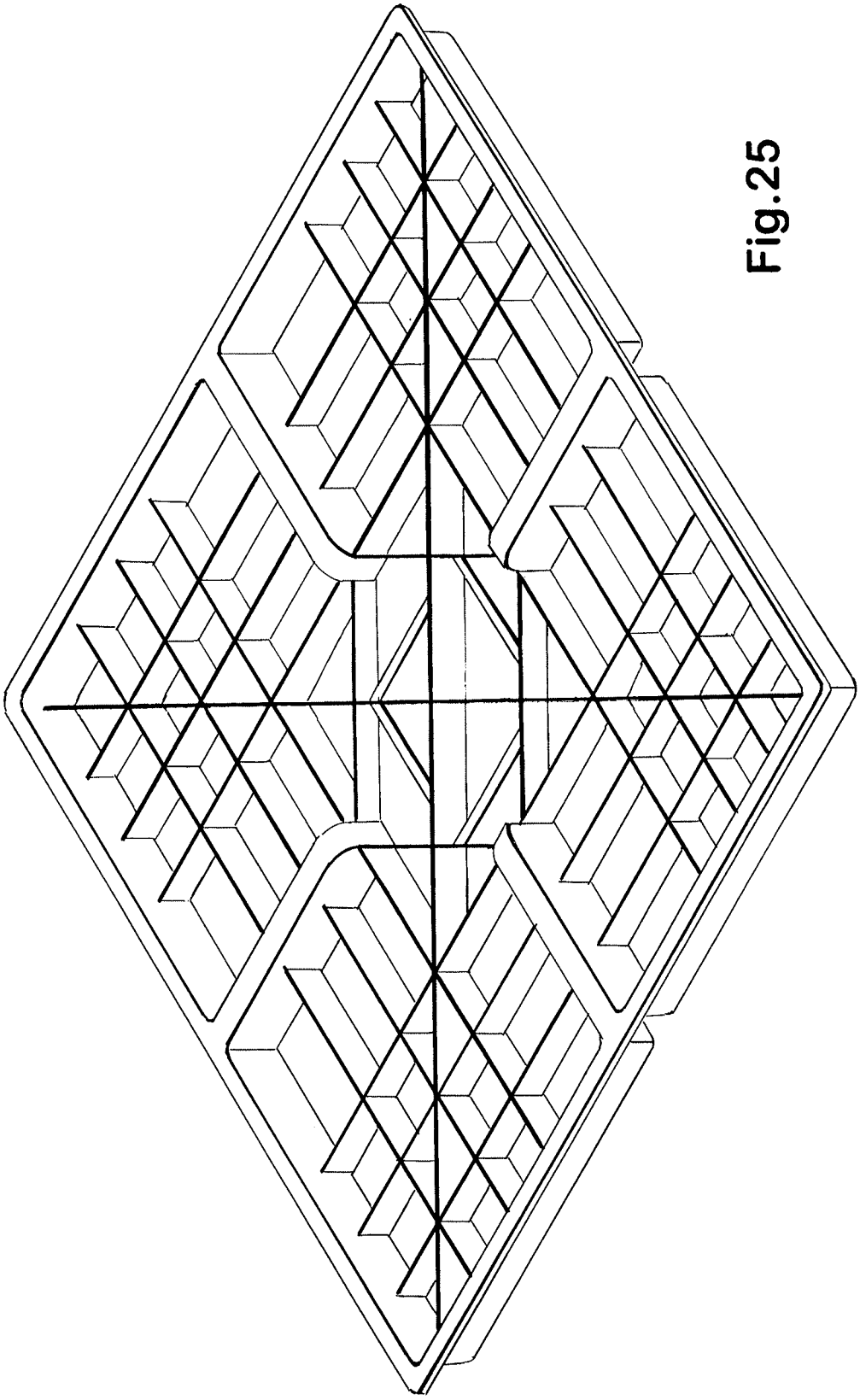

Fig.25

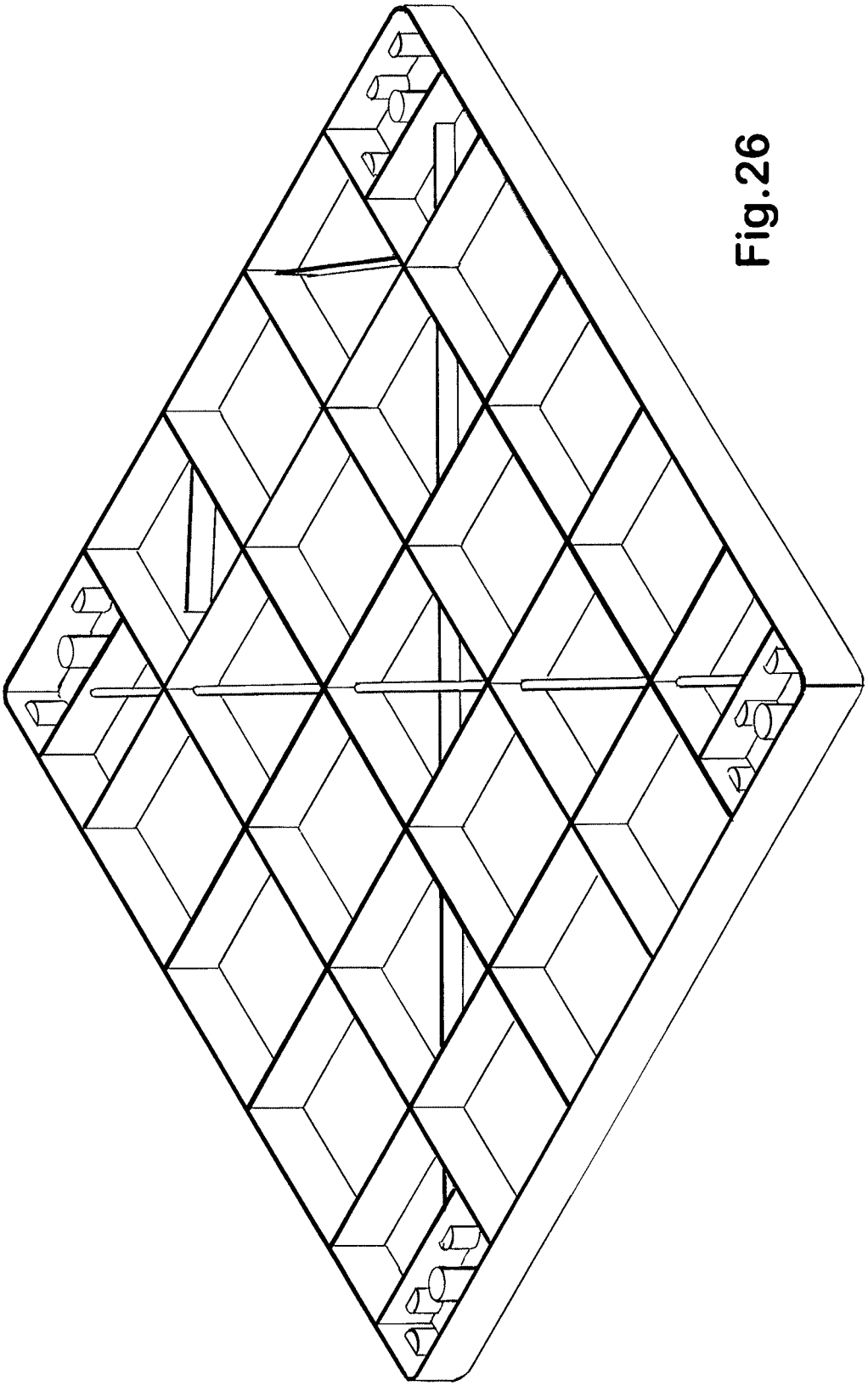

Fig.26

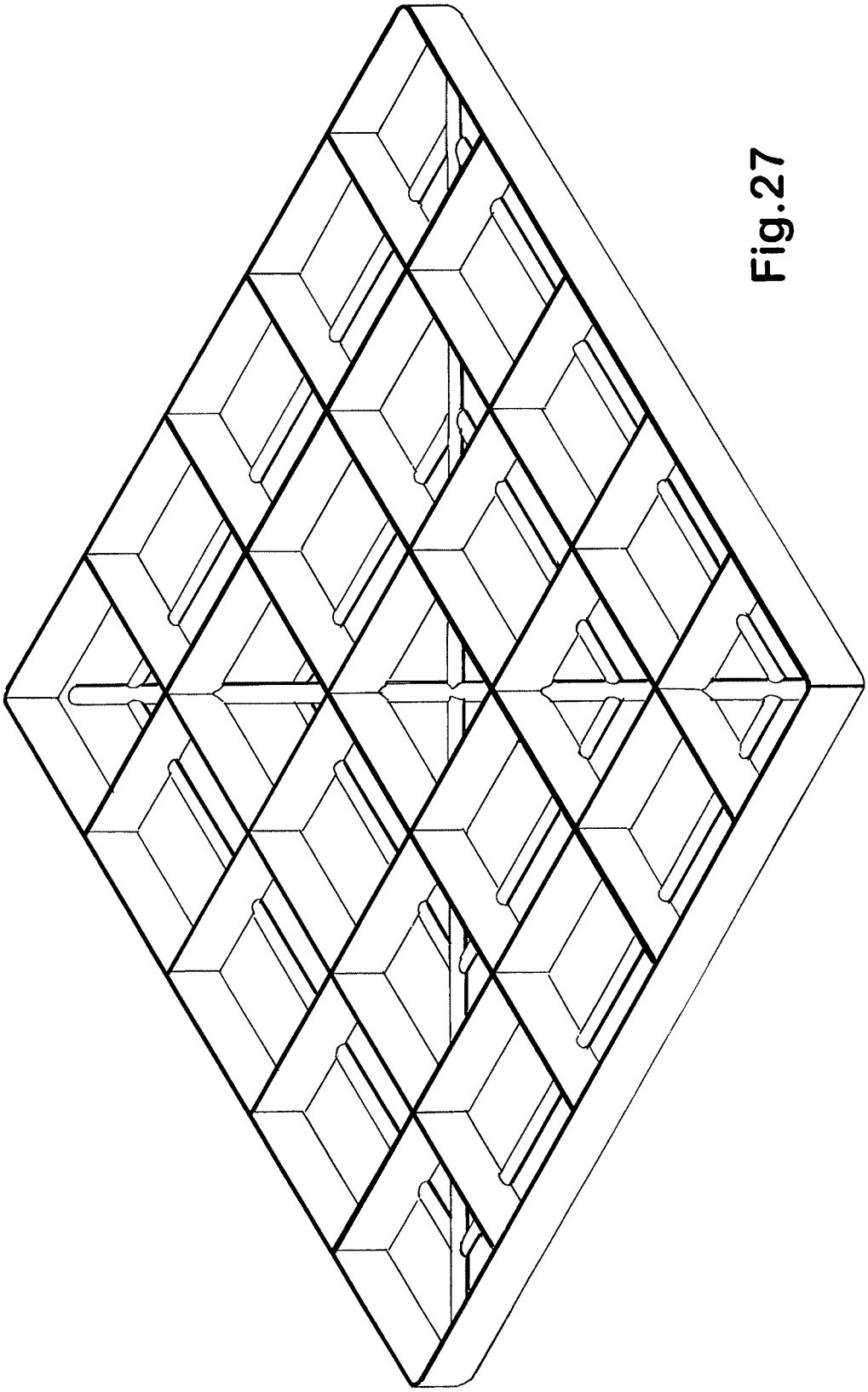

Fig.27

# MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS

## CROSS REFERENCE TO RELATED PATENT APPLICATIONS

This patent application is a continuation of U.S. patent application Ser. No. 13/874,727, filed May 1, 2013, which claims priority from U.S. Provisional Patent Application No. 61/641,937, filed May 3, 2012, which is hereby incorporated by reference.

## FIELD OF THE INVENTION

This invention relates to equipment pads, and more specifically to a molded equipment pad with underlying reinforcing arc-shaped ribs.

## BACKGROUND OF THE INVENTION

Molded equipment pads are molded using thermoplastic, thermoset, and concrete materials and are designed to support heavy equipment, such as an air conditioning unit. In connection with such a molded equipment pad, the equipment pad must be designed with sufficient strength to support the heavy equipment while at the same time minimizing the amount of material used in the manufacturing of the equipment pad.

## SUMMARY OF THE INVENTION

Consequently, there is a need for a molded equipment pad that has sufficient strength to support heavy equipment while at the same time minimizing the amount of material used to construct the equipment pad. Minimizing the amount of material used in the construction of the equipment pad saves on cost, saves on weight, and minimizes the environmental impact of the manufacturing process of the equipment pad, the distribution of the equipment pad, and the ultimate disposal of the equipment pad.

The equipment pad of the present invention is molded of a thermoplastic, thermoset, or concrete material and is designed to support heavy equipment such as an air conditioner unit while minimizing the amount of material used in the construction of the equipment pad. The material used to mold the equipment pad of the present invention may be any conventional thermoplastic, thermoset, or concrete materials material used for molding equipment pads. A molded equipment pad in accordance with the present invention has a continuous equipment support deck, perimeter side walls, and an underlying network of arc-shaped reinforcing ribs.

In one embodiment of the present invention, the underlying network of reinforcing ribs includes both radial ribs and arc-shaped ribs. Particularly, the radial ribs are straight and radiate from the center point of the equipment pad. The arc-shaped ribs include a series of concentric arc-shaped ribs (centered on the center point of the equipment pad) and a number of distributed circular hubs. The concentric arc-shaped ribs radiate in concentric circles toward the side walls of the equipment pad, and the outermost concentric arc-shaped ribs intersect the side walls of the equipment pad. The concentric arc-shaped ribs may constitute a segment of a circle, a segment of an ellipse, or a segment of any other curved line, including smooth curved lines and curved lines with irregular curvature.

In a second embodiment of the invention, the molded equipment pad has radial ribs, arc-shaped ribs, and a number of distributed circular hubs. The arc-shaped ribs comprise a series of concentric arc-shaped ribs (centered on the center point of the equipment pad) and a series of opposing arc-shaped ribs (centered on the corners of the equipment pad). The concentric arc-shaped ribs radiate in concentric circles toward the side walls, but the outermost concentric arc-shaped ribs end short of the side walls of the equipment pad. The opposing arc-shaped ribs are centered on the corners of the equipment pad, radiate in concentric circles toward the center of the equipment pad, and intersect the side walls, the radial ribs, and the concentric arc-shaped ribs. The center arc-shaped ribs and the opposing arc-shaped ribs may constitute segments of a circle, segments of an ellipse, or segments of any other curved line, including smooth curved lines and curved lines with irregular curvature.

Where the radial ribs, the concentric arc-shaped ribs, and the opposing arc-shaped ribs intersect each other and intersect the side walls, the ribs may have gussets resulting from adding height to the rib at the intersection. Moreover, where the ribs intersect each other, the intersection may be in the form of a post-shaped fillet to increase the strength of the intersection. Such gusseted and filleted intersections allow the height of the ribs between the gusseted and filleted intersections to be reduced with the attendant reduction of material.

When the pad is loaded as intended, a force is exerted perpendicular to the top deck. The concentric arc-shaped ribs and the opposing arc-shaped ribs react to the perpendicular force by "flattening" and supporting the top deck more evenly than conventional straight-line ribs. The nature of the arc shape allows the ribs to react to the applied forces in a compound manner on multiple planes of support. The "flattening" of the network of arc-shaped ribs is counteracted by the straight-line radial ribs. The radial ribs also tie the network of arc-shaped ribs together, which furthers the arc-shaped ribs' ability to counteract downward forces on the top deck.

In the second embodiment of the invention, the outer opposing arc-shaped ribs of the molded equipment pad reinforce the outermost concentric arc-shaped ribs in a fashion similar to the reinforcement provided by the straight radial ribs. The design of the opposing arc-shaped ribs also provides a more frequent support interval to the substantially perpendicular perimeter side walls than if the pattern of concentric arc-shaped ribs were propagated all the way to the side walls of the equipment pad as configured in the first embodiment of the invention. The outer opposing arc-shaped ribs are also gusseted where they meet the equipment pad side walls to reinforce the side walls of the pad.

In both the first and second embodiments, distributed circular hubs are located in each of the quadrants of the equipment pad. The radial ribs extend through the circular hubs, and the circular hubs have straight hub cross ribs positioned within the distributed circular hubs. The straight hub cross ribs and the portions of the radial ribs within the circular hubs support the top deck at the centers of the circular hubs. The straight hub cross ribs and the portions of the radial ribs within the circular hubs are gusseted where the straight hub cross ribs and the radial ribs intersect the inside of the circular hubs.

