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(54) FOLDING BEVERAGE ICE COOLER TABLE

(57) A cooler table (10) includes a blow-molded tabletop (12) that forms a tray for holding ice, and two collapsible leg assemblies (44a, 44b) for supporting the tabletop. The tabletop has an upper surface (14), a perimeter lip (20), and a lower surface (26). The upper surface slopes downward from its outer edges to accommodate flow of liquid toward an upper drain aperture (18) as the ice melts. The lower surface of the tabletop includes an outer perimeter portion, a central portion, a first end portion, a second end portion, a first side portion, and

a second side portion. The outer perimeter portion includes a first side perimeter portion, a second side perimeter portion, a first end perimeter portion, and a second end perimeter portion. The central portion is disposed between the first and second side perimeter portions and between the first and second end perimeter portions. The central portion is spaced apart from the upper surface and has a lower drain aperture (32) that is aligned with the upper drain aperture.

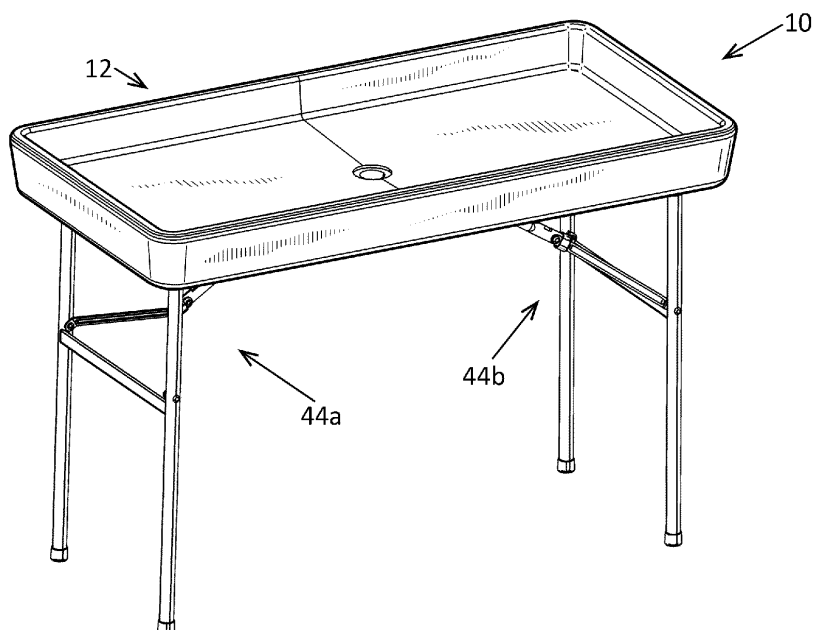


FIG. 1A

Description

FIELD

[0001] This invention relates to the field of tables having collapsible legs. More particularly, this invention relates to a table having collapsible legs and a blow-molded tabletop that forms a tray for holding ice with chilled food or beverages.

BACKGROUND

[0002] Cooler tables are used for serving food or beverages, such as at social events, while keeping the items chilled. Some such tables have legs that collapse against their lower surface to provide for ease of transport and storage when not in use. Prior cooler table designs have incorporated solid tabletops, such as the table described in U.S. Patent No. 6,832,492. Due to their solid structures, these tables are heavy and therefore cumbersome to transport and set up. Also, most solid structures do not provide adequate thermal insulation properties that are needed for cooler table applications. The lack of adequate insulation also leads to excessive moisture condensation on outside surfaces of the tabletop.

[0003] What is needed, therefore, is a cooler table having a light-weight structure to provide for easier storage, transportation and set up, and having a hollow tabletop structure to achieve better thermal insulation performance.

SUMMARY

[0004] The above and other needs are met by a cooler table that is convenient to transport and set up, provides for service of large quantities of chilled beverages, and has no moisture condensation on outside surfaces of the tabletop when in use. Preferred embodiments of the cooler table include a blow-molded tabletop, a first collapsible leg assembly, and a second collapsible leg assembly. The blow-molded tabletop may have an upper surface, a perimeter lip, and a lower surface. The upper surface may have outer edges and an upper drain aperture centrally disposed between the outer edges. The upper surface may slope downward from the outer edges toward the upper drain aperture to accommodate flow of liquid from the outer edges toward the upper drain aperture. The perimeter lip may have inner walls extending upward from the outer edges of the upper surface of the tabletop and/or outer walls spaced apart from the inner walls. The outer walls can include a first side outer wall, a second side outer wall, a first end outer wall, and/or a second end outer wall.

[0005] The lower surface of the tabletop can be disposed below the upper surface and may span between the outer walls of the perimeter lip. The lower surface may include an outer perimeter portion, a central portion, a first end portion, a second end portion, a first side portion,

and/or a second side portion. The outer perimeter portion may be disposed adjacent to the outer walls of the perimeter lip. The outer perimeter portion can include a first side perimeter portion disposed adjacent to the first side outer wall of the perimeter lip, a second side perimeter portion disposed adjacent to the second side outer wall of the perimeter lip, a first end perimeter portion disposed adjacent to the first end outer wall of the perimeter lip, and/or a second end perimeter portion disposed adjacent to the second end outer wall of the perimeter lip.

[0006] The central portion may be disposed between the first and second side perimeter portions and/or between the first and second end perimeter portions. The central portion may be spaced apart from the upper surface by a first distance and may have a lower drain aperture that is aligned with the upper drain aperture. The first end portion, which is disposed between the central portion and the first end perimeter portion, may be spaced apart from the upper surface by a second distance. The second end portion, which is disposed between the central portion and the second end perimeter portion, may be spaced apart from the upper surface by the second distance. The first side portion, which is disposed between the central portion and the first side perimeter portion, may be spaced apart from the upper surface by a third distance. The second side portion, which is disposed between the central portion and the second side perimeter portion, may be spaced apart from the upper surface by the third distance. In a preferred embodiment, the first distance has a largest value that is greater than the largest value of the second distance, and the second distance has a largest value that is greater than the largest value of the third distance.

[0007] The first collapsible leg assembly can be operable to move between a collapsed position in which the first collapsible leg assembly is disposed against the lower surface of the tabletop and an extended position in which the first collapsible leg assembly extends outward from the lower surface of the tabletop. The first collapsible leg assembly may comprise a first attachment bar, a first cross tube, a first pair of legs, and/or a first articulated support bracket assembly. The first attachment bar may be secured to the lower surface of the tabletop within the central portion. The first cross tube may be rotatably attached to the lower surface of the tabletop and disposed adjacent and parallel to the first end perimeter portion. The first pair of legs may be attached to and extend from the first cross tube. The first articulated support bracket assembly may have a first end rotatably attached to the first pair of legs and a second end rotatably attached to the first attachment bar. When the first collapsible leg assembly is in the collapsed position, the first articulating support bracket assembly may be folded against the first end portion of the tabletop, one leg of the first pair of legs is disposed against the first side portion of the lower surface of the tabletop, and/or another leg of the first pair of legs is

disposed against the second side portion of the lower surface of the tabletop.

[0008] The second collapsible leg assembly can be operable to move between a collapsed position in which the second collapsible leg assembly is disposed against the lower surface of the tabletop and an extended position in which the second collapsible leg assembly extends outward from the lower surface of the tabletop. The second collapsible leg assembly may comprise a second attachment bar, a second cross tube, a second pair of legs, and/or a second articulated support bracket assembly. The second attachment bar may be secured to the lower surface of the tabletop within the central portion. The second cross tube may be rotatably attached to the lower surface of the tabletop and disposed adjacent and parallel to the second end perimeter portion. The second pair of legs may be attached to and extend from the second cross tube. The second articulated support bracket assembly may have a first end rotatably attached to the second pair of legs and a second end rotatably attached to the second attachment bar. When the second collapsible leg assembly is in the collapsed position, the second articulating support bracket assembly may be folded against the second end portion of the tabletop, one leg of the second pair of legs is disposed against the first side portion of the lower surface of the tabletop, and/or another leg of the second pair of legs is disposed against the second side portion of the lower surface of the tabletop.

[0009] In some preferred embodiments, the cooler table includes retainer clips that are integrally molded into the lower surface of the tabletop for rotatably securing the first and second cross tubes to the lower surface. The retainer clips can include two or more first retainer clips for rotatably securing the first cross tube between the first end perimeter portion and the first end portion, and/or two or more second retainer clips for rotatably securing the second cross tube between the second end perimeter portion and the second end portion.

[0010] In some preferred embodiments, each of the first retainer clips can include a first section disposed within the first end perimeter portion, and/or a second section disposed within the first end portion. Optionally, each of the second retainer clips comprises a first section disposed within the second end perimeter portion, and/or a second section disposed within the second end portion.

[0011] In some preferred embodiments, the cooler table includes a plurality of end perimeter depressions formed in the lower surface of the tabletop. The end perimeter depressions may include a plurality of first end perimeter depressions distributed along the first end perimeter portion that are configured to provide structural support between the lower surface of the tabletop and the upper surface of the tabletop, optionally wherein at least a portion of each of the two or more first retainer clips is disposed between two of the first end perimeter depressions. The end perimeter depressions may also include a plurality of second end perimeter

depressions distributed along the second end perimeter portion that are configured to provide structural support between the lower surface of the tabletop and the upper surface of the tabletop, optionally wherein at least a portion of each of the two or more second retainer clips is disposed between two of the second end perimeter depressions.

[0012] In some preferred embodiments, the cooler table includes an integrally molded tubular section that extends through the tabletop to fluidly connect the upper and lower drain apertures, so that liquid can enter the upper drain aperture, flow through the tubular section, and exit the lower drain aperture.

[0013] In some preferred embodiments, the cooler table includes a plurality of first end depressions, a plurality of second end depressions, a plurality of first side depressions, and/or a plurality of second side depressions, all of which provide structural support between the lower surface and the upper surface of the tabletop. Each of the first end depressions, which are formed in the first end portion of the lower surface of the tabletop, may occupy an area A1 in the lower surface and/or have a height H1 measured between the lower surface and the upper surface of the tabletop. Each of the second end depressions, which are formed in the second end portion of the lower surface of the tabletop, may occupy the area A1 in the lower surface and/or have the height H1 measured between the lower surface and the upper surface of the tabletop. Each of the first side depressions, which are formed in the first side portion of the lower surface of the tabletop, may occupy an area A2 in the lower surface and/or have a height H2 measured between the lower surface and the upper surface of the tabletop. Each of the second side depressions, which are formed in the second side portion of the lower surface of the tabletop, may occupy the area A2 in the lower surface and/or have the height H2 measured between the lower surface and the upper surface of the tabletop. In a preferred embodiment, the area A1 is greater than the area A2, and the height H1 is greater than the height H2.

