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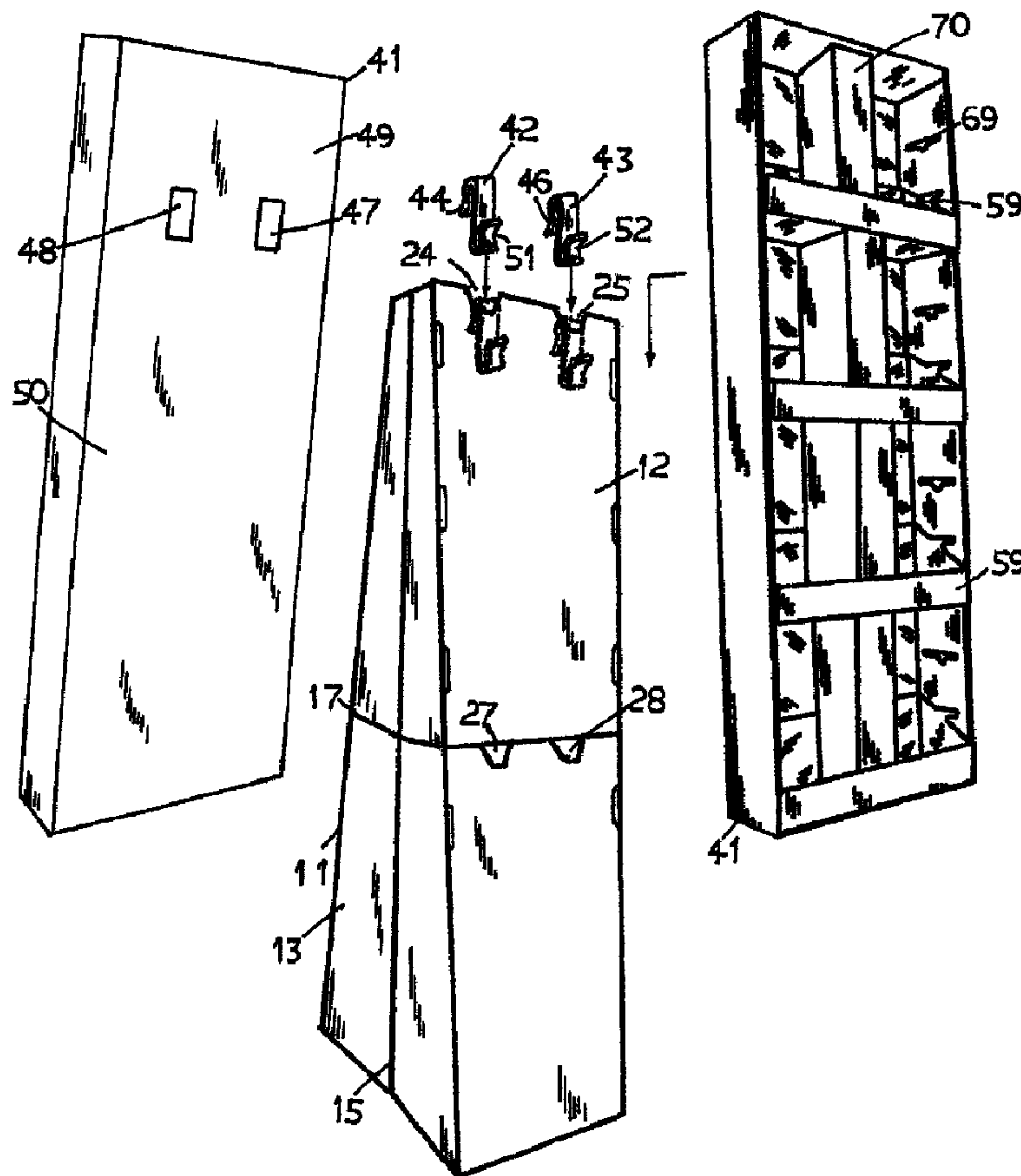
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(54) Title: TILT BACK MERCHANDISE DISPLAY STAND



(57) Abrégé/Abstract:

A tilt back merchandise display stand has a front panel tilted at the top rearwardly to its rear panel. The stand has two triangular side panel foldable inwardly along two vertical middle fold lines. A horizontal fold line formed at the middle position of the stand so

(57) **Abrégé(suite)/Abstract(continued):**

that the stand may be folded into a collapsed condition. A single large rectangular merchandise display shelving or two separate merchandise display shelving may be mounted to the front panel with S-shaped hooks mounted to open mounting slots formed at the top edge and at the horizontal fold line of the front panel. A plurality of separate merchandise display trays with upper L-shaped tabs may also be mounted to the front panel with a plurality of vertical mounting slots formed along its side edges. The display stand is self-erectable with the provision of an elastic cord mounted between a brace panel and the rear panel within the stand.

