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(54) **CLAMSHELL BASKETBALL SYSTEM**

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(52) **U.S. Cl.**  
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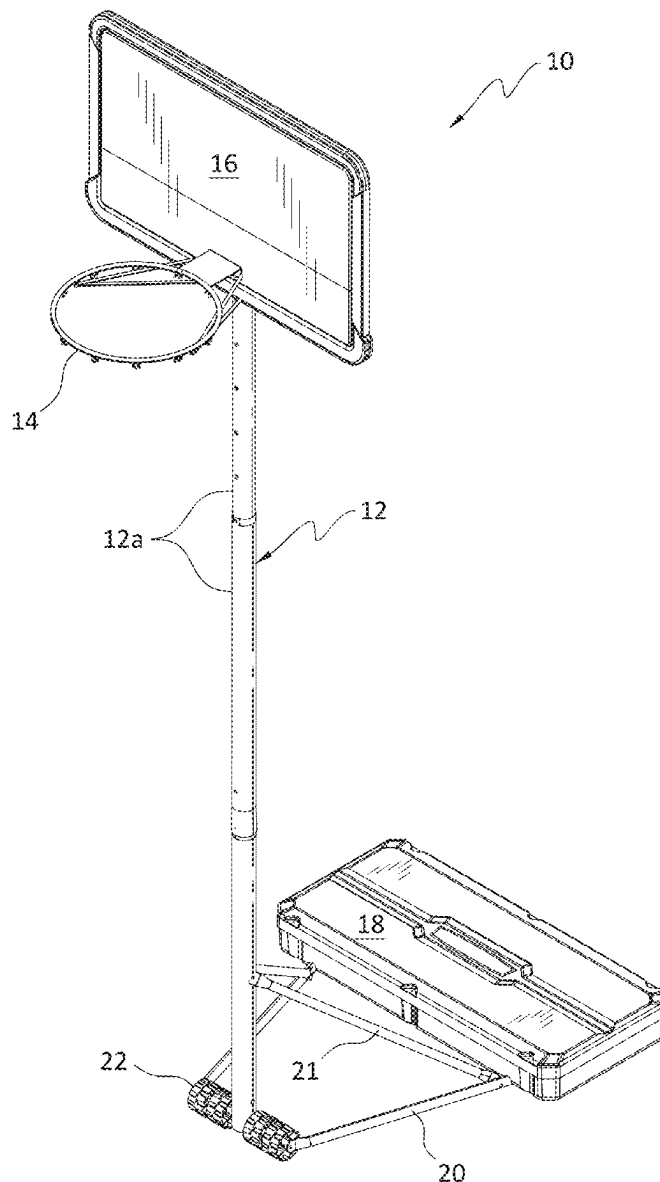
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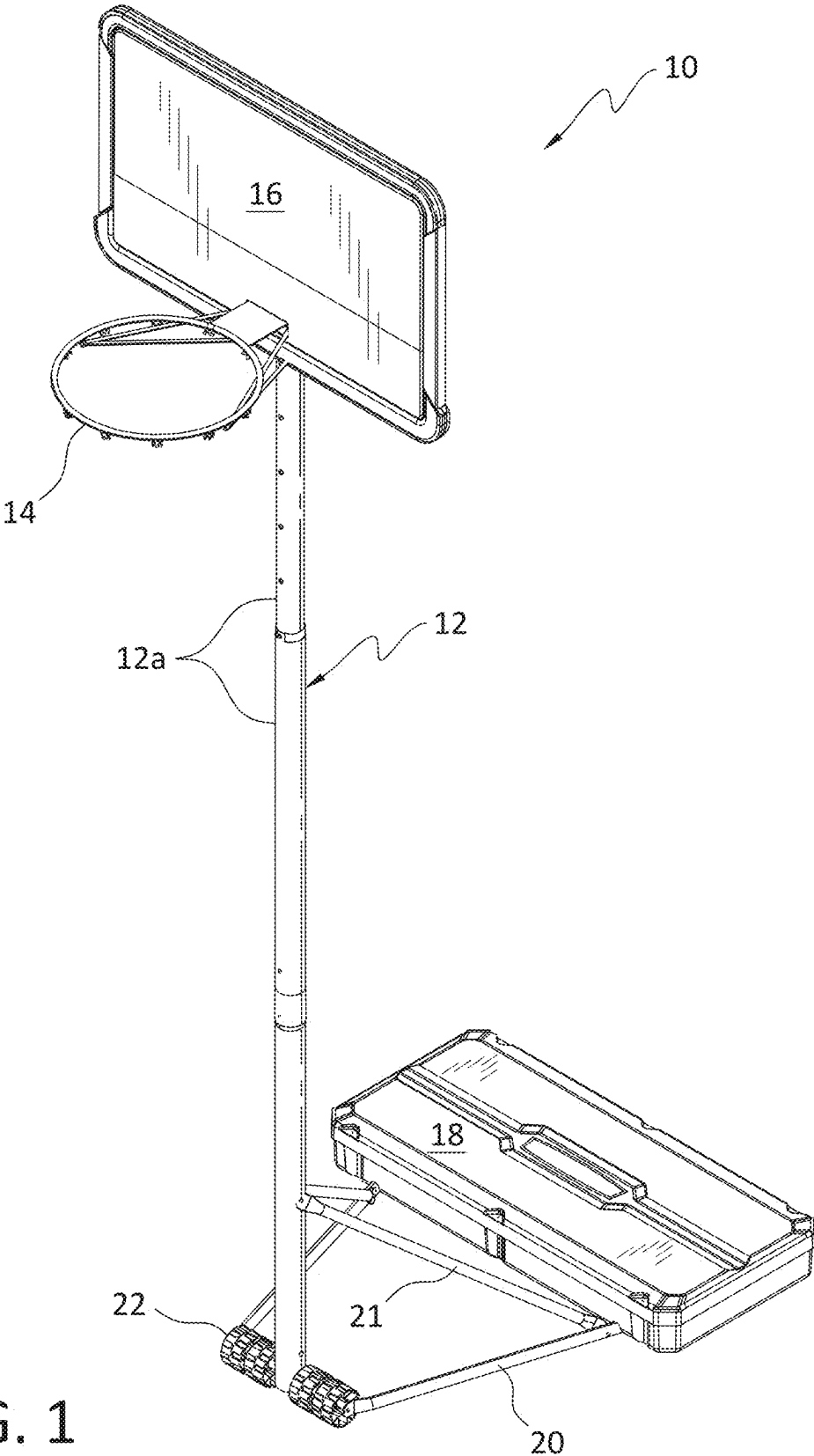
**Related U.S. Application Data**

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(57) **ABSTRACT**

One example of a basketball system includes a goal, a backboard to which the goal is attachable, a support structure that is connectible to the backboard, legs that are attachable to the support structure, and a base to which the legs are attachable, and the base is sized and configured to completely enclose the goal, the backboard, the support structure, and the legs. The backboard is configured to fold when not in use.