[0014] In some preferred embodiments, the first and second side portions of the lower surface of the tabletop are each sufficiently wide to accommodate the first pair of legs and the second pair of legs in a side-by-side arrangement

[0015] In one embodiment, there is provided a cooler table comprising:

a blow-molded tabletop comprising:

an upper surface having outer edges and an upper drain aperture centrally disposed between the outer edges, wherein the upper surface slopes downward from the outer edges toward the upper drain aperture to accommodate flow of liquid from the outer edges toward the upper drain aperture;

a perimeter lip having:

inner walls extending upward from the outer edges of the upper surface of the tabletop; and

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outer walls spaced apart from the inner walls, the outer walls comprising a first side outer wall, a second side outer wall, a first end outer wall, and a second end outer wall;

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a lower surface disposed below the upper surface and spanning between the outer walls of the perimeter lip, the lower surface comprising:

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an outer perimeter portion disposed adjacent to the outer walls of the perimeter lip, the outer perimeter portion including:

a first side perimeter portion disposed adjacent to the first side outer wall of the perimeter lip;

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a second side perimeter portion disposed adjacent to the second side outer wall of the perimeter lip;

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a first end perimeter portion disposed adjacent to the first end outer wall of the perimeter lip; and

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a second end perimeter portion disposed adjacent to the second end outer wall of the perimeter lip;

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a central portion disposed between the first and second side perimeter portions and between the first and second end perimeter portions, the central portion spaced apart from the upper surface by a first distance, the central portion having a lower drain aperture that is aligned with the upper drain aperture;

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a first end portion disposed between the central portion and the first end perimeter portion, the first end portion spaced apart from the upper surface by a second distance;

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a second end portion disposed between the central portion and the second end perimeter portion, the second end portion spaced apart from the upper surface by the second distance;

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a first side portion disposed between the central portion and the first side perimeter

portion, the first side portion spaced apart from the upper surface by a third distance;

a second side portion disposed between the central portion and the second side perimeter portion, the first side portion spaced apart from the upper surface by the third distance,

wherein the first distance has a largest value that is greater than a largest value of the second distance, and

wherein the second distance has a largest value that is greater than a largest value of the third distance;

a first collapsible leg assembly that is operable to move between a collapsed position in which the first collapsible leg assembly is disposed against the lower surface of the tabletop and an extended position in which the first collapsible leg assembly extends outward from the lower surface of the tabletop, the first collapsible leg assembly comprising:

a first attachment bar secured to the lower surface of the tabletop within the central portion;

a first cross tube rotatably attached to the lower surface of the tabletop and disposed adjacent and parallel to the first end perimeter portion;

a first pair of legs attached to and extending from the first cross tube;

a first articulated support bracket assembly having a first end rotatably attached to the first pair of legs and a second end rotatably attached to the first attachment bar,

wherein, when the first collapsible leg assembly is in the collapsed position,

the first articulating support bracket assembly is folded against the first end portion of the tabletop,

one leg of the first pair of legs is disposed against the first side portion of the lower surface of the tabletop, and

another leg of the first pair of legs is disposed against the second side portion of the lower surface of the tabletop; and

a second collapsible leg assembly that is operable to move between a collapsed position in which the second collapsible leg assembly is disposed against

the lower surface of the tabletop and an extended position in which the second collapsible leg assembly extends outward from the lower surface of the tabletop, the second collapsible leg assembly comprising:

a second attachment bar secured to the lower surface of the tabletop within the central portion;

a second cross tube rotatably attached to the lower surface of the tabletop and disposed adjacent and parallel to the second end perimeter portion;

a second pair of legs attached to and extending from the second cross tube;

a second articulated support bracket assembly having a first end rotatably attached to the second pair of legs and a second end rotatably attached to the second attachment bar,

wherein, when the second collapsible leg assembly is in the collapsed position,

the second articulating support bracket assembly folds against the second end portion of the tabletop,

one leg of the second pair of legs is disposed against the first side portion of the lower surface of the tabletop, and

another leg of the second pair of legs is disposed against the second side portion of the lower surface of the tabletop.

[0016] In a further embodiment, there is provided a cooler table comprising:

a blow-molded tabletop comprising:

an upper surface having outer edges and an upper drain aperture centrally disposed between the outer edges, wherein the upper surface slopes downward from the outer edges toward the upper drain aperture to accommodate flow of liquid from the outer edges toward the upper drain aperture;

a perimeter lip having:

inner walls extending upward from the outer edges of the upper surface of the tabletop; and

outer walls spaced apart from the inner walls, the outer walls comprising a first side

outer wall, a second side outer wall, a first end outer wall, and a second end outer wall;

a lower surface disposed below the upper surface and spanning between the outer walls of the perimeter lip, the lower surface comprising:

an outer perimeter portion disposed adjacent to the outer walls of the perimeter lip, the outer perimeter portion including:

a first side perimeter portion disposed adjacent to the first side outer wall of the perimeter lip;

a second side perimeter portion disposed adjacent to the second side outer wall of the perimeter lip;

a first end perimeter portion disposed adjacent to the first end outer wall of the perimeter lip; and

a second end perimeter portion disposed adjacent to the second end outer wall of the perimeter lip;

a central portion disposed between the first and second side perimeter portions and between the first and second end perimeter portions, the central portion having a lower drain aperture that is aligned with the upper drain aperture;

a first end portion disposed between the central portion and the first end perimeter portion, wherein the first end portion includes a plurality of first end depressions formed in the lower surface of the tabletop that provide structural support between the lower surface and the upper surface of the tabletop, wherein each of the first end depressions occupies an area A1 in the lower surface and has a height H1 measured between the lower surface and the upper surface;

a second end portion disposed between the central portion and the second end perimeter portion, wherein the second end portion includes a plurality of second end depressions formed in the lower surface of the tabletop that provide structural support between the lower surface and the upper surface of the tabletop, wherein each of the second end depressions occupies the area A1 in the lower surface and has the height H1 measured between the lower surface

and the upper surface;

a first side portion disposed between the central portion and the first side perimeter portion, wherein the first side portion includes a plurality of first side depressions formed in the lower surface of the tabletop that provide structural support between the lower surface and the upper surface of the tabletop, wherein each of the first side depressions occupies an area A2 in the lower surface and has a height H2 measured between the lower surface and the upper surface;

a second side portion disposed between the central portion and the second side perimeter portion, wherein the second side portion includes a plurality of second side depressions formed in the lower surface of the tabletop that provide structural support between the lower surface and the upper surface of the tabletop, wherein each of the second side depressions occupies the area A2 in the lower surface and has the height H2 measured between the lower surface and the upper surface,

wherein the area A1 is greater than the area A2, and the height H1 is greater than the height H2;

a first collapsible leg assembly that is operable to move between a collapsed position in which the first collapsible leg assembly is disposed against the lower surface of the tabletop and an extended position in which the first collapsible leg assembly extends outward from the lower surface of the tabletop, the first collapsible leg assembly comprising:

a first attachment bar secured to the lower surface of the tabletop within the central portion;

a first cross tube rotatably attached to the lower surface of the tabletop and disposed adjacent and parallel to the first end perimeter portion;

a first pair of legs attached to and extending from the first cross tube;

a first articulated support bracket assembly having a first end rotatably attached to the first pair of legs and a second end rotatably attached to the first attachment bar,

wherein, when the first collapsible leg assembly is in the collapsed position,

the first articulating support bracket assembly is folded against the first end portion of the tabletop,

one leg of the first pair of legs is disposed against the first side portion of the lower surface of the tabletop, and

another leg of the first pair of legs is disposed against the second side portion of the lower surface of the tabletop; and

a second collapsible leg assembly that is operable to move between a collapsed position in which the second collapsible leg assembly is disposed against the lower surface of the tabletop and an extended position in which the second collapsible leg assembly extends outward from the lower surface of the tabletop, the second collapsible leg assembly comprising:

a second attachment bar secured to the lower surface of the tabletop within the central portion;

a second cross tube rotatably attached to the lower surface of the tabletop and disposed adjacent and parallel to the second end perimeter portion;

a second pair of legs attached to and extending from the second cross tube;

a second articulated support bracket assembly having a first end rotatably attached to the second pair of legs and a second end rotatably attached to the second attachment bar,

wherein, when the second collapsible leg assembly is in the collapsed position,

the second articulating support bracket assembly folds against the second end portion of the tabletop,

one leg of the second pair of legs is disposed against the first side portion of the lower surface of the tabletop, and

another leg of the second pair of legs is disposed against the second side portion of the lower surface of the tabletop.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] Other embodiments of the invention will become apparent by reference to the detailed description in conjunction with the figures, wherein elements are not to scale so as to more clearly show the details, wherein

like reference numbers indicate like elements throughout the several views, and wherein:

FIG. 1A depicts a top perspective view of a cooler table with legs extended according to an embodiment of the invention;

FIG. 1B depicts a bottom perspective view of a cooler table with legs extended according to an embodiment of the invention;

FIG. 2A depicts a top perspective view of a cooler table with legs collapsed according to an embodiment of the invention;

FIG. 2B depicts a bottom perspective view of a cooler table with legs collapsed according to an embodiment of the invention;

FIG. 3A depicts a top plan view of a cooler table according to an embodiment of the invention;

FIG. 3B depicts a bottom plan view of a cooler table with legs collapsed according to an embodiment of the invention;

FIG. 4A depicts a lengthwise cross-section view of a cooler table according to an embodiment of the invention;

FIG. 4B depicts a widthwise cross-section view of a cooler table according to an embodiment of the invention;

FIG. 5 depicts a cross-section view of a retainer clip in a lower surface of a blow-molded tabletop of a cooler table according to an embodiment of the invention;

FIG. 6 depicts a perspective view of a retainer clip in a lower surface of a blow-molded tabletop of a cooler table according to an embodiment of the invention;

FIG. 7 depicts depressions in a lower surface of a blow-molded tabletop of a cooler table according to an embodiment of the invention;

FIG. 8A depicts detail views of an end depression in a lower surface of a blow-molded tabletop of a cooler table according to an embodiment of the invention;

FIG. 8B depicts detailed views of a perimeter depression in a lower surface of a blow-molded tabletop of a cooler table according to an embodiment of the invention;

FIGS. 9A and 9B depict detail views of a bracket for attaching a side rail to a blow-molded tabletop of a

cooler table according to an embodiment of the invention; and

FIGS. 10A and 10B depict various dimensions of a cooler table according to embodiments of the invention.

DETAILED DESCRIPTION

[0018] FIGS. 1A, 1B, 2A and 2B depict a cooler table 10 used for serving food or beverages, such as at social events. The tabletop 12, which is preferably made of plastic formed by blow molding, comprises a tray for holding a bed of ice in which food or beverage items stay chilled. Due to the blow-molding process, the tabletop 12 has a double-walled tray structure that provides thermal insulation on the bottom and sides of the tray.