The height of the concentric arch-shaped ribs and of the opposing arc-shaped ribs varies according to the length of the arc-shaped ribs with longer ribs being taller to compensate for the increase in forces applied over the length. By varying rib heights, the amount of material for the ribs can be optimized. With the ribs optimized, the top deck can be substantially thinner because the deck strength is not dic-

tated solely by the thickness of the deck. Particularly, the equipment pad in accordance with the present invention has a number of short ribs to compensate for the lost stiffness by thinning the top deck. The equipment pad in accordance with the present invention has a top deck that is twice as stiff (measured by maximum deflection at a fixed load) as conventional pad with a deck that is more than twice as thick. The invention thus results in an equipment pad that is lighter with increased structural strength by using less polymer material.

In a third embodiment of the present invention, the molded equipment pad has corner originating arc-shaped ribs each of which is the arc of a circle having its center point located midway between the corners of the equipment pad and outside the side walls of the equipment pad.

In a fourth embodiment of the present invention, the molded equipment pad has a series of arc-shaped ribs each in the form of a sine wave extending across either the length or the width of the equipment pad or extending across both the length and the width of the equipment pad.

In a fifth embodiment of the present invention, the molded equipment pad has a series of concentric arc-shaped ribs (centered on the pad center point). Each of the concentric arc-shaped ribs has an irregular shaped curvature made up of short segments to create an undulating curvature for the concentric arc-shaped ribs.

In a sixth embodiment of the present invention, the molded equipment pad has a series of concentric arc-shaped ribs (centered on the pad center point). Each of the concentric arc-shaped ribs has an irregular shaped curvature made up of short segments connected at obtuse angles to each other to create a segmented curvature for the concentric arc-shaped ribs.

In a seventh embodiment of the present invention, the molded equipment pad has two (or more) sections with a center point for each section. The molded equipment pad has concentric arc-shaped ribs centered on the center points of the equipment pad, corner opposing arc-shaped ribs centered on the corners of the equipment pad, and side opposing arc-shaped ribs centered on center points along the sides and positioned between the corners of the equipment pad. The concentric arc-shaped ribs radiate outwardly from the center points and may or may not intersect the side walls of the equipment pad. The corner opposing arc-shaped ribs may or may not intersect the concentric arcs-shaped ribs, and the side opposing arc-shaped ribs may or may not intersect the concentric arc-shaped ribs. The center arc-shaped ribs, the corner opposing arc-shaped ribs, and the side opposing arc-shaped ribs may constitute segments of a circle, segments of an ellipse, or segments of any other curved line, including smooth curved lines and curved lines with irregular curvature. The seventh embodiment of the present invention may also have radial ribs radiating from each of the center points.

Further objects, features and advantages will become apparent upon consideration of the following detailed description of the invention when taken in conjunction with the drawings and the appended claims.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a top perspective view of an equipment pad in accordance with a first embodiment of the present invention.

FIG. **2** is a bottom perspective view of the equipment pad in accordance with the first embodiment of the present invention.



FIG. **3** is a top plan view of the equipment pad in accordance with the first embodiment of the present invention.

FIG. **4** is a bottom plan view of the equipment pad in accordance with the first embodiment of the present invention.

FIG. **5** is a side elevation view of the equipment pad in accordance with the first embodiment of the present invention.

FIG. **6** is a top perspective view of a stack of equipment pads, stacked for shipping and storage, in accordance with a first embodiment of the present invention.

FIG. **7** is a bottom perspective view of the stack of equipment pads, stacked for shipping and storage, in accordance with the first embodiment of the present invention.

FIG. **8** is a top perspective view of an equipment pad in accordance with a second embodiment of the present invention.

FIG. **9** is a bottom perspective view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **10** is a top plan view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **11** is a bottom plan view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **12** is a side elevation view of the equipment pad in accordance with the second embodiment of the present invention.

FIG. **13**B is an enlarged bottom perspective view of the equipment pad (circled in FIG. **13**A) in accordance with the second embodiment of the present invention.

FIG. **14**A is an enlarged bottom perspective view of the equipment pad (circled in FIG. **14**B) in accordance with the second embodiment of the present invention.

FIG. **15** is a bottom perspective view of an equipment pad in accordance with a third embodiment of the present invention.

FIG. **16** is a bottom plan view of the equipment pad in accordance with the third embodiment of the present invention.

FIG. **17** is a bottom perspective view of an equipment pad in accordance with a fourth embodiment of the present invention.

FIG. **18** is a bottom plan view of the equipment pad in accordance with the fourth embodiment of the present invention.

FIG. **19** is a bottom perspective view of an equipment pad in accordance with a fifth embodiment of the present invention.

FIG. **20** is a bottom plan view of the equipment pad in accordance with the fifth embodiment of the present invention.

FIG. **21** is a bottom perspective view of an equipment pad in accordance with a sixth embodiment of the present invention.

FIG. **22** is a bottom plan view of the equipment pad in accordance with the sixth embodiment of the present invention.

FIG. **23** is a bottom perspective view of an equipment pad in accordance with a seventh embodiment of the present invention.

FIG. **24** is a bottom plan view of the equipment pad in accordance with the seventh embodiment of the present invention.

FIG. **25** is a bottom perspective view of a competitive equipment pad, Brand A.

FIG. **26** is a bottom perspective view of a competitive equipment pad, Brand B.

FIG. **27** is a bottom perspective view of a competitive equipment pad, Brand C.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGS. **1-7** illustrate a first embodiment of a molded equipment pad with, reinforcing radial ribs, reinforcing concentric arc-shaped ribs, and distributed hubs.

FIGS. **8-14** illustrate a second embodiment of a molded equipment pad with, reinforcing radial ribs, reinforcing concentric arc-shaped ribs, reinforcing opposing arc-shaped ribs, and distributed hubs.

FIGS. **15-16** illustrate a third embodiment of a molded equipment pad with reinforcing corner originating arc-shaped ribs.

FIGS. **17-18** illustrate a fourth embodiment of a molded equipment pad with reinforcing sine wave arc-shaped ribs.

FIGS. **19-20** illustrate a fifth embodiment of a molded equipment pad with reinforcing concentric arc-shaped ribs with irregular undulating curvature.

FIGS. **21-22** illustrate a sixth embodiment of a molded equipment pad with reinforcing concentric arc-shaped ribs with irregular segmented curvature.

FIGS. **23-24** illustrate a seventh embodiment of a molded equipment pad two sections, each section with reinforcing concentric arc-shaped ribs, side opposing arc-shaped ribs and corner opposing arc-shaped ribs.

Turning to FIGS. **1-5**, a molded equipment pad **10** comprises an equipment support deck **12** having a deck top surface **14** and a deck bottom surface **16**, side walls **22** having internal surfaces **24** and external services **26**, and an underlying network **30** of reinforcing ribs attached to the bottom surface **16** of the deck **12**. The material used to mold the equipment pad **10** of the present invention may include virtually any moldable material. Suitable materials may include without limitation, thermoplastics (including polyethylene, polypropylene, ABS, styrene, and nylon), thermosets, and concrete (including polymer concrete, self consolidating concrete, and conventional concrete).

The equipment support deck **12** is generally rectangular with a center point **18** generally equidistant from the side walls **22**. The equipment support deck **12** may also be other geometric shapes including but not limited to square, triangular, hexagonal, octagonal, circular, or elliptical. The top surface **14** of the deck **12** is generally planar. The four side walls **22** are attached to the edges of the deck **12** and extend downwardly. The four side walls **22** are joined at their edges to form corners **20** of the pad **10**.

As shown in FIGS. **2** and **4**, a network **30** of reinforcing ribs is attached to the bottom surface **16** of the deck **12** and occupies the space between the side walls **22**. The network **30** of reinforcing ribs includes segments of straight radial ribs **32** that extend from the side walls **22** toward the center point **18** and segments of straight radial ribs **33** that extend from the corners **20** toward the center point **18**. Post-shaped fillets **46** are used at the intersections of the straight radial ribs **32** and the internal surface **24** of the side walls **22** to reinforce the intersection. The post shaped fillets **46** also have openings to accept anti-vibration rubber bumpers (not shown). Likewise, post-shaped fillets **46** are used at the intersections of the straight radial ribs **33** and the corners **20** to reinforce the intersections. The network **30** of reinforcing ribs further includes segments of a series of concentric arc-shaped ribs **36** that are centered on the center point **18**. The concentric arc-shaped ribs **36** intersect the straight radial ribs **32** and **33**, and the outermost segments of the arc-shaped ribs **36** intersect the internal surface **24** on the side walls **22**. As the concentric arc-shaped ribs **36** are positioned further from the center point **18**, the height of the concentric arc-shaped ribs **36** increases to provide greater strength in the longer segments of the concentric arc-shaped ribs **36** between the straight radial ribs **32** and **33**. For example, the outermost segment **36**A of the concentric arc-shaped ribs **36** has a greater height than the innermost segment **36**E with the segments **36**A-**36**E gradually decreasing in height as the segments become shorter between the straight radial ribs **32** and **33**.



With continuing reference to FIGS. **2** and **4**, the network **30** of reinforcing ribs further includes distributed circular hubs **40** and a center hub **41**. In the embodiment shown in FIGS. **2** and **4**, the center circular hub **41** is centered on the center point **18** of the network **30** of reinforcing ribs, and the four distributed hubs **40** are each located in the four quadrants of the network **30** of reinforcing ribs. With reference to FIG. **2**, the straight radial ribs **33** extended through and intersect the distributed hubs **40**, and therefore reinforce the walls of the distributed hubs **40**. Inside the distributed hubs **40** the straight radial ribs **33** are of reduced height because the reinforcement of the deck **12** by the distributed hubs **40** reduces the reinforcement requirements of the straight radial ribs **33** inside the distributed hubs **40**. In addition, hub cross ribs **42** are positioned at essentially right angles to the segments of the radial ribs **33** inside the distributed hubs **40**. The hub cross ribs **42** lend additional support to the deck **12** inside the distributed hubs **40**. The hub cross ribs **42** are of reduced height because of the support provided by the distributed hubs **40** themselves. The hub cross ribs **42** and the segments of the straight radial ribs **33** inside the distributed hubs **40** have increased height or gussets **44** where the hub cross ribs **42** and the segments of the straight radial ribs **33** intersect the distributed hubs **40** to add additional strength to the intersection points. Similarly, the portions of the radial ribs **33** outside of the distributed hubs **40** have increased height or gussets **45** where the radial ribs **33** intersect the outside of the distributed hubs **40** to increase the strength of the intersection. The segments of the radial ribs **33** inside the center circular hub **41** are the same height as the walls of the center circular hub **41**. The segments of the radial ribs **33** outside the center circular hub **41** are of reduced height with a gusset where the segments of the radial ribs **33** intersect the outside wall of the center circular hub **41**.

As shown in FIGS. **6** and **7**, the equipment pads **10** are nestable when stacked to form a stack **28** because the side walls **22** are flared outwardly and the height of the reinforcing network **30** of reinforcing ribs is less than the height of the side walls **22**.

With reference to FIGS. **8-14**, a second embodiment of a molded equipment pad **110** comprises an equipment support deck **112** having a deck top surface **114** and a deck bottom surface **116**, side walls **122** having internal surfaces **124** and external surfaces **126**, and an underlying network **130** of reinforcing ribs attached to the bottom surface **116** of the deck **112**.

The equipment support deck **112** is generally rectangular with a center point **118** generally equidistant from the side walls **122**. The equipment support deck **112** may also be other geometric shapes including but not limited to square, triangular, hexagonal, octagonal, circular, or elliptical. The

top surface **114** of the deck **112** is generally planar. The four side walls **122** are attached to the edges of the deck **112** and extend downwardly. The four side walls **122** are joined at their edges to form corners **120** of the equipment pad **110**.

As shown in FIGS. **9**, **11**, **13**B, and **14**B, the network **130** of reinforcing ribs is attached to the bottom surface **116** of the deck **112** and occupies the space between the side walls **122**. The network **130** of reinforcing ribs includes segments of straight radial ribs **132** that extend from side walls **122** toward the center point **118** and segments of straight radial ribs **133** that extend from the corners **120** toward the center point **118**. The network **130** of reinforcing ribs also includes segments of a series of concentric arc-shaped ribs **136** that are centered on the center point **118**. The concentric arc-shaped ribs **136** intersect the straight radial ribs **132** and **133**. As the concentric arc-shaped ribs **136** are positioned further from the center point **118**, the height of the concentric arc-shaped ribs **136** increases to provide greater strength in the longer segments of the concentric arc-shaped ribs **136** between the straight radial ribs **132** and **133**. For example, the outermost segment **136**A of the concentric arc-shaped ribs **136** has a greater height than the innermost segment **136**F with the segments **136**A-**136**F gradually decreasing in height as the segments become shorter between the straight radial ribs **132** and **133**. In this second embodiment, the outermost segments **136**A of the concentric arc-shaped ribs **136** do not intersect the internal surface **124** on the side walls **122**. Instead, the network **130** of reinforcing ribs includes segments of opposing arc-shaped ribs **138** that are centered on the corners **120** of the pad **110**. The opposing arc-shaped ribs **138** also have varying heights depending on the length of the segments of the opposing arc-shaped ribs **138**. For example, opposing arc-shaped ribs at **138**A, **138**B, and **138**C decrease in height as the length of the segment decreases.

With continuing reference to FIGS. **9**, **11**, **13**B, and **14**B, the network **130** of reinforcing ribs further includes distributed circular hubs **140** and a center hub **141**. In the embodiment shown in FIGS. **9** and **11**, the center circular hub **141** is centered on the center point **118** of the network **130** of reinforcing ribs, and the four distributed hubs **140** are each located in the four quadrants of the network **130** of reinforcing ribs. With reference to FIGS. **9**, **11**, **1313**, and **14**B, the straight radial ribs **133** extended through and intersect the distributed hubs **140**, and therefore reinforce the walls of the distributed hubs **140**. Inside the distributed hubs **140** the straight radial ribs **133** are of reduced height because the reinforcement of the deck **112** by the distributed hubs **140** reduces the reinforcement requirements of the straight radial ribs **133** inside the distributed hubs **140**. In addition, hub cross ribs **142** are positioned at essentially right angles to the segments of the radial ribs **133** inside the distributed hubs **140**. The hub cross ribs **142** lend additional support to the deck **112** inside the distributed hubs **140**. The hub cross ribs **142** are of reduced height because of the support provided by the distributed hubs **140** themselves. The hub cross ribs **142** and the segments of the straight radial ribs **133** inside the distributed hubs **140** have increased height or gussets **144** where the hub cross ribs **142** and the segments of the straight radial ribs **133** intersect the distributed hubs **140** to add additional strength to the intersection. The segments of the radial ribs **133** inside the center circular hub **141** are the same height as the walls of the center circular hub **141**. The segments of the radial ribs **133** outside the center circular hub **141** are the same height as the walls of the center circular hub **141**. The straight radial ribs **132** are the same height as the wall of the center circular hub **141** along their length.

The straight radial ribs **133** intersect the corners **120**, the opposing arc-shaped ribs **138**, the concentric arc-shaped ribs **136**, the distributed circular hubs **140**, and the center circular hub **141**. The opposing arc-shaped ribs **138** intersect the internal surface **124** of the side walls **122**, the straight radial ribs **133**, the concentric arc-shaped ribs **136**, and the distributed hubs **140** located in each of the four quadrants of the equipment pad **110**. The concentric arc-shaped ribs **136** intersect the straight radial ribs **133**, the straight radial ribs **132**, the opposing arc-shaped **138**, and the distributed hubs **140**. Where the ribs, the sidewalls, and the hubs intersect, gussets, such as gussets **145** inside the distributed hubs **140** and gussets **147** where the opposing arc-shaped ribs **138** meet the side walls **122**, strengthen the intersections. In addition, post-shaped fillets, such as fillets **146** strengthen the intersection between concentric arc-shaped ribs **136**, opposing arc-shaped ribs **138**, straight radial ribs **132** and **133**. The post shaped fillets **146** also have openings to accept anti-vibration rubber bumpers (not shown). Additional post-shaped fillets, such as fillets **148**, may be placed at points along the length of the ribs to provide additional structural strength.

The equipment pad **110** in accordance with the second embodiment of the present invention has a top deck **112** that is twice as stiff (measured by maximum deflection at a fixed load) as conventional pads with a deck that is more than twice as thick. The invention thus results in an equipment pad that is lighter with increased structural strength by using less polymer material. Three conventional mold equipment pads, Brands A, B, and C, are illustrated in FIGS. **25**, **26**, and **27**. Table 1 sets forth the relevant deflections of each of the equipment pads including an equipment pad **110** in accordance with the second embodiment of the present invention.

TABLE 1

| Pad Model | Max Deflection (mm) w/ 150 lb Load |
|---|---|
| Brand A | 0.236 |
| Brand B | 0.057 |
| Brand C | 0.048 |
| Second Embodiment of the Present Invention (FIGS. 8-14) | 0.022 |

With reference to FIGS. **15** and **16**, a third embodiment of a molded equipment pad **210** comprises an equipment support deck **212** having a deck top surface (not shown) and a deck bottom surface **216**, side walls **222** having internal surfaces **224** and external surfaces **226**, and an underlying network **230** of reinforcing, corner originating arc-shaped ribs **236**. The reinforcing, corner originating arc-shaped ribs **236** originate at each of the four corners **220** and arch toward the center point **218** of the bottom surface **216** of the equipment pad **210**. Each of the corner originating arc-shaped ribs **236** constitutes a segment of a circle having its center centered on the midpoint of each side wall **222** and lying outside of the bounds of the equipment pad **210**. While FIGS. **15** and **16** show four corner originating arc-shaped ribs **236**, additional concentric arc-shaped ribs may be added to the bottom surface **216** of the support deck **212** to add additional strength if necessary.