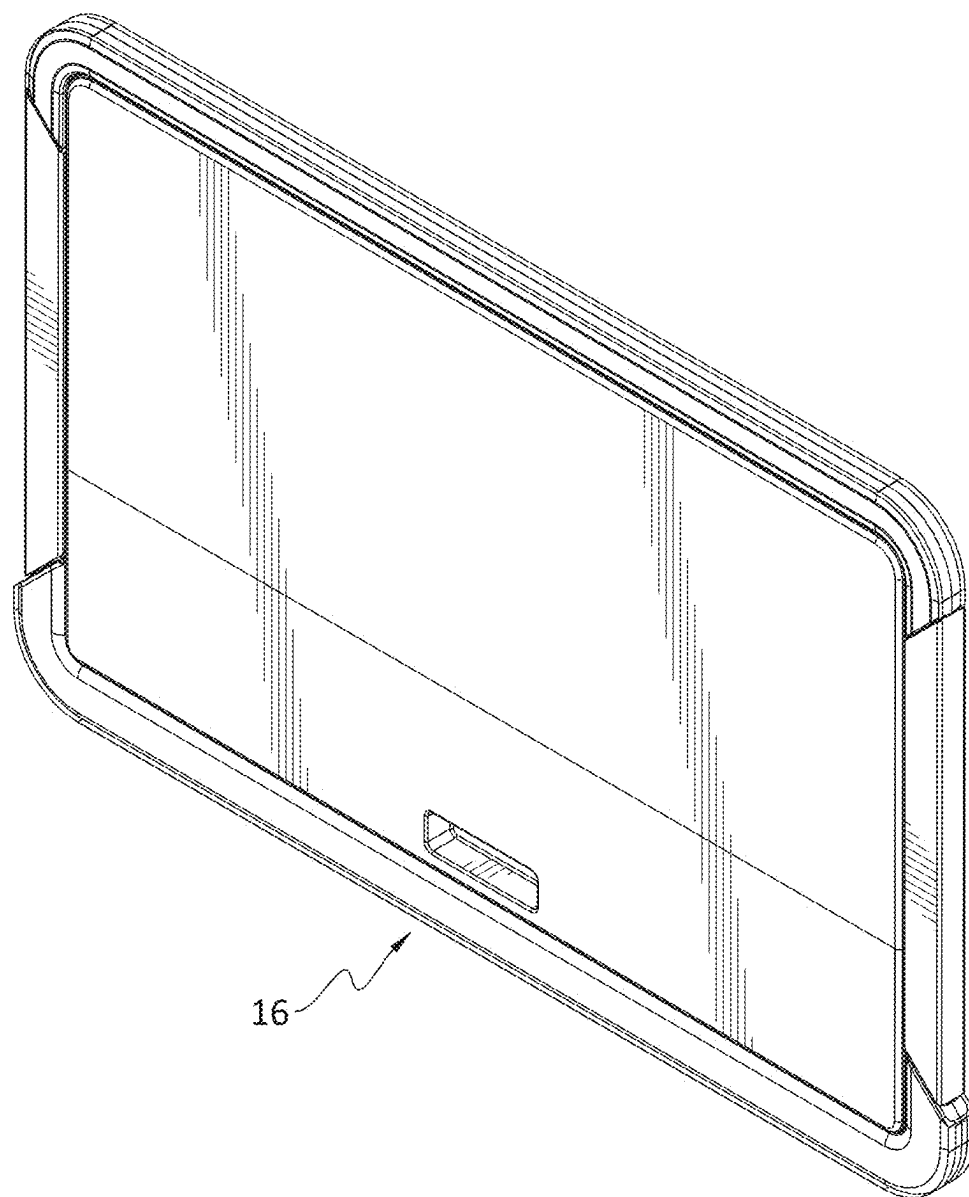


FIG. 2

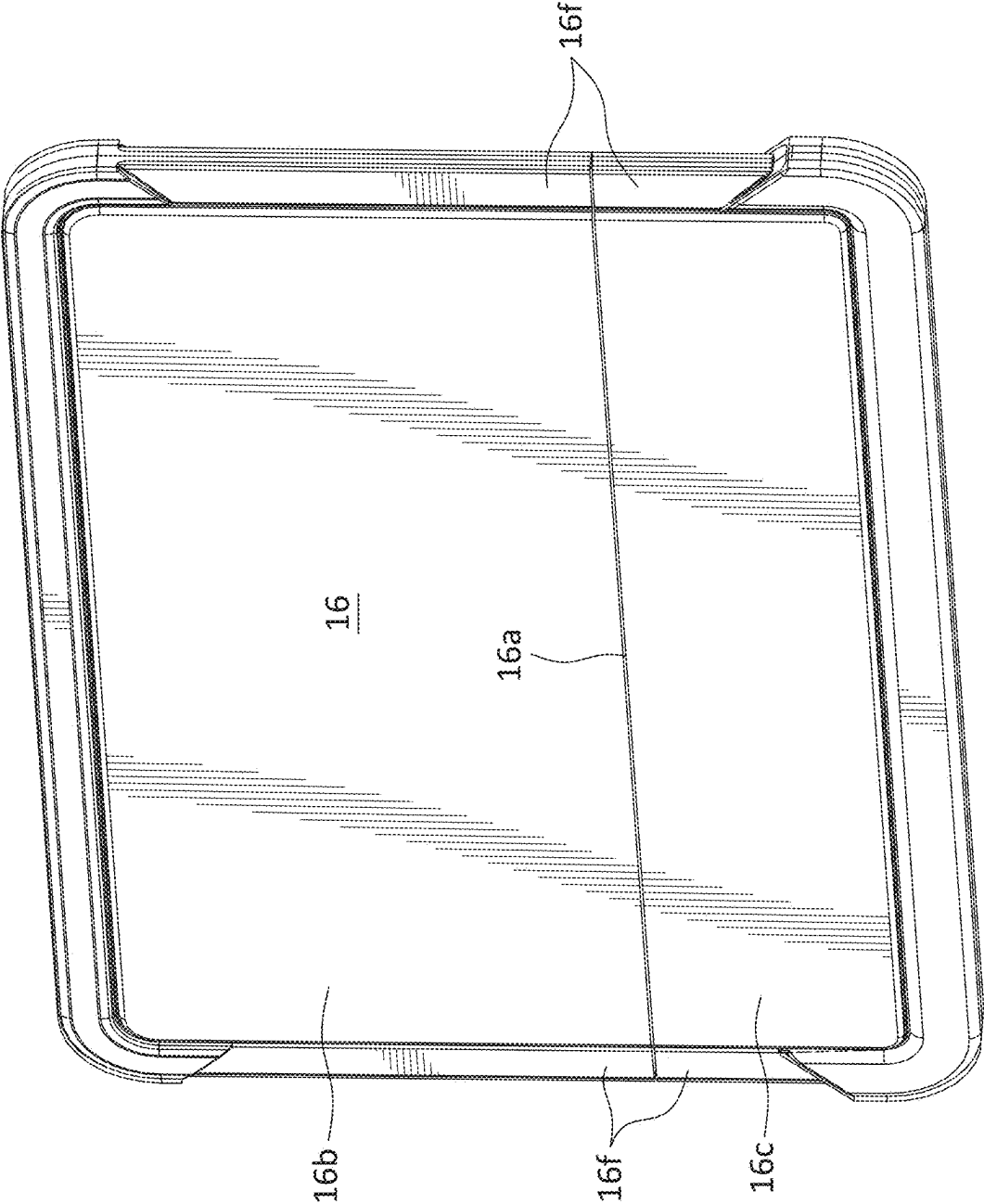


FIG. 3

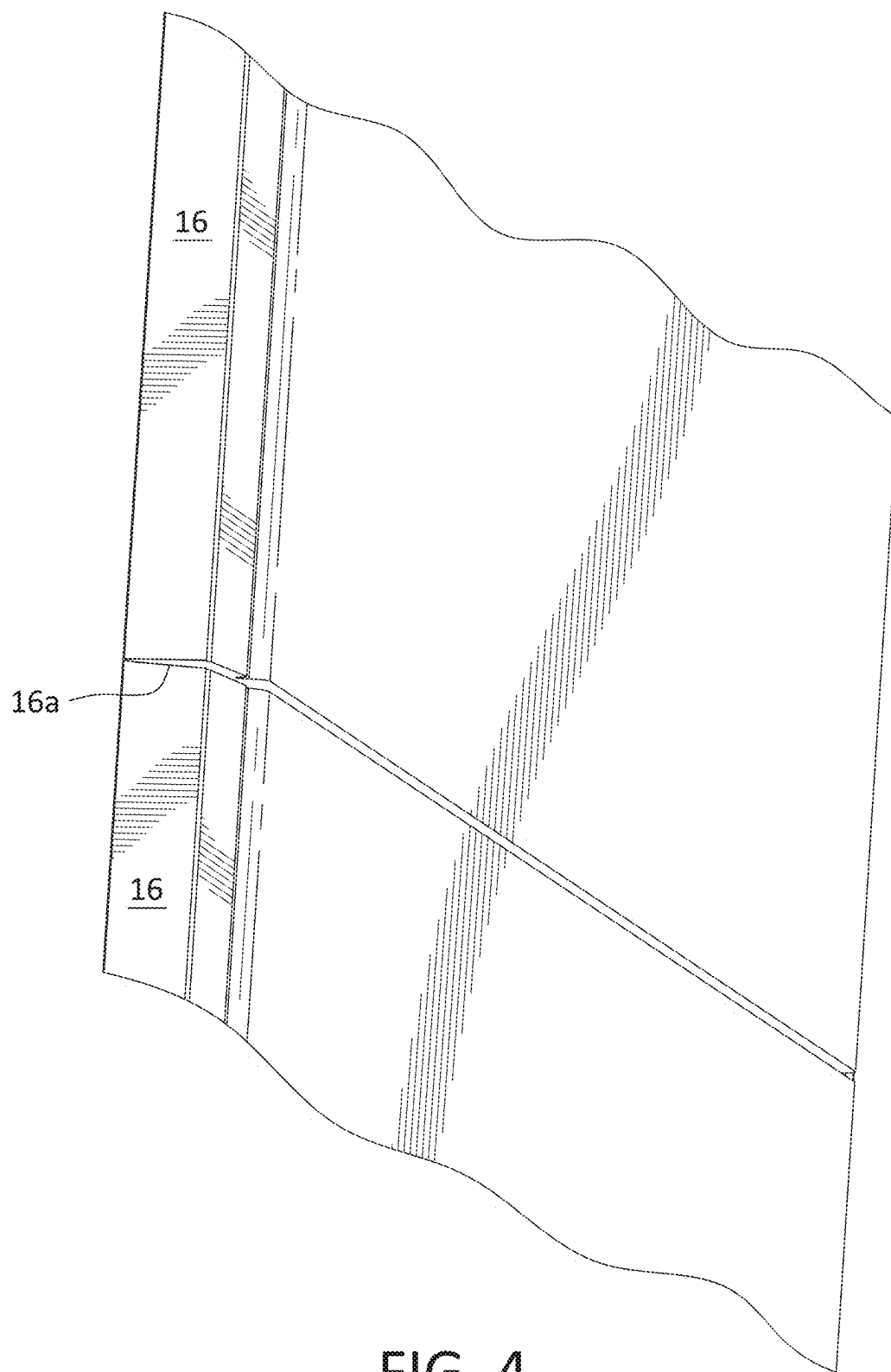


FIG. 4

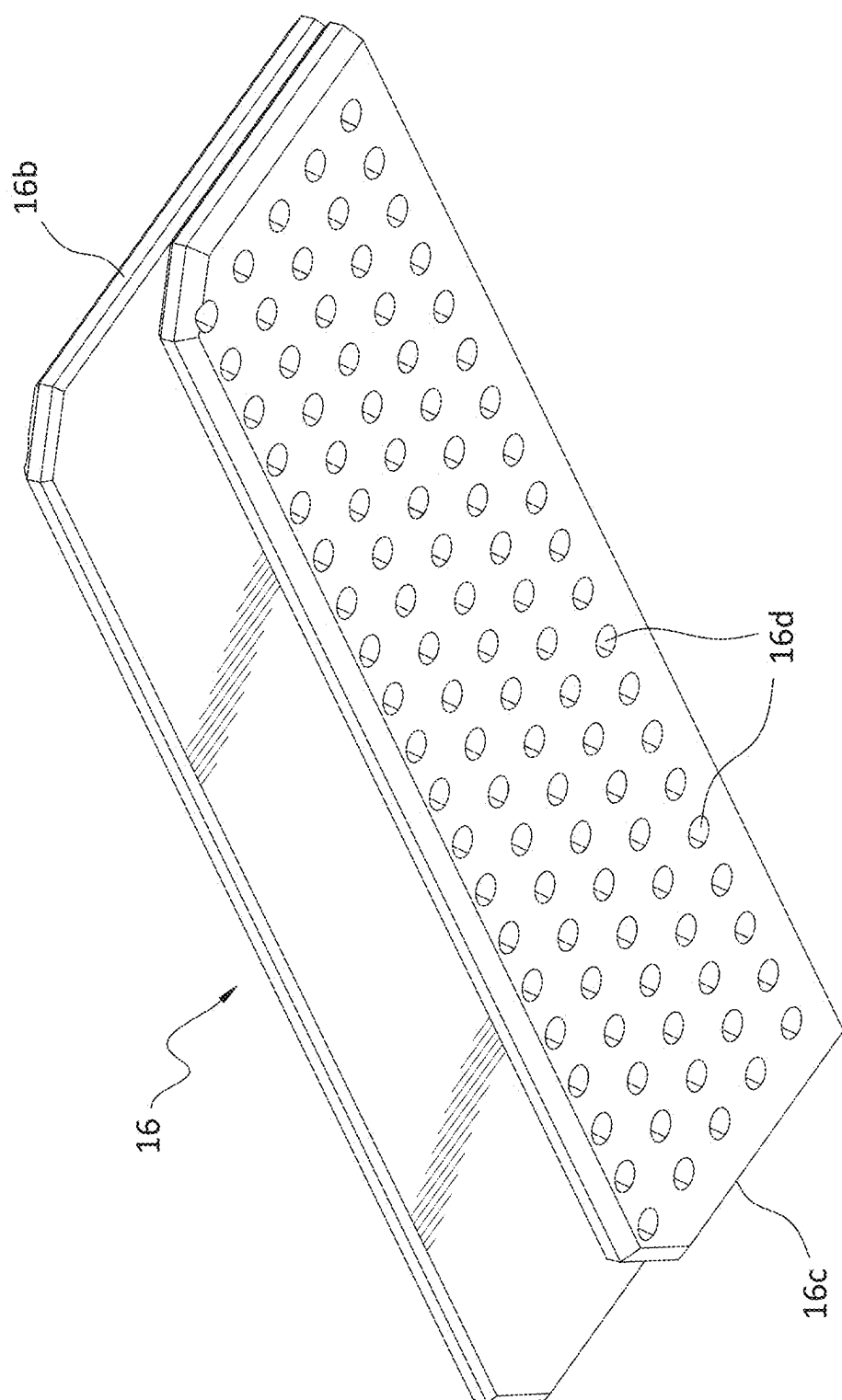


FIG. 5

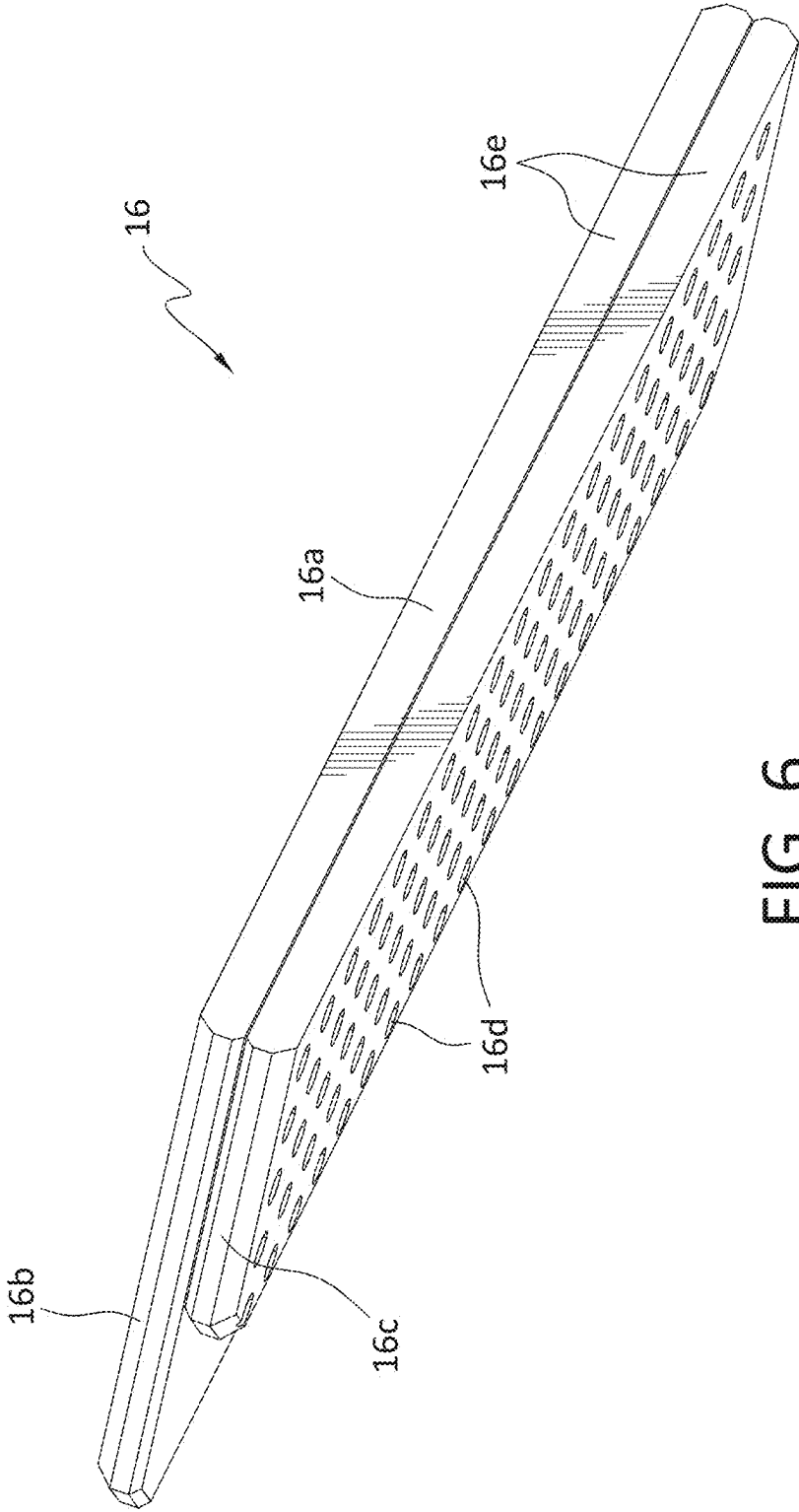


FIG. 6

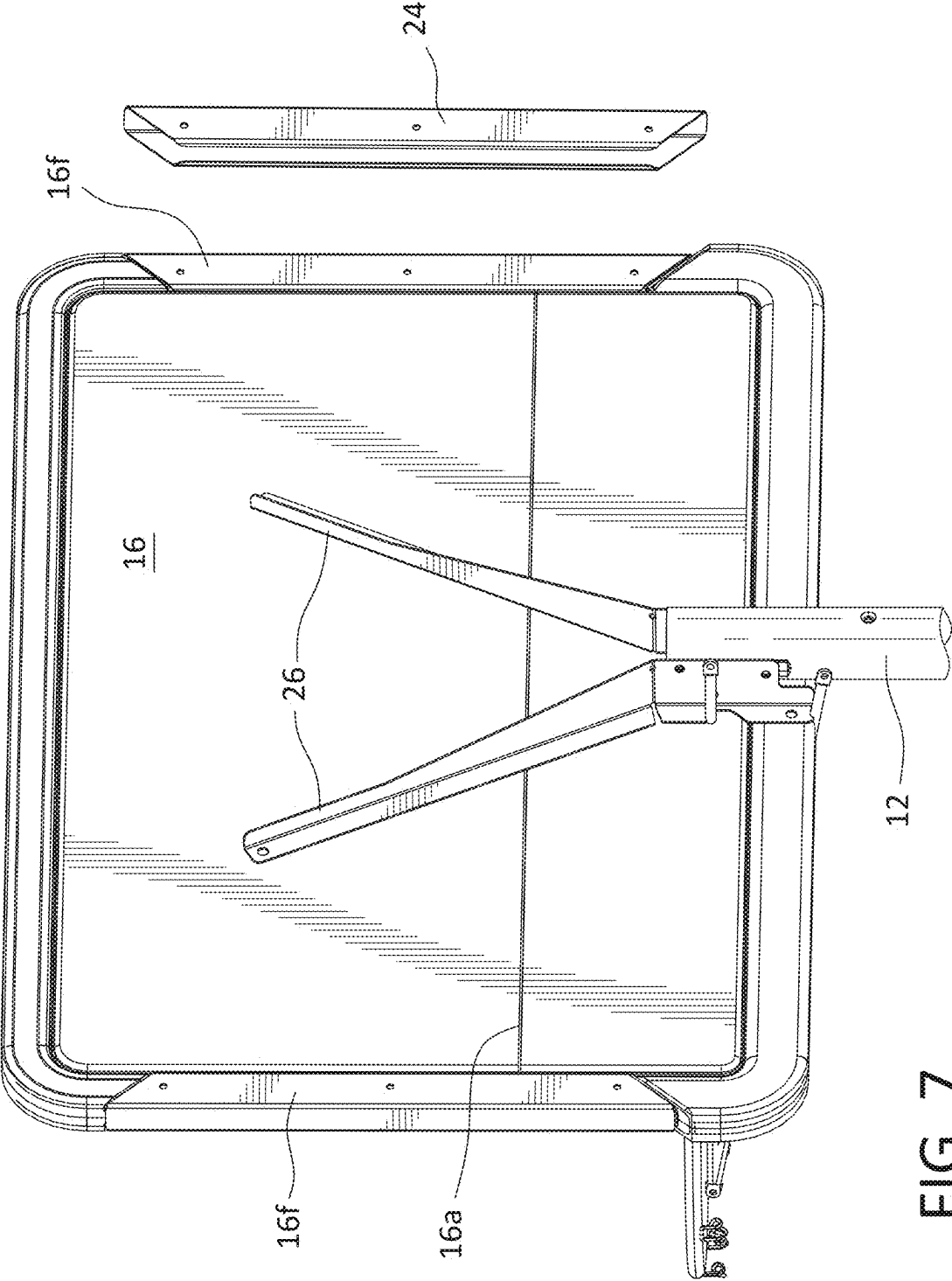
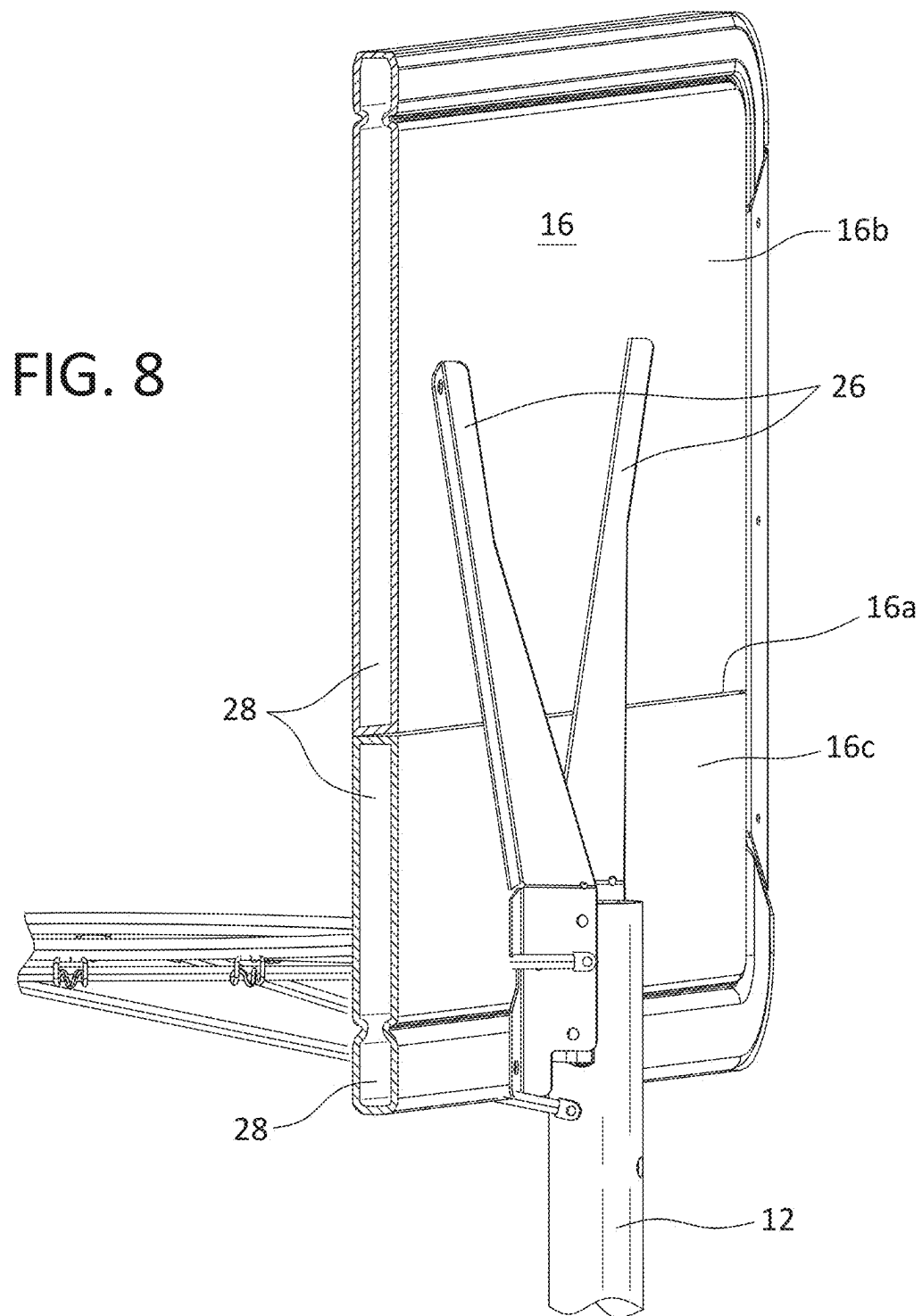