[0019] As described in more detail below, the table 10 preferably has legs 50a and 50b that collapse against the underside of the tabletop 12 to make the structure easier to transport and store. FIGS. 1A and 1B depict the table 10 in a use configuration in which the legs are extended. FIGS. 2A and 2B depict the table 10 in a storage configuration in which the legs are collapsed.

[0020] Descriptions of embodiments of the table 10 provided herein refer to various surfaces in the structure of the tabletop 12. As the term is used herein, a "surface" refers to a wall of a molded structure having a thickness that is relatively small compared to the length and width of the structure. For example, the thickness of a wall of a blow-molded structure may be between about 1.50 mm and 4.00 mm, whereas the surface may span a distance that is on the order of 400 times the thickness. Thus, unless specifically defined herein as an inner surface or an outer surface, the word "surface" is not limited to the inside or the outside of a double-wall blow-molded structure but refers generally to a wall of the double-wall structure.

[0021] The tabletop 12 includes an upper surface 14 having outer edges 16, and a perimeter lip 20 having inner walls 22 that extend upward from the outer edges 16. The perimeter lip 20 has outer walls that are spaced apart from the inner walls 22, including first and second side outer walls 24a and first and second end outer walls 24b. In the description provided herein, the first and second side outer walls 24a define the length of the tabletop 12, and the first and second end outer walls 24b define the width of the tabletop 12. An upper drain aperture 18 is centrally disposed between the outer edges 16 of the tabletop 12. In a preferred embodiment, the upper surface 14 slopes downward from the outer edges 16 toward the upper drain aperture 18 to accommodate flow of water from the outer edges 16 toward the upper drain aperture 18 as ice melts.

[0022] In preferred embodiments, the thickness of the material of the upper surface 14 varies from about 3.10 mm to about 3.70 mm, and the thickness of the material of the lip 20 varies from about 2.50 mm to about 3.70 mm.

[0023] The tabletop 12 includes a lower surface 26 that spans the distance between the outer walls 24a and 24b of the perimeter lip 20. In a preferred embodiment, the lower surface 26 includes outer perimeter portions 28a-28b, a central portion 30, a first end portion 36, a second end portion 38, a first side portion 40 and a second side portion 42. The outer perimeter portions, which are disposed adjacent to the outer walls 24a-24b of the perimeter lip 20, comprise first and second side perimeter portions 28a disposed opposite each other, and first and second end perimeter portions 28b disposed opposite each other. The first side perimeter portion 28a is disposed adjacent to the first side outer wall 24a of the perimeter lip 20, and the second side perimeter portion 28a is disposed adjacent to the second side outer wall 24a of the perimeter lip 20. The first end perimeter portion 28b is disposed adjacent to the first end outer wall 24b of the perimeter lip 20, and the second end perimeter portion 28b is disposed adjacent to the second end outer wall 24b of the perimeter lip 20.

[0024] In preferred embodiments, the thickness of the material of the lower surface 26 varies from about 2.50 mm to about 4.00 mm, and the thickness of the material of the outer perimeter portions 28a-28b varies from about 1.50 mm to about 2.60 mm.

[0025] The central portion 30 of the lower surface 26 is disposed between the first and second side portions 40 and 42 and between the first and second end portions 36 and 38 and is spaced apart from the upper surface 14 by a distance D1. The central portion 30 has a lower drain aperture 32 that is aligned with the upper drain aperture 18. An integrally molded tubular section 34 extends through the tabletop 12 to fluidly connect the upper and lower drain apertures 18 and 32, so that liquid can enter the upper drain aperture 18, flow through the tubular section 34, and exit from the lower drain aperture 32.

[0026] The first end portion 36 of the lower surface 26 is disposed between the central portion 30 and the first end perimeter portion 28b and is spaced apart from the upper surface 14 by a distance D2. The second end portion 38 of the lower surface 26 is disposed between the central portion 30 and the second end perimeter portion 28b and is spaced apart from the upper surface 14 by the distance D2.

[0027] The first side portion 40 of the lower surface 26 is disposed between the central portion 30 and the first side perimeter portion 28a and is spaced apart from the upper surface 14 by a distance D3. The second side portion 42 of the lower surface 26 is disposed between the central portion 30 and the second side perimeter portion 28a and is spaced apart from the upper surface 14 by the distance D3.

[0028] In a preferred embodiment depicted in FIGS. 4A and 4B, although the distance D1 between the upper surface 14 and the central portion 30 of the lower surface 26 varies over a range, and the distance D2 between upper surface 14 and the first and second end portions 36 and 38 of the lower surface 26 varies over a range, the

largest value of the distance D1 is greater than the largest value of the distance D2. Also, although the distance D3 between the upper surface 14 and the first and second side perimeter portions 40 and 42 of the lower surface 26 varies over a range, the largest value of the distance D2 is greater than the largest value of the distance D3. This variation in distances that define the overall height in the various portions of the tabletop 12 across its length and width - smaller height toward the edges and larger height toward the center - accommodates the downward slope of the upper surface 14 from its outer edges 16 toward the drain aperture 18. It also provides more space near the side edges to accommodate the legs 50a and 50b and more space near the end edges to accommodate the leg support brackets when the legs are in the collapsed position.

[0029] The table 10 includes first and second collapsible leg assemblies 44a and 44b that are operable to move between a collapsed position in which the leg assemblies are disposed against the lower surface 26 of the tabletop 12 and an extended position in which the leg assemblies extend outward from the lower surface 26. The first collapsible leg assembly 44a includes a first attachment bar 46a that is attached to the lower surface 26 of the tabletop 12 within the central portion 30. In a preferred embodiment, the first attachment bar 46a is secured to the lower surface 26 with fasteners, such as screws. A first cross tube 48a is rotatably attached to the lower surface 26 adjacent and parallel to the outer edge of the first end perimeter portion 28b. The opposing ends of the first cross tube 48a are rotatably received in apertures in opposing side rails 64 that are attached to the first side perimeter portions 28a of the lower surface 26. The first cross tube 48a is also rotatably secured to the lower surface 26 by a pair of retainer clips 56 that are described in more detail hereinafter.

[0030] The first collapsible leg assembly 44a includes a first pair of legs 50a that are attached to and extend from the first cross tube 48a, and a first articulated support bracket assembly 52a having a first end that is rotatably attached to the first pair of legs 50a and a second end that is rotatably attached to the first attachment bar 46a. The first articulated support bracket assembly 52a includes an inner bracket portion 66a and an outer bracket portion 68a. The inner bracket portion 66a is rotatably attached at its distal end to the first attachment bar 46a and at its proximal end to the inner end of the outer bracket portion 68a. The outer ends of the outer bracket portion 68a are rotatably attached to the first pair of legs 50a.

[0031] As shown in FIGS. 2B, 3B, 4A and 4B, when the first collapsible leg assembly 44a is in the collapsed position, the first articulating support bracket assembly 52a collapses down against the first end portion 36 of the lower surface 26 of the tabletop 12, with one leg 50a disposed against the first side portion 40 of the lower surface 26 and the other leg 50a disposed against the second side portion 42 of the lower surface 26.

[0032] Similarly, the second collapsible leg assembly

44b includes a second attachment bar 46b that is attached to the lower surface 26 of the tabletop 12 within the central portion 30. In a preferred embodiment, the second attachment bar 46b is secured to the lower surface 26 with fasteners, such as screws. A second cross tube 48b is rotatably attached to the lower surface 26 adjacent and parallel to the outer edge of the second end perimeter portion 28b. The opposing ends of the second cross tube 48b are rotatably received in apertures in the opposing side rails 64. The second cross tube 48b is also rotatably secured to the lower surface 26 by a pair of retainer clips 56 that are described in more detail hereinafter.

[0033] The second collapsible leg assembly 44b includes a second pair of legs 50b that are attached to and extend from the second cross tube 48b, and a second articulated support bracket assembly 52b having a first end that is rotatably attached to the second pair of legs 50b and a second end that is rotatably attached to the second attachment bar 46b. The second articulated support bracket assembly 52b includes an inner bracket portion 66b and an outer bracket portion 68b. The inner bracket portion 66b is rotatably attached at its distal end to the second attachment bar 46b and at its proximal end to the inner end of the outer bracket portion 68b. The outer ends of the outer bracket portion 68b are rotatably attached to the second pair of legs 50b.

[0034] As shown in FIGS. 2B, 3B, 4A and 4B, when the second collapsible leg assembly 44b is in the collapsed position, the second articulating support bracket assembly 52b collapses down against the second end portion 38 of the lower surface 26 of the tabletop 12, with one leg 50b disposed against the first side portion 40 of the lower surface 26 and the other leg 50b disposed against the second side portion 42 of the lower surface 26. It should be noted that the first and second side portions 40 and 42 are sufficiently wide to accommodate the legs 50a and 50b in a side-by-side arrangement.

[0035] As shown in FIGS. 4A, 5 and 6, a preferred embodiment of the tabletop 12 includes retainer clips 56 that are integrally molded into the lower surface 26. Each retainer clip 56 comprises two opposing sections disposed to either side of a cross tube 48a-48b. One of the sections of each clip 56 is integrally molded as part of the first end perimeter portion 28b and the other section is integrally molded as part of the first end portion 36. At the other end of the tabletop 12, one of the sections of each clip 56 is integrally molded as part of the second end perimeter portion 28b and the other section is integrally molded as part of the second end portion 38. In a preferred embodiment, two retainer clips 56 are provided at each end of the tabletop 12 to rotatably secure the first cross tube 48a between the first end perimeter portion 28b and the first end portion 36, and to rotatably secure the second cross tube 48b between the second end perimeter portion 28b and the second end portion 38. The retainer clips 56 are dimensioned so that the cross tubes 48a-48b can be pushed into a snap-fit engagement that holds the tubes 48a-48b in place while still allowing

the tubes to rotate when the leg assemblies 44a-44b are moved between collapsed and extended positions.

[0036] As depicted in FIG. 3B, a plurality of first end perimeter depressions 54 and second end perimeter depressions 54 are distributed along the first end perimeter portion 28b and the second end perimeter portion 28b in the lower surface 26 of the tabletop 12. Details of the depressions 54 are depicted in FIGS. 5 and 6. These depressions 54 provide additional structural support between the lower surface 26 and the upper surface 14 of the tabletop within the first and second end perimeter portions 28b where the first and second cross tubes 48a and 48b are attached. In a preferred embodiment, five depressions 54 are provided within each end perimeter portion 28b.

[0037] As shown in FIG. 6, one section of each retainer clip 56 is disposed between two adjacent end perimeter depressions 54 to enhance the structural rigidity of the clip 56.

[0038] As shown in FIG. 7, a preferred embodiment includes depressions 60a-60b and 62a-62b that provide structural support between the lower surface 26 and the upper surface 14 of the tabletop 12. The first end depressions 60a are formed in the first end portion 36 of the lower surface 26 of the tabletop 12 and the second end depressions 60b are formed in the second end portion 38 of the lower surface 26 of the tabletop 12. As shown in FIG. 8A, each of the first end depressions 60a and second end depressions 60b occupies the area A1 in the lower surface 26 and has the height H1 measured between the lower surface 26 and the upper surface 14 of the tabletop 12.