ABSTRACT OF THE DISCLOSURE

A tilt back merchandise display stand has a front panel tilted at the top rearwardly to its rear panel. The stand has two triangular side panel foldable inwardly along two vertical middle fold lines. A horizontal fold line formed at the middle position of the stand so that the stand may be folded into a collapsed condition. A single large rectangular merchandise display shelving or two separate merchandise display shelving may be mounted to the front panel with S-shaped hooks mounted to open mounting slots formed at the top edge and at the horizontal fold line of the front panel. A plurality of separate merchandise display trays with upper L-shaped tabs may also be mounted to the front panel with a plurality of vertical mounting slots formed along its side edges. The display stand is self-erectable with the provision of an elastic cord mounted between a brace panel and the rear panel within the stand.

TILT BACK MERCHANDISE DISPLAY STAND

This invention relates to merchandise display stands and more particularly display stands made of cardboard or corrugated paper board or plastic material such as coroplast (a trade mark) having a foldable and vertical support stand with merchandise containing cases or trays
5 removably mounted on the front of the support stand. The display stand may be erected readily at the field location with ease.

Heretofore there are numerous types of merchandise stands. Some display stands consist of a merchandise containing case resting horizontally on top of a support stand. Other display stands consist of a merchandise containing case merely resting in a substantially vertical position
10 on a pedestal or shelf provided in front of a vertical stand. In the latter type of display stand the merchandise case is not securely mounted to the support stand such that it can easily separate or fall off from the stand accidentally. Furthermore, most of the support stands require time consuming assembly and erection and they are awkward to assemble; particularly if a large number of such display stands are to be erected at the same time it would be very time
15 consuming to assemble them. The display stand may not be pre-assembled as an integral single unit, since the unmounted merchandise case could easily become separated. Thus, they must be transported in a separated manner. The separate support stand and merchandise case would occupy separate available spaces in the transporting vehicle thus resulting in the inefficient use of the available space in the transporting vehicle because of less number of display stands that can
20 be transported.

It is a principal object of the present invention to provide merchandise display stands which can be easily and readily erected.

It is another object of the present invention to provide merchandise display stands in which the support stand is foldable in storage or in transportation.

It is another object of the present invention to provide merchandise display stands in which the support stand is self-erectable from the folded condition.

5 It is another object of the present invention to provide merchandise display stands in which the merchandise carrying containers are securely mounted to the support stand.

It is still another object of the present invention to provide merchandise display stands in which the support stand and the merchandise carrying containers may be pre-assembled and mounted together for transportation for efficient use of the available space in the transporting
10 vehicle.

The above objects and other advantages and embodiments of the invention will become apparent from reading the accompanying description, with reference to the accompanying drawings in which

Figure 1 is a front and left side perspective elevation view of the foldable support stand of
15 the merchandise display stand according to the present invention.

Figure 2 is a cross sectional side elevation view along section line II-II of Figure 1.

Figure 3 is a front and left side perspective elevation view of the foldable self-erecting support stand of the merchandise display stand according to the present invention.

Figure 4 is an exploded perspective elevation view showing the separate component parts
20 of the merchandise display stand having a single large merchandise display casing.

Figure 5 is a front and left side perspective elevation view of the merchandise display stand of Figure 4 in the fully assembled condition.

Figure 6 is a front and left perspective view of the frame of the merchandise display casing showing the tray mounting slots formed in its side walls.

Figure 7 is an exploded perspective front view of the merchandise display shelving mountable in the display casing and the reinforcing support column.

5 Figure 8 is a side elevation view of the left side wall of the display shelving.

Figure 9 is a side elevation view of the right side wall of the display shelving.

Figure 10 is an isolated front elevation view showing the mounting of the display shelving to the display casing.

10 Figure 11 is an exploded perspective front view of the merchandise display stand having two separable merchandise display casings removably mountable to the support stand.

Figure 12 is a front and left side perspective view of the merchandise display stand with a plurality of merchandise display trays removably mounted to its front panel.

Figure 13 is a front and left side perspective view of the merchandise display tray shown in Figure 12.