FIG. 7





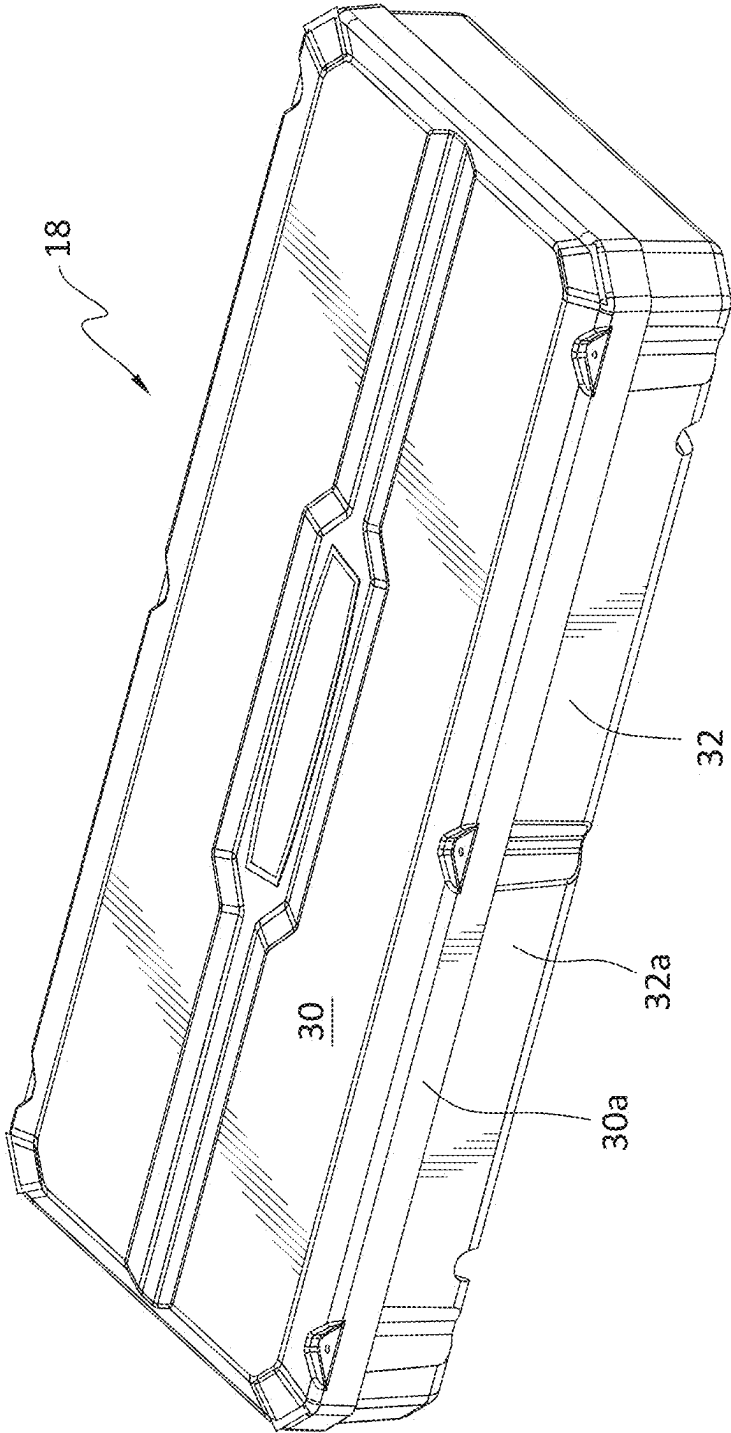


FIG. 9

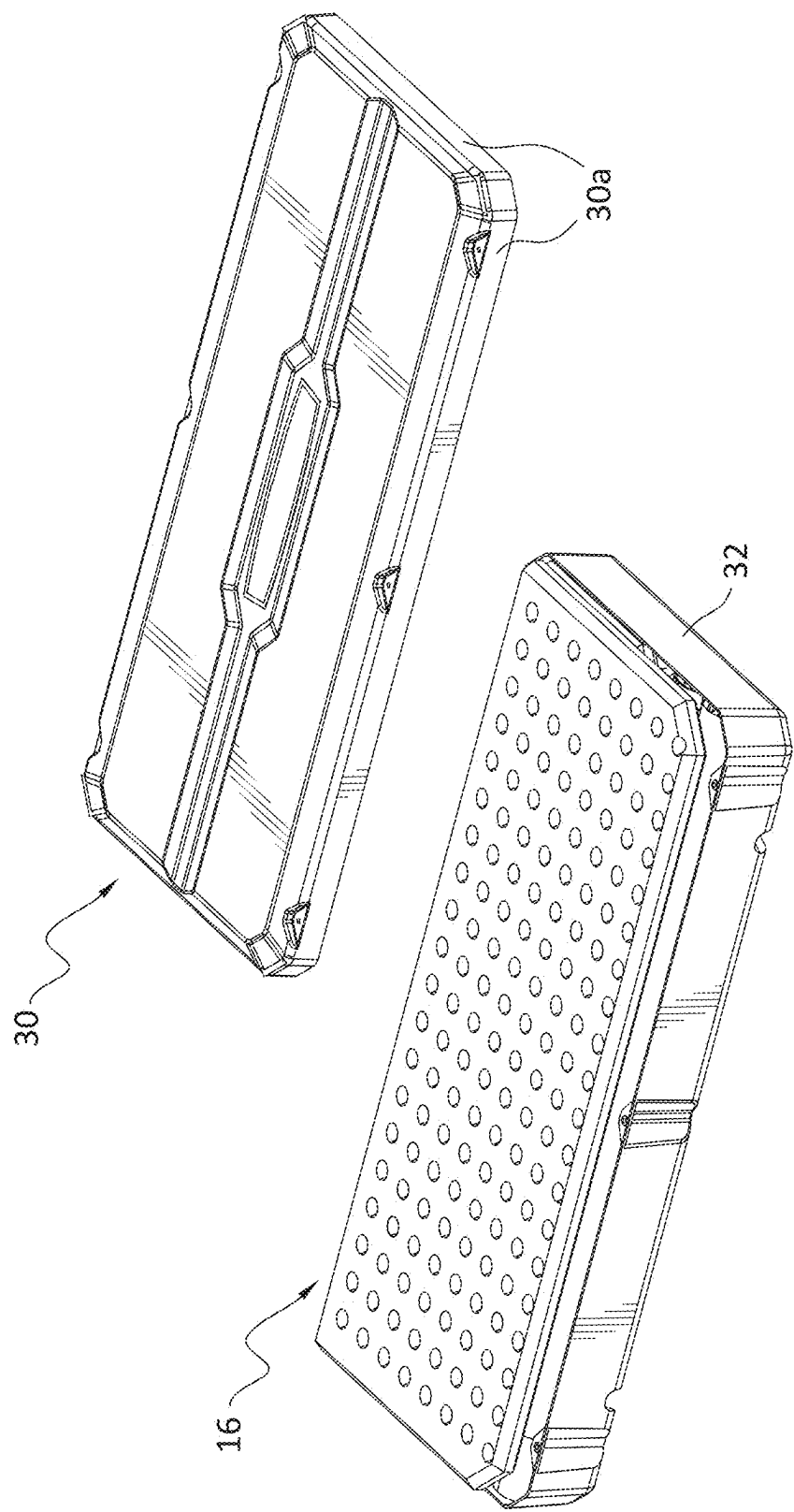


FIG. 10

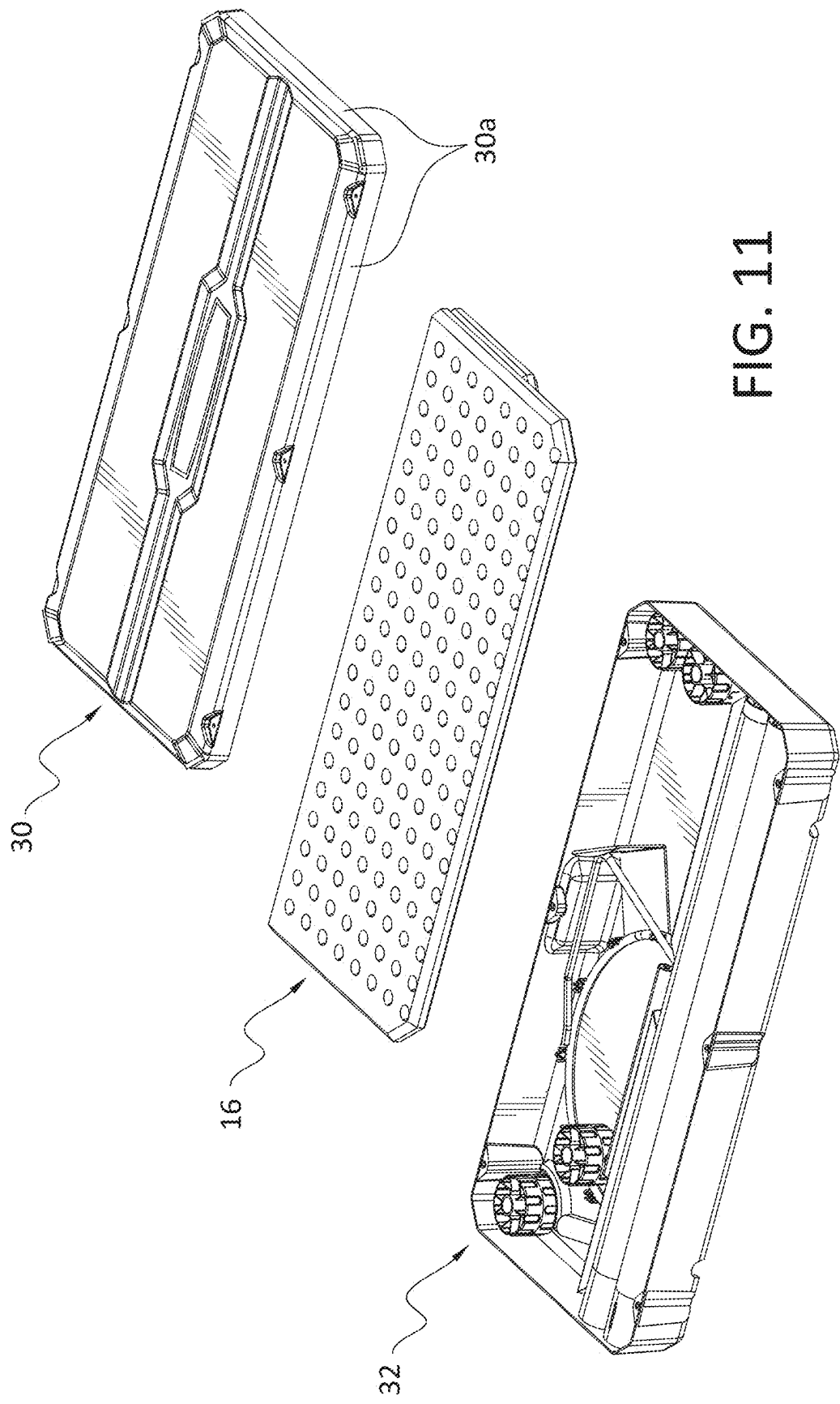


FIG. 11

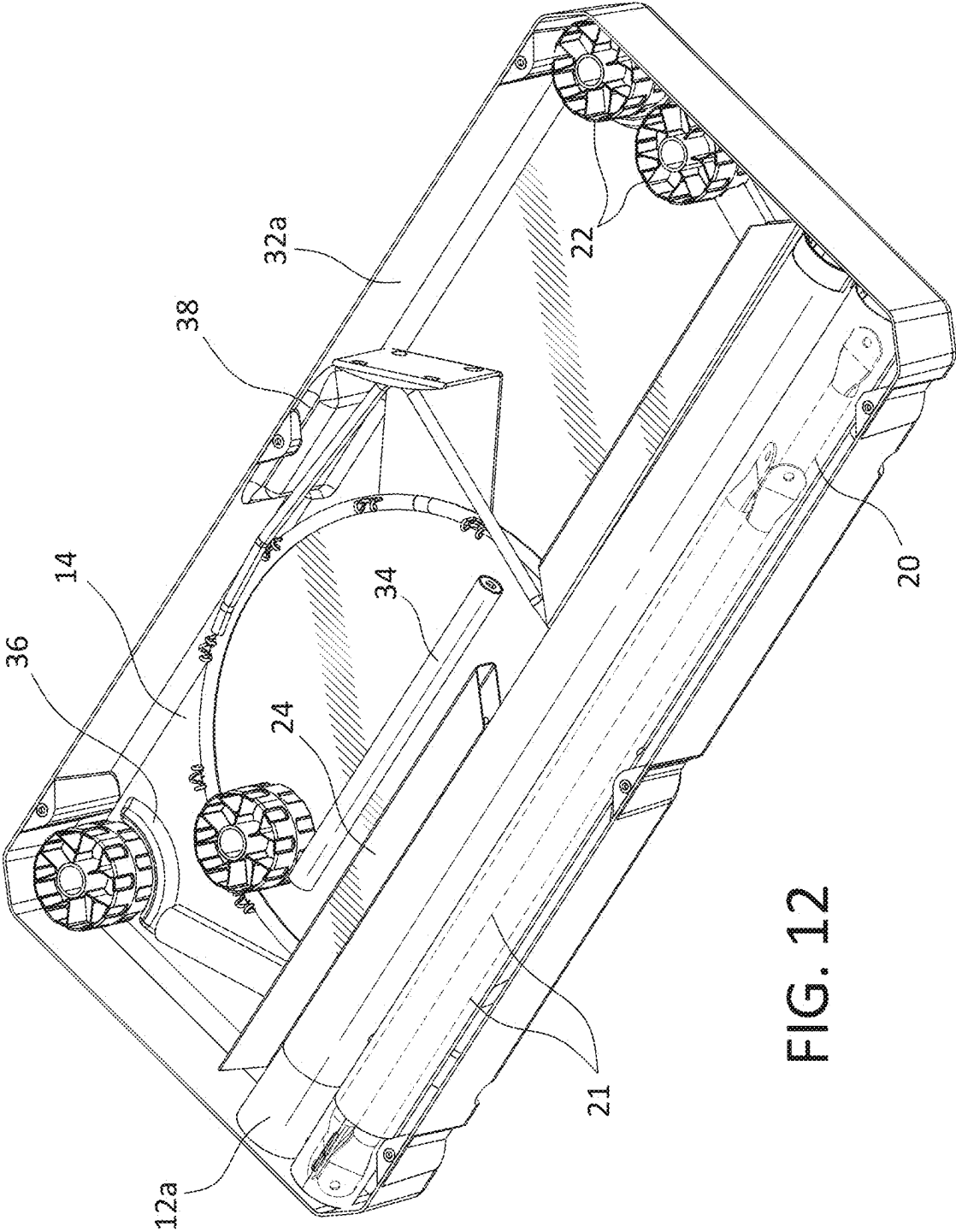


FIG. 12

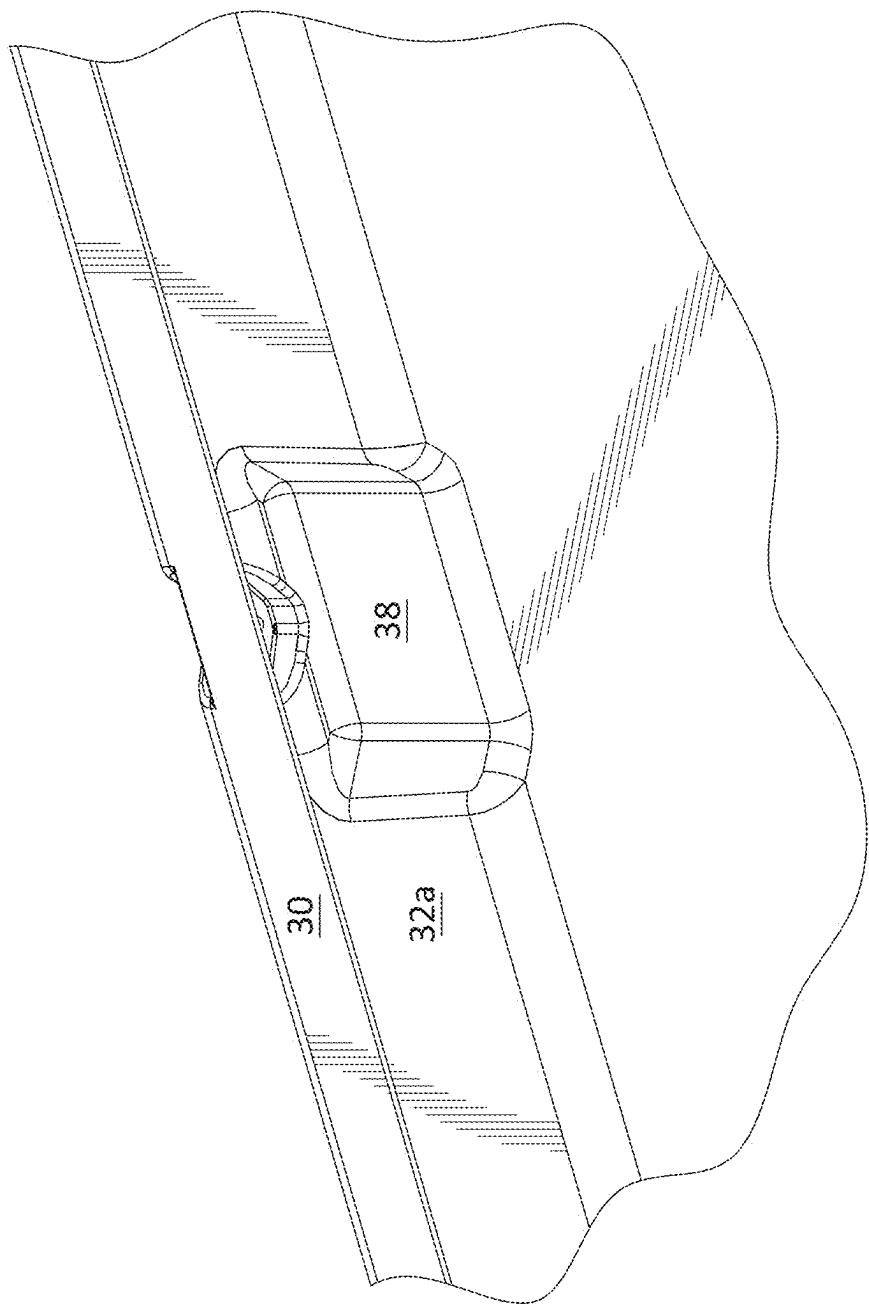


FIG. 12a

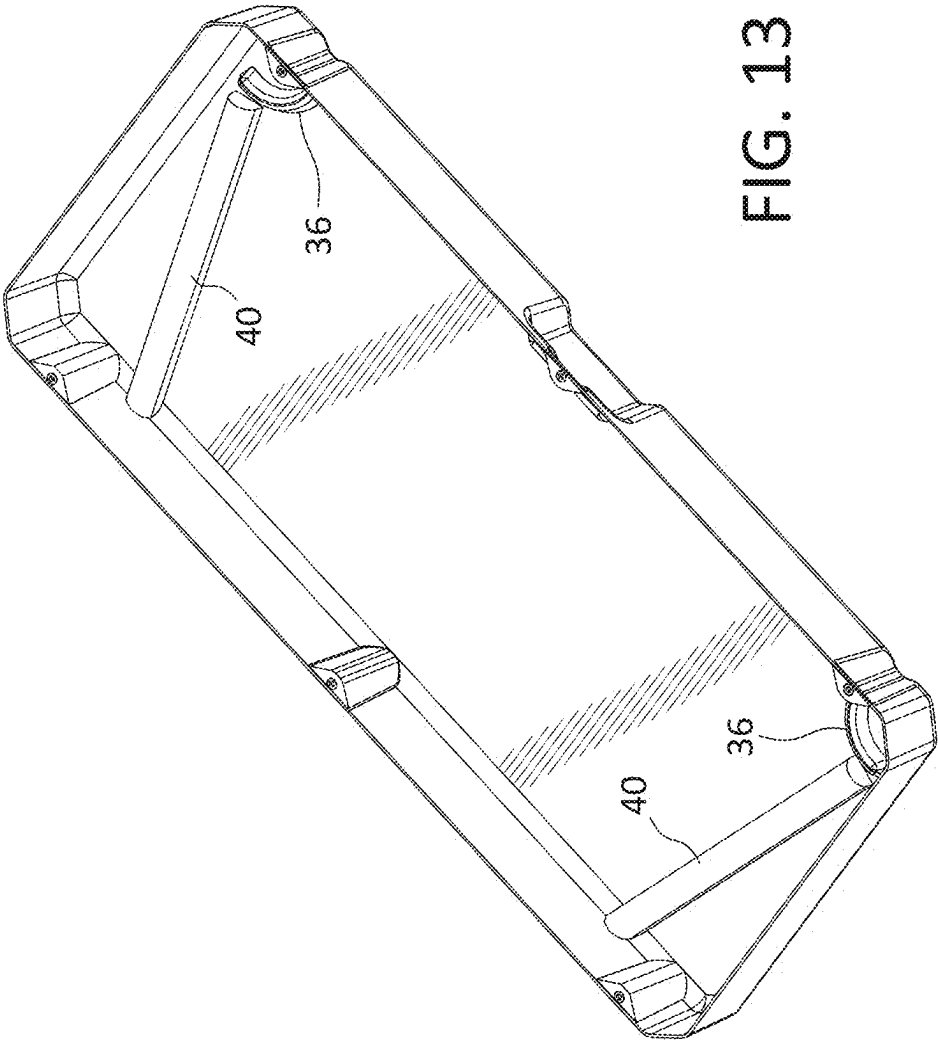


FIG. 13

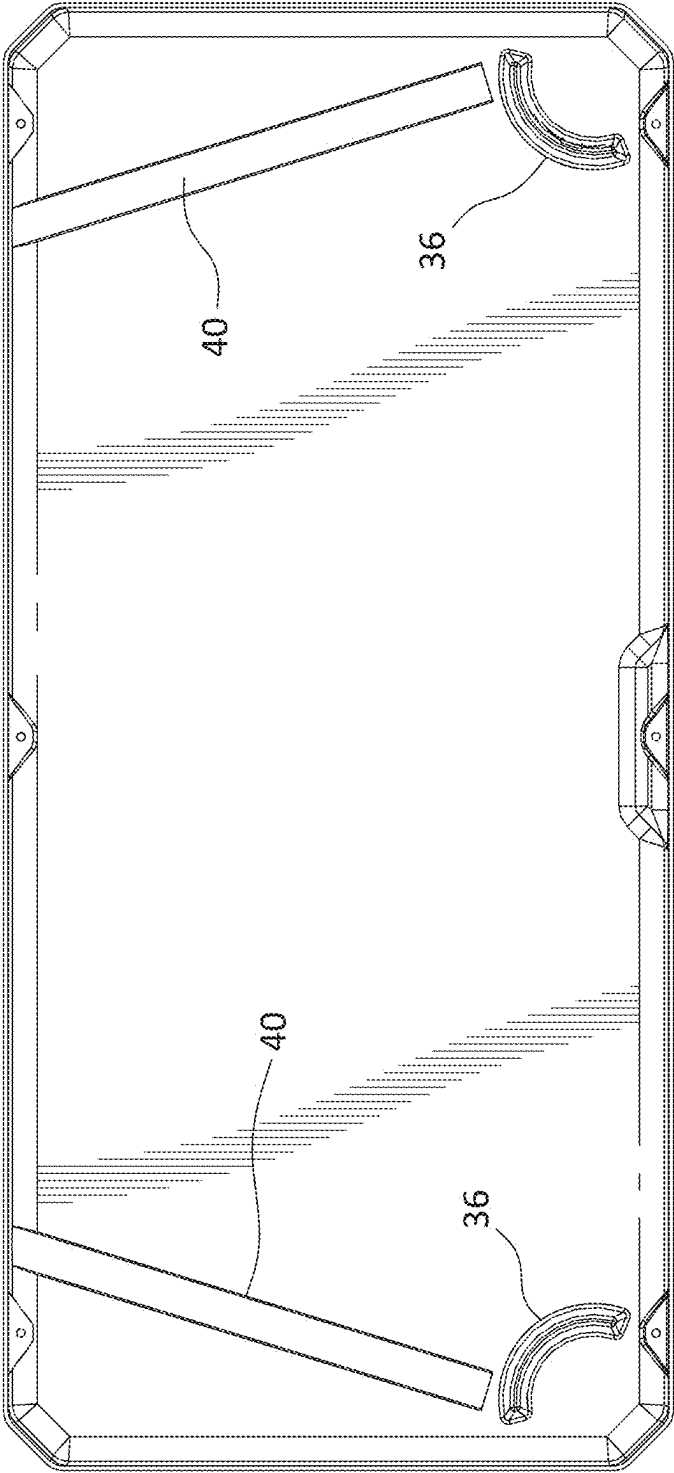


FIG. 14



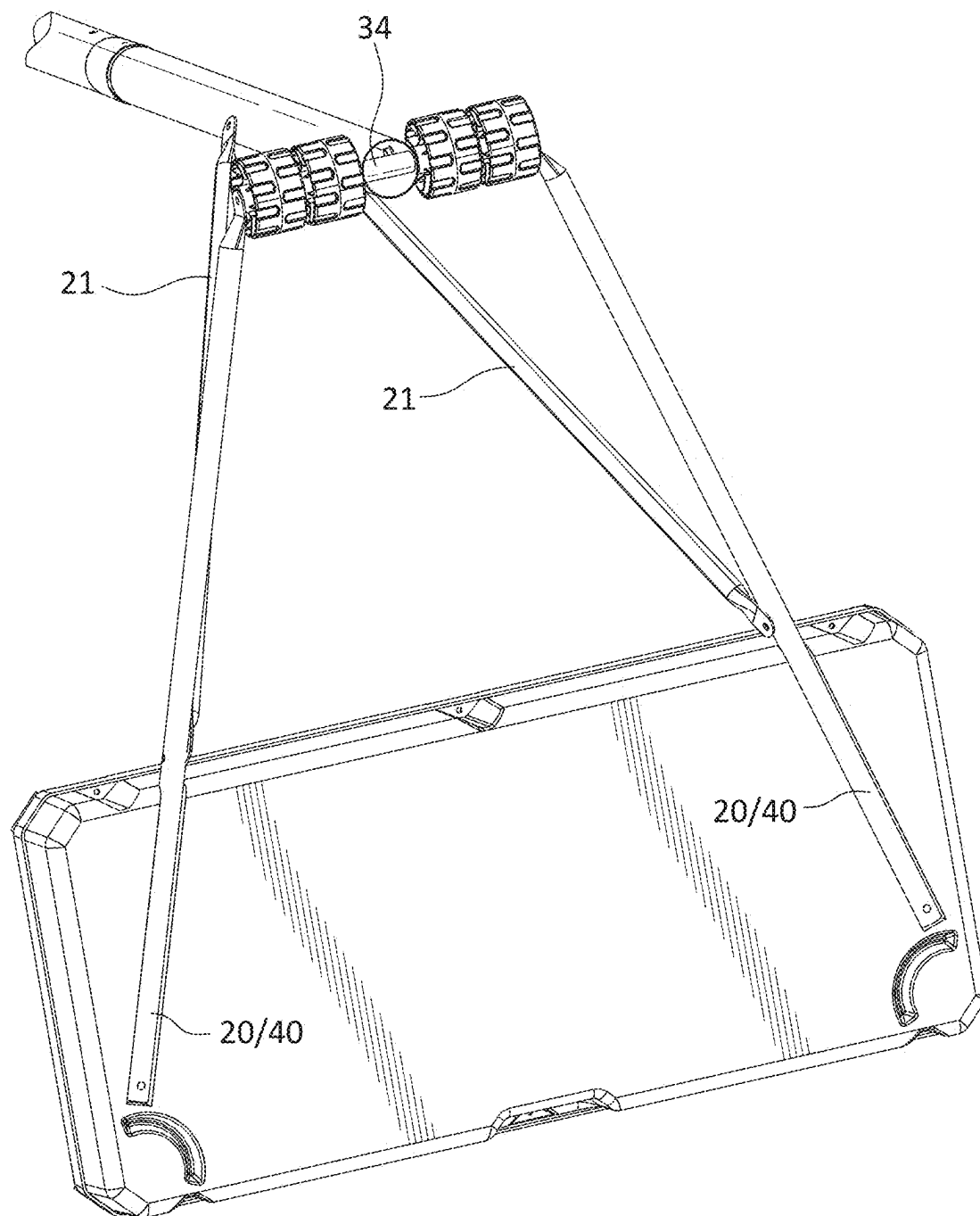