[0039] With continued reference to FIG. 7, the first side depressions 62a are formed in the first side portion 40 of the lower surface 26 of the tabletop 12 and the second side depressions 62b are formed in the second side portion 42 of the lower surface 26 of the tabletop 12. As shown in FIG. 8B, each of the first side depressions 62a and second side depressions 62b occupies the area A2 in the lower surface 26 and has the height H2 measured between the lower surface 26 and the upper surface 14 of the tabletop 12.

[0040] In a preferred embodiment of the tabletop 12, the area A1 is greater than the area A2, and the height H1 is greater than the height H2.

[0041] Further details regarding the shape and structure of a preferred embodiment of the depressions 60a-60b and 62a-62b may be found in U.S. Patent No. 11,147,377, the entirety of which is incorporated herein by reference.

[0042] As depicted in FIGS. 3B, 9A and 9B, a preferred embodiment of the cooler table 10 includes a set of right-angle brackets 70 to enhance the strength of the attachment of the side rails 64 to the first and second end perimeter portions 28b of the bottom surface 26 of the tabletop 12. The brackets 70, which are preferably constructed from steel, include apertures 72 in each of their plates through which fasteners pass to secure the plates

70 and the side rail 64 to the tabletop 12. In a preferred embodiment, the brackets 70 are received in rectangular recesses 74 molded into the first and second side portions 40 and 42 of the bottom surface 26 of the tabletop 12.

[0043] FIG. 10A depicts typical dimensions of an embodiment of the tabletop 12. Those of skill in the art will appreciate that other dimensions could be selected, and that the dimensions shown herein do not limit the scope of the invention. FIG. 10B depicts dimensions of a most preferred embodiment, in which the sidewalls of the drain aperture 18 include a chamfer at the top and bottom edges at angles of 15.4 and 20.5 degrees, respectively. This chamfered shape makes removal of the tabletop 12 from the blow molding machine easier.

[0044] The foregoing description of preferred embodiments for this invention have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise form disclosed. Obvious modifications or variations are possible in light of the above teachings. The embodiments are chosen and described in an effort to provide the best illustrations of the principles of the invention and its practical application, and to thereby enable one of ordinary skill in the art to utilize the invention in various embodiments and with various modifications as are suited to the particular use contemplated. All such modifications and variations are within the scope of the invention as determined by the appended claims when interpreted in accordance with the breadth to which they are fairly, legally, and equitably entitled.

Claims

1. A cooler table comprising:

a blow-molded tabletop comprising:

an upper surface having outer edges and an upper drain aperture centrally disposed between the outer edges, wherein the upper surface slopes downward from the outer edges toward the upper drain aperture to accommodate flow of liquid from the outer edges toward the upper drain aperture;
a perimeter lip having:

inner walls extending upward from the outer edges of the upper surface of the tabletop; and
outer walls spaced apart from the inner walls, the outer walls comprising a first side outer wall, a second side outer wall, a first end outer wall, and a second end outer wall;

a lower surface disposed below the upper

surface and spanning between the outer walls of the perimeter lip, the lower surface comprising:

an outer perimeter portion disposed adjacent to the outer walls of the perimeter lip, the outer perimeter portion including:

a first side perimeter portion disposed adjacent to the first side outer wall of the perimeter lip;
a second side perimeter portion disposed adjacent to the second side outer wall of the perimeter lip;
a first end perimeter portion disposed adjacent to the first end outer wall of the perimeter lip; and
a second end perimeter portion disposed adjacent to the second end outer wall of the perimeter lip;

a central portion disposed between the first and second side perimeter portions and between the first and second end perimeter portions, the central portion having a lower drain aperture that is aligned with the upper drain aperture;
a first end portion disposed between the central portion and the first end perimeter portion;
a second end portion disposed between the central portion and the second end perimeter portion;
a first side portion disposed between the central portion and the first side perimeter portion;
a second side portion disposed between the central portion and the second side perimeter portion,

a first collapsible leg assembly that is operable to move between a collapsed position in which the first collapsible leg assembly is disposed against the lower surface of the tabletop and an extended position in which the first collapsible leg assembly extends outward from the lower surface of the tabletop, the first collapsible leg assembly comprising:

a first attachment bar secured to the lower surface of the tabletop within the central portion;
a first cross tube rotatably attached to the lower surface of the tabletop and disposed adjacent and parallel to the first end perimeter portion;
a first pair of legs attached to and extending

from the first cross tube;
 a first articulated support bracket assembly having a first end rotatably attached to the first pair of legs and a second end rotatably attached to the first attachment bar,
 wherein, when the first collapsible leg assembly is in the collapsed position,

the first articulating support bracket assembly is folded against the first end portion of the tabletop,
 one leg of the first pair of legs is disposed against the first side portion of the lower surface of the tabletop, and
 another leg of the first pair of legs is disposed against the second side portion of the lower surface of the tabletop;
 and

a second collapsible leg assembly that is operable to move between a collapsed position in which the second collapsible leg assembly is disposed against the lower surface of the tabletop and an extended position in which the second collapsible leg assembly extends outward from the lower surface of the tabletop, the second collapsible leg assembly comprising:

a second attachment bar secured to the lower surface of the tabletop within the central portion;
 a second cross tube rotatably attached to the lower surface of the tabletop and disposed adjacent and parallel to the second end perimeter portion;
 a second pair of legs attached to and extending from the second cross tube;
 a second articulated support bracket assembly having a first end rotatably attached to the second pair of legs and a second end rotatably attached to the second attachment bar,
 wherein, when the second collapsible leg assembly is in the collapsed position,

the second articulating support bracket assembly folds against the second end portion of the tabletop,
 one leg of the second pair of legs is disposed against the first side portion of the lower surface of the tabletop, and
 another leg of the second pair of legs is disposed against the second side portion of the lower surface of the tabletop.

2. The cooler table of Claim 1 wherein on the lower surface:

the central portion is spaced apart from the upper surface by a first distance;
 the first end portion is spaced apart from the upper surface by a second distance;
 the second end portion is spaced apart from the upper surface by the second distance;
 the first side portion is spaced apart from the upper surface by a third distance;
 the second side portion is spaced apart from the upper surface the third distance;
 wherein the first distance has a largest value that is greater than a largest value of the second distance;
 wherein the second distance has a largest value that is greater than a largest value of the third distance.

3. The cooler table of Claim 1 or Claim 2 further comprising:

two or more first retainer clips that are integrally molded into the lower surface of the tabletop for rotatably securing the first cross tube to the lower surface of the tabletop between the first end perimeter portion and the first end portion;
 and

two or more second retainer clips that are integrally molded into the lower surface of the tabletop for rotatably securing the second cross tube to the lower surface of the tabletop between the second end perimeter portion and the second end portion.

4. The cooler table of Claim 3 wherein:

each of the first retainer clips comprises a first section disposed within the first end perimeter portion, and a second section disposed within the first end portion; and
 each of the second retainer clips comprises a first section disposed within the second end perimeter portion, and a second section disposed within the second end portion.

5. The cooler table of Claim 3 or Claim 4 further comprising:

a plurality of first end perimeter depressions in the lower surface of the tabletop distributed along the first end perimeter portion, the first end perimeter depressions configured to provide structural support between the lower surface of the tabletop and the upper surface of the tabletop, wherein at least a portion of each of the two or more first retainer clips is disposed between two of the first end perimeter depressions;
 a plurality of second end perimeter depressions in the lower surface of the tabletop distributed

along the second end perimeter portion, the second end perimeter depressions configured to provide structural support between the lower surface of the tabletop and the upper surface of the tabletop, wherein at least a portion of each of the two or more second retainer clips is disposed between two of the second end perimeter depressions. 5

6. The cooler table of any one of Claims 1 to 5 further comprising an integrally molded tubular section that extends through the tabletop to fluidly connect the upper and lower drain apertures, so that liquid can enter the upper drain aperture, flow through the tubular section, and exit the lower drain aperture. 10 15

7. The cooler table of any one of Claims 1 to 6 further comprising:

a plurality of first end depressions formed in the first end portion of the lower surface of the tabletop that provide structural support between the lower surface and the upper surface of the tabletop, wherein each of the first end depressions occupies an area A1 in the lower surface and has a height H1 measured between the lower surface and the upper surface of the tabletop; 20 25

a plurality of second end depressions formed in the second end portion of the lower surface of the tabletop that provide structural support between the lower surface and the upper surface of the tabletop, wherein each of the second end depressions occupies the area A1 in the lower surface and has the height H1 measured between the lower surface and the upper surface of the tabletop; 30 35

a plurality of first side depressions formed in the first side portion of the lower surface of the tabletop that provide structural support between the lower surface and the upper surface of the tabletop, wherein each of the first side depressions occupies an area A2 in the lower surface and has a height H2 measured between the lower surface and the upper surface of the tabletop; and 40 45

a plurality of second side depressions formed in the second side portion of the lower surface of the tabletop that provide structural support between the lower surface and the upper surface of the tabletop, wherein each of the second side depressions occupies the area A2 in the lower surface and has the height H2 measured between the lower surface and the upper surface of the tabletop, wherein the area A1 is greater than the area A2, and the height H1 is greater than the height H2. 50 55

8. The cooler table of any one of Claims 1 to 7 wherein

the first and second side portions of the lower surface of the tabletop are each sufficiently wide to accommodate the first pair of legs and the second pair of legs in a side-by-side arrangement.