15 Figure 14 is a front and left side perspective view of the foldable support stand of the present invention having a rectangular pattern stamped at the central lower portion of the front panel which may be pulled forward and folded outwards to form an abutment to provide an additional support for the display casing mounted on the support stand.

20 Figure 15 is a sectional side elevation view of the foldable support stand of Figure 14 with the abutment in the erected condition.

With reference to the drawings in which same parts are designated with corresponding reference numerals in the several views, the merchandise support of the present invention has a

support stand 10 having a substantially vertical rectangular rear panel 11 and a rectangular front panel 12 which is slanted rearwards at its top towards the rear panel 11. The support stand 10 has two triangular side panels 13 and 14. The right side panel 14 is shown in dotted line in Figure 1.

The support stand 10 may therefore rest securely on a support surface in an erected condition

5 with the front panel 11 leaning in a rearwardly slanting position as best shown in Figure 1. The

side panels 13 and 14 are foldable along middle vertical fold lines 15 and 16 respectively by

pushing them inwards towards one another at these vertical fold lines as shown by two arrows in

which the right arrow is shown in dotted line. A horizontal fold line 17 is formed around the

middle of the support stand 10 at the middle of the rear panel 10, the front panel 11, and the side

10 panels 13 and 14 such that the entire support stand 10 may be folded to a collapse condition by

first folding the side panels 13 and 14 inwards until the rear panel 10 and the front panel 11 are

juxtaposed to one another and then further folding the top portion forward along the horizontal

fold line 17 until it lies over the lower portion. The stand 10 may be unfolded to the erected

condition with the reverse procedure. A brace panel 18 is mounted in a cantilever manner on the

15 inside surface of the front panel. The brace panel 18 has a length equal to the cross sectional

depth of the display stand and it has a mounting tab 19. The brace panel 18 may be pivoted to lie

juxtaposed to the front panel 12 when the display panel 10 is in the collapse condition, and it may

be pivoted to a generally horizontal position extending between the rear panel 11 and the front

panel 12 with the mounting tab 19 engaging with a latching slot 20 formed in the rear panel 11 so

20 as to maintain the display stand 10 in a rigid erected condition. Additionally, an upper brace panel

21 may be provided by a scored generally rectangular pattern formed in the upper portion of the

front panel. The rectangular pattern has three scored sides and a foldable side pivotal relative to

the front panel. A scored tab 22 is located directly opposite to the foldable side. The upper brace panel 21 also has a length equal to the cross sectional depth of the display stand at that position.

The rectangular pattern may be pushed inward to pivot relative to its foldable side serving as a fold line so as to form the upper brace panel 21, and then positioning it in a generally horizontal

5 position transverse of the display stand 10 until its mounting tab 22 engages with another latching slot 23 formed at the rear panel 11 of the display stand and located directly opposite to the foldable side of the rectangular pattern. The upper brace panel 21 provides additional rigidity to the display stand 10 in the erected condition. In order to fold the display stand 10 to the

collapsed condition, the brace panel 19 and the additional upper brace panel 21 must first be

10 pulled to disengage their mounting tabs 19 and 22 from the latching slots 20 and 23 respectively the brace panel 18 may be pivoted upward or downward to lie juxtapose to the front panel 12 and

the upper brace panel 21 is pivoted back to the position juxtaposed to or lie in the opening in the front panel 12 formed by the pattern left behind when it is pushed in to form the upper brace

panel 21. It can be understood, that alternatively, the brace panel 18 may be mounted to the rear

15 panel 11 with the latching slot 20 formed in the front panel and the upper brace panel 21 may be formed in the rear panel with the second mounting slot 23 formed in the front panel 12 to provide the same purposes.

Two equally spaced opened slots 24 and 25 are formed at the upper edge 26 of the front panel 12. Two similar slots 27 and 28 are formed at the horizontal fold line 17 in the front panel

20 12. A plurality of evenly spaced vertical slots 29, 30, 31 and 32 are formed at the left edge 33 of the front panel 12 and corresponding evenly spaced vertical slots 34, 35, 36 and 37 are formed at the right edge 38 of the front panel 12 and located directly opposite to the vertical slots 29, 30, 31

and 32 respectively.