FIG. 15

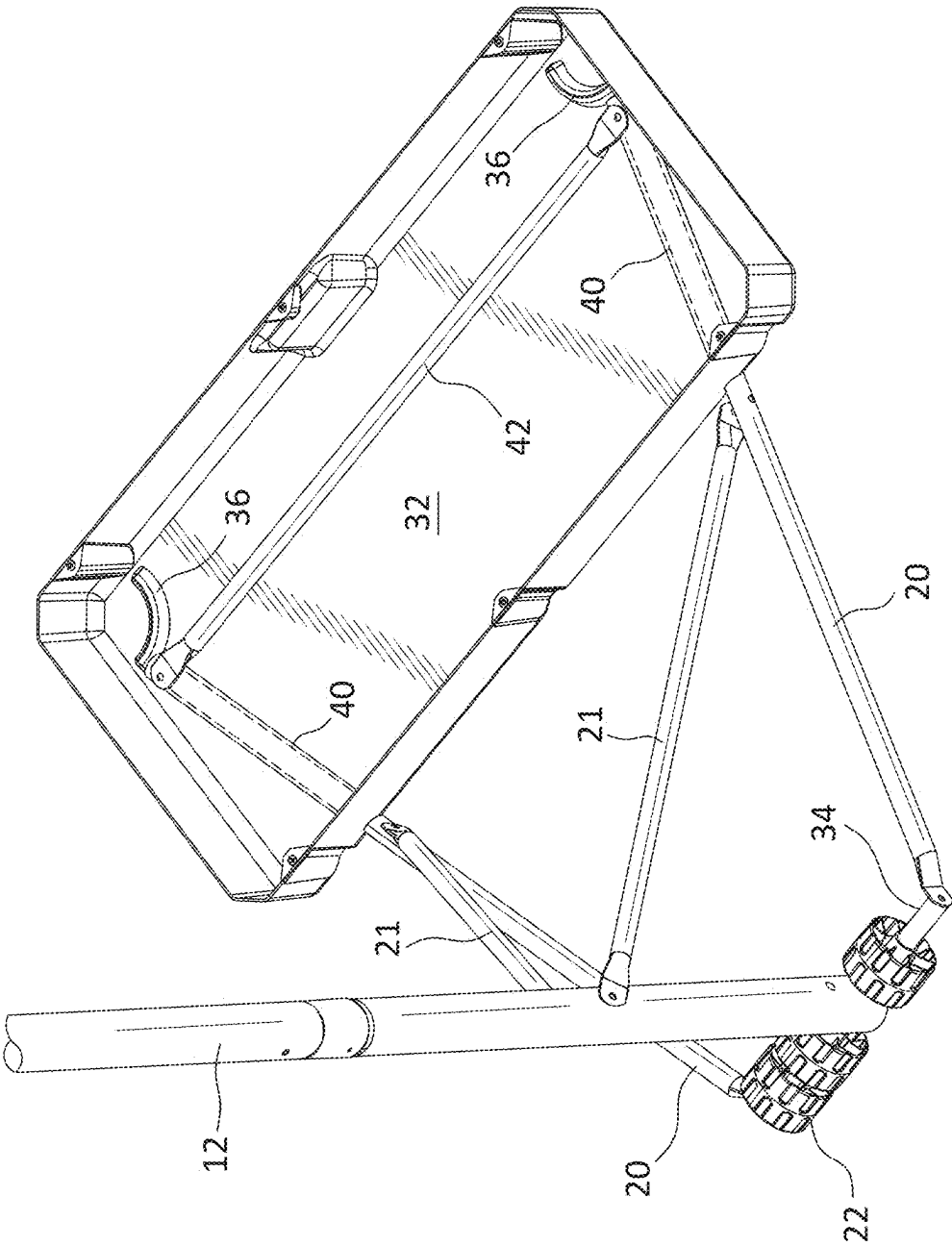


FIG. 16

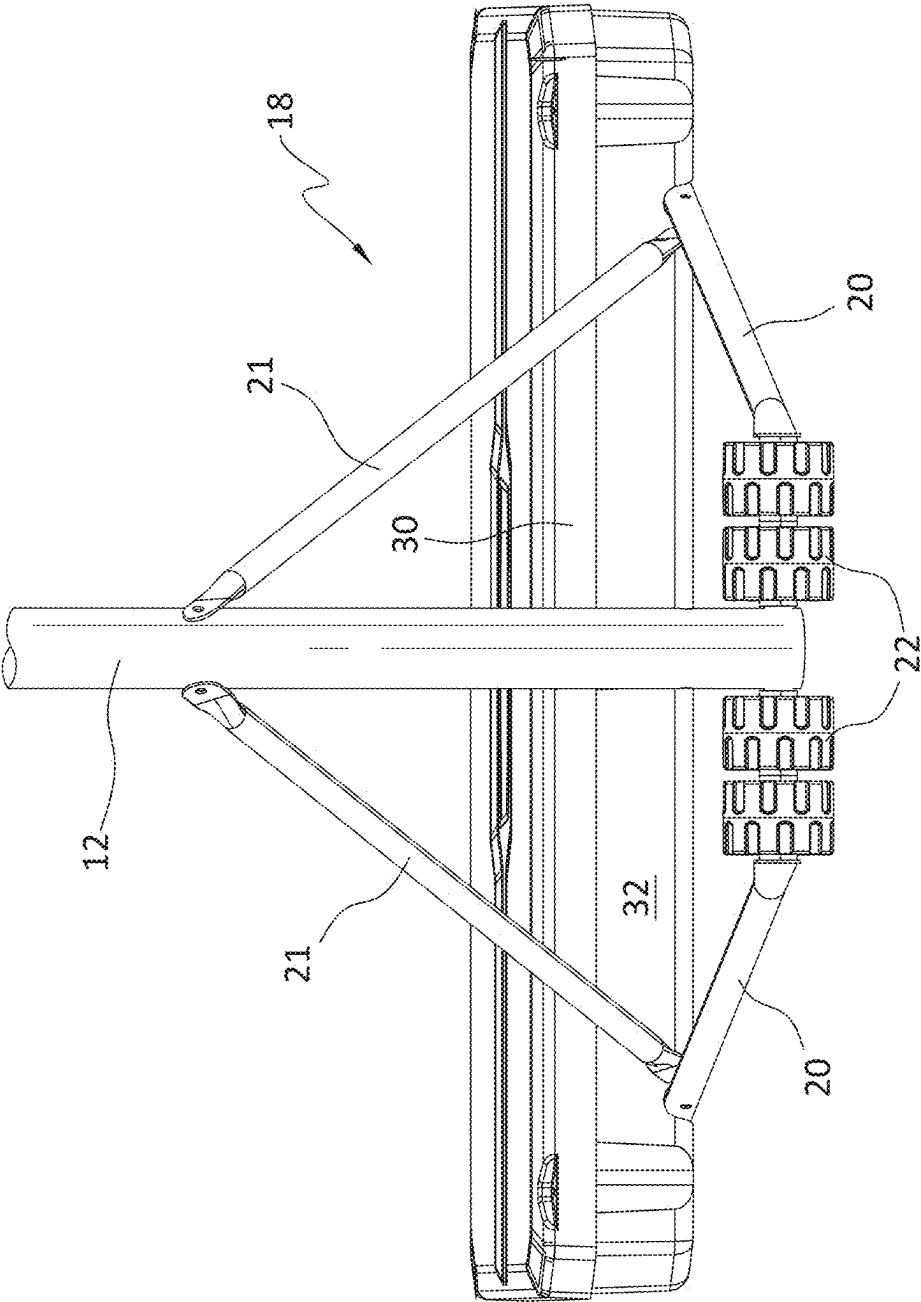


FIG. 17

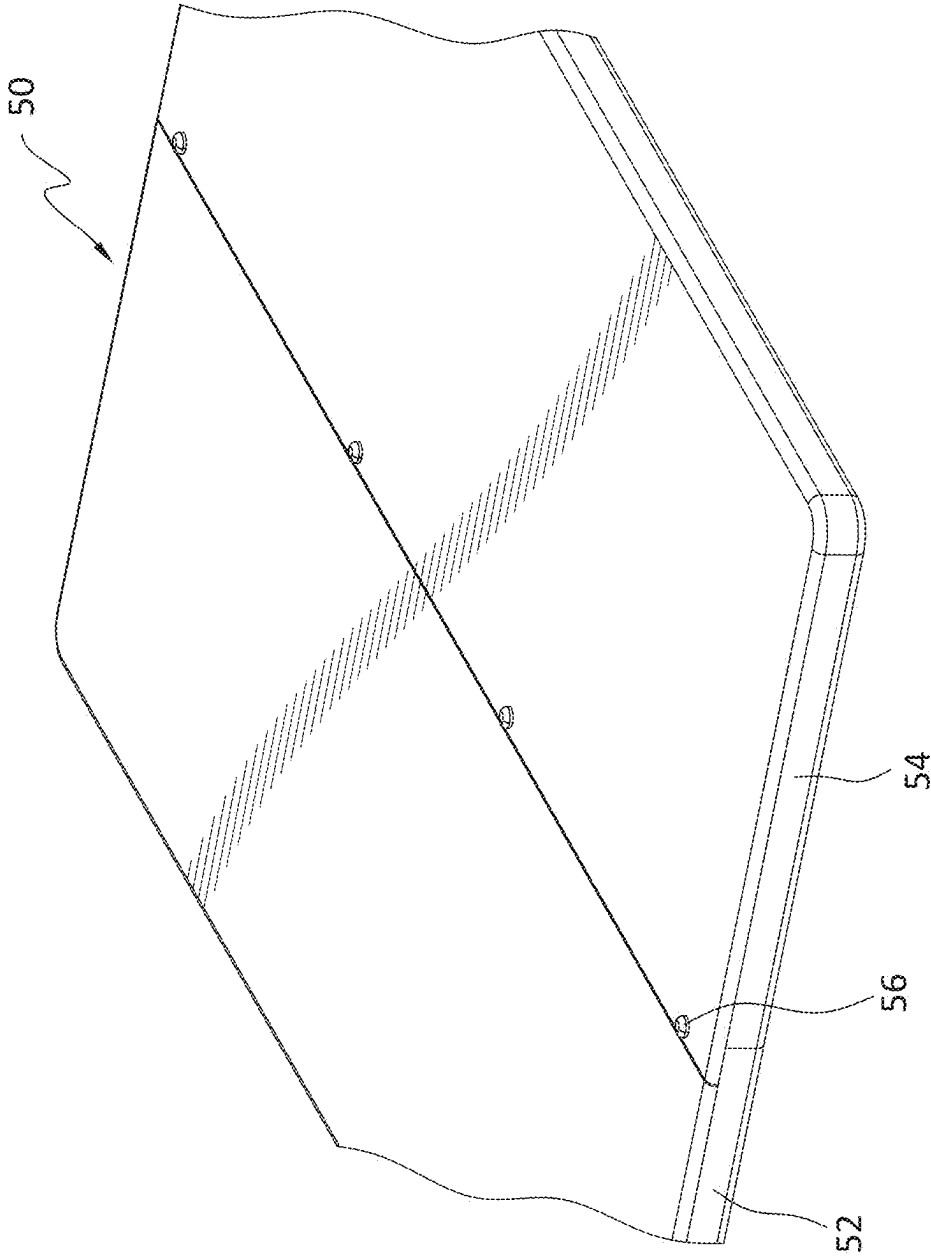


FIG. 18

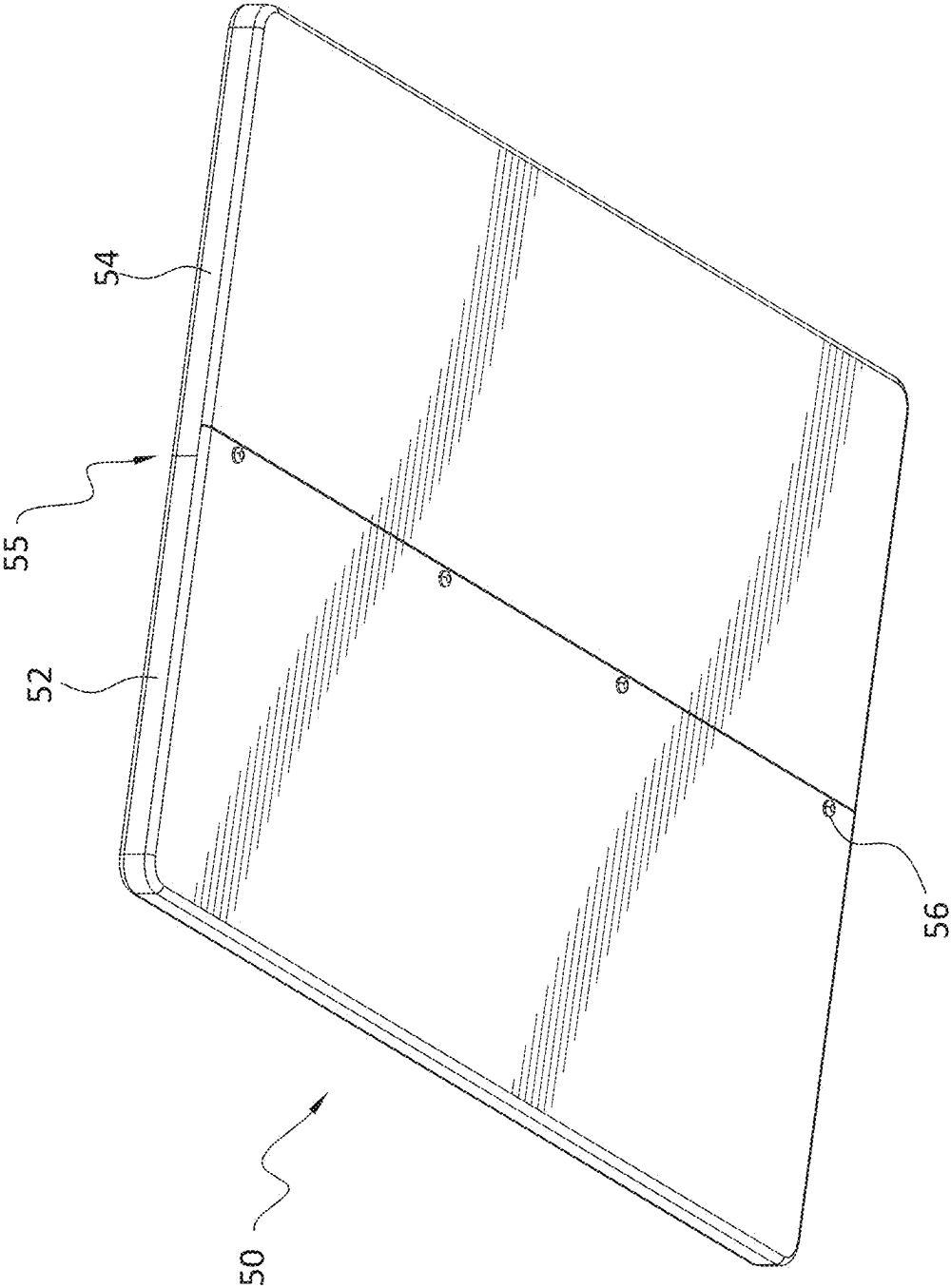


FIG. 19

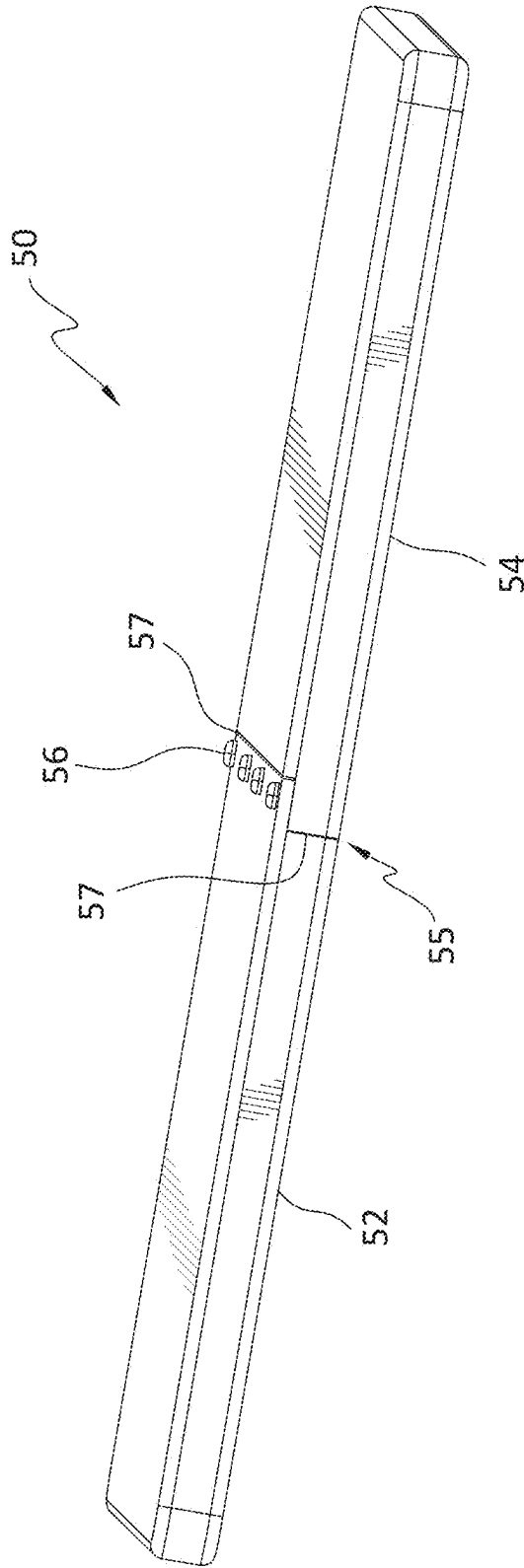


FIG. 20

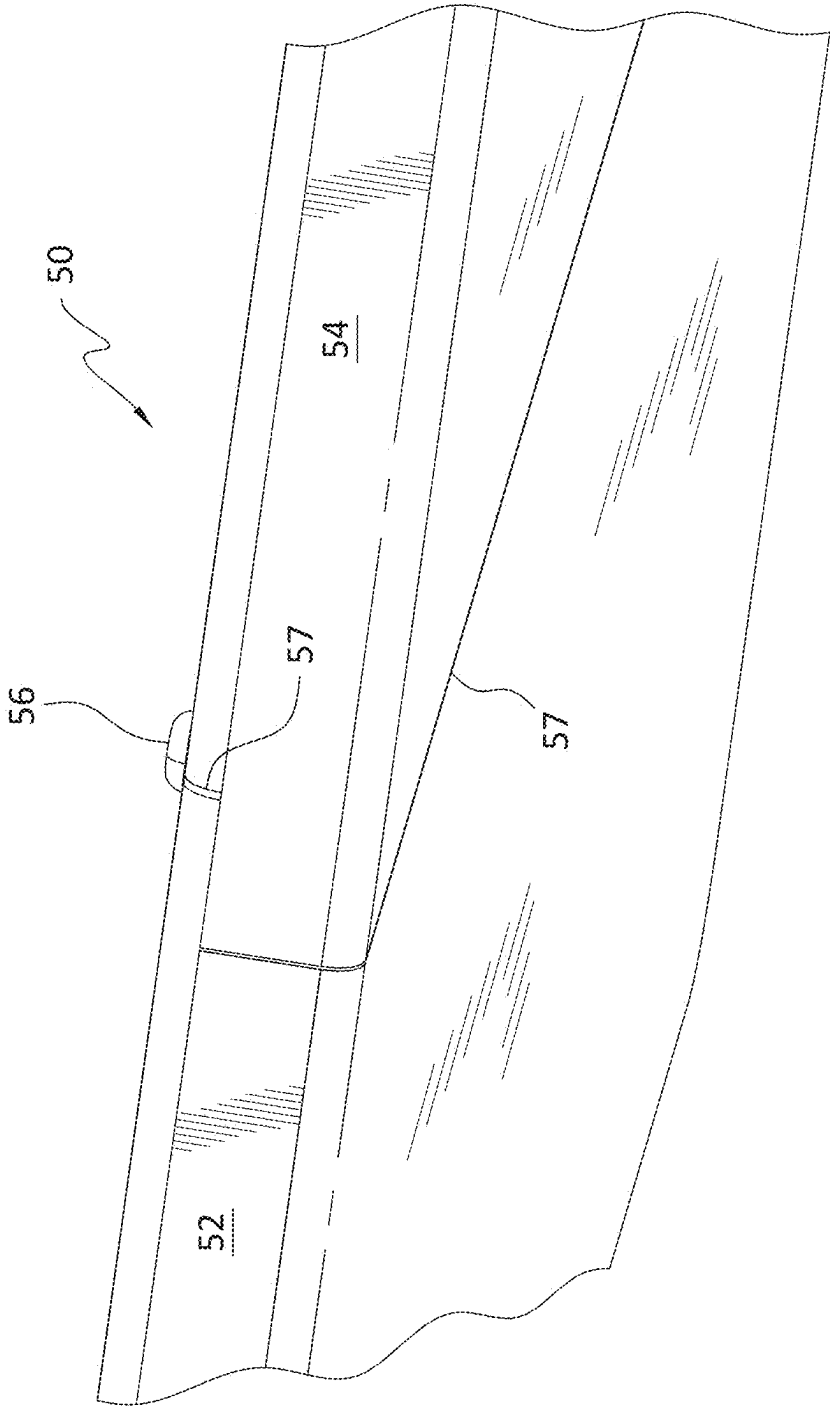


FIG. 21

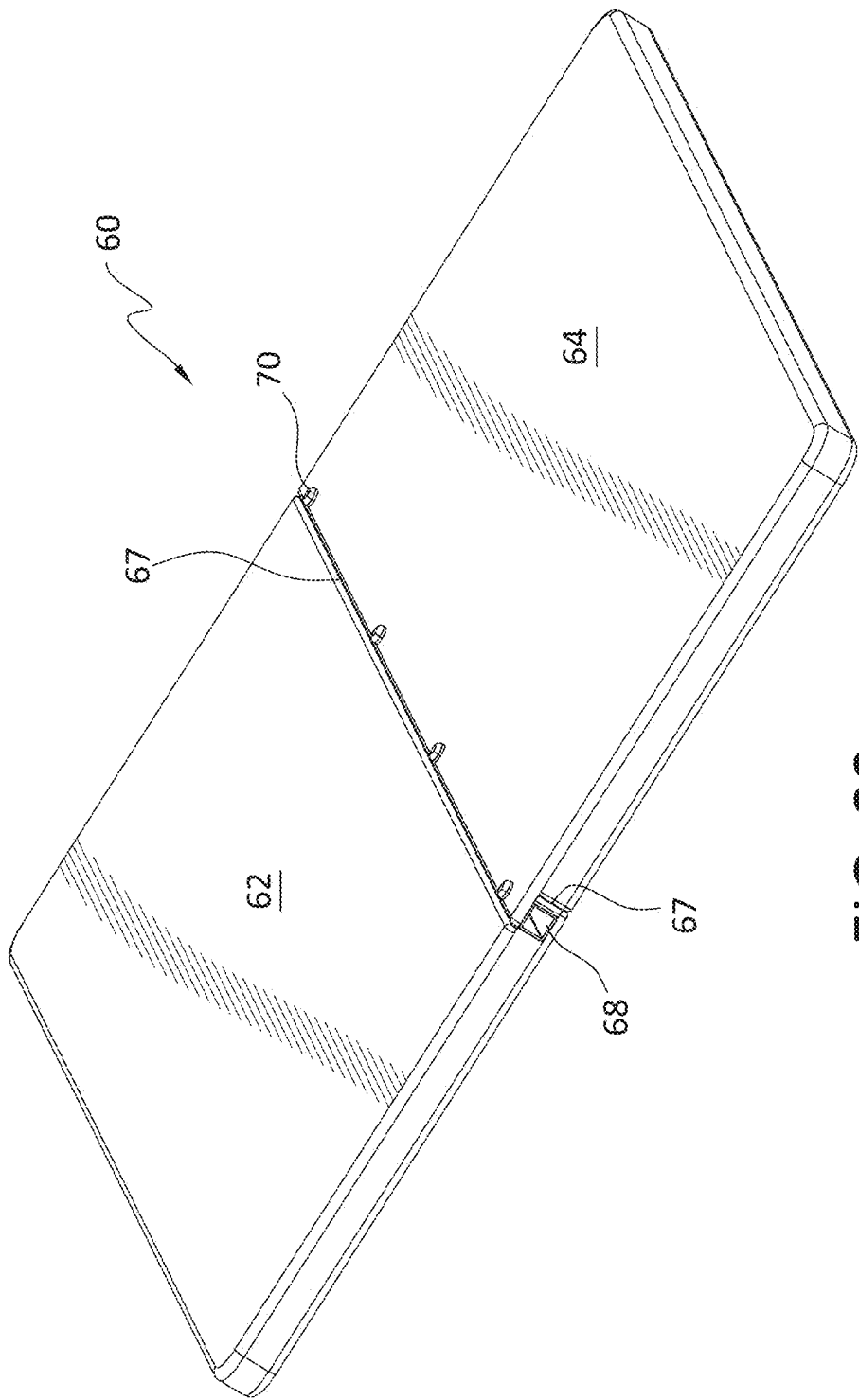


FIG. 22



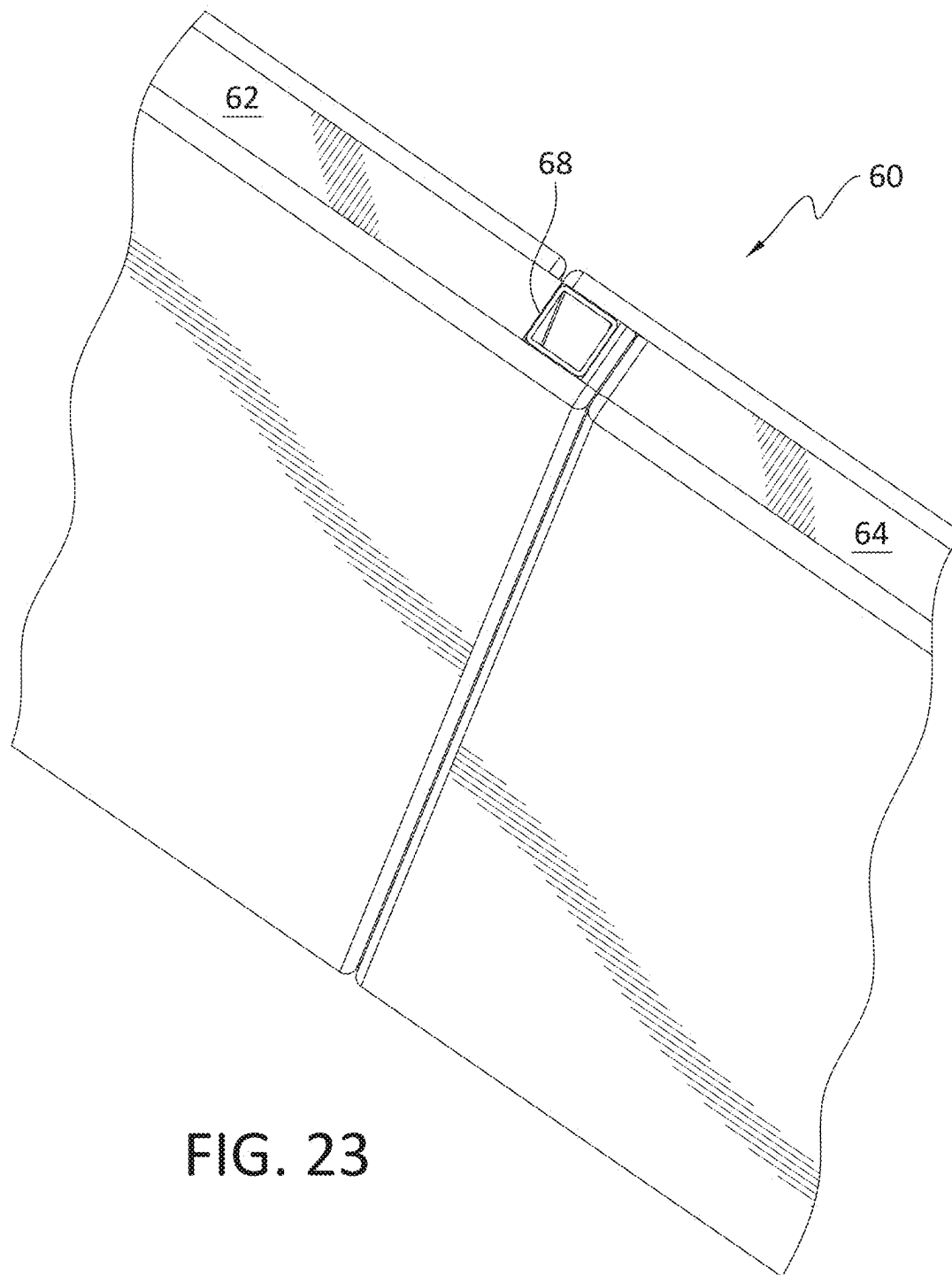