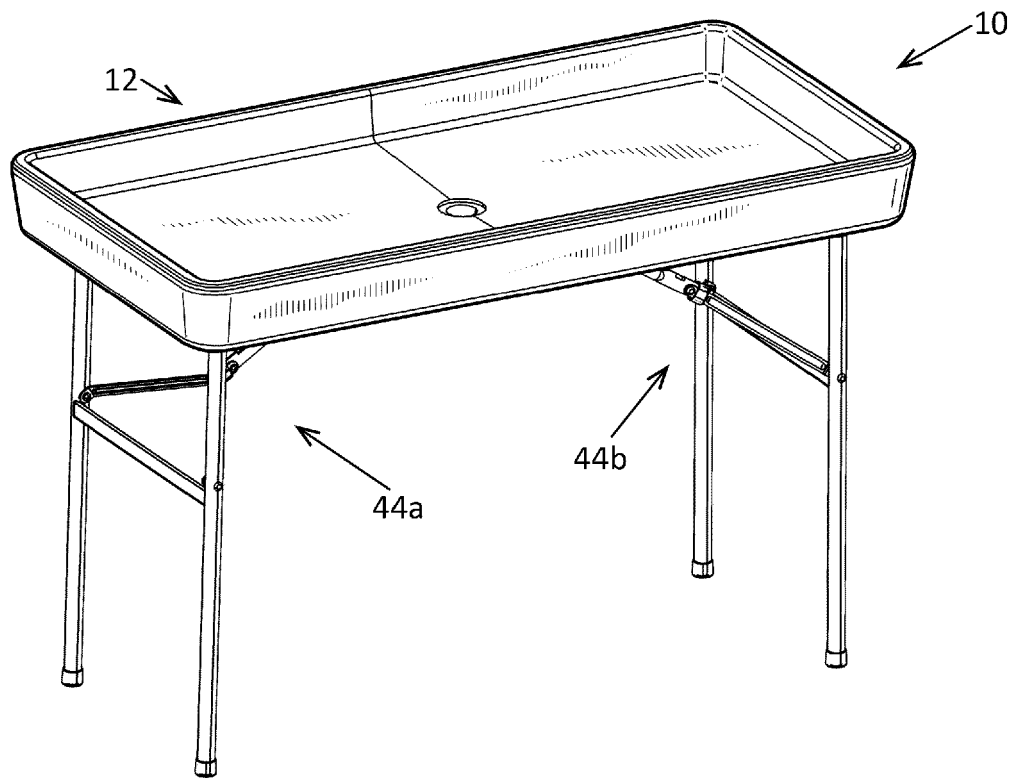


FIG. 1A

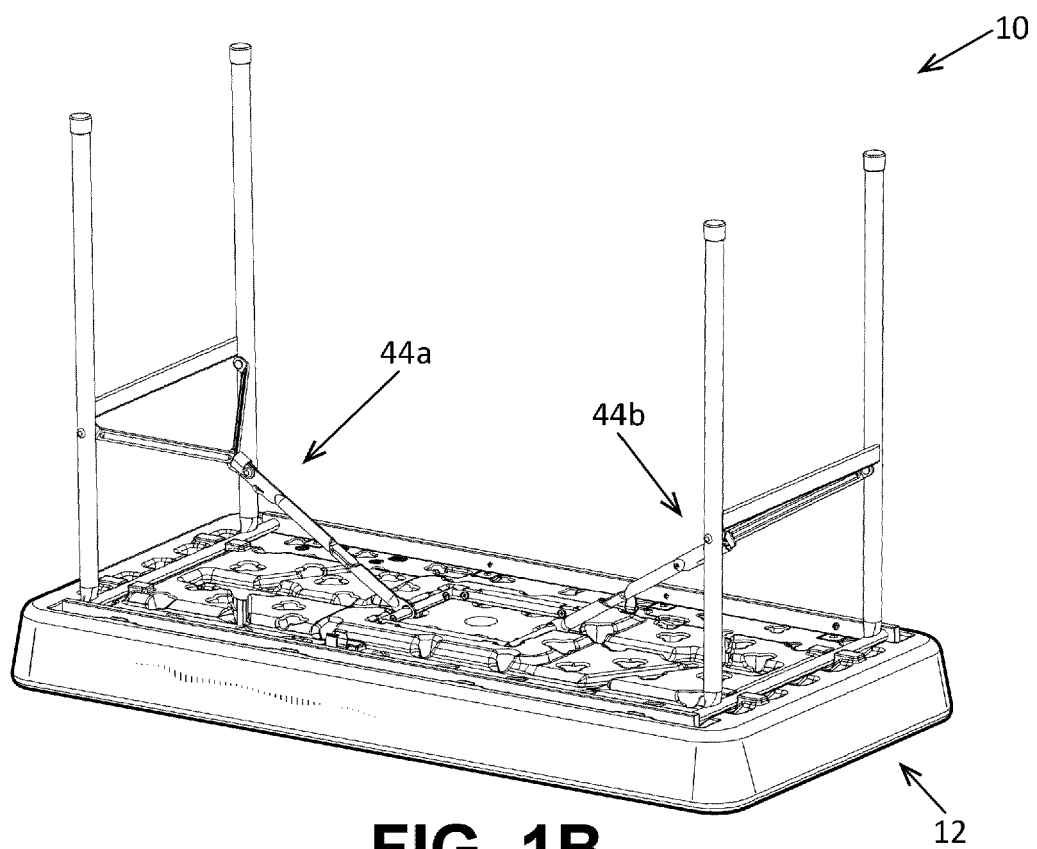
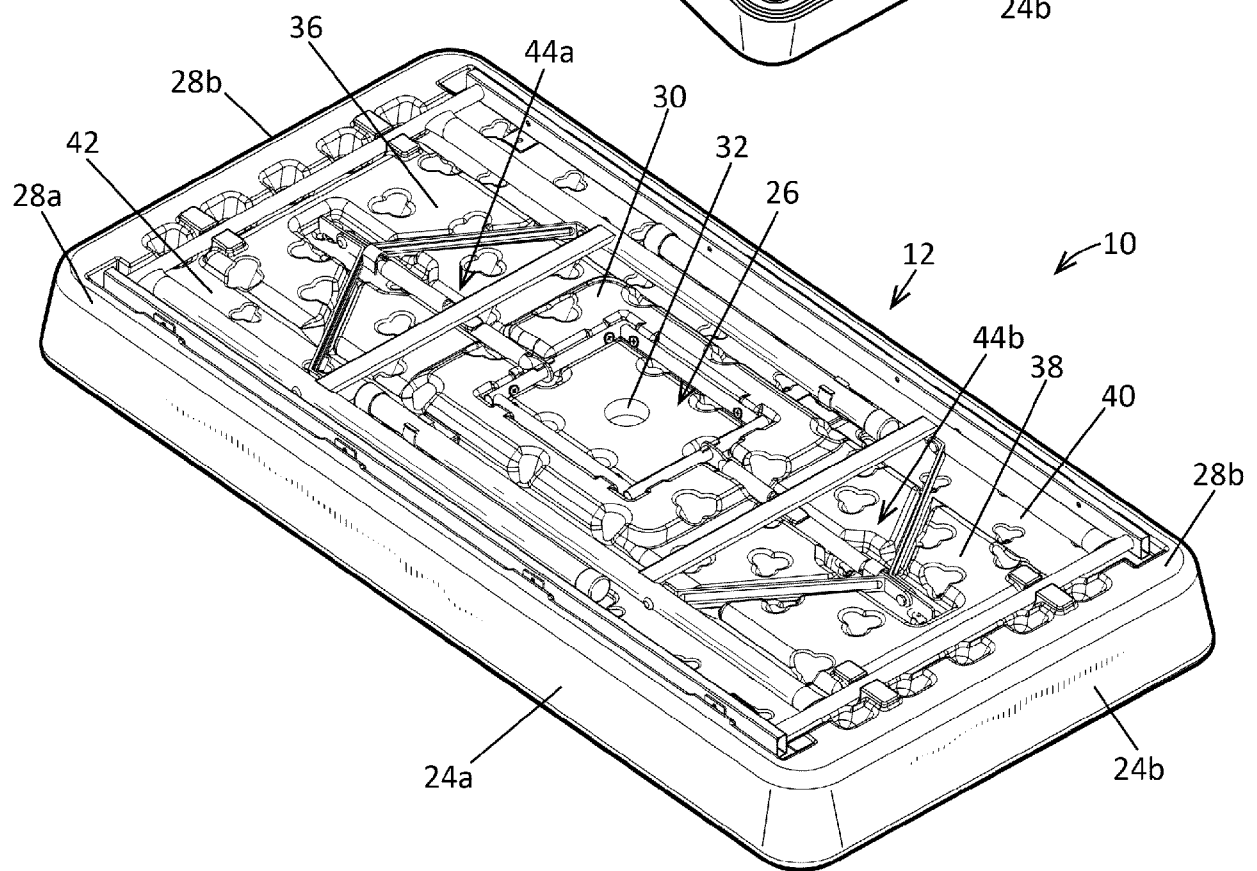
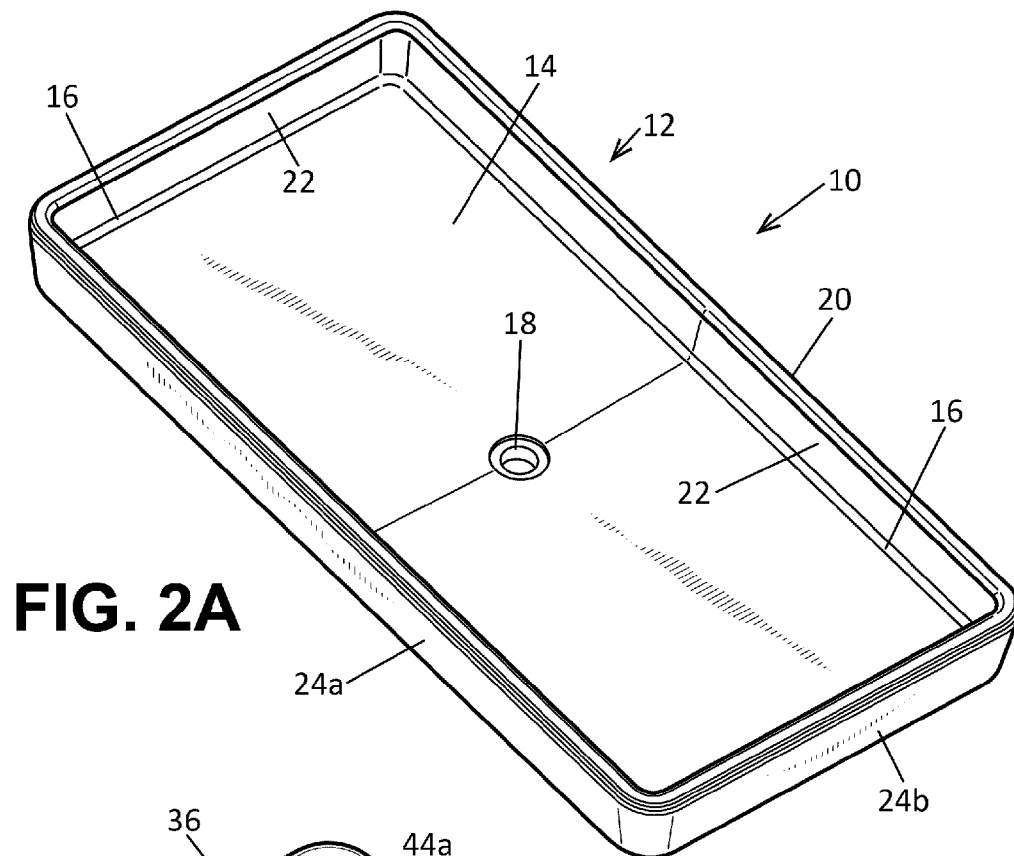