With reference to FIGS. **17** and **18**, a fourth embodiment of a molded equipment pad **310** comprises an equipment support deck **312** having a deck top surface (not shown) and a deck bottom surface **316**, side walls **322** having internal surfaces **324** and external surfaces **326**, and an underlying network **330** of reinforcing, sinusoidal arc-shaped ribs **336**.

The reinforcing, sinusoidal arc-shaped ribs **336** are composed of a series of arc-shaped segments, such as segments **336**A and **336**B. The sinusoidal arc-shaped ribs **336** extend across the width of the space between two opposing side walls **322**A and **322**B. While FIGS. **17** and **18** show a series of substantially parallel sinusoidal arc-shaped ribs **336** extending in one direction across the bottom surface **316** of the equipment pad **310**, additional sinusoidal-shaped ribs **336** maybe added to the bottom surface **316** of the support deck **312** at essentially right angles to the sinusoidal arc-shaped ribs **336** shown in FIGS. **17** and **18**.

With reference to FIGS. **19** and **20**, a fifth embodiment of a molded equipment pad **410** comprises an equipment support deck **412** having a deck top surface (not shown) and a deck bottom surface **416**, side walls **422** having internal surfaces **424** and external surfaces **426**, and an underlying network **430** of reinforcing, concentric arc-shaped ribs **436** with an irregular undulating curvature. The reinforcing, concentric arc-shaped ribs **436** are centered on the center point **418** of the support deck **412**. The concentric arc-shaped ribs **436** constitute a series of segments, such as repeating segments **436**A, **436**B, and **436**C. While FIGS. **19** and **20** show three concentric arc-shaped ribs **436** with irregular undulating curvature, additional concentric arc-shaped ribs **436** may be added to the bottom surface **416** of the support deck at **412** to add additional strength if necessary.

With reference to FIGS. **21** and **22**, a sixth embodiment of a molded equipment pad **510** comprises an equipment support deck **512** having a deck top surface (not shown) and a deck bottom surface **516**, side walls **522** having internal surfaces **524** and external surfaces **526**, and an underlying network **530** of reinforcing, concentric arc-shaped ribs **536** with a segmented curvature. The reinforcing, concentric arc-shaped ribs **536** with the segmented curvature are centered on the center point **518** of the support deck **512**. The concentric arc-shaped ribs **536** comprise a series of segments, such as repeating segments **536**A and **536**B. While FIGS. **21** and **22** show three concentric arc-shaped ribs **536** with the segmented curvature, additional concentric arc-shaped ribs **536** may be added to the bottom surface **516** of the support deck **512** to add additional strength if necessary.

With reference to FIGS. **23** and **24**, a seventh embodiment of a molded equipment pad **610** comprises an equipment support deck **612** having a deck top surface (not shown) and a deck bottom surface **616**, side walls **622** having internal surfaces **624** and external surfaces **626**, and an underlying network **630** of reinforcing ribs attached to the bottom surface **616** of the deck **612**.

The equipment support deck **612** is generally rectangular with generally square sections **612**A and **612**B. Each of the sections **612**A and **612**B has center points **618**A and **618**B respectively. The equipment support deck **612** may also be other geometric shapes, including but not limited to square, triangular, hexagonal, octagonal, circular, or elliptical. The top surface (not shown) and the bottom surface **616** of the deck **612** are generally planar. The four side walls **622** are attached to the edges of the deck **612** and extend downwardly. The four side walls **622** are joined at their edges to form corners **620** of the equipment pad **610**.

As shown in FIGS. **23** and **24**, the network **630** of reinforcing ribs is attached to the bottom surface **616** of the deck **612** and occupies the space between the side walls **622**. The network **630** of reinforcing ribs includes a series of concentric arc-shaped ribs **636**A and **636**B that are centered on the center points **618**A and **618**B respectively and radiate outwardly toward the side walls **622**. As the concentric arc-shaped ribs **636**A and **636**B are positioned further from the center points **618**A and **636**B, the height of the concentric arc-shaped ribs **636**A and **636**B increases to provide greater strength in the longer segments of the concentric arc-shaped ribs **636**A and **636**B. In this seventh embodiment, the outermost segments of the concentric arc-shaped ribs **636**A and **636**B do not intersect the internal surface **624** on the side walls **622**. Instead, the network **630** of reinforcing ribs includes segments of corner opposing arc-shaped ribs **638**A and **638**B that are centered on the corners **620** of the pad **610**. The corner opposing arc-shaped ribs **638**A and **638**B are of varying heights depending on the length of the segments of the corner opposing arc-shaped ribs **638**A and **638**B. The network **630** of reinforcing ribs also includes segments of side opposing arc-shaped ribs **638**C that are centered on the sides **622** of the pad **610**. The side opposing arc-shaped ribs **638**C are of varying heights depending on the length of the segments of the side opposing arc-shaped ribs **638**C.

As shown FIGS. **23** and **24**, the concentric arc-shaped ribs **636**A and **636**B intersect the side opposing arcs-shaped ribs **638**C but do not intersect the corner opposing arc-shaped ribs **638**A and **638**B nor do the concentric arc-shaped ribs **636**A and **636**B intersect the side walls **622**. The seventh embodiment, however, can be modified so that the concentric arc-shaped ribs **636**A and **636**B, the side opposing arcs-shaped ribs **638**C, and the corner opposing arc-shaped ribs **638**A and **638**B intersect each other. Further, radial ribs passing through the center points **618**A and **618**B may be added to the network **630** of reinforcing ribs.

While this invention has been described with reference to preferred embodiments thereof, it is to be understood that variations and modifications can be affected within the spirit and scope of the invention as described herein and as described in the appended claims.

We claim:

**1**. A system comprising:

an air conditioning unit; and

a pad configured for supporting the air conditioning unit, the pad comprising:

a. a top deck having a top surface, a bottom surface, a plurality of edges, a plurality of corners, a first deck point located on the bottom surface of the top deck and enclosed within the edges of the top deck, and a second deck point located on the bottom surface of the top deck and enclosed within the edges of the top deck;

b. a plurality of side walls extending downwardly from the edges of the top deck such that the bottom surface and the side walls define an interior space; and

c. a network of reinforcing ribs extending from the bottom surface of the top deck, wherein the network of reinforcing ribs including a first series of reinforcing concentric arc-shaped ribs, wherein the first series of reinforcing concentric arc-shaped ribs has a first concentric rib center point that is a center of concentric circles defined by the reinforcing concentric arc-shaped ribs of the first series, and the first concentric rib center point coincides with the first deck point of the top deck, wherein the network of reinforcing ribs including a second series of reinforcing concentric arc-shaped ribs, wherein the second series has a second concentric rib center point that is a center of concentric partial circles defined by the reinforcing concentric arc-shaped ribs of the second series, and the second concentric rib center point coincides with one of the corners of the top deck, wherein each of the bottom surface and the top surface extend between the air conditioning unit and the inte-

rior space when the air conditioning unit rests on the top surface, wherein the top surface extends between the air conditioning unit and the network of reinforcing ribs when the air conditioning unit rests on the top surface, wherein the top deck is molded with the side walls and the network of reinforcing ribs, wherein the network of reinforcing ribs extending from the bottom surface of the top deck includes a third series of reinforcing concentric arc-shaped ribs, wherein the third series has a third concentric rib center point that is a center of concentric circles defined by the reinforcing concentric arc-shaped ribs of the third series, and the third concentric rib center point coincides with the second deck point of the top deck, wherein the network of reinforcing ribs extending from the bottom surface of the top deck includes a fourth series of reinforcing concentric arc-shaped ribs, wherein the fourth series has a fourth concentric rib center point that is a center of concentric partial circles defined by the reinforcing concentric arc-shaped ribs of the fourth series, wherein the fourth concentric rib center point coincides with a point along one of the edges of the top deck, wherein the concentric circles defined by the reinforcing concentric arc-shaped ribs of the first series or the concentric circles defined by the reinforcing concentric arc-shaped ribs of the third series include a first outermost concentric reinforcing arc-shaped rib, wherein the fourth series includes a second outermost concentric reinforcing arc-shaped rib, wherein the first outermost concentric reinforcing arc-shaped rib is discontinuous via interruption by the second outermost concentric reinforcing arc-shaped rib.

**2**. The system of claim **1**, wherein at least one reinforcing concentric arc-shaped rib of the first series of reinforcing concentric arc-shaped ribs-intersects at least one reinforcing concentric arc-shaped rib of the second series of reinforcing concentric arc-shaped ribs.

**3**. The system of claim **1**, wherein longer ribs of the first series of reinforcing concentric arc-shaped ribs and longer ribs of the second series of reinforcing concentric arc-shaped ribs have heights from the bottom surface greater than shorter ribs of the first series of reinforcing concentric arc-shaped ribs and shorter ribs of the second series of reinforcing concentric arc-shaped ribs respectively.

**4**. The system of claim **1**, wherein the top deck, the sidewalls, and the network of reinforcing ribs form a single unitary unit including thermoplastic.

**5**. The system of claim **1**, wherein the top deck, the sidewalls, and the network of reinforcing ribs form a single unitary unit including thermoset.

**6**. The system of claim **1**, wherein the top deck, the sidewalls, and the network of reinforcing ribs form a single unitary unit including concrete.

* * * * *

# EXHIBIT F

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| APPLICATION NO. | ISSUE DATE | PATENT NO. | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 18/674,037 | 05/27/2025 | 12312123 | 15257403-000004-PFT132 | 6030 |

158065 7590 05/14/2025

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# ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

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# NOTICE OF ALLOWANCE AND FEE(S) DUE

158065 7590 02/26/2025

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 18/674,037 | 05/24/2024 | Charles Walter Cox JR. | 15257403-000004-PFT132 | 6030 |

TITLE OF INVENTION: MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $1290 | $0.00 | $0.00 | $1290 | 05/27/2025 |

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

**HOW TO REPLY TO THIS NOTICE:**

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If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

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# PART B - FEE(S) TRANSMITTAL

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158065 7590 02/26/2025
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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

| |
|---|
| (Typed or printed name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 18/674,037 | 05/24/2024 | Charles Walter Cox JR. | 15257403-000004-PFT132 | 6030 |

TITLE OF INVENTION: MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $1290 | $0.00 | $0.00 | $1290 | 05/27/2025 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| HANDVILLE, BRIAN | 1783 | 428-068000 |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via the USPTO patent electronic filing system ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 18/674,037 | 05/24/2024 | Charles Walter Cox JR. | 15257403-000004-PFT132 | 6030 |

158065 7590 02/26/2025

Dentons US LLP (Roman Tsibulevskiy)
P.O. Box 1302
Chicago, IL 60604

| EXAMINER | |
|---|---|
| HANDVILLE, BRIAN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1783 | |

DATE MAILED: 02/26/2025

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).
https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to:

1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
2) a federal, state, local, or international agency, in response to its request;
3) a contractor of the USPTO having need for the information in order to perform a contract;
4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
9) the Office of Personnel Management (OPM) for personnel research purposes; and
10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

| Notice of Allowability | Application No. 18/674,037 | Applicant(s) Cox et al. | |
|---|---|---|---|
| | Examiner BRIAN HANDVILLE | Art Unit 1783 | AIA (FITF) Status Yes |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to the RCE submitted on 30 January 2025.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-26 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☑ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☑ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/BRIAN HANDVILLE/
Primary Examiner, Art Unit 1783

***Election/Restrictions***

1. Claim 2 is allowable. Claims 15 and 16, previously withdrawn from consideration as a result of a restriction requirement, require all the limitations of an allowable claim. Pursuant to the procedures set forth in MPEP § 821.04(a), **the restriction requirement among the species as defined within Species 1 and the species as defined within Species 2, as set forth in the Office action mailed on 29 August 2024, is hereby withdrawn** and claims 15 and 16 are hereby rejoined and fully examined for patentability under 37 CFR 1.104. In view of the withdrawal of the restriction requirement, applicant(s) are advised that if any claim presented in a divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

***Allowable Subject Matter***

2. Claims 1-26 are allowed.

3. The following is an examiner's statement of reasons for allowance:

4. The closest prior art of record Jones (USPN 5,961,093), George (USPN 7,827,747), Hermans (US 2010/0207004), Adam (USPN 5,076,534), Yang (article titled "A study of rib geometry for gas-assisted injection molding"), Krupnick (US 2007/0193133), Kidd (USPN 4,643,314), and Jacobs (USPN 4,869,456 – see element

24 in Figure 3 and column 3, lines 23-32) while broadly teaching the limitations of the presently claimed invention, do not teach or suggest the combination of limitations as presently claimed in either claim 1 or 2.

Specifically, none of Jones, George, Hermans, Adam, Yang, Krupnick, Kidd, and/or Jacobs, when considered alone or in combination, teach or reasonably suggest either:

- a method comprising:

  enabling a user to:

  access a pad including a deck, a sidewall, and a set of ribs, wherein the sidewall and the set of ribs extend from the deck such that the sidewall encloses the set of ribs, wherein the set of ribs includes at least two distributed hub walls where each distributed hub wall has a first set of walls outwardly extending therefrom and a second set of walls inwardly extending therefrom such that the second set of walls intersect each other within that respective distributed hub wall and the second set of walls is shorter in height than the first set of walls relative to the deck, wherein the set of ribs includes a wall extending from the sidewall, wherein the wall varies in height relative to the deck, wherein the deck includes a top surface that is planar, wherein at least one of (a) the set of ribs segments the deck into four quadrants where two of the four quadrants respectively enclose two distributed hub walls of the at least two distributed hub walls; (b) the at least two distributed hub walls avoid sharing a common center with each other; or (c) the deck has a center point and the at least two distributed hub walls are not concentric with the center point, wherein at

least one wall of the second set of walls is longitudinally rectilinear; and

position an air conditioning unit on the deck including the top surface; or

- a method comprising:

accessing a first pad including a first deck, a first sidewall, and a first set of ribs, wherein the first sidewall and the first set of ribs extend from the first deck such that the first sidewall encloses the first set of ribs, wherein the first set of ribs includes a first hub wall and a first group of walls extending from the first hub wall radially external to the first hub, wherein the first deck includes a first top surface that is planar, wherein the first hub wall encloses a first set of walls intersecting each other and shorter in height than the first group of walls relative to the first deck;

accessing a second pad including a second deck, a second sidewall, and a second set of ribs, wherein the second sidewall and the second set of ribs extend from the second deck such that the second sidewall encloses the second set of ribs, wherein the second set of ribs includes a second hub wall and a second group of walls extending from the second hub wall radially external to the first hub, wherein the second deck includes a second top surface that is planar, wherein the second hub wall encloses a second set of walls intersecting each other and shorter in height than the second group of walls relative to the second deck;

forming a stack where the second pad is positioned on the first pad;

removing the first pad or the second pad from the stack;

positioning the first pad or the second pad on a surface; and

positioning an air conditioning unit on the first deck including the first top surface or the second deck including the second top surface, wherein (a) the first sidewall has a first group of corners and the first group of walls respectively spans between the first hub wall and the first group of corners or (b) the second sidewall has a second group of corners and the second group of walls respectively spans between the second hub wall and the second group of corners.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN HANDVILLE whose telephone number is (571)272-5074. The examiner can normally be reached Monday through Thursday, from 9 am to 4 pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Veronica Ewald can be reached on (571) 272-8519. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN HANDVILLE/
Primary Examiner, Art Unit 1783

**IN UNITED STATES PATENT AND TRADEMARK OFFICE**

| | | | |
|---|---|---|---|
| Applicant: | DiversiTech Corporation | Confirmation: | 6030 |
| Inventors: | Charles Walter Cox, Jr. et al. | Customer: | 158065 |
| Serial: | 18/674,037 | Examiner: | Brian Handville |
| Filing Date: | 24 May 2024 | Art Unit: | 1783 |
| Docket: | 15257403-000004-PFT132 | | |
| Title: | MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS | | |

**RESPONSE TO FINAL OFFICE ACTION**

This letter is a response to a Final Office Action dated 09 December 2024 that issued in a patent application referenced above. The response is due 09 March 2025 and is being timely filed.

**AMENDMENTS TO CLAIMS** begin on page 2 of the letter.

**REMARKS** begin on page 7 of the letter.

Serial: 18/674,007
Filing Date: 24 May 2024
Docket: 15257403-000004-PFT132

## AMENDMENTS TO CLAIMS

This listing of claims replaces all prior listing of claims in this patent application.