FIG. 23

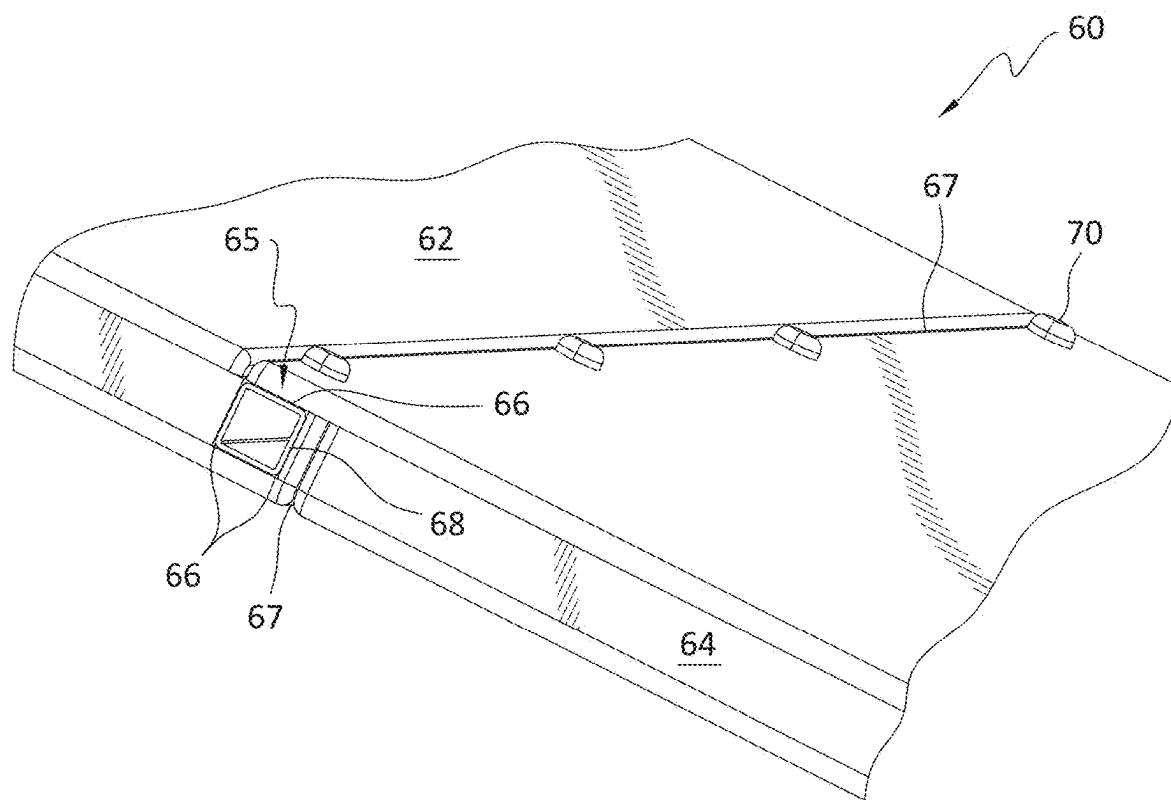


FIG. 24

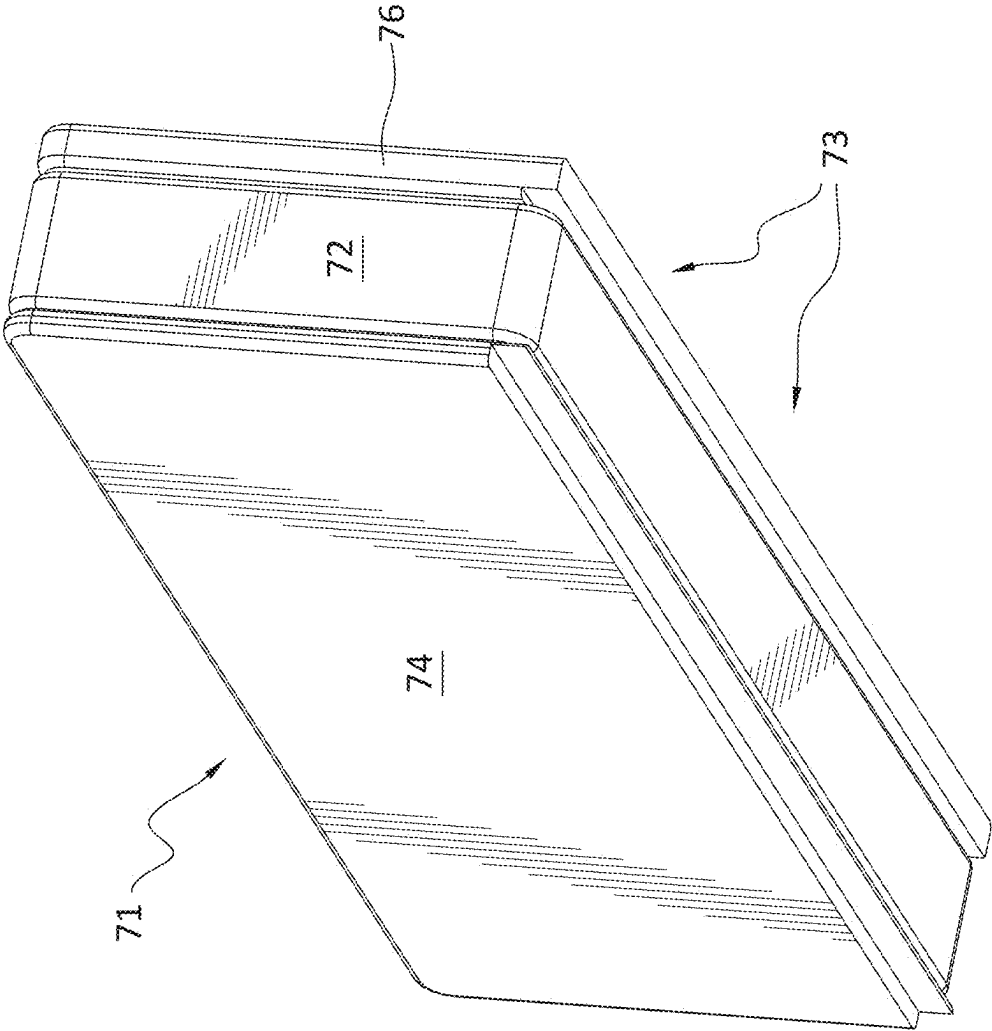


FIG. 25

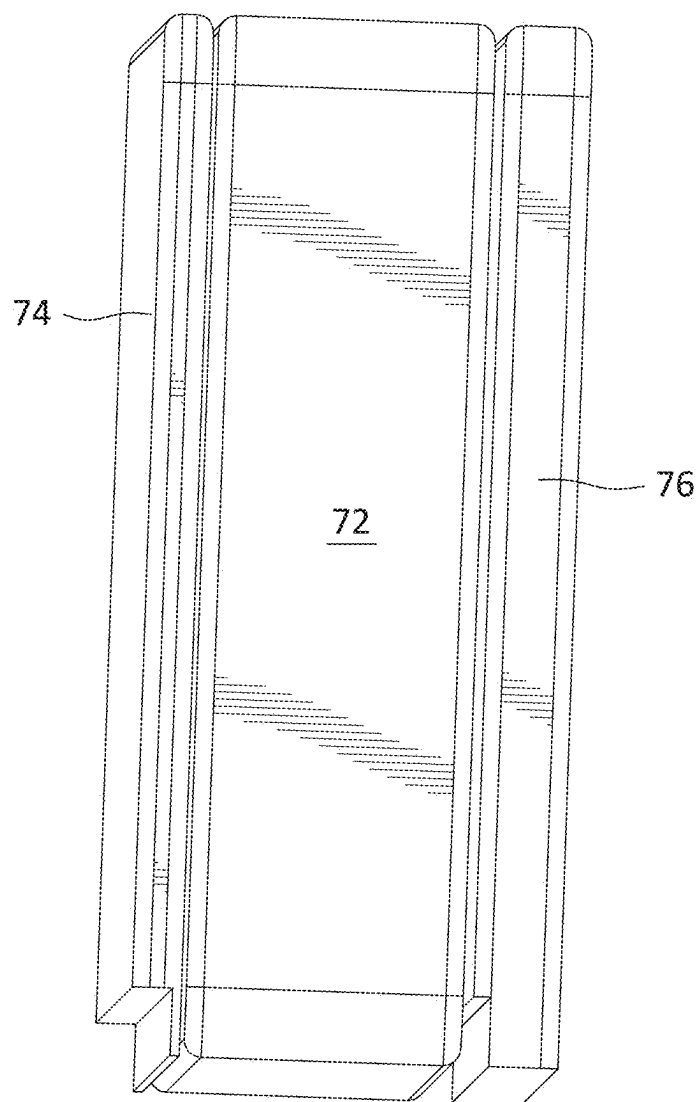


FIG. 26

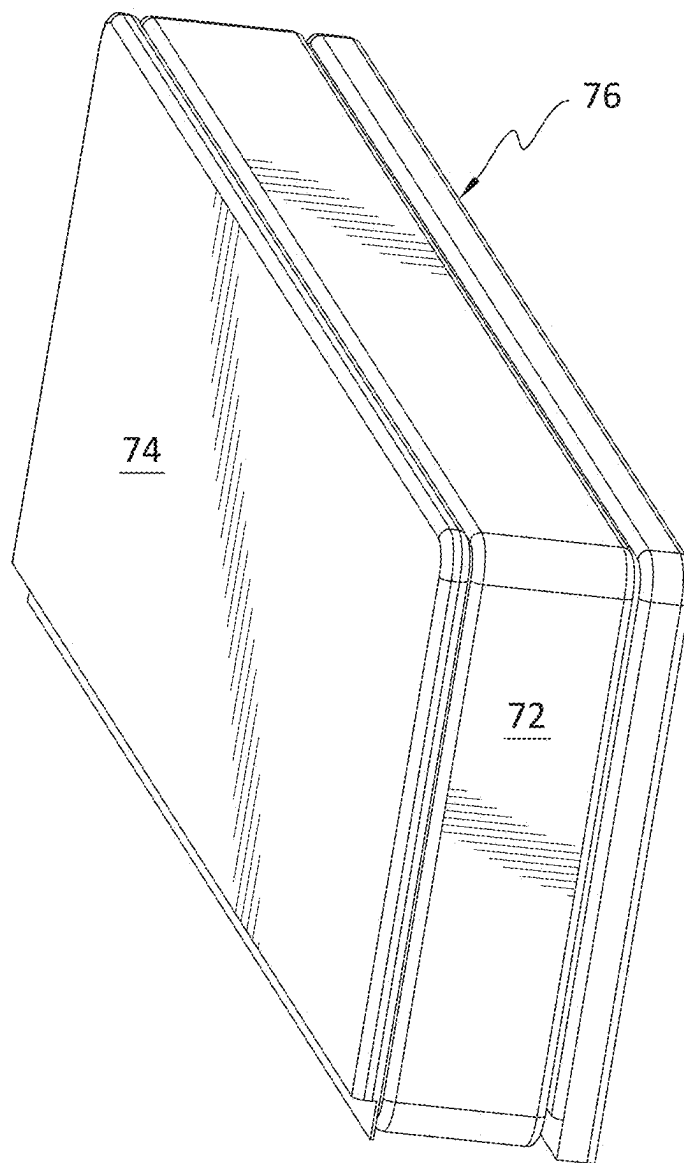


FIG. 27

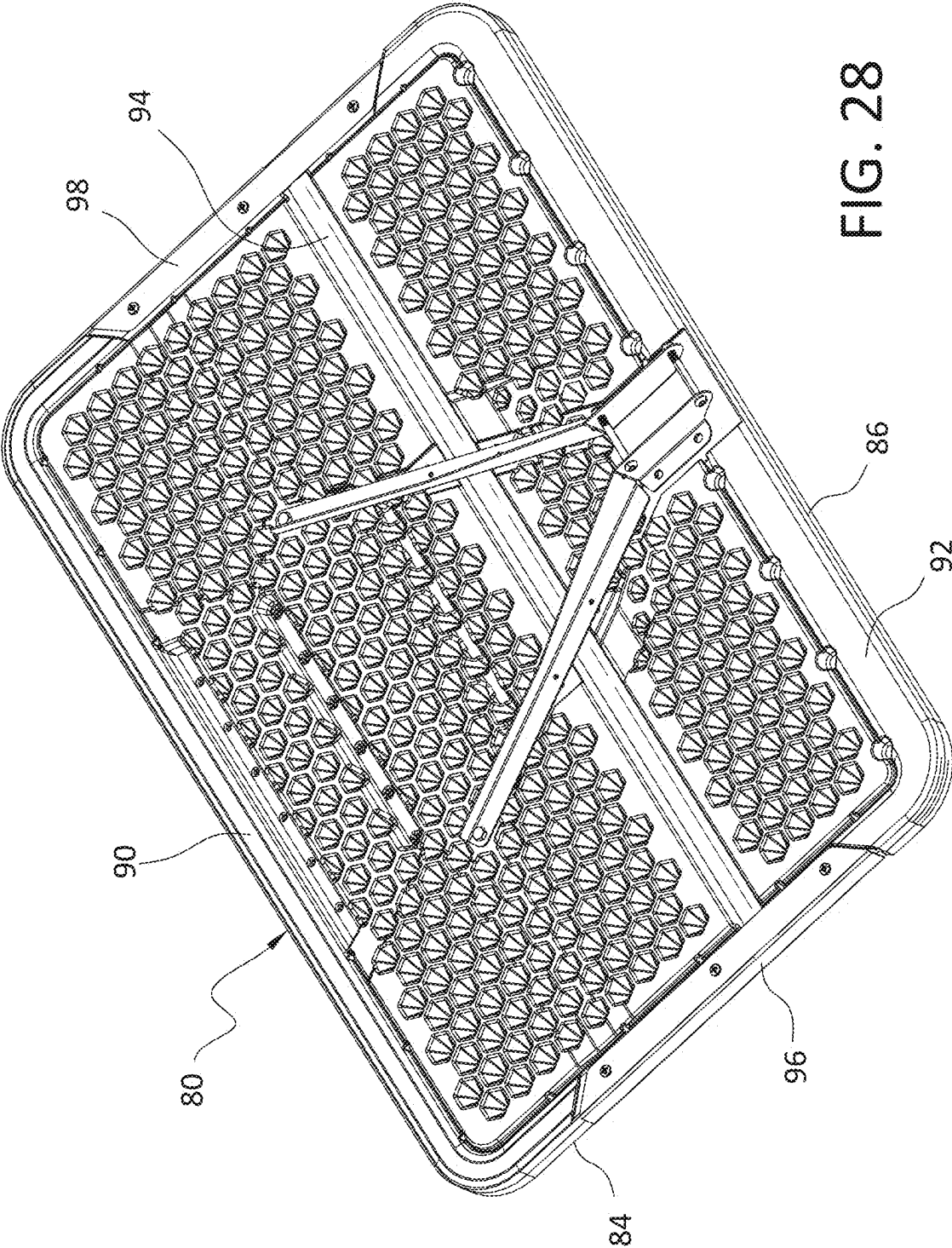


FIG. 28

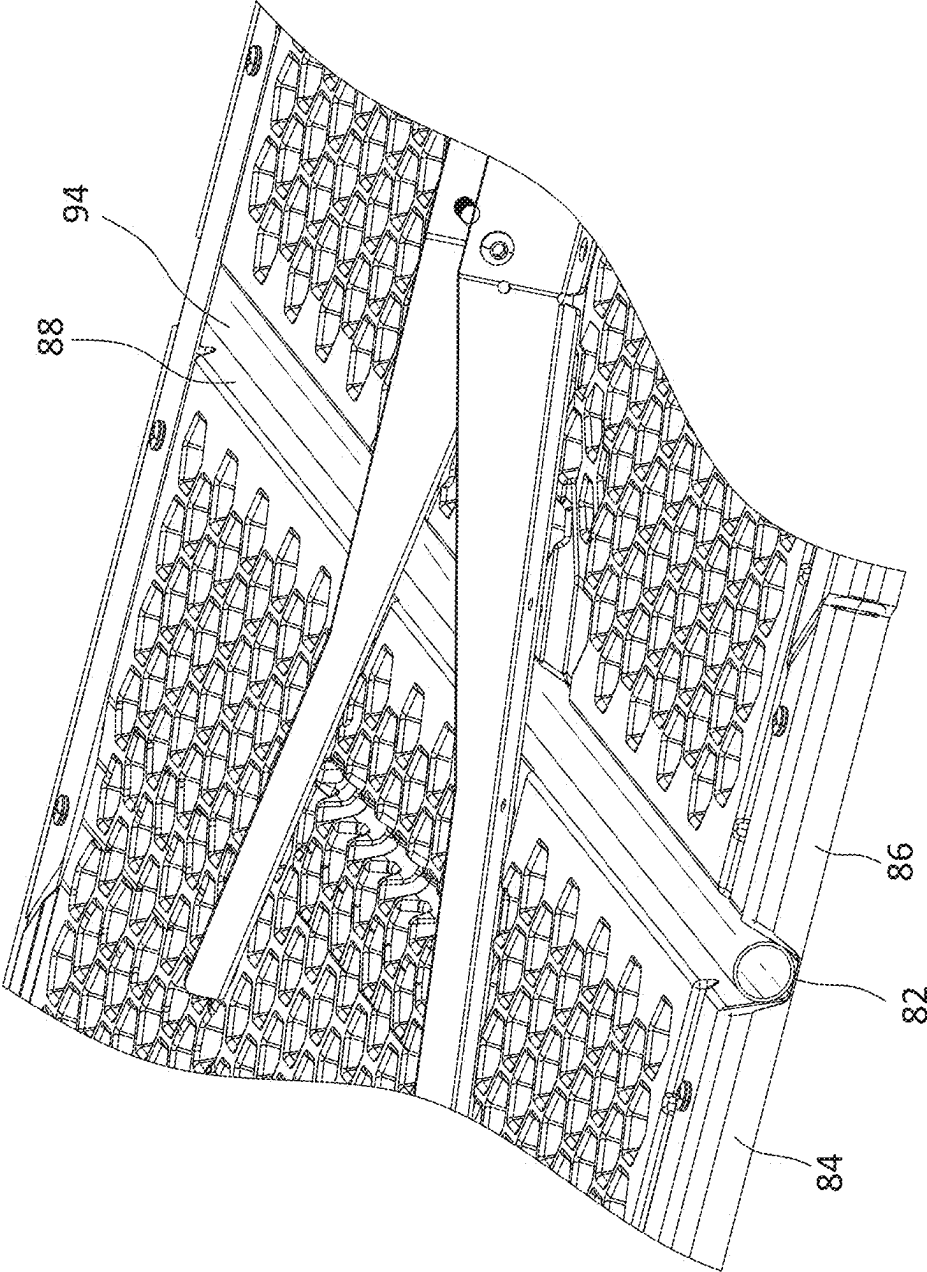


FIG. 29

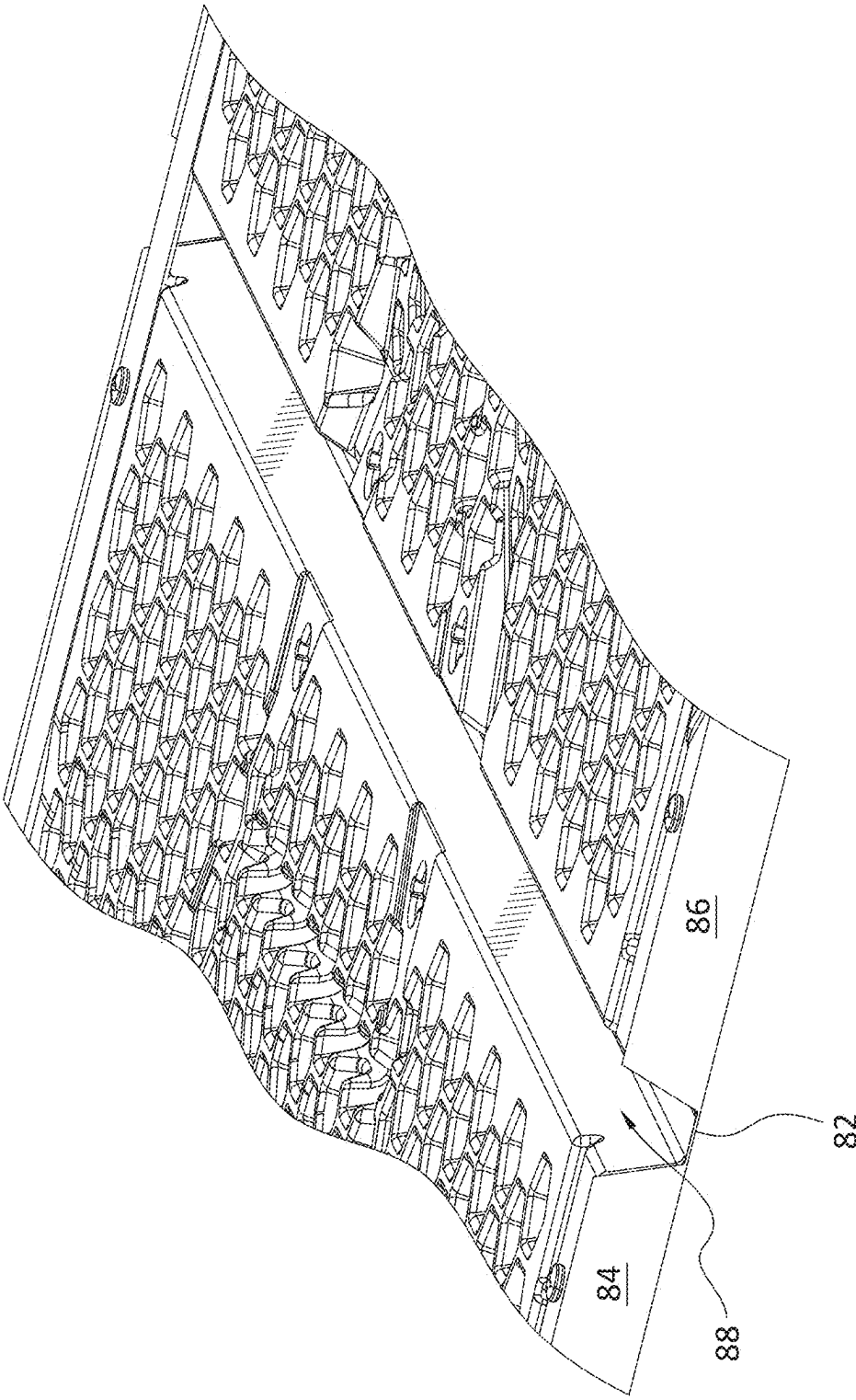


FIG. 30



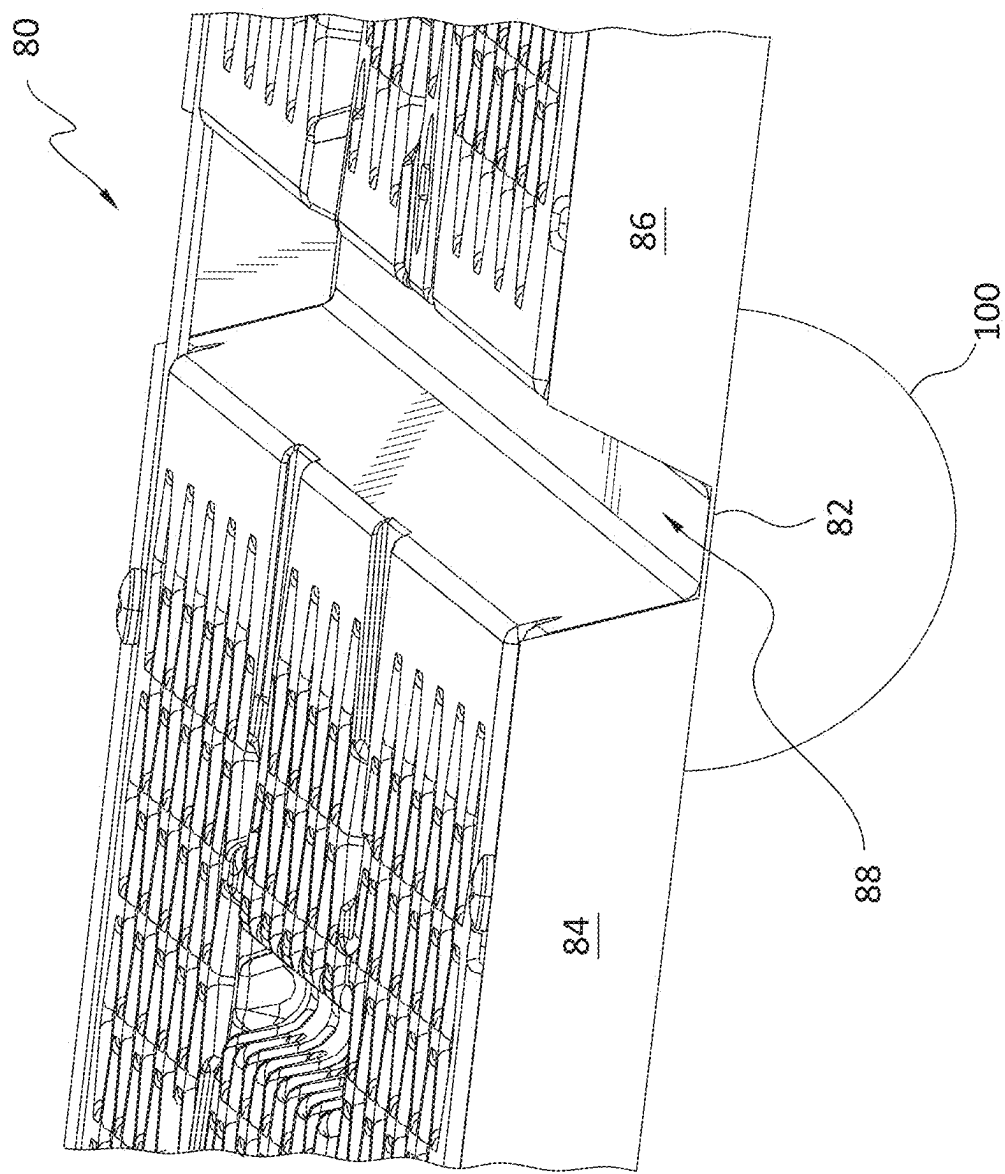


FIG. 31

## CLAMSHELL BASKETBALL SYSTEM

### TECHNOLOGICAL FIELD

**[0001]** One or more example embodiments are concerned with sporting equipment. One particular example embodiment comprises a portable basketball system configured to be broken down and placed in a container that may be easily and efficiently transported, such as in a shipping container, by a delivery driver and by a user.