FIG. 1B



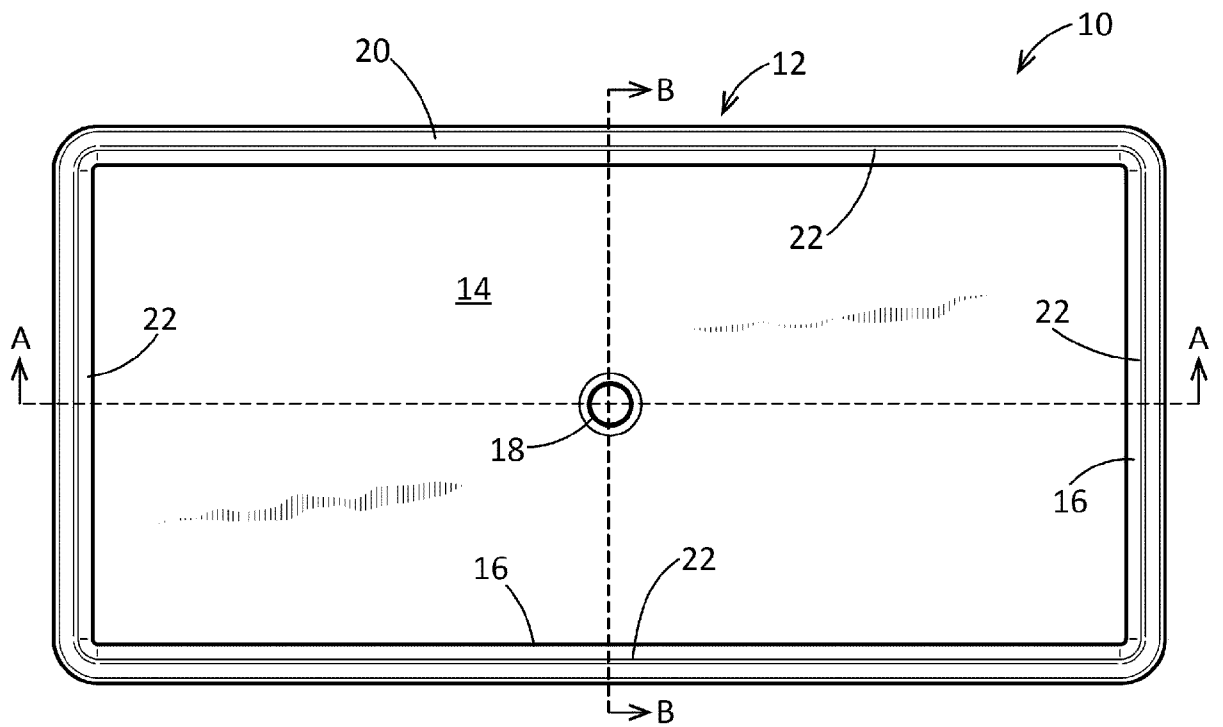


FIG. 3A

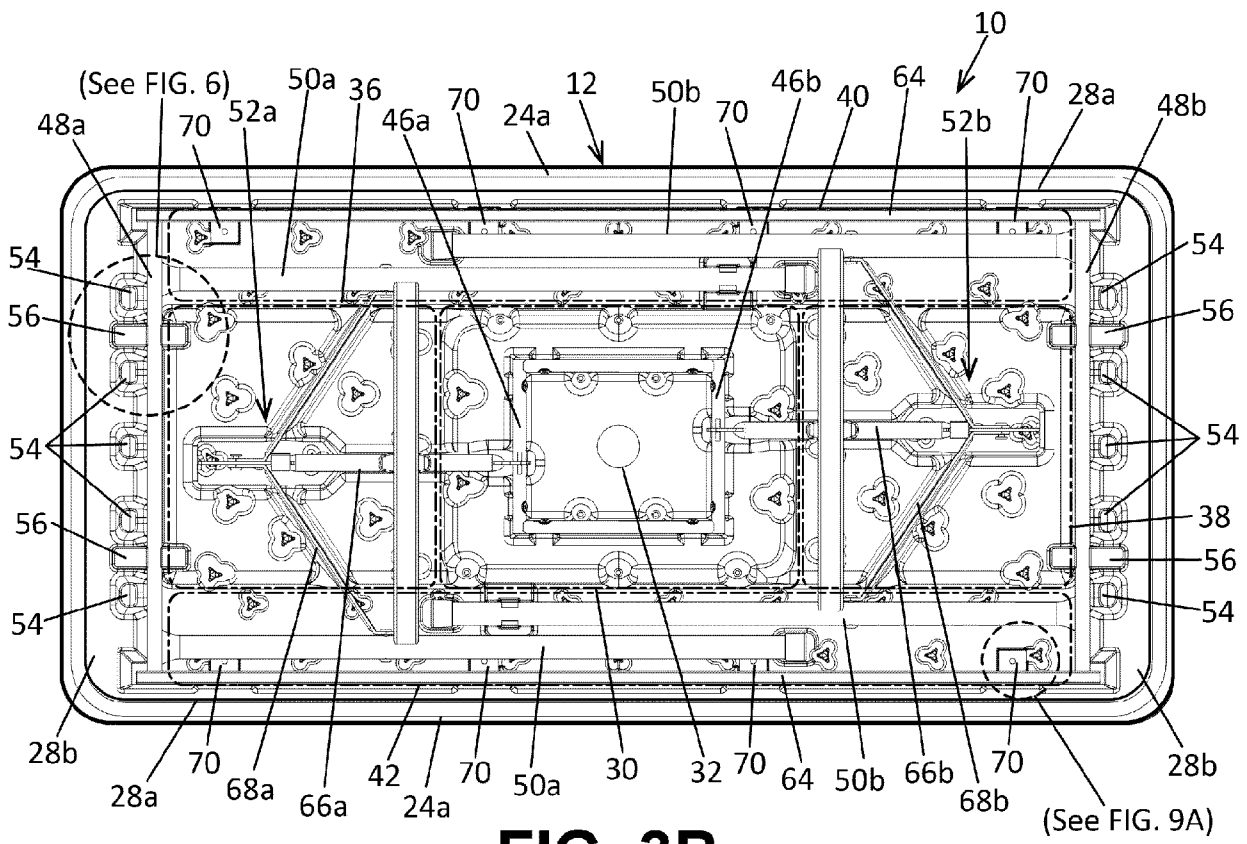
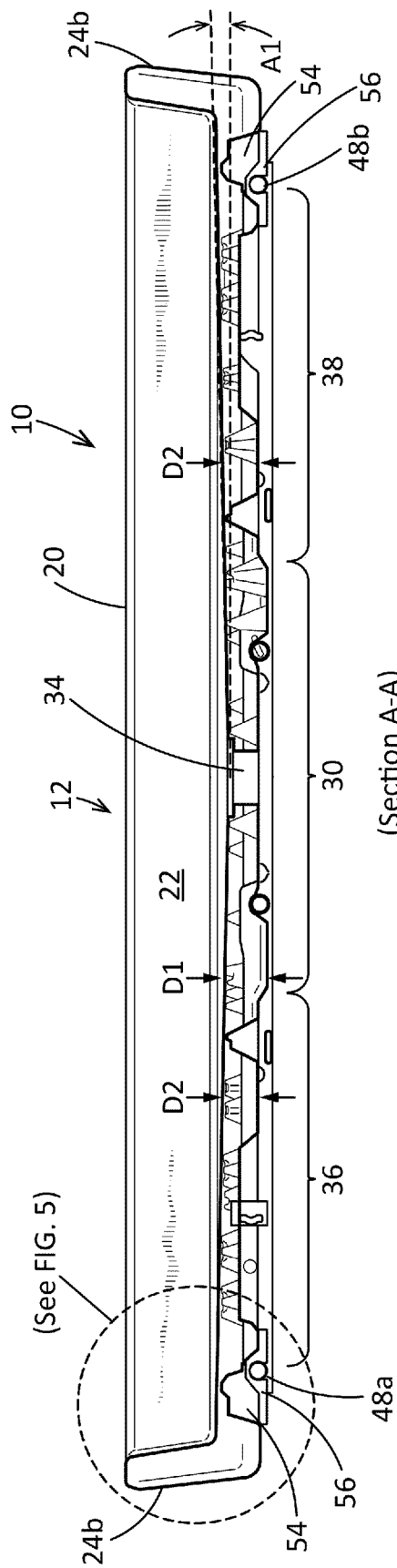
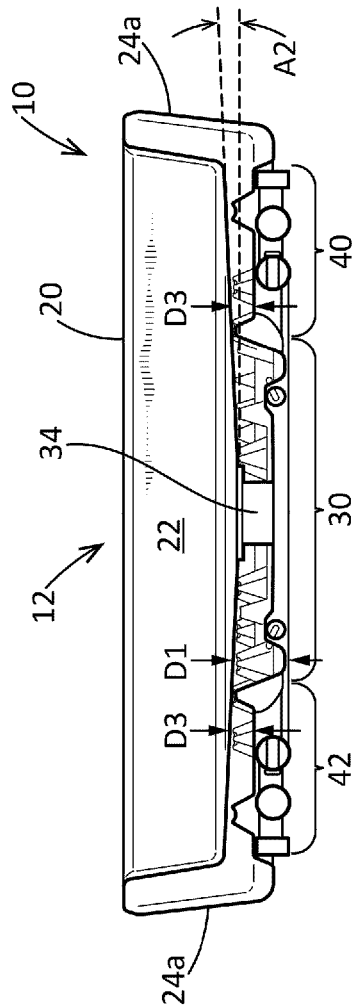


FIG. 3B



(Section A-A)

FIG. 4A



(Section B-B)