1. (Currently amended) A method, comprising:

enabling a user to:

access a pad including a deck, a sidewall, and a set of ribs, wherein the sidewall and the set of ribs extend from the deck such that the sidewall encloses the set of ribs, wherein the set of ribs includes at least two distributed hub walls where each distributed hub wall has a first set of walls outwardly extending therefrom and a second set of walls inwardly extending therefrom such that the second set of walls intersect each other within that respective distributed hub wall and the second set of walls is shorter in height than the first set of walls relative to the deck, wherein the set of ribs includes a wall extending from the sidewall, wherein the wall varies in height relative to the deck, wherein the deck includes a top surface that is planar, wherein at least one of (a) the set of ribs segments the deck into four quadrants where two of the four quadrants respectively enclose two distributed hub walls of the at least two distributed hub walls; (b) the at least two distributed hub walls avoid sharing a common center with each other; or (c) the deck has a center point and the at least two distributed hub walls are not concentric with the center point, wherein at least one wall of the second set of walls is longitudinally rectilinear; and

position an air conditioning unit on the deck including the top surface.

2. (Currently amended) A method, comprising:

accessing a first pad including a first deck, a first sidewall, and a first set of ribs, wherein the first sidewall and the first set of ribs extend from the first deck such that the first sidewall encloses the first set of ribs, wherein the first set of ribs includes a first hub wall and a first group of walls extending from the first hub wall radially external to the first hub, wherein the first deck includes a first top surface that is planar, wherein the first hub wall encloses a first set of walls intersecting each other and shorter in height than the first group of walls relative to the first deck;

Serial: 18/674,007
Filing Date: 24 May 2024
Docket: 15257403-000004-PFT132

accessing a second pad including a second deck, a second sidewall, and a second set of ribs, wherein the second sidewall and the second set of ribs extend from the second deck such that the second sidewall encloses the second set of ribs, wherein the second set of ribs includes a second hub wall and a second group of walls extending from the second hub wall radially external to the first hub, wherein the second deck includes a second top surface that is planar, wherein the second hub wall encloses a second set of walls intersecting each other and shorter in height than the second group of walls relative to the second deck;

forming a stack where the second pad is positioned on the first pad;

removing the first pad or the second pad from the stack;

positioning the first pad or the second pad on a surface; and

positioning an air conditioning unit on the first deck including the first top surface or the second deck including the second top surface, wherein (a) the first sidewall has a first group of corners and the first group of walls respectively spans between the first hub wall and the first group of corners or (b) the second sidewall has a second group of corners and the second group of walls respectively spans between the second hub wall and the second group of corners.

3. (Previously presented) The method of claim 1, wherein the wall extending from the sidewall extends towards at least one distributed hub wall of the at least two distributed hub walls.

4. (Previously presented) The method of claim 1, wherein the deck has a rectangular shape.

5. (Previously presented) The method of claim 4, wherein the rectangular shape is a square shape.

6. (Previously presented) The method of claim 1, wherein the at least two distributed hub walls is at least four distributed hub walls.

Serial: 18/674,007
Filing Date: 24 May 2024
Docket: 15257403-000004-PFT132

7. (Previously presented) The method of claim 1, wherein the pad has a corner, wherein the set of ribs includes a wall extending from the corner and hosting a post-shaped fillet.

8. (Currently amended) The method of claim 7, wherein the wall decreases in height relative to the deck as the wall extends from the sidewall towards [[the]] at least one distributed hub wall of the at least two distributed hub walls.

9. (Previously presented) The method of claim 1, wherein the pad is at least partially molded of a material consisting essentially of thermoplastic.

10. (Previously presented) The method of claim 1, wherein the pad is at least partially formed from a material other than thermoplastic or thermoset.

11. (Previously presented) The method of claim 1, wherein the pad is at least partially formed from a concrete.

12. (Previously presented) The method of claim 2, wherein the first group of walls or the second group of walls includes at least two walls that differ from each other in length.

13. (Previously presented) The method of claim 2, wherein the first set of ribs or the second set of ribs includes a plurality of walls spanning between at least two walls of the first group of walls or the second group of walls.

14. (Previously presented) The method of claim 13, wherein the plurality of walls differ from each other in length.

15. (Currently amended, withdrawn) The method of claim 2, ~~The method of claim 1,~~ wherein the first group of walls or the second group of walls includes at least one wall that dips toward the first deck or the second deck.

Serial: 18/674,007
Filing Date: 24 May 2024
Docket: 15257403-000004-PFT132

16. (Withdrawn) The method of claim 15, wherein the at least one wall that dips twice toward the first deck or the second deck.

17. (Previously presented) The method of claim 2, wherein the first deck or the second deck has a rectangular shape.

18. (Previously presented) The method of claim 17, wherein the rectangular shape is a square shape.

19. (Previously presented) The method of claim 2, wherein the first sidewall or the second sidewall is flared outwardly relative to the first deck or the second deck such that the stack has the second pad positioned on the first pad.

20. (Previously presented) The method of claim 2, wherein the first sidewall or the second sidewall has a first height, wherein the first set of ribs or the second set of ribs has a second height lesser than the first height.

21. (Previously presented) The method of claim 2, wherein the first pad or the second pad constitutes plastic.

22. (Previously presented) The method of claim 2, wherein the first group of walls or the second group of walls spans between the first hub wall and the first sidewall or the second hub wall and the second sidewall.

23. (Previously presented) The method of claim 2, wherein the first group of walls has at least two walls that intersect each other within the first hub wall or the second group of walls has at least two walls that intersect each other within the second hub wall.

24. (Previously presented) The method of claim 2, wherein the first hub wall or the second hub wall is centrally positioned on the first deck or the second deck.

Serial: 18/674,087
Filing Date: 24 May 2024
Docket: 15257403-000004-PFT132

25. (Previously presented) The method of claim 2, wherein the second hub wall overlaps the first hub wall in the stack.

26. (Previously presented) The method of claim 2, wherein the second group of walls overlaps the first group of walls in the stack.

# EXHIBIT G

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
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www.uspto.gov

| APPLICATION NO. | ISSUE DATE | PATENT NO. | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 18/214,933 | 06/03/2025 | 12319468 | 15257403-000004-PFT128 | 8924 |

158065 7590 05/21/2025

Dentons US LLP (Roman Tsibulevskiy)
P.O. Box 1302
Chicago, IL 60604

# ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 65 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

Charles Walter Cox JR., Lawrenceville, GA;
Keith Platt, Snellville, GA;
Jonathan Sada, Lawrenceville, GA;

APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

DiversiTech Corporation, Duluth, GA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

# EXHIBIT H

## AMENDMENTS TO CLAIMS

This listing of claims replaces all prior listing of claims in this patent application.

1-20. (Cancelled)

21. (Currently amended) A system, comprising:

an air conditioning unit; and

a pad including a deck, a sidewall, and a set of ribs, wherein the sidewall and the set of ribs extend from the deck such that the sidewall encloses the set of ribs, wherein the set of ribs includes at least two distributed hub walls where each distributed hub wall has a first set of walls outwardly extending therefrom and a second set of walls inwardly extending therefrom such that the second set of walls intersect each other within that respective distributed hub wall and the second set of walls is shorter in height than the first set of walls relative to the deck, wherein the sidewall defines a corner in proximity of which a post-shaped fillet is positioned, wherein the deck includes a top surface that is planar, wherein the air conditioning unit is positioned on the deck including the top surface, wherein at least one of (a) the set of ribs segments the deck into four quadrants where two of the four quadrants respectively enclose two distributed hub walls of the at least two distributed hub walls; (b) the at least two distributed hub walls avoid sharing a common center with each other; or (c) the deck has a center point and the at least two distributed hub walls are not concentric with the center point.

22. (Currently amended) A method, comprising:

enabling a user to:

access a pad including a deck, a sidewall, and a set of ribs, wherein the sidewall and the set of ribs extend from the deck such that the sidewall encloses the set of ribs, wherein the set of ribs includes at least two distributed hub walls where each distributed hub wall has a first set of walls outwardly extending therefrom and a second set of walls inwardly extending therefrom such that the second set of walls intersect each other within that respective distributed hub wall and the second set of walls is shorter in height than the first set of walls relative to the deck, wherein the sidewall defines a corner

in proximity of which a post-shaped fillet is positioned, wherein the set of ribs includes a wall extending from the sidewall, wherein the wall varies in height relative to the deck, wherein the deck includes a top surface that is planar, wherein at least one of (a) the set of ribs segments the deck into four quadrants where two of the four quadrants respectively enclose two distributed hub walls of the at least two distributed hub walls; (b) the at least two distributed hub walls avoid sharing a common center with each other; or (c) the deck has a center point and the at least two distributed hub walls are not concentric with the center point; and

position an air conditioning unit on the deck including the top surface.

23. (Previously presented) The method of claim 22, wherein at least one wall of the first set of walls is taller in height relative to the deck than at least one wall of the second set of walls in at least one distributed hub wall of the at least two distributed hub walls.

24-29. (Cancelled)

30. (Previously presented) The method of claim 22, wherein the wall extending from the sidewall extends towards at least one distributed hub wall of the at least two distributed hub walls.

31. (Previously presented) The method of claim 22, wherein the deck has a rectangular shape.

32. (Previously presented) The method of claim 31, wherein the rectangular shape is a square shape.

33. (Previously presented) The method of claim 22, wherein the at least two distributed hub walls is at least four distributed hub walls.

34. (Currently amended) The method of claim 22, wherein the pad includes polyethylene ~~has a corner, wherein the set of ribs includes a wall extending from the corner and hosting a post-shaped fillet~~.

35. (Previously presented) The method of claim 30, wherein the wall decreases in height relative to the deck as the wall extends from the sidewall towards the at least one distributed hub wall.

36. (Previously presented) The method of claim 22, wherein the pad is molded of a material consisting essentially of thermoplastic.

37. (Currently amended) The system of claim 21, wherein the pad includes polyethylene ~~has a corner, wherein the set of ribs includes a wall extending from the corner and hosting a post-shaped fillet~~.

38. (Previously presented) The system of claim 21, wherein the set of ribs includes a wall extending from the sidewall towards at least one distributed hub wall of the at least two distributed hub walls, wherein the wall varies in height relative to the deck as the wall extends from the sidewall towards the at least one distributed hub wall.

39. (Previously presented) The system of claim 38, wherein the wall decreases in height relative to the deck as the wall extends from the sidewall towards the at least one distributed hub wall.

40. (Previously presented) The system of claim 21, wherein the deck has a rectangular shape.

41. (Previously presented) The system of claim 40, wherein the rectangular shape is a square shape.

42. (Previously presented) The system of claim 21, wherein the at least two distributed hub walls is at least four distributed hub walls.

43. (Previously presented) The system of claim 21, wherein the pad is molded of a material consisting essentially of thermoplastic.

44. (Previously presented) The system of claim 21, wherein at least one wall of the first set of walls is taller in height relative to the deck than at least one wall of the second set of walls in at least one distributed hub wall of the at least two distributed hub walls.

45. (Currently amended) The system of claim 21, wherein (a) the set of ribs segments the deck into four quadrants where two of the four quadrants respectively enclose two distributed hub walls of the at least two distributed hub walls.

46. (Previously presented) The system of claim 21, wherein (b) the at least two distributed hub walls avoid sharing a common center with each other.

47. (Previously presented) The system of claim 21, wherein (c) the deck has a center point and the at least two distributed hub walls are not concentric with the center point.

48. (Currently amended) The method of claim 22, wherein (a) the set of ribs segments the deck into four quadrants where two of the four quadrants respectively enclose two distributed hub walls of the at least two distributed hub walls.

49. (Previously presented) The method of claim 22, wherein (b) the at least two distributed hub walls avoid sharing a common center with each other.

50. (Previously presented) The method of claim 22, wherein (c) the deck has a center point and the at least two distributed hub walls are not concentric with the center point.

# EXHIBIT I

Doc Code: PA...
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 01/31/2018. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE


# POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

| Application Number | Filing Date |
|---|---|
| | |

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 158065

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

**Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:**

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

| | | | | | |
|---|---|---|---|---|---|
| ☐ Firm or individual Name | | | | | |
| Address | | | | | |
| City | | State | | Zip | |
| Country | | | | | |
| Telephone | | Email | | | |

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

DiversiTech Corporation

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

**SIGNATURE of Applicant for Patent**

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

| | | | |
|---|---|---|---|
| Signature | [signature] | Date (Optional) | 4/25/25 |
| Name | J. Nicole Kronen | | |
| Title | CFO | | |

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of 1 forms are submitted.

# EXHIBIT J

| Substitute Form PTO-1449 (Modified) | US Department of Commerce Patent and Trademark Office | Docket: 15257403-000004-PFT132 | Serial: Not yet assigned |
|---|---|---|---|
| **Information Disclosure Statement by Applicant** (Use several sheets if necessary) | | Applicant: DiversiTech Corporation | Confirmation: Unknown |
| (37 CFR §1.98(b)) | | Filing Date: Herewith | Art Unit: Unknown |

## U.S. Patent Documents

| Examiner Initial | Desig. ID | Document Number | Publication Date | Patentee | Class | Sub class | Filing Date If Appropriate |
|---|---|---|---|---|---|---|---|
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| | | 2002/0079421 | 06-2002 | Harris, Stuart W. | | | |
| | | 2004/0134820 | 07-2004 | Katayama, Masaya | | | |
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| Examiner Signature | Date Considered |
|---|---|
| EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. | |

| Substitute Form PTO-1449 (Modified) | US Department of Commerce Patent and Trademark Office | Docket: 15257403-000004-PFT132 | Serial: Not yet assigned |
|---|---|---|---|
| **Information Disclosure Statement by Applicant** (Use several sheets if necessary) (37 CFR §1.98(b)) | | Applicant: DiversiTech Corporation | Confirmation: Unknown |
| | | Filing Date: Herewith | Art Unit: Unknown |

**U.S. Patent Documents**

| Examiner Initial | Desig. ID | Document Number | Publication Date | Patentee | Class | Sub class | Filing Date If Appropriate |
|---|---|---|---|---|---|---|---|
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**Foreign Patent Documents or Published Foreign Patent Applications**

| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation Yes | Translation No |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**Other Documents (include Author, Title, Date, and Place of Publication)**

| Examiner Initial | Desig. ID | Document |
|---|---|---|
| | | E Lite Plastic Equipment Pads Literature, date appears to be 26 January 2011, downloaded from internet, first result from search below called E Lite Plastic Equipment Pads at We Sell AC, https://www.google.com/search?q=condenser+pads+with+ribs+pdf&sxsrf=APwXEdeD4yKS3NOWZvG6UoYHDoEYUdb72g%3A1682111953719&source=lnt&tbs=cdr%3A1%2Ccd_min%3A%2Ccd_max%3A5%2F3%2F2012&tbm= (28 pages). |
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| Examiner Signature | Date Considered |
|---|---|
| EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. | |

| Substitute Form PTO-1449 (Modified) — US Department of Commerce Patent and Trademark Office | Docket: 15257403-000004-PFT132 | Serial: Not yet assigned |
|---|---|---|
| **Information Disclosure Statement by Applicant** (Use several sheets if necessary) | Applicant: DiversiTech Corporation | Confirmation: Unknown |
| (37 CFR §1.98(b)) | Filing Date: Herewith | Art Unit: Unknown |

## CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application No. _____, filed _____ and the references cited therein are hereby referenced, but are not required to be provided in this application under 37 CFR § 1.98(d).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

## SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /roman tsibulevskiy/ | Date (YYYY-MM-DD) | 2024-05-24 |
|---|---|---|---|
| Name/Print | Roman Tsibulevskiy | Registration Number | 61827 |

# EXHIBIT K

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

# NOTICE OF ALLOWANCE AND FEE(S) DUE

158065 7590 02/26/2025

Dentons US LLP (Roman Tsibulevskiy)
P.O. Box 1302
Chicago, IL 60604

| EXAMINER |
|---|
| HANDVILLE, BRIAN |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1783 | |

DATE MAILED: 02/26/2025

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 18/674,037 | 05/24/2024 | Charles Walter Cox JR. | 15257403-000004-PFT132 | 6030 |

TITLE OF INVENTION: MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $1290 | $0.00 | $0.00 | $1290 | 05/27/2025 |

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

**HOW TO REPLY TO THIS NOTICE:**

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.**

# PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

158065 7590 02/26/2025
Dentons US LLP (Roman Tsibulevskiy)
P.O. Box 1302
Chicago, IL 60604

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

| |
|---|
| (Typed or printed name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 18/674,037 | 05/24/2024 | Charles Walter Cox JR. | 15257403-000004-PFT132 | 6030 |

TITLE OF INVENTION: MOLDED EQUIPMENT PAD WITH ARC-SHAPED RIBS

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | UNDISCOUNTED | $1290 | $0.00 | $0.00 | $1290 | 05/27/2025 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| HANDVILLE, BRIAN | 1783 | 428-068000 |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via the USPTO patent electronic filing system ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 18/674,037 | 05/24/2024 | Charles Walter Cox JR. | 15257403-000004-PFT132 | 6030 |

158065 7590 02/26/2025

Dentons US LLP (Roman Tsibulevskiy)
P.O. Box 1302
Chicago, IL 60604

| EXAMINER | |
|---|---|
| HANDVILLE, BRIAN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1783 | |

DATE MAILED: 02/26/2025

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).
https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to:

1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
2) a federal, state, local, or international agency, in response to its request;
3) a contractor of the USPTO having need for the information in order to perform a contract;
4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
9) the Office of Personnel Management (OPM) for personnel research purposes; and
10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

| Notice of Allowability | Application No. 18/674,037 | Applicant(s) Cox et al. | |
|---|---|---|---|
| | Examiner BRIAN HANDVILLE | Art Unit 1783 | AIA (FITF) Status Yes |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to the RCE submitted on 30 January 2025.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1-26 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☑ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☑ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/BRIAN HANDVILLE/
Primary Examiner, Art Unit 1783

***Election/Restrictions***

1. Claim 2 is allowable. Claims 15 and 16, previously withdrawn from consideration as a result of a restriction requirement, require all the limitations of an allowable claim. Pursuant to the procedures set forth in MPEP § 821.04(a), **the restriction requirement among the species as defined within Species 1 and the species as defined within Species 2, as set forth in the Office action mailed on 29 August 2024, is hereby withdrawn** and claims 15 and 16 are hereby rejoined and fully examined for patentability under 37 CFR 1.104. In view of the withdrawal of the restriction requirement, applicant(s) are advised that if any claim presented in a divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

***Allowable Subject Matter***

2. Claims 1-26 are allowed.

3. The following is an examiner's statement of reasons for allowance:

4. The closest prior art of record Jones (USPN 5,961,093), George (USPN 7,827,747), Hermans (US 2010/0207004), Adam (USPN 5,076,534), Yang (article titled "A study of rib geometry for gas-assisted injection molding"), Krupnick (US 2007/0193133), Kidd (USPN 4,643,314), and Jacobs (USPN 4,869,456 – see element

24 in Figure 3 and column 3, lines 23-32) while broadly teaching the limitations of the presently claimed invention, do not teach or suggest the combination of limitations as presently claimed in either claim 1 or 2.

