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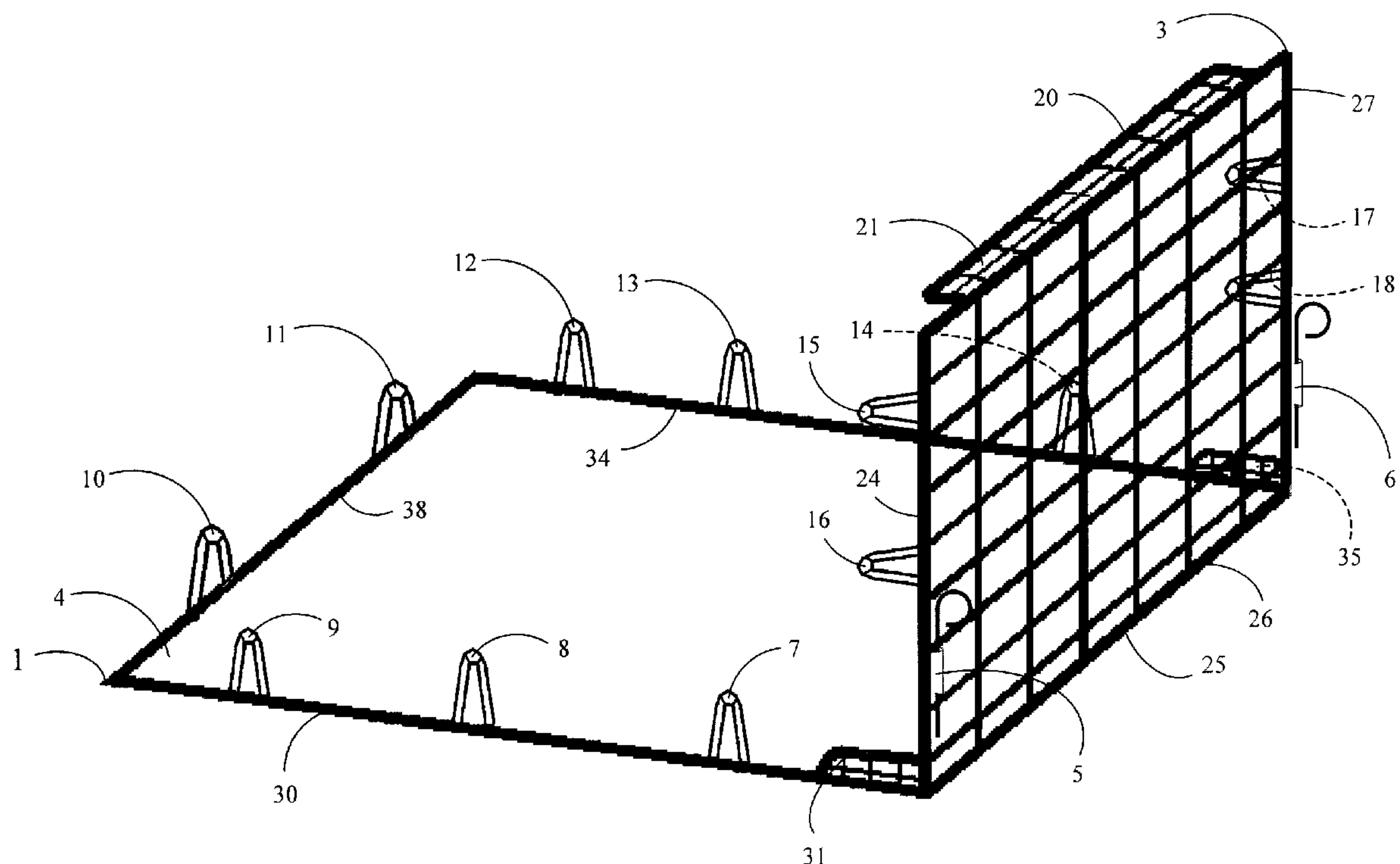
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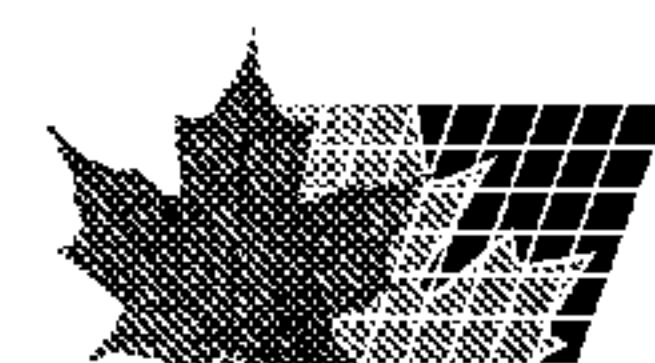
(54) Titre : ADAPTATEUR PERMETTANT DE TRANSFORMER EN CAGE UN PANIER POUR ANIMAL DE COMPAGNIE

(54) Title: ADAPTER FOR CONVERTING AN ANIMAL ENCLOSURE INTO A SELF ENCASED PET CRATE



(57) **Abrégé/Abstract:**

An adapter for converting a Foldable Pet Shelter into a self encased pet crate. The crate adapter has an end panel and a bottom panel, both of which may be joined together. The end panel is removably attachable to the Foldable Pet Shelter along the back edge perimeter of the left side, right side, and top panels of the Foldable Pet Shelter, while the bottom panel is removably attachable to the Foldable Pet Shelter along the bottom edge perimeter of the left side, right side, and front side panels of the Foldable Pet Shelter. Component lock elements positioned along various locations on the end and bottom panels of the adapter provide elements for removably securing the adapter to the Foldable Pet Shelter, thereby converting the joined components into a self encased pet crate having a top panel, a right side panel, a left side panel, a front panel, a back panel, and a bottom panel.