### BACKGROUND

**[0002]** Typical portable basketball systems include a number of components, such as a base, one or more wheels, a backboard, a goal, support post, and various support elements. While portable basketball systems are intended to be movable, the inherently unwieldy nature of portable basketball systems makes them inconvenient to transport after they have been assembled. This problem extends to unassembled portable basketball systems as well, as they include a variety of elements that may be odd shaped, long, or bulky. Further, as shipping costs increase, there is economic pressure to reduce package sizing, and increase packaging efficiency.

### ASPECTS OF AN EXAMPLE EMBODIMENT

**[0003]** The present disclosure is generally concerned with sporting equipment. One example embodiment comprises a portable basketball system configured to be broken down and placed in a container that may be easily and efficiently transported, such as in a shipping container, by a delivery driver and by a user.

**[0004]** In one embodiment, a portable basketball system comprises a base that may have a clamshell configuration that includes a removable cover. The base may be sized and configured to contain all the components of the portable basketball system such as, but not limited to, backboard, goal, support post, support brackets and other support structures, wheels, and axle. The base may include various locating features, possibly integral with the base, to help retain the various components in position during shipment once they have been placed in the base. As well, the base and/or cover may comprise a handle to enable a user to transport the base. Another embodiment may be a base with a majority of components retained inside the base and a minority of components may be outside the base, for example in an embodiment where the backboard is the same size or larger than the base it may sit above or below the base.

**[0005]** In one embodiment, a backboard for a basketball system may comprise a blow-molded plastic structure that includes living hinges which may enable the backboard to be folded so as to reduce its size in at least one dimension. In an embodiment, the folded backboard may fit in a base with a clamshell configuration. Support elements may be included that are removably attachable to the backboard to lend stiffness to the backboard, and to ensure that the backboard does not fold about the living hinge while in use. In another embodiment the backboard may fold and sit above or below the base. In another embodiment the backboard may wrap around multiple sides of the base, so a portion of the backboard sits above or below the base and a folded portion sits to the side of the base, or may sit on top or bottom of the base and a folded portion on 2 sides of the base, or completely wrap around 4 sides of the base. Another

embodiment may include a 2 or more piece backboard that can be rigidly connected together during assembly

**[0006]** Embodiments, such as the examples disclosed herein, may be beneficial in a variety of respects. For example, and as will be apparent from the present disclosure, one or more embodiments may provide one or more advantageous and unexpected effects, in any combination, some examples of which are set forth below. It should be noted that such effects are neither intended, nor should be construed, to limit the scope of the claims or this disclosure in any way. It should further be noted that nothing herein should be construed as constituting an essential or indispensable element of any embodiment. Rather, various aspects of the disclosed embodiments may be combined in a variety of ways so as to define yet further embodiments. For example, any element(s) of any embodiment may be combined with any element(s) of any other embodiment, to define still further embodiments. Such further embodiments are considered as being within the scope of this disclosure. As well, none of the embodiments embraced within the scope of this disclosure should be construed as resolving, or being limited to the resolution of, any particular problem(s). Nor should any such embodiments be construed to implement, or be limited to implementation of, any particular technical effect(s) or solution(s). Finally, it is not required that any embodiment implement any of the advantageous and unexpected effects disclosed herein.

**[0007]** In particular, one advantageous aspect of an embodiment is that most, or all, of the components of a portable basketball system may be stored in a container that may be readily transported by a user. The container may be of a size and shape that is cost effective for shipping by carriers such as rail and ship. An embodiment may be reconfigurable so that a dimension of the embodiment may be reduced in one configuration relative to another configuration. An embodiment may reduce the amount of packaging needed to package and transport a portable basketball system. Various other advantages of one or more embodiments will be apparent from this disclosure.

### BRIEF DESCRIPTION OF THE DRAWINGS

**[0008]** The appended drawings contain figures of example embodiments to further illustrate and clarify various aspects of one or more example embodiments. It will be appreciated that these drawings depict only example embodiments and are not intended to limit its scope. Aspects of various embodiments will be described and explained with additional specificity and detail through the use of the accompanying drawings in which:

**[0009]** FIG. 1 is an overall view of a portable basketball system, having a clamshell configuration, according to one embodiment.

**[0010]** FIG. 2 is a front view of a backboard, according to one embodiment.

**[0011]** FIG. 3 is a rear view of a backboard, according to one embodiment.

**[0012]** FIG. 4 is a detail view of a backboard that includes a living hinge, according to one embodiment.

**[0013]** FIG. 5 is a view of a backboard in a folded state, according to one embodiment.

**[0014]** FIG. 6 is view of a backboard folded along a living hinge, according to one embodiment.

[0015] FIG. 7 is a rear view of a backboard and a pair of attached brackets, indirectly attached to a support structure, according to one embodiment.

[0016] FIG. 8 is a side cutaway view of a backboard, according to one embodiment.

[0017] FIG. 9 is a top perspective view of a base, according to one embodiment.

[0018] FIG. 10 is a partial exploded view of a base, within which a backboard is positioned, according to one embodiment.

[0019] FIG. 11 is an exploded view of a base showing an example arrangement of some basketball system components inside the base, according to one embodiment.

[0020] FIG. 12 shows an example arrangement of basketball system components within a base, according to one embodiment.

[0021] FIG. 12a is a front perspective view of a base, according to one embodiment.

[0022] FIG. 13 is a top perspective view of an inside of a base disclosing various features configured to interface with basketball system components, according to one embodiment.

[0023] FIG. 14 is a bottom view of a base, according to one embodiment.

[0024] FIG. 15 is a bottom view of a portion of a basketball system, indicating how various components of the basketball system may interface with a base, according to one embodiment.

[0025] FIG. 16 is a top view of a portion of a basketball system, indicating how various components of the basketball system may interface with a base, according to one embodiment.

[0026] FIG. 17 is a rear view of a portion of a basketball system, indicating how various components of the basketball system may interface with a base, according to one embodiment.

[0027] FIG. 18 is a partial perspective view of a backboard that comprises two portions, according to one embodiment.

[0028] FIG. 19 is a perspective view of a backboard, in which two portions of the backboard are connected together, according to one embodiment.

[0029] FIG. 20 is a side view of a backboard, indicating how two portions of the backboard are connected together, according to one embodiment.

[0030] FIG. 21 is a detail view, showing connection of two portions of a backboard, according to one embodiment.

[0031] FIG. 22 is a top perspective view of a backboard, according to one embodiment.

[0032] FIG. 23 is a side perspective view showing connection of two portions of a backboard, according to one embodiment.

[0033] FIG. 24 is a detail side perspective view showing connection of two portions of a backboard, according to one embodiment.

[0034] FIG. 25 is a perspective view of a base and backboard that together define a storage area for basketball system components, according to one embodiment.

[0035] FIG. 26 is a side perspective view of a base and backboard that together define a storage area for basketball system components, according to one embodiment.

[0036] FIG. 27 is a top perspective view of a base and backboard that together define a storage area for basketball system components, according to one embodiment.

[0037] FIG. 28 is a rear perspective view of a backboard and stiffeners, according to one embodiment.

[0038] FIG. 29 is a partial side section view of the backboard of FIG. 28.

[0039] FIG. 30 is a detail view of channel and living hinge of a backboard, according to one embodiment.

[0040] FIG. 31 is a detail view of channel and living hinge of a backboard, indicating motion of portions of the backboard, according to one embodiment.

#### DETAILED DESCRIPTION OF SOME EXAMPLE EMBODIMENTS

[0041] One or more example embodiments are concerned with sporting equipment. One particular example embodiment comprises a portable basketball system configured to be broken down and placed in a container that may be easily and efficiently transported, such as in a shipping container, by a delivery driver and by a user. One embodiment may comprise a foldable backboard.

##### A. General Aspects of Some Example Embodiments

[0042] In general, basketball systems and associated components disclosed herein, including support structures, bases, wheels, axles, supporting structures, connecting structures, goals, backboards, height adjustment mechanisms, and other components, may be constructed with a variety of components and materials including, but not limited to, plastic (including injection-molded, blow-molded, roto-molded, and twin sheet plastic structures and elements) including polycarbonates, plastics such as high-density polyethylene (HDPE), composites, fiberglass, wood, rubber, metals, and combinations of any of the foregoing. One or more components of a basketball system, such as a portable basketball system, may be created using a blow-molding, or other molding, process. Such components may include, but are not limited to, a backboard, and a clamshell container.

[0043] The scope of this disclosure is not limited to blow molding processes or blow molded components however. Thus, other example processes that may be used to construct a portion, or all, of any of the aforementioned components include roto-molding, injection molding, vacuum molding, drape molding, and processes sometimes referred to as twin-sheet processes including twin-sheet molding. Any of these processes may produce a component that is partly, or completely, hollow. As well, it will also be appreciated that components of the disclosed embodiments need not be constructed from plastic and may be constructed using other materials having other suitable characteristics.

[0044] As noted above, any component of an embodiment that is constructed at least partly of blow molded plastic may have an interior that is partly, or completely, hollow. Such embodiments may also include, disposed in the interior, one or more depressions, sometimes referred to as “tack-offs.” In such embodiments, these tack-offs may be integrally formed as part of a unitary, one-piece structure during the blow molding process. The depressions may extend from a first surface, such as a first interior surface of a component, towards a second surface, such as a second interior surface of the component. The ends of one or more depressions may contact or engage the second surface, or the ends of one or more of the depressions may be spaced apart from the

second surface by a distance. Both types of depressions may be present in a single embodiment.

**[0045]** In some instances, one or more depressions on a first interior surface may be substantially aligned with corresponding depressions on a second interior surface, and one or more depressions on the first interior surface may contact one or more corresponding depressions on the second interior surface or, alternatively, one or more depressions on the first interior surface may be spaced apart from corresponding depressions on the second interior surface. In still other instances, depressions that contact each other, and depressions that are spaced apart from each other, may both be present in a component of one or more disclosed embodiments. The depressions may be sized and configured to strengthen and/or reinforce the component(s) in which they are present.

**[0046]** Some, no, or all, portions of a one or more of the basketball systems and their components may be coated with paint or other materials. At least some of such materials may serve to help prevent, or reduce, rust and corrosion. Surface treatments and textures may also be applied to portions of the basketball systems. For example, a component such as a base may comprise a texture or pattern, which may be created with a blow-molding process, or other, process.

**[0047]** Finally, it is a characteristic of blow molded plastic structures, such as the disclosed examples of a backboard, that they take the form of a unified, single piece structure that is formed by a single blow molding process. These structures are fully formed upon completion of the blow molding process. By way of contrast, thermoformed and vacuum formed parts are typically constructed from multiple separate pieces which, after they are created, must then be attached together in some manner to create the final structure. Thus, the use of blow molding processes to create unified, single piece, structures may eliminate the need for post-formation assembly and attachment processes that are required in other processes. In at least some instances, blow molded structures, such as example embodiments of the disclosed base and backboard, may include one or more parting lines, that is, a small ridge or protrusion of plastic that is formed where the mold halves come together. Part of the parting line may be trimmed off post-production, but even after the trimming, visible vestigial portions may remain in the final structure, indicating where the mold halves came together during the molding process.

**[0048]** With continued reference to some example materials for one or more embodiments, suitable metals, such as for posts, supporting structures, and stiffeners, may include steel, aluminum, and aluminum alloys, although the skilled person will understand that a variety of other metals may be employed as well and the scope of this disclosure, and the claims, is not limited to the foregoing examples. Where metal is employed in the construction of a basketball system or basketball system component, the metal elements may take one or more forms including, but not limited to, square tube, rectangular tube, oval tube, round tube, pipe, angles, flat bar, I-shapes, T-shapes, L-shapes, and combinations and portions of any of the foregoing.

**[0049]** Depending upon the material(s) employed in the construction of the basketball systems, a variety of methods and components may be used to connect, releasably or permanently, various elements of the basketball systems. For example, the various elements of basketball systems within the scope of this disclosure may be attached to each other by

any one or more of processes such as welding or brazing, and/or mechanically by way of fasteners such as bolts, screws, pins, and rivets, for example.

## B. General Aspects of An Example Basketball System

**[0050]** With reference first to FIG. 1, an example basketball system 10 is disclosed. In an embodiment, and as discussed in further detail below, the basketball system 10 may be a portable basketball system, and may be configured to be disassembled and reassembled.

**[0051]** The basketball system 10 may include a support structure 12, such as a support pole, that is sized and configured to support a basketball goal 14 above a playing surface. The support structure 12 may include one or more segments 12a, which may be hollow, that are interconnected/interconnectible, which may facilitate shipping and transportation of the basketball system 10, and the segments 12a may or may not be movable relative to each other. One embodiment of a support structure 12 comprises a pole with multiple telescoping segments 12a. Alternatively, the support structure 12 may take the form of a single pole.

**[0052]** In addition to the basketball goal, the basketball system 10 may include a backboard 16 to which the goal 14 is attached, directly or indirectly, by one or more fasteners and/or support elements. In an embodiment, the backboard 16 may comprise a blow-molded structure that comprises a living hinge.

**[0053]** The basketball system 10 may be a portable basketball system, as indicated in the example of FIG. 1 and discussed in more detail elsewhere herein, that is capable of being moved from one location to another. For example, the support structure 12 may be connected, directly or indirectly, to a base 18 to form part of a portable basketball system. The base 18, which may comprise multiple portions, may be a hollow structure, which may be injection molded, blow-molded, or otherwise formed, that may be filled with ballast, such as sand or water, to aid in the stability of the basketball system 10 when in use. For example, one or more portions of the base 18 may comprise a unitary one-piece structure made of plastic and formed by a blow-molding process, or by an injection molding process. The attachment of the support structure 12 to the base 18 may be effected with one or more legs 20, and the legs 20 may be supported by respective struts 21 that connect the legs 20 to the support structure 12.

**[0054]** In an embodiment, the legs 20 may be omitted and the support structure 12 received, possibly removably, within a recess defined in the base. In an embodiment, the support structure 12 may be attached, possibly removably, to the base without necessitating the use of a recess, such as by way of connecting structures that attach to the support structure 12 and to the base. In these alternative embodiments, all of the components of the basketball system may fit inside the base.

**[0055]** In an embodiment, a base for a basketball system may, instead of comprising two separate and discrete pieces as in the case of the example base 18, take the form of a unified, single piece, construction. In such an embodiment, a bottom portion, and a cover, may be connected to, and integral with, each other by a living hinge that may run part, or all of, the length, or the width, of the base. In such an embodiment, a configuration that includes the living hinge may be created by processes including, but not limited to,

blow-molding, and injection molding. The living hinge may enable the bottom portion and the cover to be selectively brought together to at least partly define an enclosed space in which basketball system components can be stored. In an embodiment, the bottom portion and/or the cover may be configured to receive at least a portion of one or more basketball system components.

**[0056]** In one embodiment, a base having a unified, single piece, construction may be constructed using a blow molding process. The molded, hollow, base may then be cut so that two portions, such as a bottom portion and a cover, are created. The upper and lower portions may be joined together, such as by one or more hinges or other components, to at least partly define an enclosed space in which basketball system components can be stored. In an embodiment, the bottom portion and/or the cover may be configured to receive at least a portion of one or more basketball system components.

**[0057]** As well, the basketball system 10 may comprise one or more wheels 22 that are attached to an axle (see FIG. 12) that passes through, or is otherwise connected to, the support structure 12. With the wheels 22 thus arranged, a user may tilt the basketball system 10 until the base 18 is off the ground, and then roll the basketball system 10 to the desired location. In an embodiment, any number of wheels 22 may be employed such as, for example, only a single wheel, two wheels, four wheels, six wheels, or eight wheels. No embodiment requires any particular number of wheels.

### C. Aspects of an Example Backboard

**[0058]** With reference next to FIG. 2, FIG. 3, and FIG. 4, further details are provided concerning the example backboard 16. As shown in those Figures, the backboard 16 may comprise a living hinge 16a that extends across the width of the backboard 16. In the example shown in the Figures, the living hinge 16a is located about 1/3 of the total height of the backboard 16 from the bottom of the backboard 16. However, this location is presented only by way of example, and the living hinge 16a may be located elsewhere. In an embodiment, the living hinge 16a may, instead of extending horizontally across a width of the backboard 16, extend vertically from the top of the backboard 16 to the bottom of the backboard 16. By its nature, the living hinge 16a may be integral with the backboard 16, such that the backboard 16 comprises a single piece of material that includes the living hinge 16a, which may be created during the same blow-molding, or other, process that was used to create the other portions of the backboard 16.

**[0059]** In an embodiment, a backboard may comprise multiple living hinges, such as two or more living hinges for example. The living hinges may be parallel, or at least generally parallel, to each other, and may extend lengthwise, or widthwise, along the backboard. The living hinges may, or may not, divide the backboard into backboard portions that have the same length and width as each other. The living hinges may be parallel, or at least generally parallel, to one or more edges of the backboard.

**[0060]** With reference now to FIG. 5, and FIG. 6, and continued reference to FIGS. 2 through 4, the example backboard 16 is shown in a folded configuration, where the backboard 16 is folded about the living hinge 16a so that a first portion 16b of the backboard 16 is on top of a second portion 16c. In an embodiment, the living hinge 16a may be configured and arranged to enable either of the portions 16b

and 16c to rotate about, or exactly, 180 degrees relative to the other of the portions 16b and 16c, such that the two portions 16a and 16b are stacked flat on top of each other as shown in FIG. 5. In an embodiment, the range of rotation may be less than 180 degrees, such as about 90 degrees, or any angle or combination of angles between 0 and 200 degrees or 0 and -200 degrees, for example. In an embodiment, the portions 16b and 16c may be different respective sizes, at least in terms of their respective heights, and the portions 16b and 16c may have the same width. In an embodiment, the portions 16b and 16c may each have the same height and width.

**[0061]** As further indicated in FIG. 5, the backboard 16 may comprise one or more tack-offs 16d. The tack-offs 16d may be created as a result of a blow-molding process. In an embodiment, the tack-offs 16d may have a circular shape, although that is not required. Further, a tack-off 16d may have a generally conical shape, or may have a cylindrical, or other, shape. FIG. 6 further indicate two faces 16e that are visible when the backboard 16 is folded about the living hinge 16a. When the backboard 16 is unfolded and ready for use, the two faces 16e may be in direct contact with each other.

**[0062]** With reference now to FIGS. 7 and 8, and referring to FIG. 3 as well, the backboard 16 may be configured so that the portions 16b and 16c collectively define a recess 16f that extends down either side of the backboard 16. As best shown in FIG. 7, a stiffener 24 may be provided on each vertical side of the backboard 16. The stiffeners 24, which may be metal, may have a generally U-shaped configuration and may removably fit in the recess 16f so that, when positioned in the recesses 16f, the stiffeners 24 are flush with the surface of the backboard 16. Thus, positioned, the stiffeners 24 may prevent the backboard 16 from buckling, or folding, about the living hinge 16a, when the backboard 16 is in use. The stiffeners 24 may snap fit into, or otherwise removably engage, the recesses 16f so that a user may readily install and remove the stiffeners 24 as needed. In an embodiment, the stiffeners 24 may additionally, or alternatively, be connected to the backboard 16 with fasteners such as screws or bolts for example.