Specifically, none of Jones, George, Hermans, Adam, Yang, Krupnick, Kidd, and/or Jacobs, when considered alone or in combination, teach or reasonably suggest either:

- a method comprising:

  enabling a user to:

  access a pad including a deck, a sidewall, and a set of ribs, wherein the sidewall and the set of ribs extend from the deck such that the sidewall encloses the set of ribs, wherein the set of ribs includes at least two distributed hub walls where each distributed hub wall has a first set of walls outwardly extending therefrom and a second set of walls inwardly extending therefrom such that the second set of walls intersect each other within that respective distributed hub wall and the second set of walls is shorter in height than the first set of walls relative to the deck, wherein the set of ribs includes a wall extending from the sidewall, wherein the wall varies in height relative to the deck, wherein the deck includes a top surface that is planar, wherein at least one of (a) the set of ribs segments the deck into four quadrants where two of the four quadrants respectively enclose two distributed hub walls of the at least two distributed hub walls; (b) the at least two distributed hub walls avoid sharing a common center with each other; or (c) the deck has a center point and the at least two distributed hub walls are not concentric with the center point, wherein at

least one wall of the second set of walls is longitudinally rectilinear; and

position an air conditioning unit on the deck including the top surface; or

- a method comprising:

accessing a first pad including a first deck, a first sidewall, and a first set of ribs, wherein the first sidewall and the first set of ribs extend from the first deck such that the first sidewall encloses the first set of ribs, wherein the first set of ribs includes a first hub wall and a first group of walls extending from the first hub wall radially external to the first hub, wherein the first deck includes a first top surface that is planar, wherein the first hub wall encloses a first set of walls intersecting each other and shorter in height than the first group of walls relative to the first deck;

accessing a second pad including a second deck, a second sidewall, and a second set of ribs, wherein the second sidewall and the second set of ribs extend from the second deck such that the second sidewall encloses the second set of ribs, wherein the second set of ribs includes a second hub wall and a second group of walls extending from the second hub wall radially external to the first hub, wherein the second deck includes a second top surface that is planar, wherein the second hub wall encloses a second set of walls intersecting each other and shorter in height than the second group of walls relative to the second deck;

forming a stack where the second pad is positioned on the first pad;

removing the first pad or the second pad from the stack;

positioning the first pad or the second pad on a surface; and

positioning an air conditioning unit on the first deck including the first top surface or the second deck including the second top surface, wherein (a) the first sidewall has a first group of corners and the first group of walls respectively spans between the first hub wall and the first group of corners or (b) the second sidewall has a second group of corners and the second group of walls respectively spans between the second hub wall and the second group of corners.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN HANDVILLE whose telephone number is (571)272-5074. The examiner can normally be reached Monday through Thursday, from 9 am to 4 pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Veronica Ewald can be reached on (571) 272-8519. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN HANDVILLE/
Primary Examiner, Art Unit 1783

# EXHIBIT L

*Dura-Plas, Inc. v. DiversiTech Corp.*

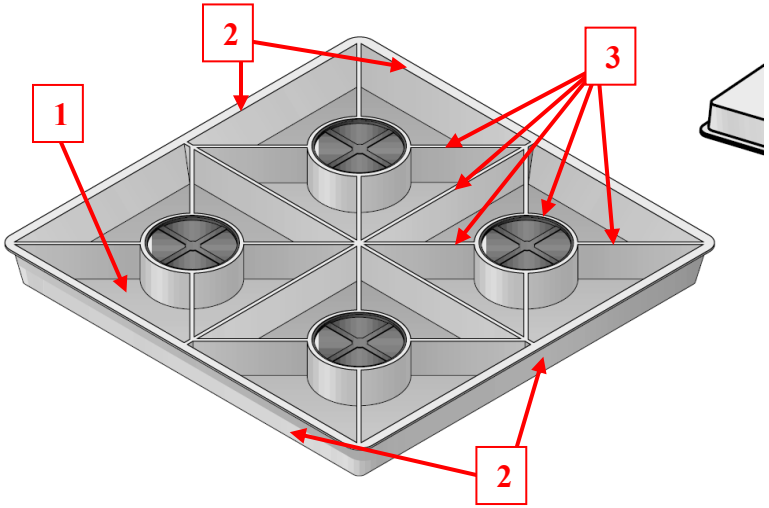
**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| ***Claim 1*** | |
| **1[pre].** A method, comprising | To the extent the preamble is limiting, the June 2002 NDS Equipment Pad Catalog (Ex. A, "EPC") describes several applications for or methods of using the Hef-T-Pad.<br><br>**HEF-T-PADS**<br><br>The illustrations below demonstrate three of the many applications for the Hef-T-Pad equipment pad.<br><br>The Hef-T-Pad is injection molded from high impact polyolefin with UV inhibitors making it easy to handle, yet durable and strong. It does not require any additional equipment for moving and handling. It is resistant to impact, ultra violet degradation and weathering and will not crack, flake or warp. The Hef-T-Pad is virtually impervious to climatic variations. It is drillable to permit installation of refrigerant and electrical lines under and through the pad and to allow equipment to be easily secured to the pad. The Hef-T-Pad features a unique non-creep surface which allows it to absorb vibration, noise and keep the equipment in its original position.<br><br>Ex. A at 2. |
| **1[a].** Enabling a user to:<br>access a pad including a deck, a sidewall, and a set of ribs, wherein the sidewall and the set of ribs extend | The prior art teaches that a user is enabled to access the Hef-T-Pad. |

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| from the deck such that the sidewall encloses the set of ribs, | **HEF-T-PADS**<br>The illustrations below demonstrate three of the many applications for the Hef-T-Pad equipment pad.<br>The Hef-T-Pad is injection molded from high impact polyolefin with UV inhibitors making it easy to handle, yet durable and strong. It does not require any additional equipment for moving and handling. It is resistant to impact, ultra violet degradation and weathering and will not crack, flake or warp. The Hef-T-Pad is virtually impervious to climatic variations. It is drillable to permit installation of refrigerant and electrical lines under and through the pad and to allow equipment to be easily secured to the pad. The Hef-T-Pad features a unique non-creep surface which allows it to absorb vibration, noise and keep the equipment in its original position.<br>Ex. A at 2.<br><br>The Hef-T-Pad is a pad that includes a deck [1], a sidewall [2], and a set of ribs [3] wherein the sidewall and set of ribs extend from the deck such that the sidewall encloses the set of ribs. |

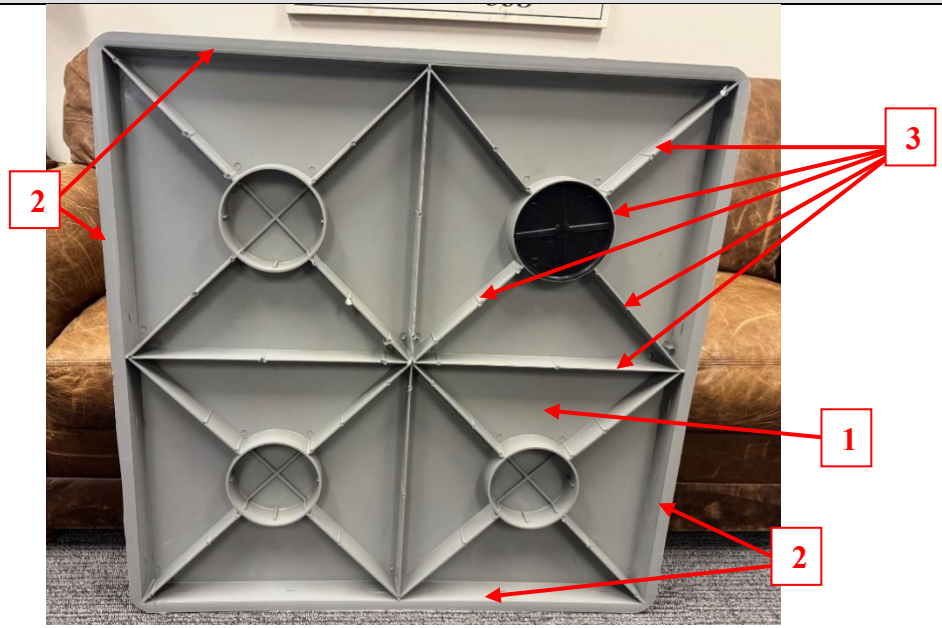
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>**Underside of Hef-T-Pad showing support ribs, stabilization pads and stabilization flange.**<br>Ex. A at 2. |

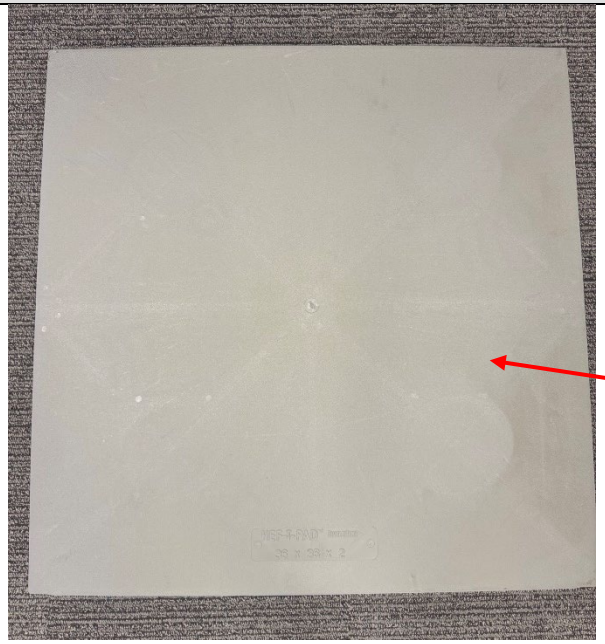
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |   |

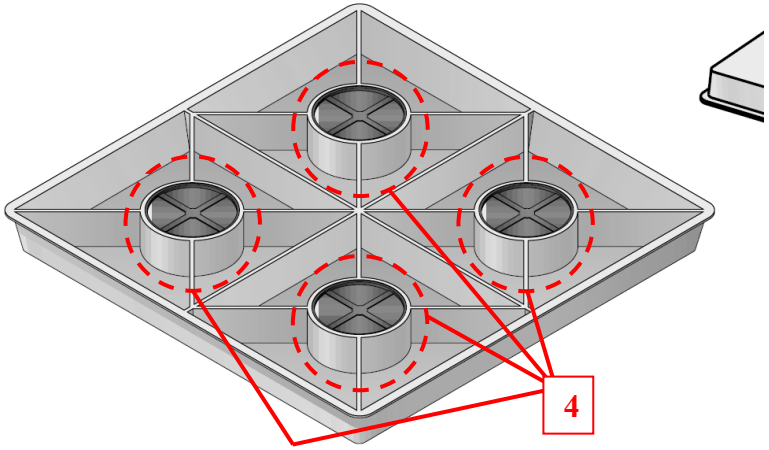
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| **U.S. Patent No. 12,312,123** | **Hef-T-Pad Prior Art** |
|---|---|
| |  |
| **1[b].** wherein the set of ribs includes at least two distributed hub walls where each distributed hub wall has a first set of walls outwardly extending therefrom and a second set of walls inwardly extending therefrom such that the second set of walls intersect each other within that respective distributed hub wall and the second set of walls is shorter in height than the first set of walls relative to the deck, | The set of ribs of the Hef-T-Pad includes four distributed hub walls [4], each distributed hub wall having a first set of walls outwardly extending therefrom [4a] and a second set of walls inwardly extending therefrom [4b]. As seen below, the second set of walls [4b] interest each other within each distributed hub wall and are shorter in height than the first set of walls [4a] relative to the deck. |

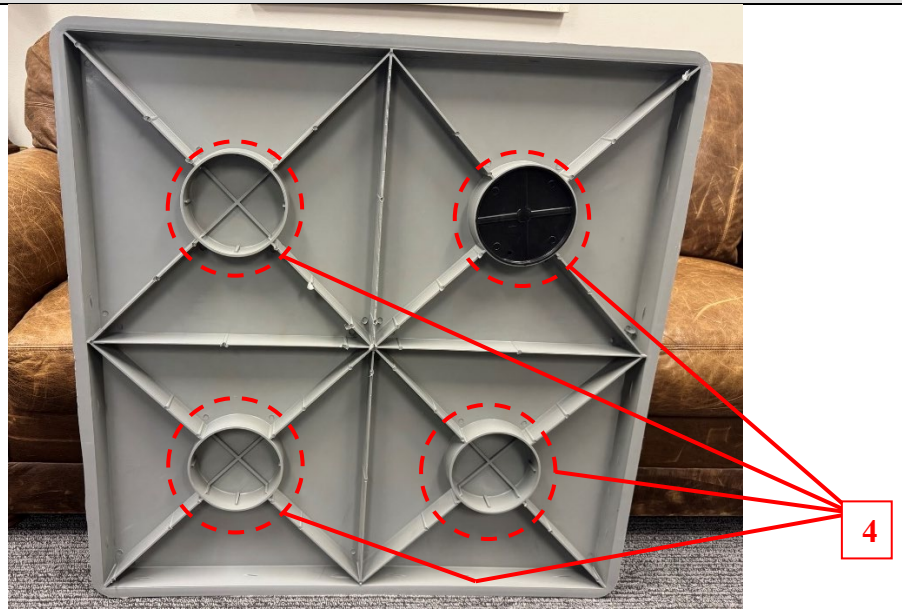
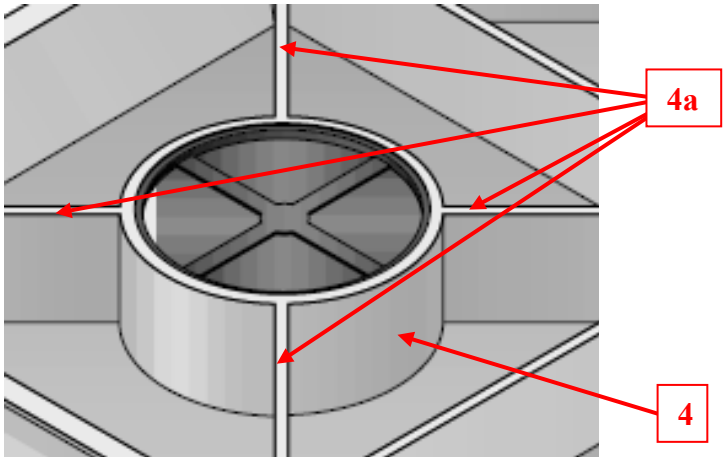
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>Ex. A at 2. |