**ABSTRACT**

1  
2       An adapter for converting a Foldable Pet Shelter into a self encased  
3 pet crate. The crate adapter has an end panel and a bottom panel, both  
4 of which may be joined together. The end panel is removably attachable  
5 to the Foldable Pet Shelter along the back edge perimeter of the left  
6 side, right side, and top panels of the Foldable Pet Shelter, while the  
7 bottom panel is removably attachable to the Foldable Pet Shelter along  
8 the bottom edge perimeter of the left side, right side, and front side  
9 panels of the Foldable Pet Shelter. Component lock elements positioned  
10 along various locations on the end and bottom panels of the adapter  
11 provide elements for removably securing the adapter to the Foldable Pet  
12 Shelter, thereby converting the joined components into a self encased pet  
13 crate having a top panel, a right side panel, a left side panel, a front  
14 panel, a back panel, and a bottom panel.



## S P E C I F I C A T I O N S

ADAPTER FOR CONVERTING AN ANIMAL ENCLOSURE INTO A SELF ENCASED PET CRATE

**BACKGROUND OF THE INVENTION**

The field of the invention is pet shelters and the invention relates more particularly to pet/animal crates.

Animal cages or crates are commonly used by individuals as a means of restricting an animal's free movement to a particular premises.

Although reasons for crating up an animal vary, there are significant advantages for doing so. For example, housetraining a new pet has long been a difficult and frustrating task for many pet owners. Despite the love that these owners have for their companions, they nevertheless face the problem of teaching their pet not to "go to the bathroom" inside of the residence. Additionally, new pets commonly tear up furniture and valuables inside of the home when someone is not available to control such mischievous behavior. As a result, use of a crate to train the pet has become quite common. Similarly, when traveling with a pet, crates are very useful throughout the course of the trip. They give the animal owner complete control over the pet in times where freedom can be dangerous for the pet and others around. Finally, crates have also been widely used to prevent an animal from coming into contact with other animals or humans. Often, an animal needs to be confined to a particular area simply because they do not interact well with others or due to their uncontrollable nature. As a consequence, use of a crate allows individuals to restrain their animal's aggressive or wild behavior and avoid difficult and harmful situations.

As described in United States Pat. No. 6,029,609, a "Foldable Pet Shelter" is one type of animal enclosure which is used for restricting an animal's free access throughout a residence. Unlike conventional crates, however, which typically have six panels that form a rectangular enclosure, the Foldable Pet Shelter does not have a second end or bottom panel. This is due to the unique design of the Foldable Pet Shelter which substitutes the surface of an exterior panel of a dwelling for the second end panel while the residence floor/ground is used for the bottom panel. By doing this, the Foldable Pet Shelter may be removably mounted



1 to the surface of an exterior panel of a dwelling, around a pet door, so  
2 that a pet could enter the shelter with the ability to exit it upon  
3 desire. It is notable that the term "Foldable Pet Shelter", (hereinafter  
4 "FPS") is defined and understood herein and in all the claims to mean an  
5 animal/pet enclosure comprised of a top panel, right side panel, left  
6 side panel, and end panel that may be hingedly affixed to a surface of an  
7 exterior panel of a dwelling, such as that disclosed in U.S. Pat. No.  
8 6,029,609.

#### 10 **BRIEF SUMMARY OF THE INVENTION**

11 The present invention is for a crate adapter for converting an  
12 animal enclosure, such a Foldable Pet Shelter, into a self encased  
13 pet/animal crate. The crate adapter has an end panel and bottom panel,  
14 both of which may be hingedly joined together. The end panel is  
15 removably attachable to the animal enclosure along the back edge  
16 perimeter of the left side, right side, and top panels of the animal  
17 enclosure, while the bottom panel is removably attachable to the animal  
18 enclosure along the bottom edge perimeter of the left side, right side,  
19 and front panels of the animal enclosure. When joined together, both the  
20 adapter and animal enclosure transform into a self encased, self  
21 supporting pet/animal crate which is useful for housetraining a pet as  
22 well as restricting its movement within a particular area.

23 Component lock elements attached along the end and bottom panels of  
24 the adapter provide elements for securing the adapter to the animal  
25 enclosure. Hinges joining the end and bottom panels of the adapter may  
26 further allow both panels to be folded along a vertical plane towards one  
27 another. This provides for a convenient and compact formation for  
28 storing the adapter when it is not in use with the animal enclosure.

#### 30 **BRIEF DESCRIPTION OF THE DRAWINGS**

31 FIG. 1 is a perspective view of one embodiment of the crate adapter  
32 illustrating an end panel attached to a bottom panel and containing  
33 component lock clips and pins for securing the adapter to a Foldable Pet  
34 Shelter.