**[0063]** The backboard 16 may be further supported by brackets 26 that enable the backboard 16 to be attached to the support structure 12. The support structure 12 may be attached to the brackets 26 with bolts or other fasteners, and the brackets 26 may likewise be removably attached to the backboard 16 with bolts, screws, or other fasteners. The brackets 26, and associated hardware and fasteners that may be needed to connect the backboard 16 to the support structure 12, may fit entirely within the base 18, along with all of the other basketball system components disclosed herein.

**[0064]** FIG. 8 discloses a portion of the hollow interior 28 of the example backboard 16. Due to the presence of one or more living hinges 16a, the respective hollow interiors of the portions 16b and 16c may be isolated from each other, that is, the hollow interior of the portion 16b does not communicate with the hollow interior of the portion 16c.

**[0065]** In an embodiment, a backboard need not take the form of example backboard 16 and may, instead, comprise various other forms such as, for example, a sheet of metal, or a sheet of plastic. Another embodiment may comprise a two piece backboard that omits the living hinge. In this example, each of the two pieces may comprise respective structures that

enable the two pieces to be removably attached to each other. In an embodiment, the respective structures may collectively define a hinge such that one of the pieces of the backboard may be snapped into, and rotatable with respect to, the other piece of the backboard. Thus, one piece of the backboard may comprise integral pin elements extending along one edge, and the other piece of the backboard may comprise one or more integral open elements having a generally cylindrical configuration and including a lengthwise opening each configured to receive a pin element or portion of a pin element. In an embodiment, a single pin may be provided to connect the two pieces.

#### D. Aspects of an Example Base

[0066] With reference now to FIG. 9, FIG. 10, and FIG. 11, details are provided concerning the example base 18. As shown, the base 18 may comprise a cover 30 that mates with a bottom portion 32. In an embodiment, the rim 30a of the cover 30 may extend partway down, and outside of, the walls 32a of the bottom portion 32 so as to help prevent ingress of foreign materials into the bottom portion 32, and egress of materials, such as ballast for example, from the base 18 to the environment. In an embodiment, the cover 30 fits over and around the backboard 16 which may be at least partly received in the bottom portion 32 when the backboard 16 is folded as shown in FIG. 10.

[0067] As shown in FIGS. 11 and 12, the bottom portion 32 of the base 18 may be configured to contain one, some, or all, components of the basketball system 10. Components of the basketball system 10 that may be completely contained within the base 18 may include, but are not limited to, the legs 20, struts 21, wheels 22, goal 14, backboard 16, and the support structure 12 comprising one or more segments 12a, as well as the axle 34 that supports the wheels 22. In an embodiment, some of the components contained in the base 18 may be nested within other components. For example, and as best shown in FIG. 12, one or more of the legs 20 and/or struts 21 may fit inside one of the segments 12a.

[0068] Turning next to FIGS. 13 and 14, and with continued reference to FIG. 12, an embodiment of the base 18 may comprise various other elements, any or all of which may be integrally formed as part of the base. For example, the base 18 may include one or more, possibly integral, locating elements which may be sized, configured, and positioned, within the base 18 to help retain one or more components in a desired orientation and location either inside, or outside, the base 18. In FIGS. 12 and 13, locating elements 36 are shown that are positioned in corners of the interior of the bottom portion 32 and may help to retain the wheels 22 in position within the bottom portion 32. In this example, the curved geometry of the locating elements 36 mimics the shape of the wheels 22. Other locating elements, sized, configured, and positioned, within the base 18 may be provided to help retain other components.

[0069] As also indicated in FIGS. 12 and 12a, in particular, another example of an element that may be incorporated in the base 18 is a handle, and/or a grip. In particular, the bottom portion 32 may further comprise an integral handle 38, which may comprise a recess formed in a wall 32a of the bottom portion.

[0070] With particular reference now to FIG. 13 (interior of the bottom portion 32) and FIG. 14 (exterior of the bottom portion 32), the example base 18 may comprise still further elements. Specifically, recesses 40 may be provided in the

exterior of the bottom portion 32. As shown in FIG. 15, the recesses 40 may be sized and configured to partly receive respective portions of the legs 20, that may attach to respective ends of the axle 34. In an embodiment, and with particular reference now to FIG. 15, a depth of the recesses 40 may be such that the legs 20 are flush with, that is, do not extend below, the bottom surface of the bottom portion 32. [0071] As shown in FIG. 15, and with attention as well to FIG. 16, an embodiment may comprise a cross piece 42 which, when not in use, may be stored in the base 18 along with the other components noted herein. When the basketball system 10 is to be used, the cross piece 42 may be positioned within the interior of the bottom portion 32 and removably connected to the legs 20 by fasteners (not shown) that pass through the cross piece 42 and the structure of the bottom portion 32, and into, or through, the legs 20. Among other things, the cross piece 42 may lend lateral stiffness to the basketball system 10, while also retaining the legs 20 in position in the recesses 40. The cross piece 42 may also help to ensure that the base 18 does not move relative to the legs 20, and struts 21. FIG. 17 shows the base 18 fully assembled to the legs 20 and various other elements of the basketball system 10.

#### E. Further Embodiments of a Backboard and Base

##### E.1 Embodiments of FIGS. 18-27

[0072] With attention now to FIGS. 18, 19, 20, 21, 22, 23, 24, 25, 26, and 27, details are provided concerning further embodiments of a backboard, and a base. Turning first to FIGS. 18-21, an embodiment of a backboard 50 is disclosed. In an embodiment, the backboard 50 may comprise two separable portions 52 and 54 that may be configured, for example, to form a lap joint 55 when engaged with each other, and the lap joint 55 may define one or more seams 57 running the width of the backboard 50. In an embodiment, the portions 52 and 54 may comprise respective blow-molded elements, or may be formed using any other molding or manufacturing process. In an embodiment, the portions 52 and/or 54 may alternatively comprise respective pieces of glass, fiberglass, wood, or composite material(s), for example.

[0073] Fasteners 56 may be used to connect the portions 52 and 54. Such fasteners 56 may comprise removable fasteners, such as screws or bolts for example. The fasteners 56 may be located on a backside of the backboard 50, that is, a side of the backboard 50 opposite the side where the goal (not shown) is attached or attachable. In an embodiment, a tongue-and-groove joint may be employed instead of the lap joint 55. In an embodiment, the lap joint 55, or other joint between the portions 52 and 54, may extend along the width of the backboard 50, and in another embodiment, the lap joint 55, or other joint, may extend along the height of the backboard 50. In an embodiment, the backboard 50 may be disassembled and the portions 52 and 54 may fit partly, or entirely, within a base, such as the base 18 for example.

[0074] With reference now to FIGS. 22-24, an embodiment of a backboard is denoted generally at 60. In an embodiment, the backboard 60 may comprise two separable portions 62 and 64 that may be configured, for example, to define a recess 66 when positioned as shown in those Figures. In the disclosed example, the portion 62 defines a generally U-shaped channel that runs the width of the

portion 62. Correspondingly, the portion 64 defines an extension 65 configured to extend over and cover part, or all, of the U-shaped channel defined by the portion 62. In this way, the U-shaped channel and the extension 65 may cooperate with each other to define the recess 66. When the portions 62 and 64 are connected to each other, two width-wise, or lengthwise, seams 67 may be defined in the backboard 60. That is, the seams 67 may extend from one side edge of the backboard 60 to the other side edge of the backboard 60 or, alternatively, may extend from a top edge of the backboard 60 to a bottom edge of the backboard 60.

[0075] In an embodiment, the portions 62 and 64 may comprise respective blow-molded elements, or may be formed using any other molding or manufacturing process. In an embodiment, the portions 62 and/or 64 may alternatively comprise respective pieces of glass, fiberglass, wood, or composite material(s), for example.

[0076] In an embodiment, the recess 66 may have a square, or rectangular, cross-section, although no particular cross-sectional shape of the recess 66 is required. A stiffener 68, which may, in one embodiment, comprise square tubing made of metal and/or the other materials disclosed herein, may be provided that is configured to be received, possibly removably, within the recess 66. The cross-sectional shape of the stiffener 68 may mimic the cross-sectional shape of the recess 66. Thus, in the illustrated example, the cross-sectional shape of the stiffener 68 is generally square, or rectangular. In an embodiment, the cross-sectional shape of the stiffener 68, as well as the cross-sectional shape of the recess 66, may be round, triangular, or polygonal. In an embodiment, the stiffener 68 may comprise one or more pieces of metal flat bar positioned within a recess 66 of a shape and size corresponding to the dimensions and configuration of the flat bar piece(s). When not in use, the stiffener 68 may be partly, or completely, disposed within an interior of a base.

[0077] In an embodiment, one or more fasteners 70 may be used to connect, possibly removably, the portions 62 and 64. For example, the fasteners 70 may pass through the extension 65 and the stiffener 68, and into the interior of the stiffener 68. Such fasteners 70 may comprise removable fasteners, such as screws or bolts for example. The fasteners 70 may be located on a backside of the backboard 60, that is, a side of the backboard 60 opposite the side where the goal (not shown) is attached or attachable. In an embodiment, the backboard 60 may be disassembled, such as by removing the fasteners 70, and the portions 62 and 64, as well as the stiffener 68, may fit partly, or entirely, within a base, such as the base 18 for example.

[0078] Turning now to FIGS. 25, 26, and 27, an example apparatus 71 is disclosed that comprises a base 72, and a backboard 73 that comprises portions 74 and 76 that may be removably attachable to each other, and to the base 72. In an embodiment, the backboard 73 may be similar, or identical, to the backboard 50.

[0079] In an embodiment, the base 72 may be open on both sides so that an enclosure may be defined by attaching the portions 74 and 76 to respective sides of the base 72, as shown in FIGS. 25-27. In an embodiment, the enclosure thus defined may be sized and configured to completely contain basketball system components including, but not limited to, support structures, a goal, wheels, axle, net, legs, stiffeners, and struts. The base 72, as well as the respective backside portions of the portions 74 and 76, may also include one or

more locating structures, which may be similar to the locating structures 36 referred to in FIG. 12. While not specifically indicated in FIGS. 25-27, the base 72 may further comprise a handle, examples of which are disclosed herein. One or more handles may be integrally formed with the portion 74 and/or the portion 76.

[0080] As in the case of other embodiments disclosed herein, the portions 74 and 76, as well as the base 72, may comprise respective blow-molded elements, or may be formed using any other molding or manufacturing process. In an embodiment, the portions 74 and/or 76, as well as the base 72, may alternatively comprise respective pieces of glass, fiberglass, wood, or composite material(s), for example.

[0081] The portions 74 and 76 may removably connect to the base 72 in various ways. For example, in one embodiment, the portions 74/76 and the base 72 may comprise respective complementary structures configured to removably engage each other, such as by a snap-fit, or other, mechanism. For example, the portions 74/76 may comprise pins configured to be removably received in corresponding holes defined by the base 72, or the reverse configuration may be employed, that is, in which the base 72 defines the pins, and the holes are defined by the portions 74/76. In an embodiment, the portions 74/76 may connect to the base 72 on only part, or on all, of their respective perimeters. In an embodiment, one or the other of the portions 74/76, and the base 72, may define one or more grooves configured to removably receive a protruding portion, which may comprise a barb-shaped cross-section for example, of the other of the portions 74/76 and base 72. In an embodiment, one or more of the complementary structures may comprise multiple discrete elements disposed along part, or all, of the circumference of the element that includes them. In an embodiment, one or more of the complementary structures may take the form of a single element disposed along part, or all, of the circumference of the element that includes it. No particular number or configuration of complementary structures is required in any embodiment. In an embodiment, one or both of the portions 74/76, or the base 72, may define a slot or track, such as a T-shaped slot, that slidably receives a protruding element, which may have a corresponding T-shaped configuration, of the other of the portions 74/76, or the base 72, so that the portions 74/76 can be slid onto, and off of, the base 72. The slots, where provided, may include a stop at one end to limit the range of motion of the portions 74/76 relative to the base 72.

[0082] The complementary structures or other elements that enable the portions 74/76 to releasably engage the base 72 may be positioned on the back side of the backboard 73 so as not to interfere with the goal (not shown) when the goal is attached to the backboard 73. In an embodiment, one or fasteners, such as screws or bolts for example, may be used in addition to, or instead, of complementary structures, to enable the portions 74/76 to releasably connect to the base 72.

## E.2 Embodiment of FIGS. 28-31

[0083] With attention now to FIGS. 28, 29, 30 and 31, details are provided concerning another embodiment of a backboard, generally indicated at 80. Except as specifically noted in the discussion below, the backboard 80 may be similar, or identical, to any of the other backboards disclosed herein.

[0084] As best shown in FIGS. 29-31, the backboard 80 may comprise a living hinge 82 that is integral with, and connects, first and second portions 84 and 86 of the backboard 80. The living hinge 82 may be configured and arranged to define a generally V-shaped channel 88, that is a channel 88 with a generally V-shaped cross-section, when the first and second portions 84 and 86 of the backboard 80 are laid flat, that is, disposed at an angle of about 180 degrees with respect to each other, as shown in FIGS. 30 and 31. In other embodiments, the channel 88 may have a generally rectangular shape, polygonal shape, or circular shape, for example.

[0085] The channel 88 may be generally parallel to upper and lower edges 90 and 92 of the backboard 80. As best shown in FIGS. 28 and 29, the channel 88 may be sized and configured to receive, in whole or in part, a stiffener 94. The depth of the channel 88 may be such that the stiffener 94 resides partly, or completely, below the back surface of the backboard 80, when the stiffener 94 is disposed in the channel 88.

[0086] The stiffener 94 may comprise a tube, or a solid piece of material, made of metal, plastic, and/or other materials. The stiffener 94 may have any suitable cross-sectional shape which may, in an embodiment, mimic the cross-sectional shape of the channel 88, although that is not required, as illustrated by FIG. 29. Some example cross-sectional shapes for the stiffener 94 include rectangular, polygonal, or circular. The stiffener 94 may have a length that is the same as, or less than, a width of the backboard 80.

[0087] With continued reference to FIGS. 28-31, the backboard 80 may comprise additional stiffeners 96 and 98, disposed at the sides of the backboard 80, as in the case of various other embodiments herein. However, the stiffeners 96 and 98 may be omitted, and the backboard 80 may include only the stiffener 94.

[0088] In operation, the stiffener 94 may help to improve the rebound of the backboard 80. For example, a force, such as may be exerted by a player and/or a ball, on the portion 84 may cause the portion 84 to rotate, due to the somewhat resilient nature of the plastic material that may be used in the construction of the portion 84, backwards about the stiffener 94 toward the portion 86. After the force is remove, the portion 84, supported by the stiffener 94, may return, such as by rotation, to its original position and orientation. In this way, the shock of the imposition of the force may be somewhat absorbed and attenuated by the backboard 80. This functionality may contribute to the durability of the backboard 80, and of its associated components.

[0089] With reference, finally, to the example of FIG. 31, the backboard 80 may be configured so that each of the portions can rotate into contact with the other portion, as indicated by the arc representing movement/range of motion 100 of the portion 84 and/or 86. That is, the channel 88 and the living hinge 82 may enable such motion of the portions 84 and/or 86. In an embodiment, the range of motion 100 may be such that one of the portions can be rotated into contact in a stacked arrangement with the other portion. When the portions 84 and 86 are thus disposed, the backboard 80 may fit partly, or completely, within a base, examples of which are disclosed herein. As further disclosed herein, such a base may also contain, in whole or in part, various other components of a basketball system.

[0090] The described embodiments are to be considered in all respects only as illustrative and not restrictive. All

changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

What is claimed is:

1. A basketball system, comprising:

a goal;

a backboard to which the goal is attachable;

a support structure that is connectible directly or indirectly to the backboard;

legs that are attachable to the support structure; and

a base to which the legs are attachable, and the base is sized and configured to completely enclose the goal, the support structure, and the legs.

2. The basketball system as recited in claim 1, wherein the backboard is foldable and, when folded, fits within the base.

3. The basketball system as recited in claim 1, wherein the backboard comprises a living hinge that runs a length, or a width, of the backboard.

4. The basketball system as recited in claim 1, further comprising struts that are connectible to respective legs, and to the base, and the struts are containable in the base along with the goal, the backboard, the support structure, and the legs.

5. The basketball system as recited in claim 1, further comprising an axle and two wheels configured to be positioned on the axle, and the wheels and the axle are containable in the base along with the goal, the backboard, the support structure, the legs, and struts.

6. The basketball system as recited in claim 1, further comprising a stiffener configured to removably engage a recess defined by the backboard, and the stiffener is containable in the base along with the goal, the backboard, the support structure, and the legs.

7. The basketball system as recited in claim 1, further comprising wheels that enable the basketball system to be rolled from one location to another when the basketball system is in an assembled state.

8. The basketball system as recited in claim 1, wherein the base comprises a bottom portion, and a cover that removably fits with the bottom portion.

9. The basketball system as recited in claim 1, wherein the backboard comprises two pieces.

10. A basketball system, comprising:

a base that contains basketball system components comprising:

a goal;

a backboard comprising two portions;

a support structure;

legs;

one or more wheels;

an axle; and

struts.

11. The basketball system as recited in claim 10, wherein the base comprises a bottom portion, and a cover that removably fits with the bottom portion.

12. The basketball system as recited in claim 10, wherein the base defines a locating element that is integral with the base.

13. The basketball system as recited in claim 10, wherein the base defines recesses that are integral with the base and that are configured to accommodate respective portions of the legs.



**14.** The basketball system as recited in claim **10**, wherein the base further contains a cross piece, and one or more stiffeners that are removably connectible to the backboard.

**15.** The basketball system as recited in claim **10**, wherein the backboard is folded.

**16.** The basketball system as recited in claim **10**, wherein the base defines an integral handle.

**17.** The basketball system as recited in claim **10**, wherein the base is made of plastic.

**18.** A backboard, comprising:

a first portion;

a second portion; and

a living hinge integral with, and connecting, the first portion and the second portion.

**19.** The backboard as recited in claim **18**, wherein the backboard is foldable.

**20.** The backboard as recited in claim **19**, wherein when the backboard is fully folded, the first portion and the second portion are stacked one on top of the other.

**21.** The backboard as recited in claim **18**, wherein the living hinge enables one of the first portion and the second portion to rotate about **180** degrees, or more, relative to the other of the first portion and the second portion.

**22.** The backboard as recited in claim **19**, wherein when the backboard is fully folded, respective faces of the first portion and the second portion, and are in contact with, each other.

**23.** The backboard as recited in claim **18**, wherein the backboard comprises one or more tack-offs.

**24.** The backboard as recited in claim **18**, wherein the backboard is hollow.

**25.** The backboard as recited in claim **18**, wherein the backboard comprises a parting line.

**26.** The backboard as recited in claim **18**, wherein the first portion and the second portion are configured to be positioned with respect to each other so as to cooperatively define a recess that extends along a length or a width of the backboard.

**27.** The backboard as recited in claim **26**, further comprising a stiffener configured to be removably received within the recess.

**28.** The backboard as recited in claim **18**, further comprising a third portion and a second living hinge that connects the third portion to one or both of the first portion and the second portion.

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