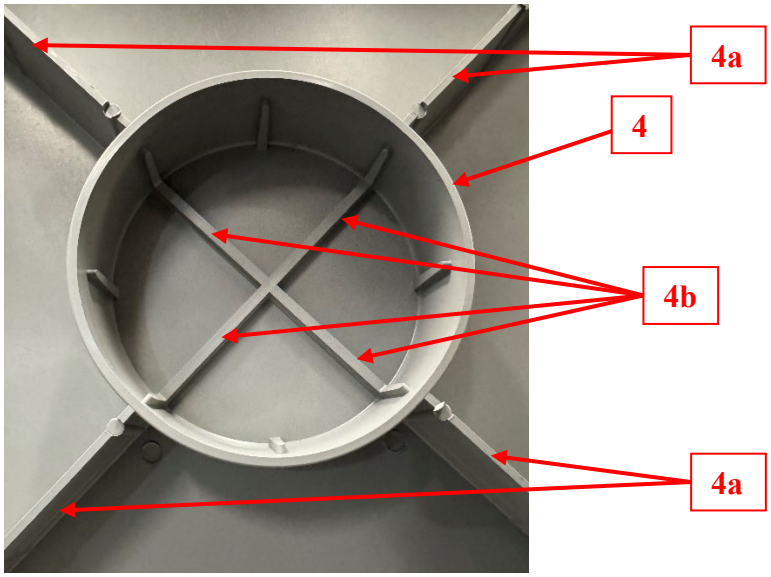
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>  <br>Ex. A at 2. |

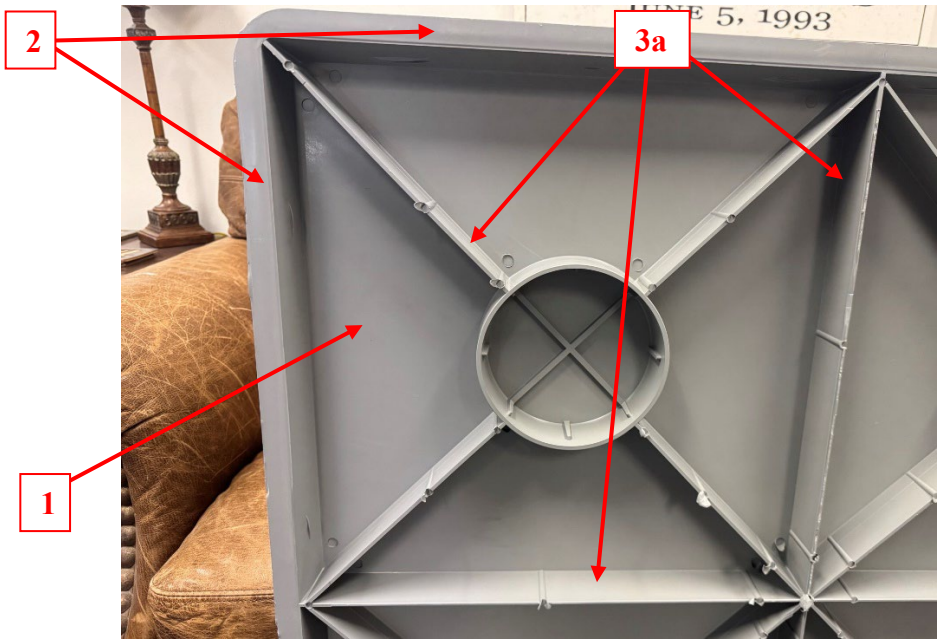
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| **U.S. Patent No. 12,312,123** | **Hef-T-Pad Prior Art** |
|---|---|
| |  |
| **1[c].**wherein the set of ribs includes a wall extending from the sidewall, wherein the wall varies in height relative to the deck, | The Hef-T-Pad's set of ribs [3] includes several walls that extend from the sidewall and vary in height relative to the deck, each therefore comprising a wall [3a] extending from the sidewall [2], wherein the wall [3a] varies in height relative to the deck [1]. |

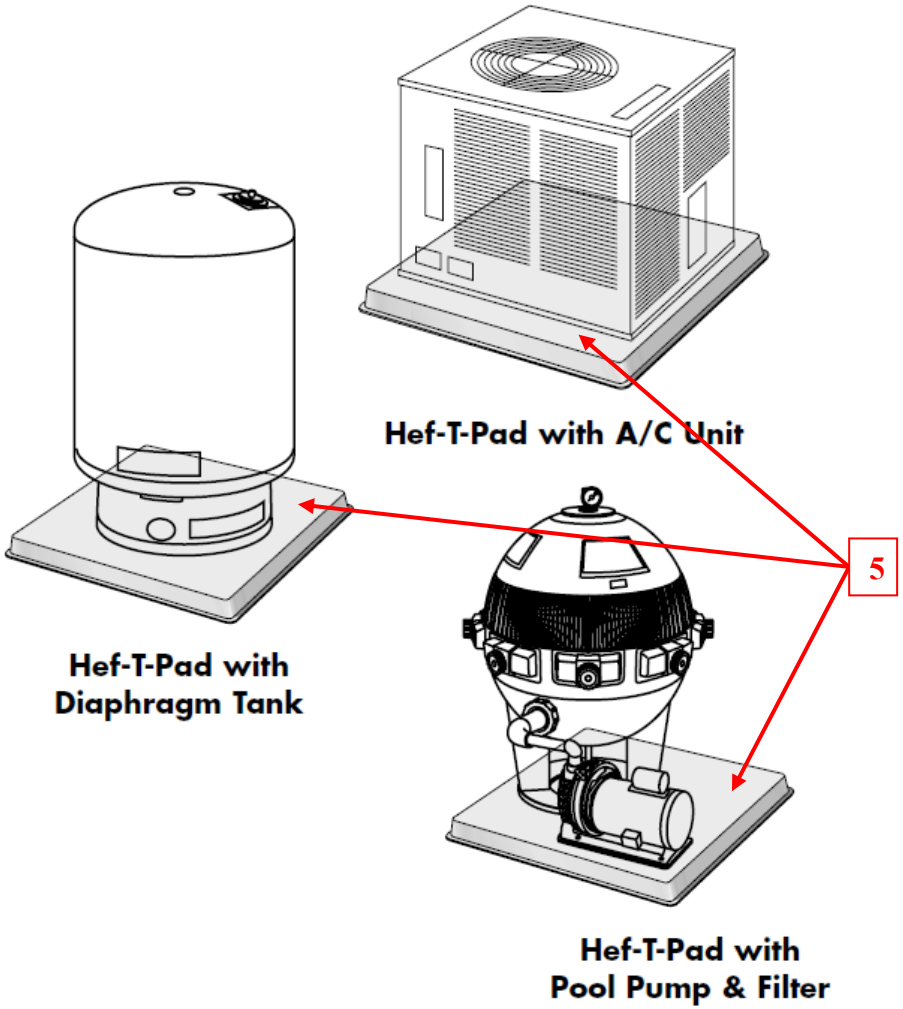
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |   |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| **1[d].** wherein the deck includes a top surface that is planar, | The deck of the Hef-T-Pad includes a planar top surface [5].<br>  <br><br>Ex. A at 2. |

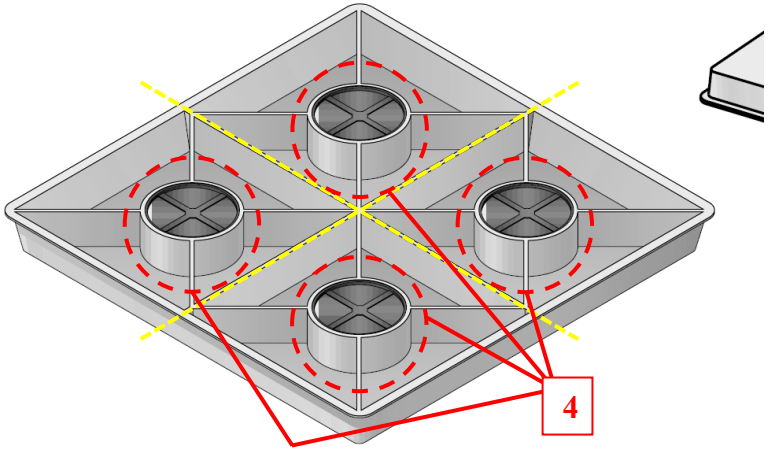
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  |
| **1[e].** wherein at least one of (a) the set of ribs segments the deck into four quadrants where two of the four quadrants respectively enclose two distributed hub walls of the at least two distributed hub walls; (b) the at least two distributed hub walls avoid sharing a common center with each other; or (c) the deck has a center point and the at least two distributed hub walls are not concentric with the center point, | The Hef-T-Pad's set of ribs segments the deck into four quadrants, all four of which enclose one of the distributed hub walls [4]. |

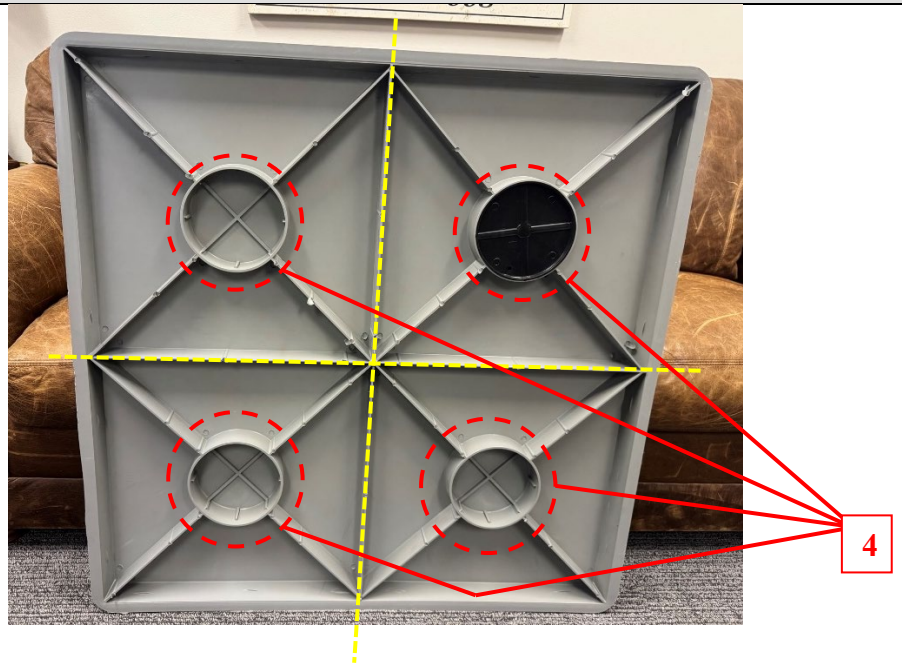
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>Ex. A at 2. |

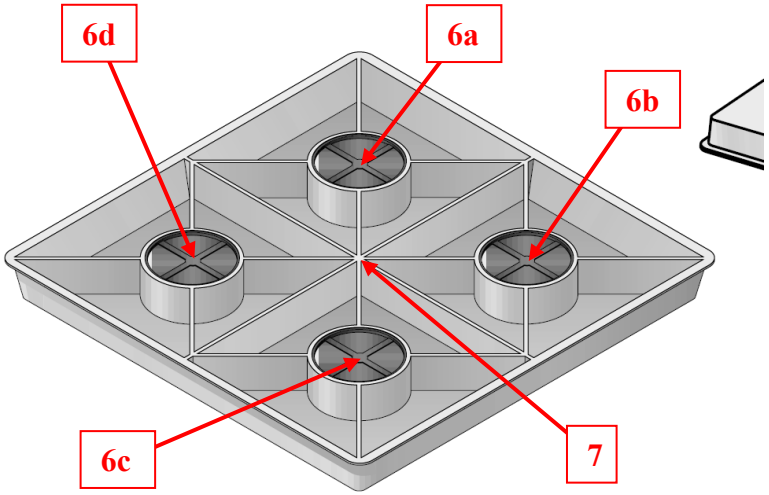
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>The Hef-T-Pad's four distributed hub walls also both avoid sharing a common center with each other and are not concentric with the center point of the Hef-T-Pad's deck. As shown below, the centers of the distributed hub walls [6a-d] are not shared and are not concentric with the center point of the deck [7]. |

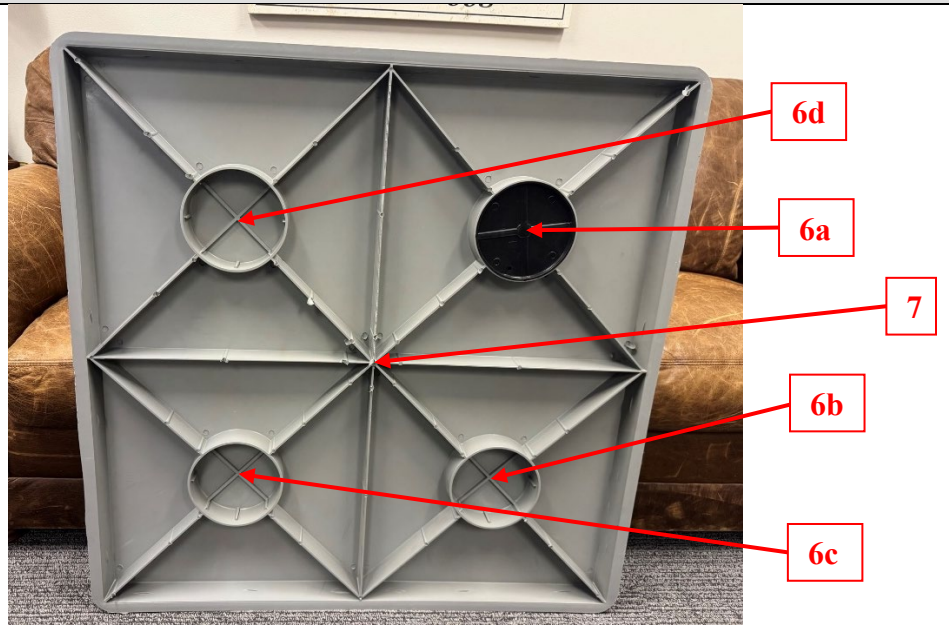
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>Ex. A at 2. |

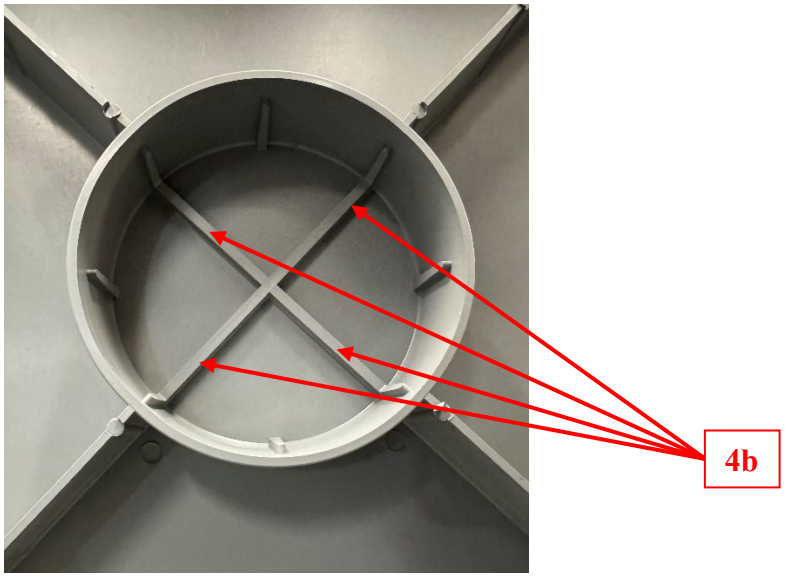
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  |

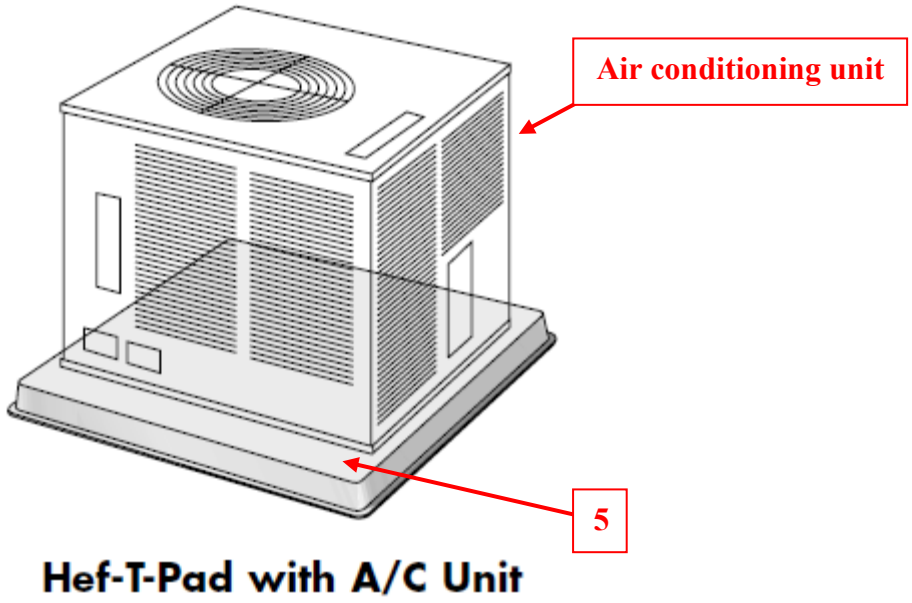
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| **U.S. Patent No. 12,312,123** | **Hef-T-Pad Prior Art** |
|---|---|
| **1[f].** wherein at least one wall of the second set of walls is longitudinally rectilinear; and | The Hef-T-Pad's second set of walls [4b] are longitudinally rectilinear.<br>  |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| **1[g].** position an air conditioning unit on the deck including the top surface. | The prior art teaches that the Hef-T-Pad is intended to have an air conditioning unit positioned on the top surface [5] of the deck.<br>  <br>**Hef-T-Pad with A/C Unit**<br>Ex. A at 2. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| **U.S. Patent No. 12,312,123** | **Hef-T-Pad Prior Art** |
|---|---|
| ***Claim 2*** | |
| **2[pre].** A method, comprising: | To the extent the preamble is limiting, the NDS EPC describes several applications for or methods of using the NDS Hef-T-Pad.<br>**HEF-T-PADS**<br>The illustrations below demonstrate three of the many applications for the Hef-T-Pad equipment pad.<br>The Hef-T-Pad is injection molded from high impact polyolefin with UV inhibitors making it easy to handle, yet durable and strong. It does not require any additional equipment for moving and handling. It is resistant to impact, ultra violet degradation and weathering and will not crack, flake or warp. The Hef-T-Pad is virtually impervious to climatic variations. It is drillable to permit installation of refrigerant and electrical lines under and through the pad and to allow equipment to be easily secured to the pad. The Hef-T-Pad features a unique non-creep surface which allows it to absorb vibration, noise and keep the equipment in its original position.<br>Ex. A at 2. |