35 FIG. 2 is a perspective view of one embodiment for attaching the  
36 adapter to a Foldable Pet Shelter whereby the Foldable Pet Shelter is



1 lowered onto the adapter in order to convert the two components into a  
2 self encased pet/animal crate.

3 FIG. 3 is a perspective view of a self encased crate resulting from  
4 having secured the adapter to a Foldable Pet Shelter.

5 FIG. 4 is a perspective view of another embodiment for attaching the  
6 adapter to a Foldable Pet Shelter whereby the Foldable Pet Shelter is  
7 slid into sliding tracks that are mounted on the bottom panel of the  
8 adapter in order to convert the two components into a self encased  
9 pet/animal crate.

10 FIG. 5 is a perspective view of the adapter of FIG. 1 in a tilted  
11 position for illustrating the process by which the end panel may be  
12 folded flush atop of the bottom panel.

### 13 14 **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

15 As shown in FIG. 1, the crate adapter 1, has an end panel 3 and a  
16 bottom panel 4 perpendicularly positioned next to each other so that the  
17 bottom edge 26 of end panel 3 abuts the back edge 25 of bottom panel 4.  
18 Crate adapter 1 further has component lock pins 5 and 6 vertically  
19 attached to end panel 3 along right side edge 24 and left side edge 27.  
20 Along the perimeter of bottom panel 4, component lock clips, reference  
21 characters 7 - 14 are shown in an unlocked open position in a similar  
22 manner to component lock clips 15 - 18 which are respectively located  
23 along right side edge 24 and left side edge 27 of end panel 3. Both the  
24 component lock pins 5 and 6 as well as component lock clips 7-18 provide  
25 elements which removably secure a FPS to the  
26 adapter 1 when both components are joined together.

27 As indicated by arrow 19 in FIG. 2, a FPS 2 may be joined together  
28 with the crate adapter 1 to form a self encased pet crate 49 (as shown in  
29 FIG. 3). Upper edge 20 of the adapter end panel 3 is brought together in  
30 an abutting manner to the back edge 22 of the top panel 23 of the FPS 2.  
31 As shown in the diagram (FIG. 2), upper edge 20 of end panel 3 runs along  
32 an extended frame member portion 21 of end panel 3 that is horizontally  
33 situated parallel to bottom panel 4. It is noteworthy that extended  
34 frame member portion 21 is just one example of how an extending frame  
35 member built into either of the adapter panel(s) 3 or 4 may be used to  
36 complete the less than rectangular form of particular panel(s) of the FPS



2. For example, the elongated "u" shaped void that is located at the back edge 22 of FPS top panel 23 is compensated with the extended frame member portion 21 of end panel 3 when the FPS 2 and the adapter 1 are joined together. Of course, end panel 3 need not have extended frame member portion 21 for the adapter 1 to effectively transform the FPS 2 into a self encased pet crate, although such may be preferred in order to accommodate the top panel 23 design of the FPS 2.

Attachment of the adapter 1 to the FPS 2 further requires that the right side edge 24 of adapter end panel 3 be positioned in an abutting manner to the back edge 25 of the Foldable Pet Shelter's right side panel 26. Similarly, left side edge 27 of the adapter end panel 3 would abut the back edge 28 of the Foldable Pet Shelter's left side panel 29. With respect to the bottom panel 4 of the adapter 1, attachment would render the right side edge 30 of bottom panel 4 abutting the bottom edge 32 of the Foldable Pet Shelter's right side panel 26. Likewise, left side edge 34 of bottom panel 4 would abut the bottom edge 36 of the Foldable Pet Shelter's left side panel 29. It should be mentioned that similar to the extended frame member portion 21 of end panel 3, the adapter 1 may also contain extended frame member portion(s) 31 and 35 respectively. Frame member portions 31 and 35 are further examples of how an extending frame member may be built into either panels 3 or 4 of the adapter 1 for the purpose of completing the less than rectangular form of particular panel(s) of the FPS 2. As shown in FIG. 2, both the right 26 and left 29 side panels of the FPS 2 contain a curvature void, 33 and 37 respectively. Although extended frame member portions 31 and 35 need not be present for the adapter 1 to effectively transform the FPS 2 into a self encased pet crate, such may be preferred in order to accommodate the right 26 and left 29 side panel designs of the FPS 2. Finally, attachment of the adapter 1 to the FPS 2 would render the front edge 38 of the adapter bottom panel 4 abutting the bottom edge 39 of the Foldable Pet Shelter's front panel 40.

Once the FPS 2 is attached to the crate adapter 1 (in the manner mentioned above), the two components may be removably secured together in a number of different ways. For example, component lock pins 5 and 6 which are vertically mounted on the outer surface of end panel 3 may be inserted into pin sleeves 41 and 42, located on the lower bottom portions



1 of the right 26 and left 29 side panels of the FPS 2. Additionally,  
2 component lock clips 7-14 may be used to clamp the bottom panel 4 of the  
3 adapter 1 to the FPS 2 along the bottom edge perimeter 32 of the FPS  
4 right panel 26, the bottom edge perimeter 36 of the FPS left panel 29,  
5 and the bottom edge perimeter 39 of the FPS front panel 40. Furthermore,  
6 component lock clips 15-18 may be used to clamp the end panel 3 of the  
7 adapter 1 to the FPS 2 along the back edge 25 of the FPS right side panel  
8 26 and along the back edge 28 of the FPS left side panel 29. As shown in  
9 FIG. 3, the adapter 1 and FPS 2 have been secured together, in the manner  
10 discussed above, to form a self encased pet crate 49.