FIG. 4B

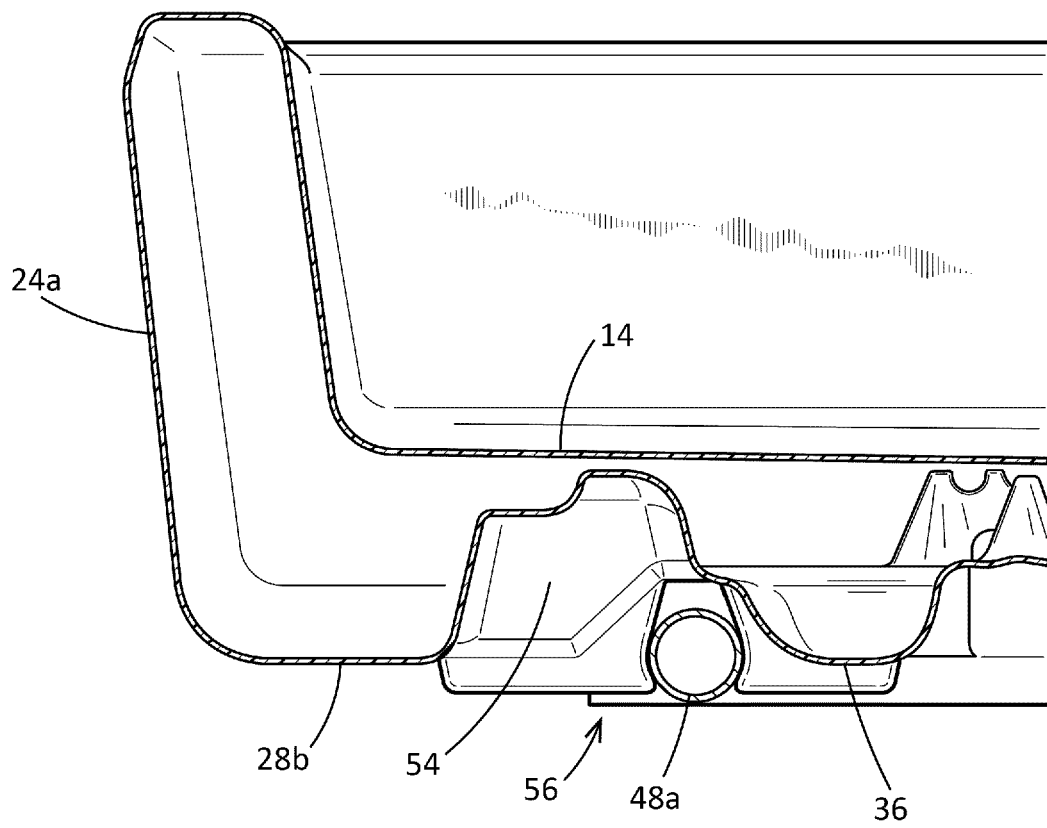


FIG. 5

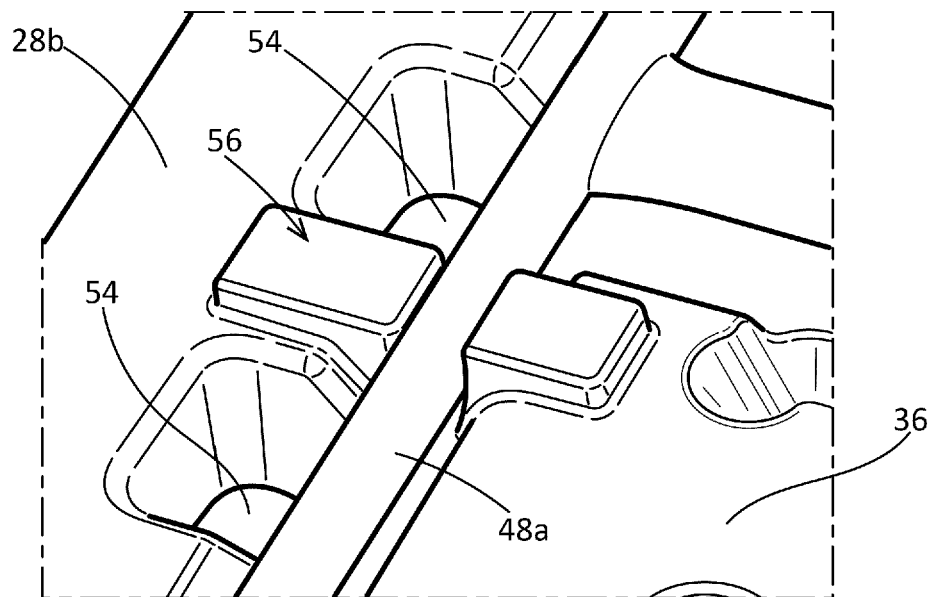


FIG. 6

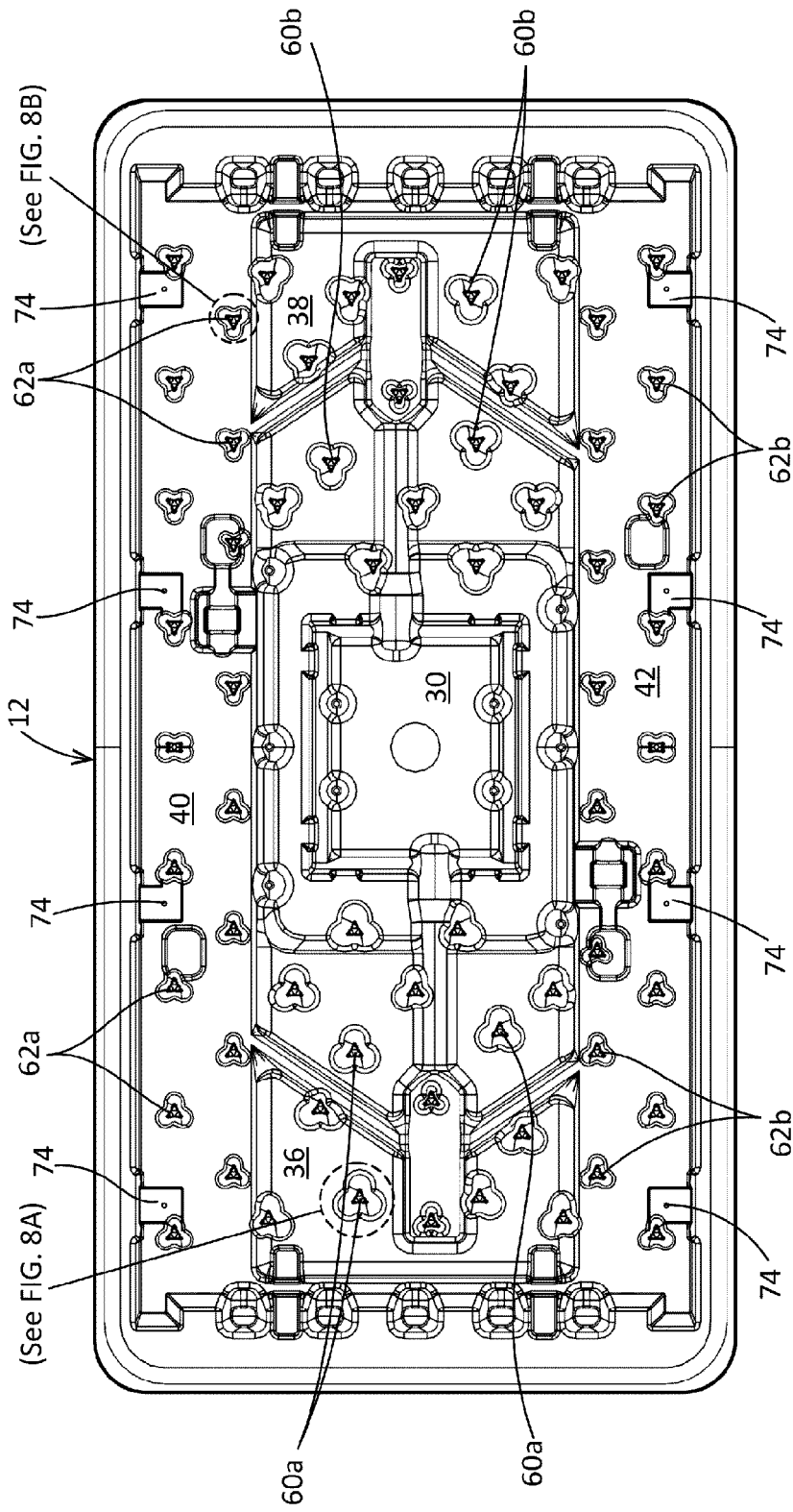


FIG. 7

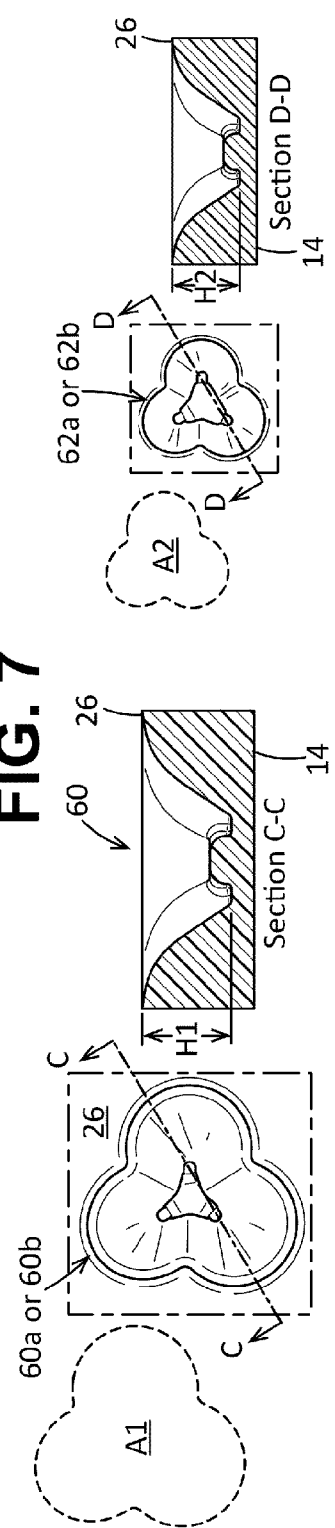


FIG. 8A

FIG. 8B

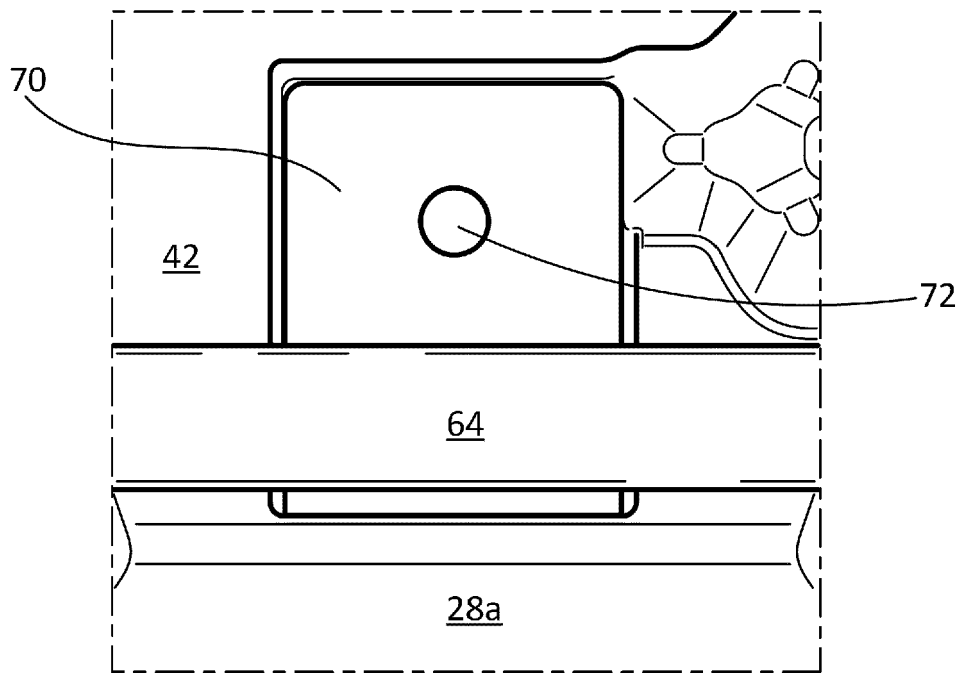


FIG. 9A

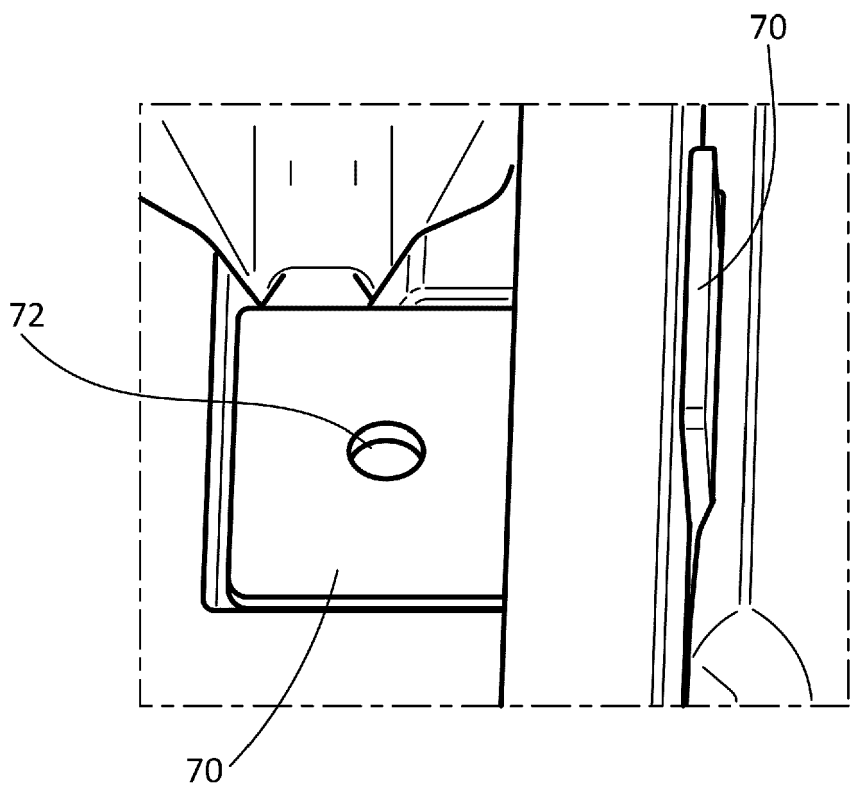


FIG. 9B

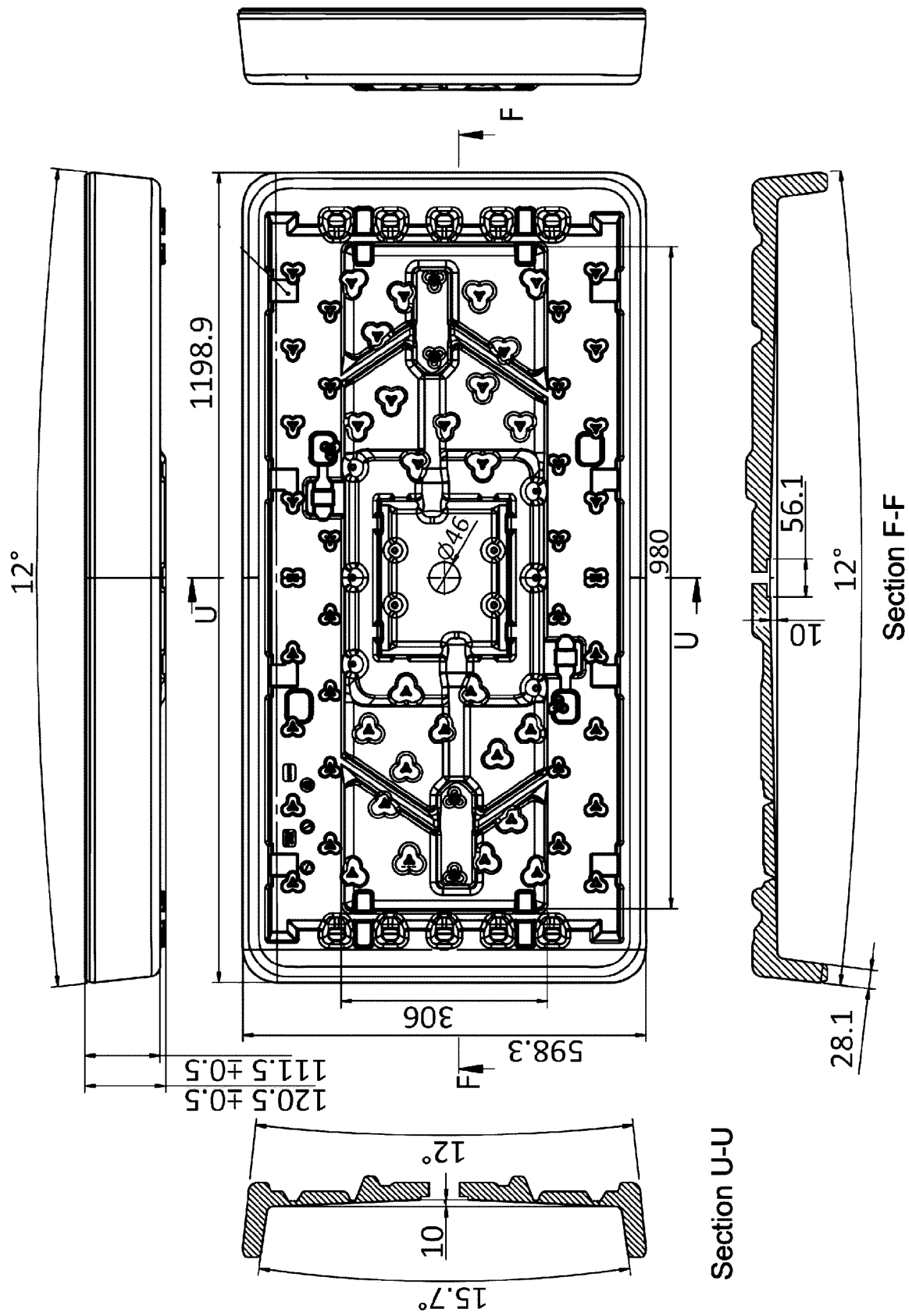
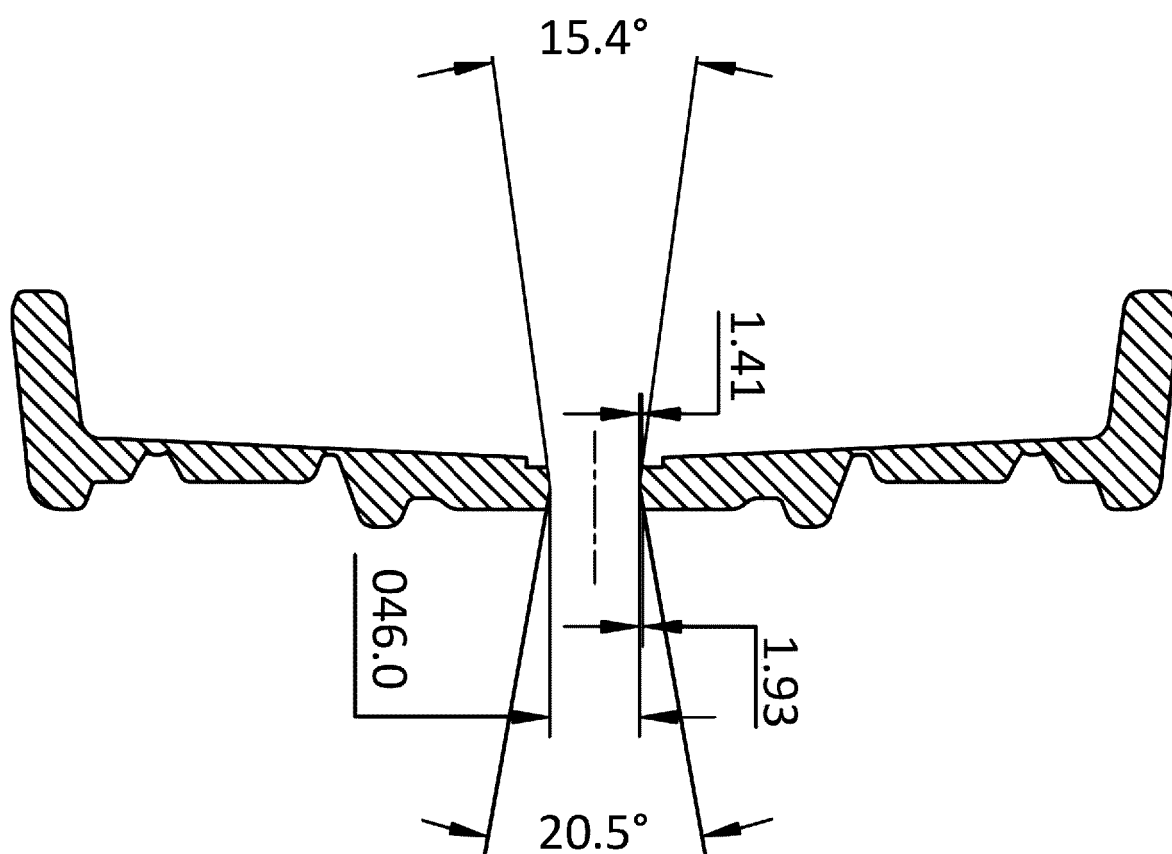


FIG. 10A



Section U-U

FIG. 10B



EUROPEAN SEARCH REPORT

Application Number

EP 24 20 0188

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	Anonymous: "Amazon.com: 7Penn Outdoor Bar Cooler Table with Skirt - 4ft Folding White Patio Table Ice Trough for Deck, Porch, Backyard - Party Cooler Beverage Table with Drain Portable Bartender Table for Beer, Wine, Buffet : Patio, Lawn & Garden", , 27 February 2023 (2023-02-27), pages 1-8, XP093241242, Retrieved from the Internet: URL:https://www.amazon.com/7Penn-Folding-Cooler-Bartender-Station/dp/B0BWP21YKV/ [retrieved on 2025-01-20]	1,3-6,8	INV. A47B3/08 A47F7/00
Y	* pages 1-4 *	7	
X	US 2013/186306 A1 (THORNLEY DAVID [US]) 25 July 2013 (2013-07-25)	1,6,8	
Y	* figures 1,5,6 *	7	
X	US 6 832 492 B1 (KUNKEL ANNA [US] ET AL) 21 December 2004 (2004-12-21) * figures 1-4 *	1,2,6,8	TECHNICAL FIELDS SEARCHED (IPC) A47B A47F
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Place of search The Hague		Date of completion of the search 21 January 2025	Examiner de Cornulier, P
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03.82 (P04C01)

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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21-01-2025

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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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