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| **2[a].** accessing a first pad including a first deck, a first sidewall, and a first set of ribs, wherein the first sidewall and the first set of ribs extend from the first deck such that the first sidewall encloses the first set of ribs, | The prior art teaches that a user is enabled to access each Hef-T-Pad.<br>**HEF-T-PADS**<br>The illustrations below demonstrate three of the many applications for the Hef-T-Pad equipment pad.<br>The Hef-T-Pad is injection molded from high impact polyolefin with UV inhibitors making it easy to handle, yet durable and strong. It does not require any additional equipment for moving and handling. It is resistant to impact, ultra violet degradation and weathering and will not crack, flake or warp. The Hef-T-Pad is virtually impervious to climatic variations. It is drillable to permit installation of refrigerant and electrical lines under and through the pad and to allow equipment to be easily secured to the pad. The Hef-T-Pad features a unique non-creep surface which allows it to absorb vibration, noise and keep the equipment in its original position.<br>Ex. A at 2.<br><br>Each Hef-T-Pad is a pad. As evidenced by the fact that the Hef-T-Pad was sold in a package quantities of 24 (2" Hef-T-Pads) and 16 (3" Hef-T-Pads), the prior art teaches a first pad, as well as a second pad, third pad, etc. |

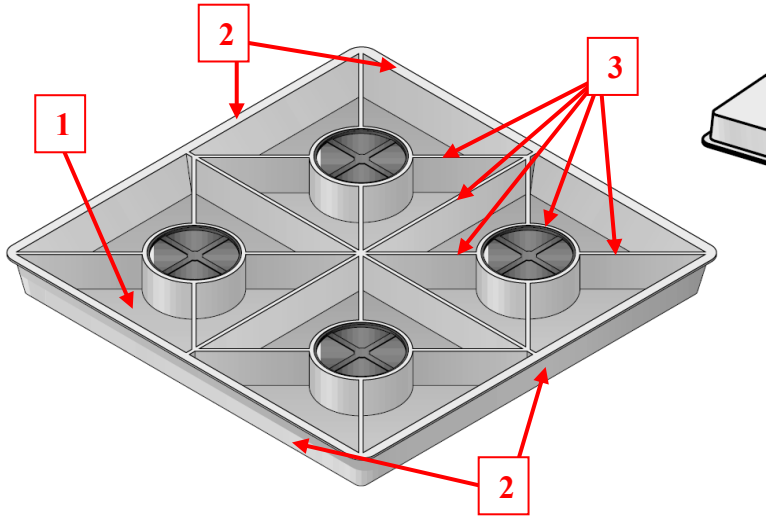
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| | **2" HEF-T-PADS**<br>Product Class 40PD<br><br>**Part No.** / **Description** / **Color** / **Pkg. Qty.** / **Wt. Ea. (lbs.)** / **List Price (ea.)**<br>X2424211 / 24"x24"x2" One Piece / Gray / 24 / 6.60 / 15.05<br>Ex. A at 2.<br><br>**3" HEF-T-PADS**<br>Product Class 40PD<br><br>**Part No.** / **Description** / **Color** / **Pkg. Qty.** / **Wt. Ea. (lbs.)** / **List Price (ea.)**<br>X2424311 / 24"x24"x3" One Piece / Gray / 16 / 9.40 / 18.45<br>Ex. A at 2.<br><br>Each Hef-T-Pad pad includes a deck [1], a sidewall [2], and a set of ribs [3] wherein the sidewall and set of ribs extend from the deck such that the sidewall encloses the set of ribs. Thus, a first Hef-T-Pad pad includes a first deck, a first sidewall, and a first set of ribs, wherein the first sidewall and first set of ribs extend from the first deck such that the sidewall encloses the set of ribs. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>**Underside of Hef-T-Pad showing support ribs, stabilization pads and stabilization flange.**<br>Ex. A at 2. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
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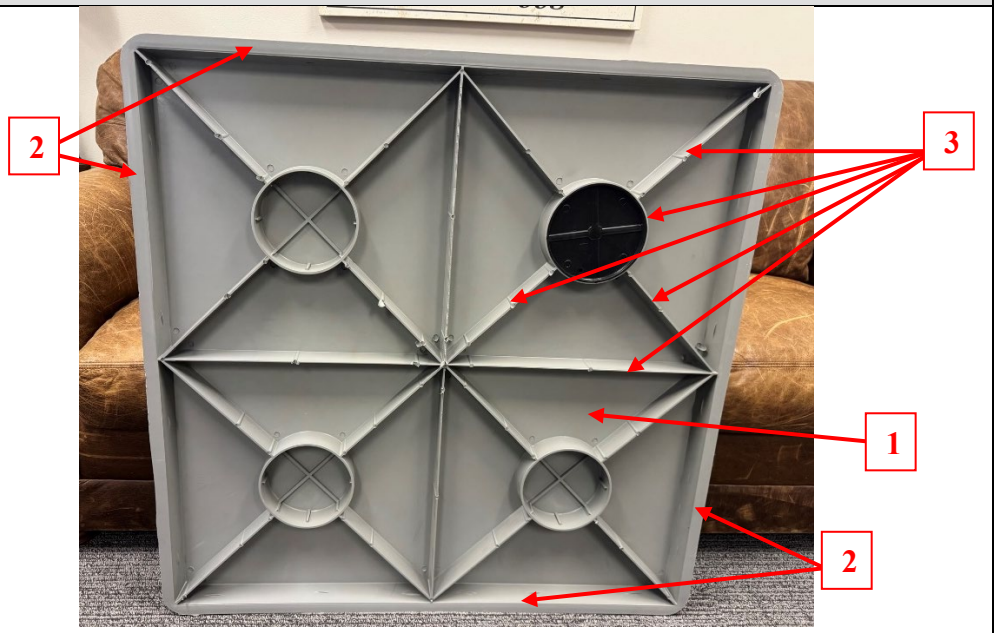
| |  |

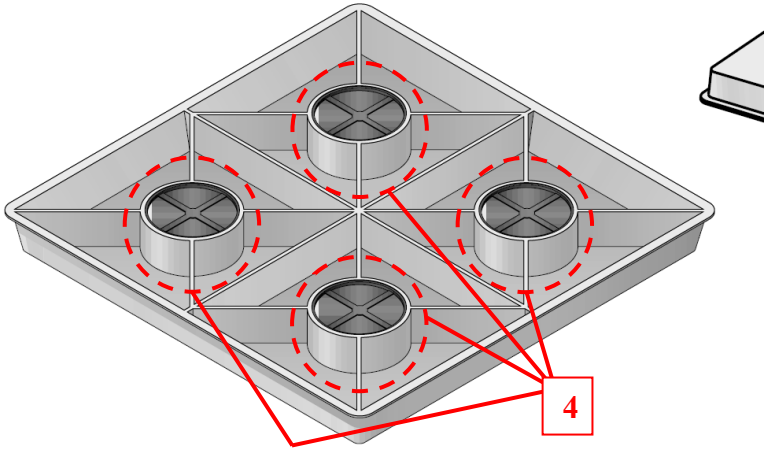
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| **U.S. Patent No. 12,312,123** | **Hef-T-Pad Prior Art** |
|---|---|
| |  |
| **2[b].** wherein the first set of ribs includes a first hub wall and a first group of walls extending from the first hub wall radially external to the first hub, | The set of ribs of each Hef-T-Pad includes four hub walls [4], each hub wall having a first group of walls extending radially outward from the hub wall [4a]. Thus, the first set of ribs of a first Hef-T-Pad pad includes a first hub wall and a first group of walls extending from the first hub wall radially external to the first hub. |

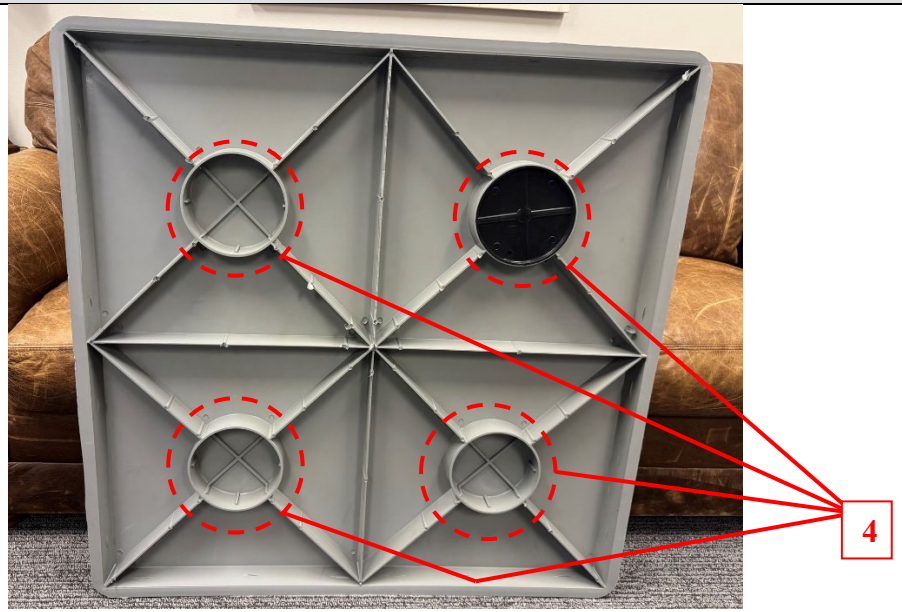
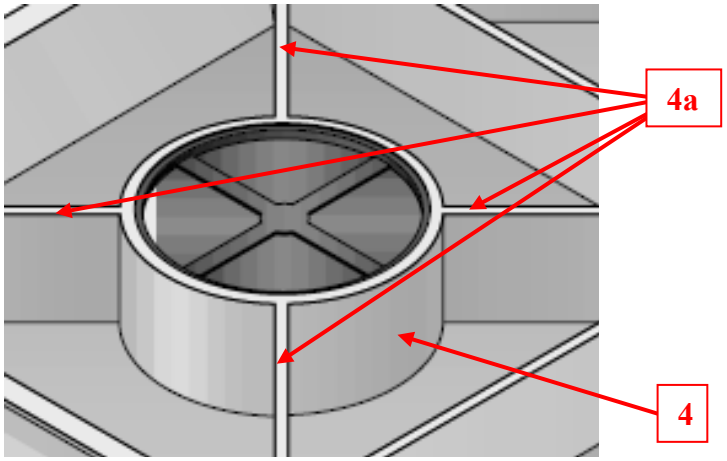
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>Ex. A at 2. |

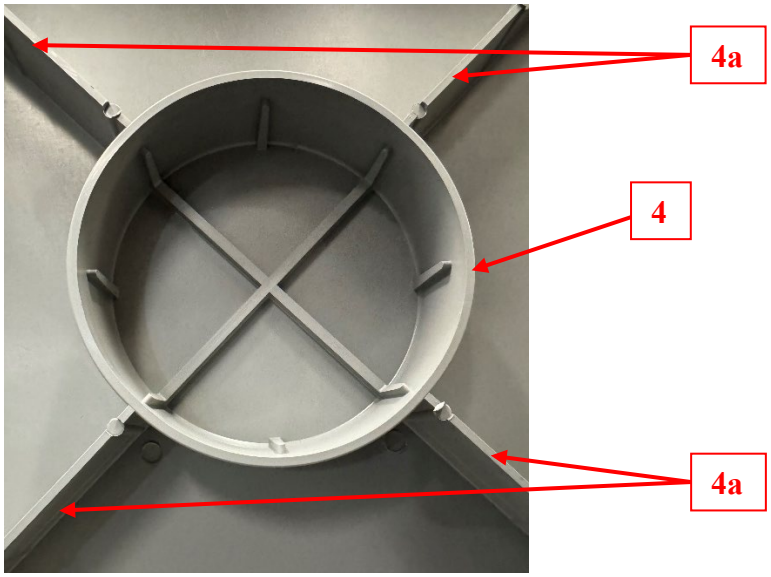
*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  <br>  <br>Ex. A at 2. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| **U.S. Patent No. 12,312,123** | **Hef-T-Pad Prior Art** |
|---|---|
| |  |
| **2[c].** wherein the first deck includes a first top surface that is planar, | The deck of each Hef-T-Pad includes a planar top surface [5]. Thus, the first deck of a first Hef-T-Pad pad includes a first top surface that is planar. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
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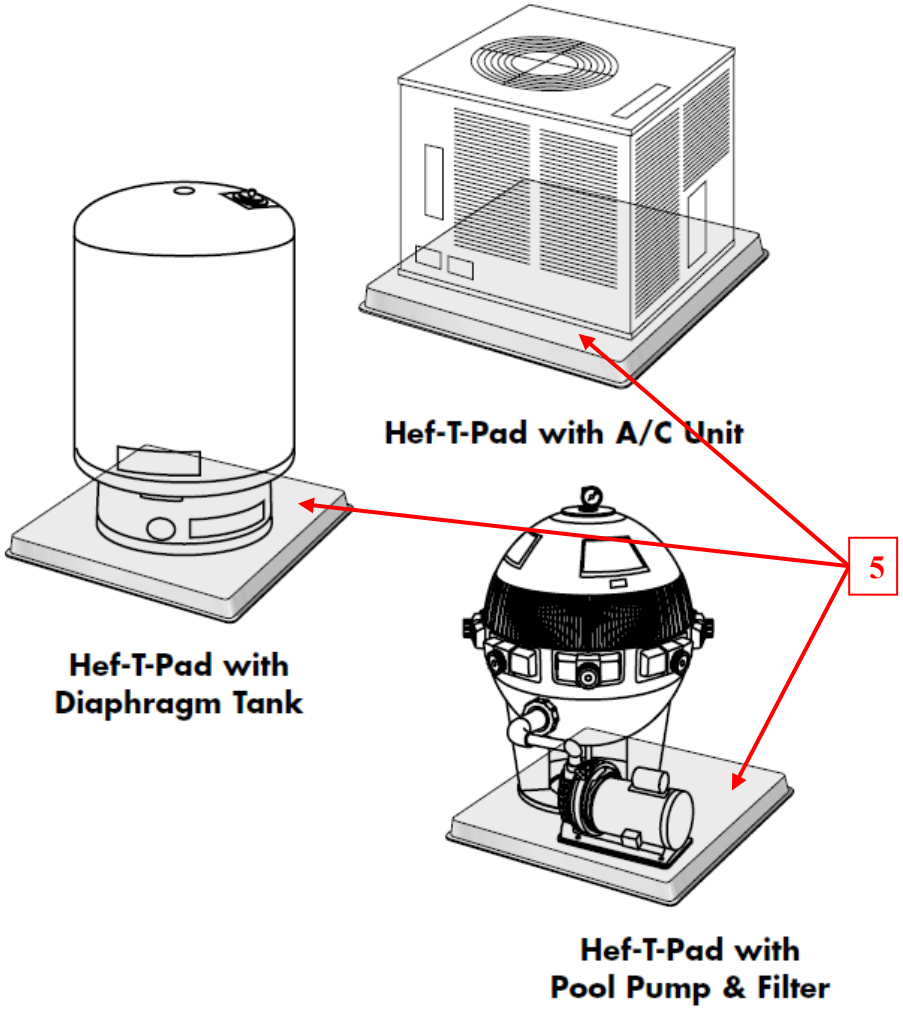
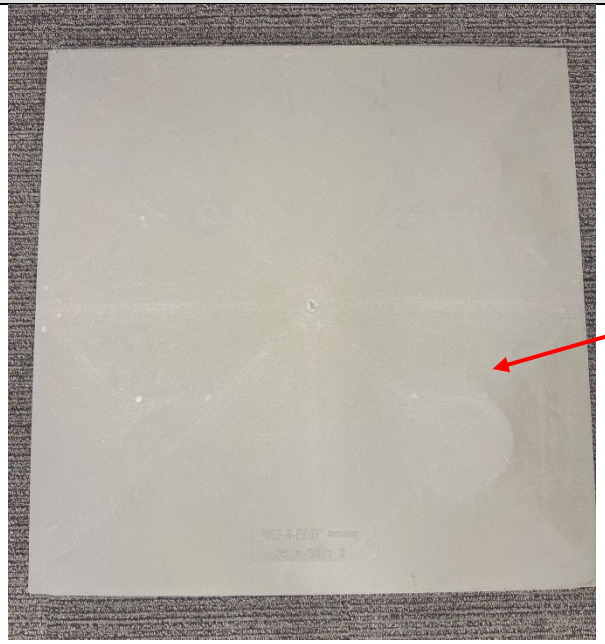
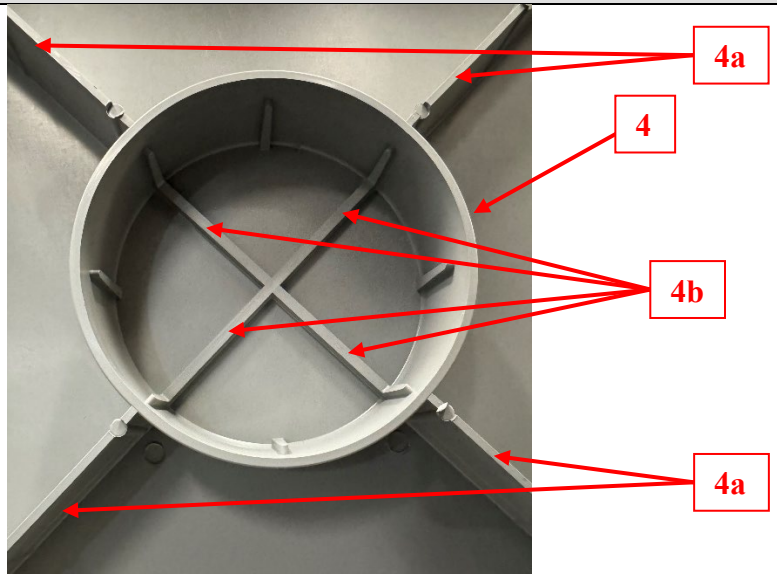
| |  <br>Ex. A at 2. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| **U.S. Patent No. 12,312,123** | **Hef-T-Pad Prior Art** |
|---|---|
| |  |
| **2[d].** wherein the first hub wall encloses a first set of walls intersecting each other and shorter in height than the first group of walls relative to the first deck; | Each hub wall [4] of each Hef-T-Pad pad encloses a set of walls [4b] that intersect each other and are shorter in height than the radially extending group of walls [4a] relative to the deck. Thus, each first hub wall of a first Hef-T-Pad pad encloses a first set of walls intersecting each other and shorter in height than the first group of walls relative to the first deck. |