11 Alternatively, FIG. 4 illustrates another example of how the adapter  
12 1 can be secured to the FPS 2. As shown, the adapter 1 is equipped with  
13 sliding tracks 43 and 44 respectively mounted on the right 30 and left 34  
14 side edges of the adapter bottom panel 4. Indicated by direction arrows  
15 45 and 46, the bottom edge 32 of the FPS right side panel 26 and the  
16 bottom edge 36 of the FPS left side panel 29 are inserted into the right  
17 47 and left 48 channel grooves of right and left sliding tracks 43 and 44  
18 respectively. The FPS 2 is thereafter advanced along tracks 43 and 44  
19 towards the end panel 3 of the adapter 1 until: i. the back edge 25 of  
20 the FPS right side panel 26 abuts the right side edge 24 of adapter end  
21 panel 3, and ii. the back edge 28 of the FPS left side panel 29 abuts  
22 the left side edge 27 of adapter end panel 3. Thereafter, component lock  
23 pins 5 and 6 may be inserted into pin sleeves 41 and 42 respectively,  
24 while component lock clips 10 and 11 may be clamped upon the bottom edge  
25 39 of the FPS front panel 40 in order to secure the FPS 2 to the adapter  
26 1. It is noteworthy that despite the two mentioned examples for securing  
27 the adapter 1 to the FPS 2, it is of course, understood that there are  
28 numerous other methods for securing the two components together which are  
29 best known to those skilled in the art, and therefore, need not be  
30 mentioned herein. Additionally, although the "tilting" component clips  
31 7-18 are shown as the elements which removably secure the adapter 1 to  
32 the FPS 2, other securing devices, including, but not limited to metal or  
33 plastic snap clips, latch and eye arrangement(s), or other type of  
34 locking device(s), dependent or independent of the adapter 1, may be used  
35 to secure the adapter 1 to the FPS 2.

36 Both the end 3 and bottom 4 panels of the adapter 1 can be made from



1 a total or partially closed sheet of plastic, metal, wood, fiberglass, or  
2 other material, but are preferably made from a wire grid to further  
3 provide ventilation for the animal and less of an enclosed feeling inside  
4 the crate 49. Additionally, although end 3 and bottom 4 panels are shown  
5 to be in a substantially flat, rectangular formation, they may  
6 alternatively undertake any geometric shape, including, but not limited  
7 to spherical, triangular, trapezoid, polygon, etc. Finally, it is  
8 noteworthy that the bottom panel 4 of the  
9 adapter 1 may allow for a plastic/metal pan to be removably attached to  
10 its upper surface area so that an animal/pet may have added resting  
11 comfort when placed inside the crate 49. The plastic pan may even be the  
12 bottom panel 4, thereby eliminating the need to place a grid or similar  
13 panel member underneath the pan.

14 Panels 3 and 4 of the adapter 1 are preferably hingedly attached  
15 along the bottom edge 26 of end panel 3 and back edge 25 of bottom panel  
16 4. Illustrated in FIG. 5, a hinge 51 joining these two panels together  
17 will maintain the stability and unification of the adapter 1. Hingedly  
18 joining the panels together will also provide for a precise and guided  
19 process of folding the panels along a parallel plane towards one another.  
20 As indicated by arrow 50, FIG. 5, adapter end panel 3 is rotated  
21 vertically along the hinged axis from which the panels are attached  
22 towards a position that places it flush on adapter bottom panel 4.  
23 Folding the panels 3, 4 in this manner allows the adapter 1 to be  
24 rendered in a compact and flat formation for storage and transportation  
25 during times of non-use. Of course, adapter panels 3 and 4 may  
26 alternatively be detached from each other and exist as separate  
27 components, each of which, can be independently attached to the FPS 2.

28 The present embodiments of this invention are thus to be considered  
29 in all respects as illustrative and not restrictive; the scope of the  
30 invention being indicated by the appended claims rather than by the  
31 foregoing description. All changes which come within the meaning and  
32 range of equivalency of the claims are intended to be embraced therein.  
33  
34  
35  
36



**I CLAIM:**

1. An adapter for converting an animal enclosure that is adapted for mounting around a pet door opening into an encased crate, said adapter comprising:
  - an end panel removably attachable along a back edge perimeter of an animal enclosure, said back edge perimeter being formed from the back edges of the right side, left side, and top panels of said animal enclosure;
  - a bottom panel removably attachable along a bottom edge perimeter of said animal enclosure, said bottom edge perimeter being formed from the bottom edges of the right side, left side, and front panel of said animal enclosure.
2. The adapter of claim 1, wherein said adapter end panel is hingedly affixed to said adapter bottom panel.
3. The adapter of claim 1, further including at least one locking mechanism which removably secures said adapter to said animal enclosure.
4. The adapter of claim 3, wherein said at least one locking mechanism is situated on said adapter.
5. The adapter of claim 3, wherein said at least one locking mechanism is attachable to said adapter.
6. The adapter of claim 2, wherein said adapter end and bottom panels may be rotated along the axis from which they are hingedly attached in order to fold said panels flush on top of each other.