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| |  |
| **2[e].** accessing a second pad including a second deck, a second sidewall, and a second set of ribs, wherein the second sidewall and the second set of ribs extend from the second deck such that the second sidewall encloses the second set of ribs, | *See* element 2[a].<br><br>As discussed in connection with element 2[a], the prior art teaches that a user is enabled to access each Hef-T-Pad, each of which is a pad. As evidenced by the fact that the Hef-T-Pad was sold in a package quantities of 24 (2" Hef-T-Pads) and 16 (3" Hef-T-Pads), the prior art teaches a first pad, as well as a second pad, third pad, etc.<br><br>As also discussed in connection with element 2[a], each Hef-T-Pad pad includes a deck [1], a sidewall [2], and a set of ribs [3] wherein the sidewall and set of ribs extend from the deck such that the sidewall encloses the set of ribs. Thus, a second Hef-T-Pad pad includes a second deck, a second sidewall, and a second set of ribs, wherein the second sidewall and second |

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| | set of ribs extend from the second deck such that the sidewall encloses the set of ribs. |
| **2[f]** wherein the second set of ribs includes a second hub wall and a second group of walls extending from the second hub wall radially external to the first hub, | *See* element 2[b].<br><br>As discussed in connection with element 2[b], the set of ribs of each Hef-T-Pad includes four hub walls [4], each hub wall having a first group of walls extending radially outward from the hub wall [4a]. Thus, the second set of ribs of a second Hef-T-Pad pad includes a second hub wall and a second group of walls extending from the second hub wall radially external to the second hub. |
| **2[g].** wherein the second deck includes a second top surface that is planar, | *See* element 2[c].<br><br>As discussed in connection with element 2[b], the deck of each Hef-T-Pad pad includes a planar top surface [5]. Thus, the second deck of a second Hef-T-Pad pad includes a second top surface that is planar. |
| **2[h].** wherein the second hub wall encloses a second set of walls intersecting each other and shorter in height than the second group of walls relative to the second deck; | *See* element 2[d].<br><br>As discussed in connection with element 2[d], each hub wall [4] of each Hef-T-Pad pad encloses a set of walls [4b] that intersect each other and are shorter in height than the radially extending group of walls [4a] relative to the deck. Thus, each second hub wall of a second Hef-T-Pad pad encloses a second set of walls intersecting each other and shorter in height than the second group of walls relative to the second deck. |
| **2[i].** forming a stack where the second pad is positioned on the first pad; | As disclosed in the prior art, the Hef-T-Pad pads were sold in package quantities of 24 (2" Hef-T-Pads) and 16 (3" Hef-T-Pads). Given the flat shape of each Hef-T-Pad, a person of ordinary skill in the art ("POSA") |

<table>
<tr><th>U.S. Patent No. 12,312,123</th><th>Hef-T-Pad Prior Art</th></tr>
<tr><td></td><td>would understand that each package would be formed by stacking the pads, such that the second pad is positioned on the first pad, the third pad is positioned on the second pad, etc. Thus, a POSA would understand the prior art to disclose forming a stack where the second pad is positioned on the first pad.<br>2" HEF-T-PADS<br>Product Class 40PD<br><table><tr><th>Part No.</th><th>Description</th><th>Color</th><th>Pkg. Qty.</th><th>Wt. Ea. (lbs.)</th><th>List Price (ea.)</th></tr><tr><td>X2424211</td><td>24"x24"x2" One Piece</td><td>Gray</td><td>24</td><td>6.60</td><td>15.05</td></tr></table>Ex. A at 2.<br>3" HEF-T-PADS<br>Product Class 40PD<br><table><tr><th>Part No.</th><th>Description</th><th>Color</th><th>Pkg. Qty.</th><th>Wt. Ea. (lbs.)</th><th>List Price (ea.)</th></tr><tr><td>X2424311</td><td>24"x24"x3" One Piece</td><td>Gray</td><td>16</td><td>9.40</td><td>18.45</td></tr></table>Ex. A at 2.</td></tr>
<tr><td>2[j]. removing the first pad or the second pad from the stack;</td><td>As taught in the prior art, each Hef-T-Pad pad is intended to be used individually to mount equipment. Accordingly, a POSA would understand that a first pad or a second pad would have to be removed from the packaged stack in order to be used for its intended purpose.</td></tr>
</table>

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

| U.S. Patent No. 12,312,123 | Hef-T-Pad Prior Art |
|---|---|
| | **HEF-T-PADS**<br><br>The illustrations below demonstrate three of the many applications for the Hef-T-Pad equipment pad.<br><br>The Hef-T-Pad is injection molded from high impact polyolefin with UV inhibitors making it easy to handle, yet durable and strong. It does not require any additional equipment for moving and handling. It is resistant to impact, ultra violet degradation and weathering and will not crack, flake or warp. The Hef-T-Pad is virtually impervious to climatic variations. It is drillable to permit installation of refrigerant and electrical lines under and through the pad and to allow equipment to be easily secured to the pad. The Hef-T-Pad features a unique non-creep surface which allows it to absorb vibration, noise and keep the equipment in its original position.<br><br>Ex. A at 2. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

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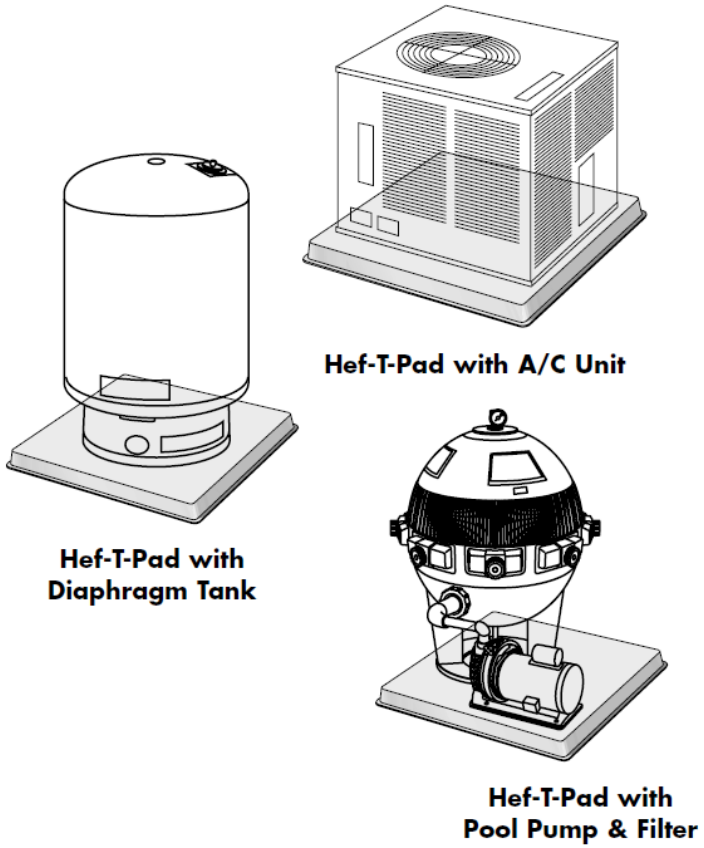
| |  <br>Ex. A at 2. |
| **2[k].** positioning the first pad or the second pad on a surface; and | The prior art teaches that each Hef-T-Pad pad is intended to be used individually to mount equipment. A POSA would readily understand that the first pad or the second pad must be positioned on a surface before a piece of equipment is mounted thereon. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

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| **2[l].** positioning an air conditioning unit on the first deck including the first top surface or the second deck including the second top surface, | The prior art teaches that each Hef-T-Pad pad is intended to have an air conditioning unit positioned on the top surface [5] of the deck. Thus, a POSA would understand that an air conditioning unit would be positioned on either the first deck including the first top surface of a first Hef-T-Pad pad or the second deck including the second top surface of a second Hef-T-Pad pad. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

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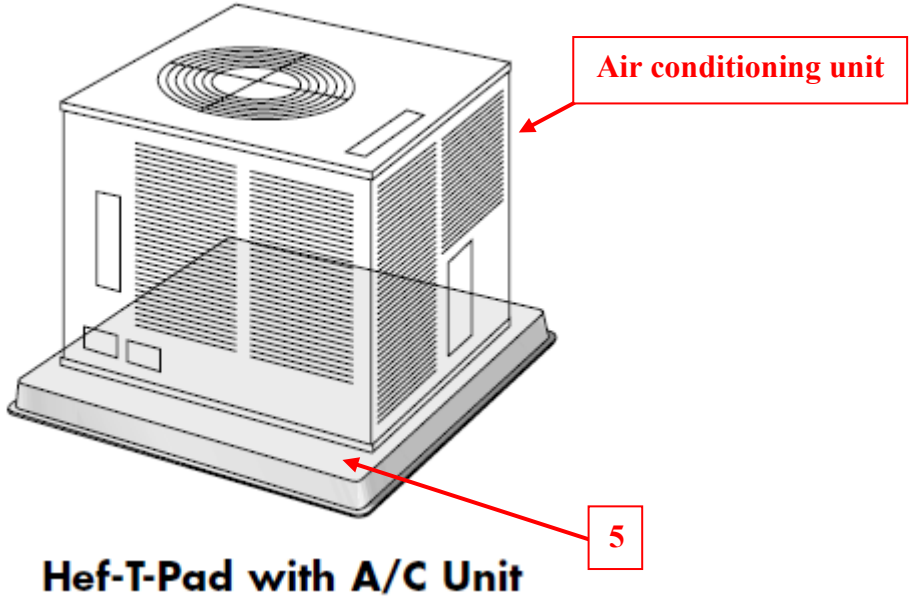
| |  <br>Ex. A at 2. |
| **2[m].** wherein (a) the first sidewall has a first group of corners and the first group of walls respectively spans between the first hub wall and the first group of corners or (b) the second sidewall has a second group of corners and the second group of walls respectively spans between the second hub wall and the second group of corners. | The sidewall of each Hef-T-Pad pad has a group of corners [2a], and at least one of the walls of each group of walls [4a] radially extending from each hub spans between the hub wall and a corner [2a]. Thus, (a) the first sidewall of a first Hef-T-Pad pad has a first group of corners and the first group of walls respectively spans between the first hub wall and the first group of corners and (b) the second sidewall of a second Hef-T-Pad pad has a second group of corners and the second group of walls respectively spans between the second hub wall and the second group of corners. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

**Invalidity Claim Chart – U.S. Patent No. 12,312,123**

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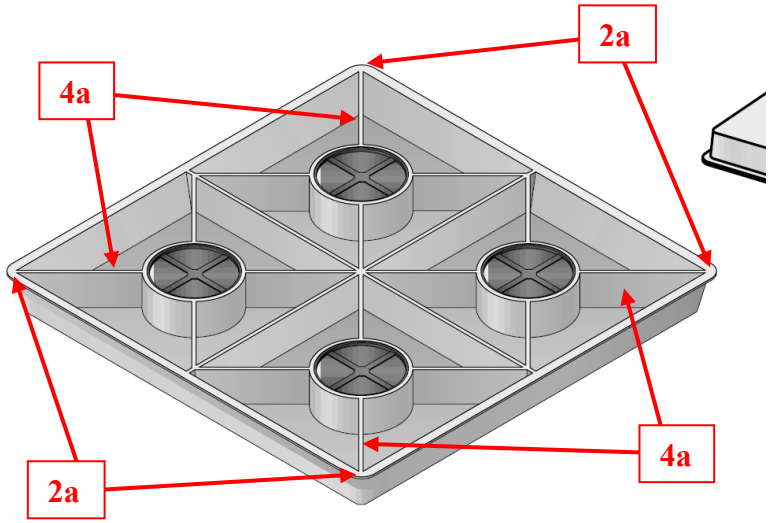
| |  <br>Ex. A at 2. |

*Dura-Plas, Inc. v. DiversiTech Corp.*

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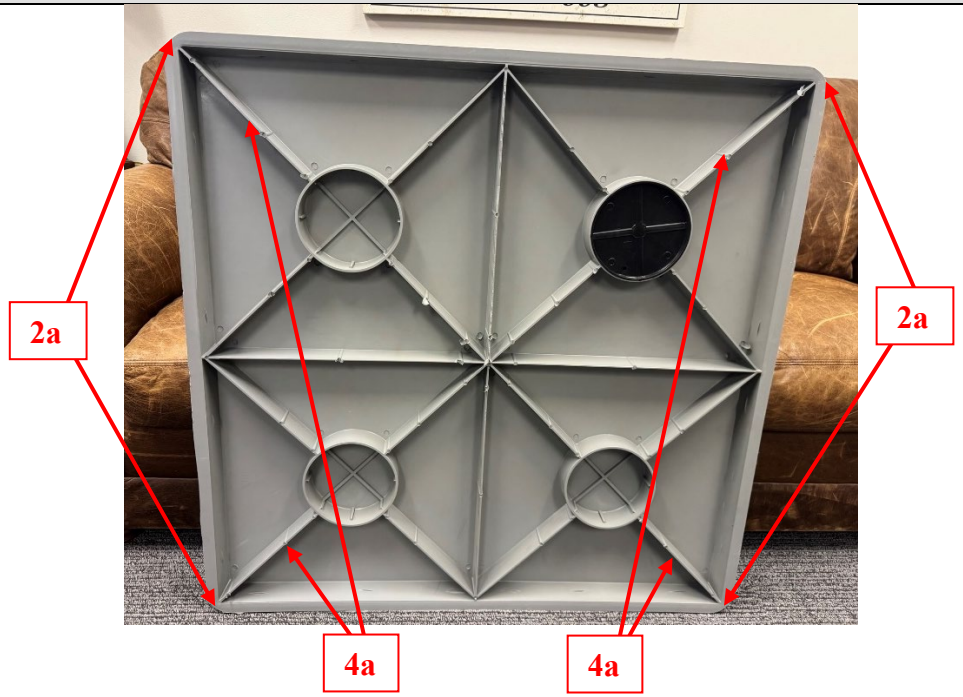
| |  |