7. The adapter of claim 1, wherein said animal enclosure comprises a top panel, a right side panel, a left side panel, and a front panel.
8. The adapter of claim 3, wherein said at least one locking mechanism is attachable to said animal enclosure.
9. A method for converting an animal enclosure that is adapted for mounting around a pet door opening into an encased crate, said method comprising:
  - providing an animal enclosure, said animal enclosure being detached from a mounted position around a pet door opening;
  - providing an end panel having, at least, left, right, and top edges; and
  - attaching said end panel to said animal enclosure along the right, left, and top edges of said end panel, wherein said end panel becomes attached to said animal enclosure at a back edge perimeter of said animal enclosure, said back edge perimeter being formed from the back edges of a right side, left side, and top panel of said animal enclosure;
  - providing a bottom panel having, at least, right, left, and front edges; and
  - attaching said bottom panel to said animal enclosure along said right, left, and front edges of said bottom panel, wherein said bottom panel becomes attached to said animal enclosure at a bottom edge perimeter of said animal enclosure, said bottom edge perimeter being formed from the bottom edges of a right side, left side, and front panel of said animal enclosure.
10. The method of claim 9, wherein said animal enclosure comprises a top panel, a right side panel, a left side panel, and a front panel.



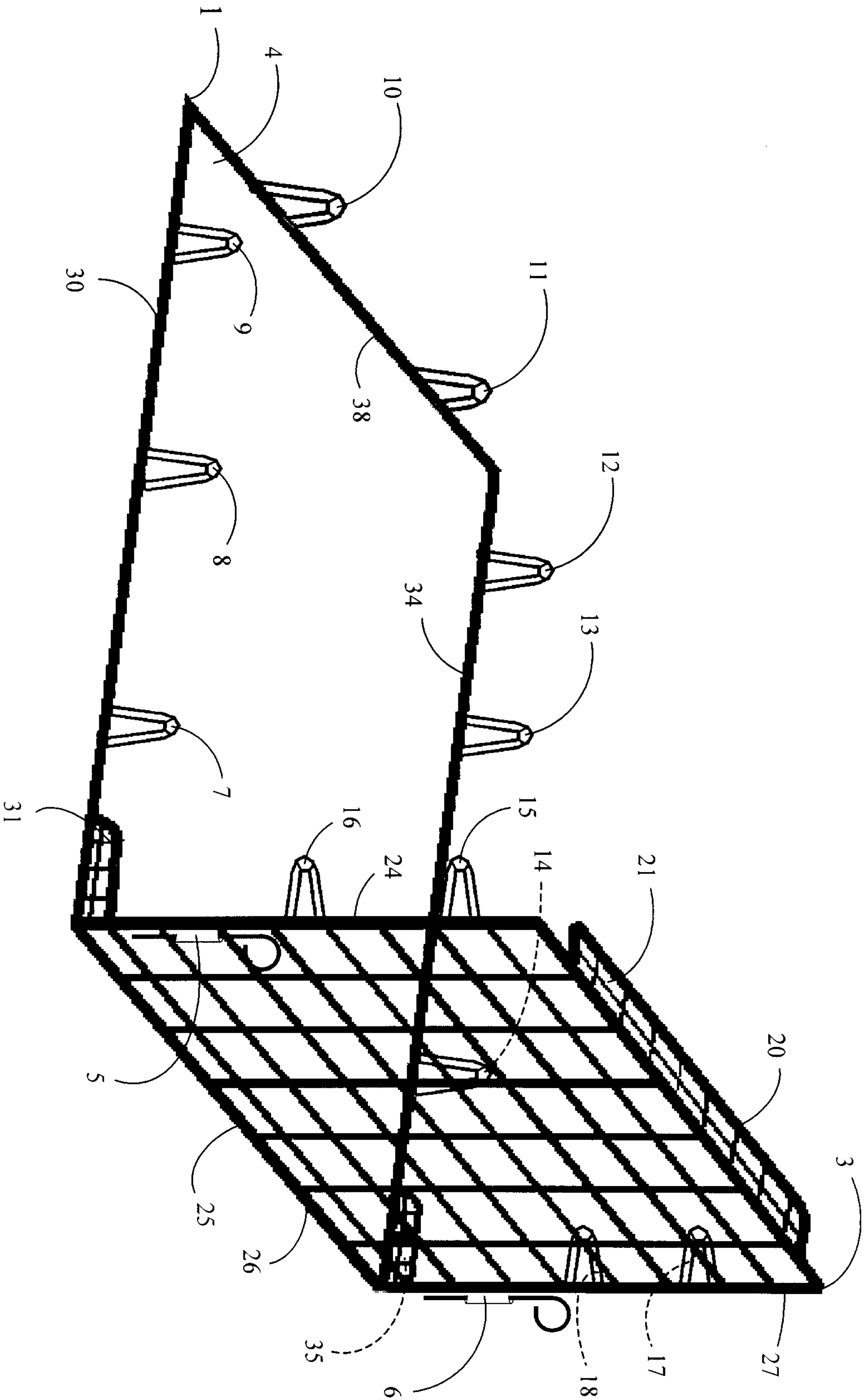


FIG. 1

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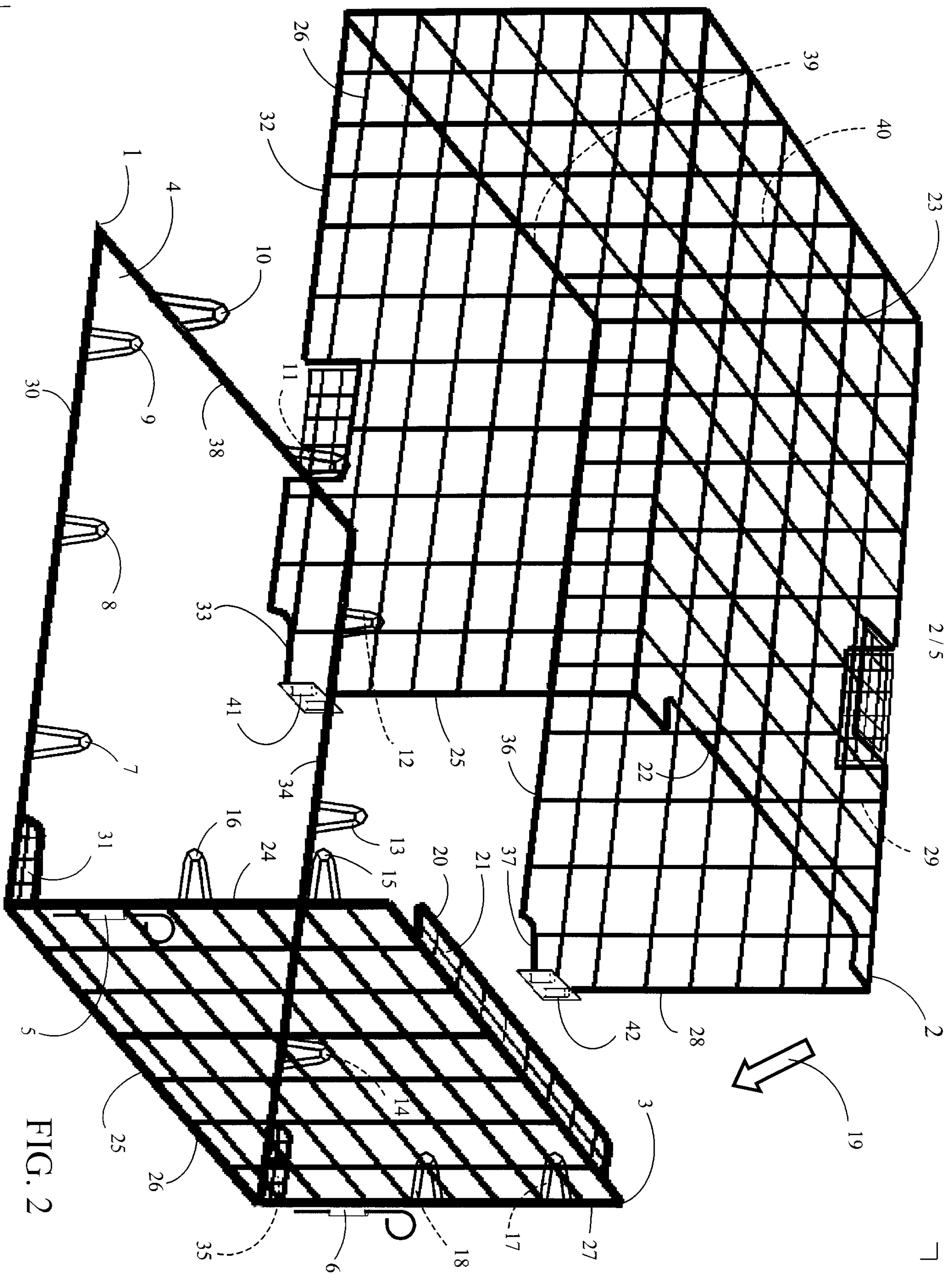


FIG. 2



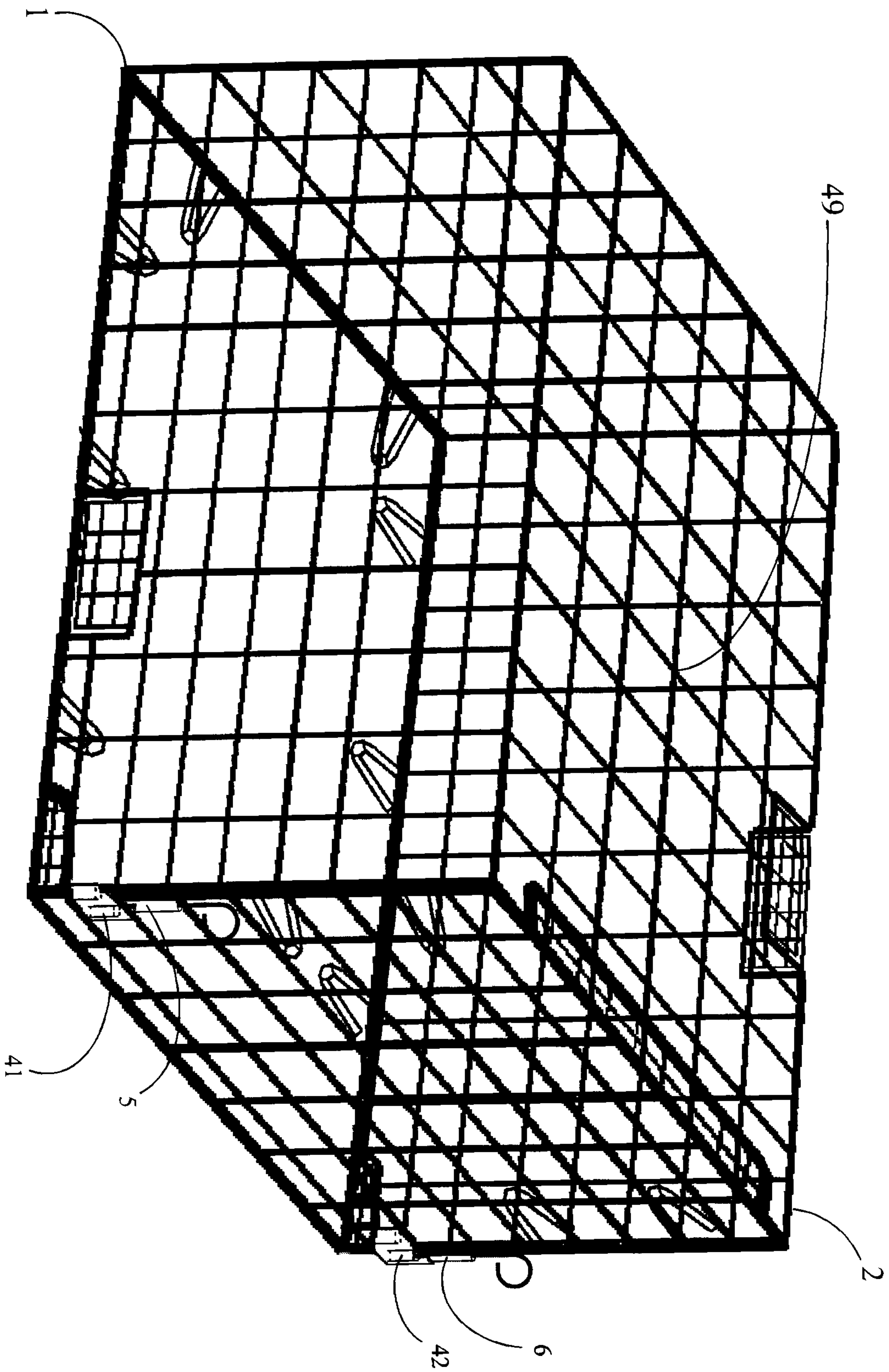


FIG. 3



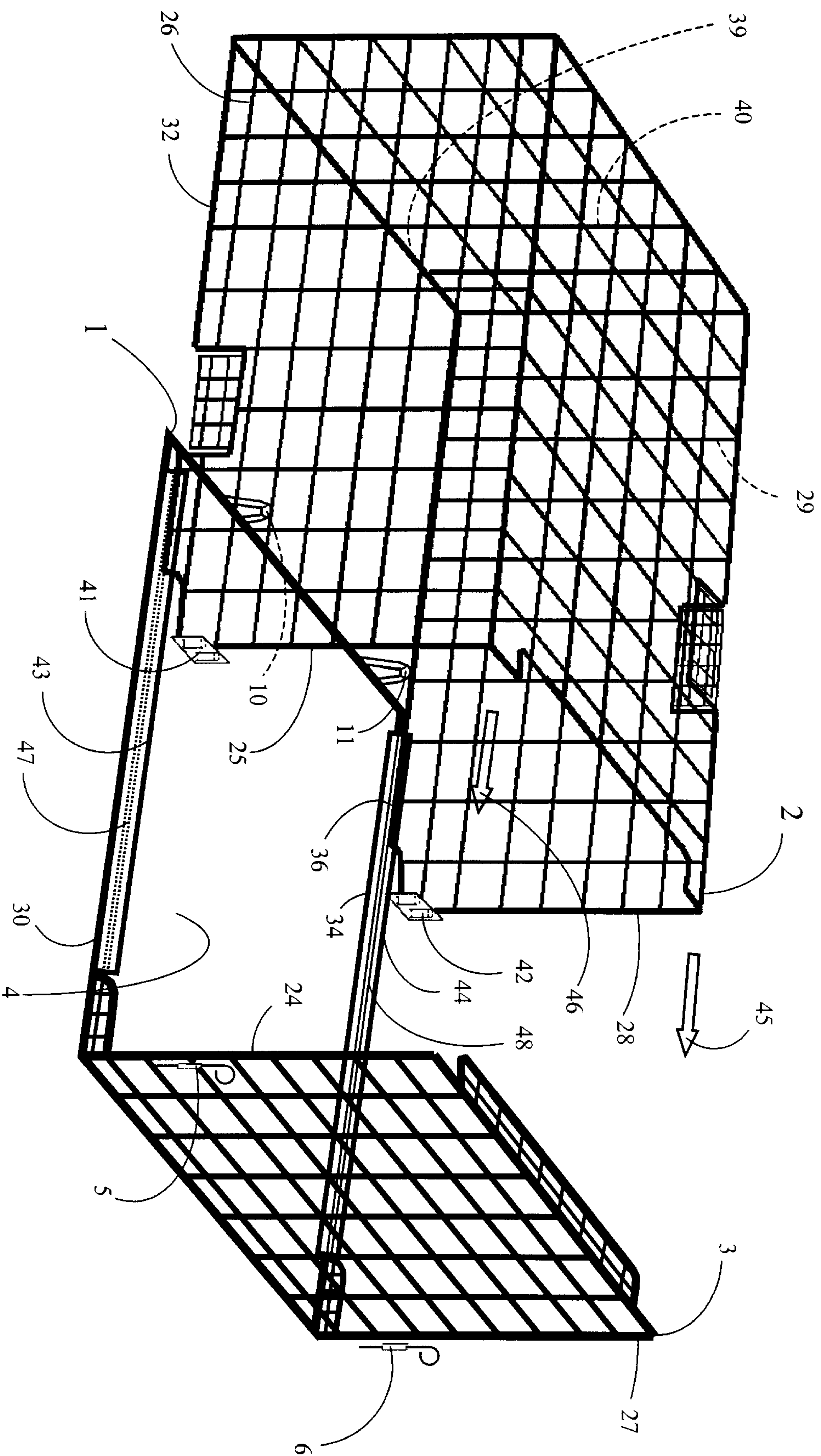


FIG. 4



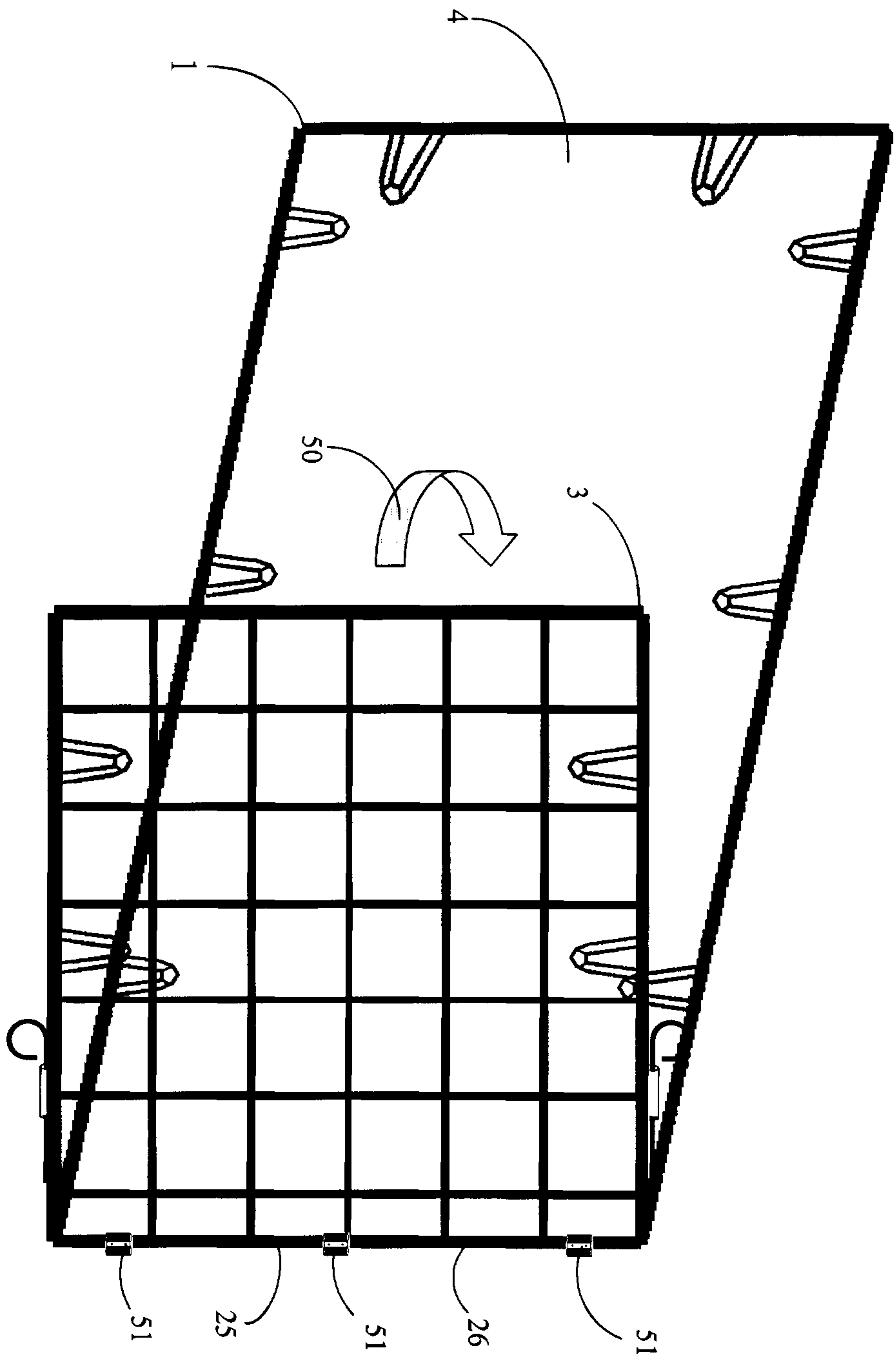


FIG. 5