As shown in Figure 3, an elastic cord 39 may be mounted between the brace panel 18 and the rear panel 11. The ends of the elastic cord 39 may be mounted to the brace panel 18 and the rear panel 11 with short cross bars 40. The elastic cord 39 will be stretched in an elastic tension when the brace panel 18 is pivoted downward to lie juxtaposed to the front panel 12 for folding the display stand 10 to the collapsed condition. The folded display stand 10 in the collapsed condition may be readily erected by merely holding its top edge 26 and raising it upwards. The elastic tension of the elastic cord 39 will pivot the brace panel 18 upwards which, in turn, causes the lower half to unfold from the top half as well as forcing the folded side panels 13 and 14 to unfold. The brace 18 will pivot upwards further by the tension force of the elastic cord 39 until it assumes the horizontal position within the now erected support stand 10 with its tab 19 engaging with the latching slot 20 to maintain the support stand 10 in the fully rigid erected condition. This self-erecting operation may be carried out simply and readily by the operator with only one hand holding and lifting the top edge 26 upwards.

A rectangular merchandise display casing or shelving 41 can be readily and securely mounted to the slanted front panel 12 of the support stand 10 with two S-shaped slide hooks 42 and 43. The upper hooks 44 and 46 of the slide hooks 42 and 43 are slidably secured to the slots 24 and 25 of the top edge 26 of the front panel 12. Two slot openings 47 and 48 are formed in the rear surface 49 of the rear panel 50 of the casing 41. Thus, the merchandise display casing 41 may be securely hung onto the front panel 12 of the display stand 10 by slidably engaging the upper edge of the slot openings 47 and 48 with the lower hooks 51 and 52 respectively. The merchandise display casing 41 will also be tilted backward at the top similar to the front panel 12

of the display stand 10 to provide a clear view of the merchandise placed therein as well as a stable center of gravity for the entire display stand.

The merchandise display casing 41 consists of a rectangular frame 53 having a rectangular well 54 formed by left side wall 55, right side wall 56, top side wall 57, bottom side wall 58 and a rear panel 50. A plurality of tray shelving 59 are provided in the well 54 for carrying and displaying the merchandise for sale. The tray shelving 59 may be in the form of separate trays removably mounted within the well 54. As shown in Figure 7, the tray shelving 59 has a rectangular tray 60 having a front wall 61, a rear wall 62 and a bottom panel 63. The rear wall 62 is higher than the front wall 61. As shown in Figures 8 and 9, the side walls 64 and 65 have a sloping top edge sloping from the higher rear wall 62 to the lower front wall 61. A mounting tab 66 extends downwards from the lower edge of the left side wall 64 and a similar mounting tab 67 extends downwards from the lower edge of the right side wall 65. A plurality of evenly spaced horizontal mounting slots 68 are formed in the left side wall 55 and a plurality of similar horizontal mounting slots 69 are formed in the right side wall 56 of the rectangular casing 53. The tray shelving 59 may be removably mounted within the rectangular casing 53 by positioning within the rectangular casing and then pushing downwards to engage its mounting tab 66 and 67 within mounting slots 68 and 69 respectively at the same level on the side walls 55 and 56 of the rectangular casing 53 as best shown in Figure 10. Additional rectangular bracing columns 70 may be removably located between the tray shelving 59 to reinforce the shelving for supporting the weight of the merchandise placed therein.

The merchandise display casing 41 may be provided in two separate sections, namely, a top merchandise display casing 80 and a lower merchandise display casing 81 as shown in Figure

11. Both of these separate display casings have two mounting openings formed in the rear surface of their rear panels similar to those of the single merchandise display casing 41. The top merchandise display casing 80 mountable on the top section of the front panel 12 of the display stand 10 by slidably engaging its rear mounting openings with the mounting hooks 42 and 43, and the lower merchandise display casing 81 may be removably and slidably mounted to two additional S-shaped mounting hooks 82 and 83 which are slidably mounted to the mounting slots 27 and 28 provided at the horizontal fold line 17. Handle openings 84 and 85 may be provided in the two side walls of the top merchandise display casing 80 and similarly handle openings 86 and 87 may be provided in the two side walls of the lower merchandise display casing 81 to facilitate easy handling of these merchandise display casing. Similar handle openings may also be provided on the side walls of the single merchandise display casing 41 for the same purpose.

A plurality of merchandise display trays 88 may be removably mounted on the front panel 12 of the display stand 10 as shown in Figure 12. The display tray 88 has similar construction as the merchandise display shelve 59 with additional substantially L-shaped mounting tabs 89 and 90 extending rearwardly and upwardly from its two side walls respectively as shown in Figure 13. The merchandise display trays 88 are removably mounted to the front panel 12 by engaging its mounting tabs 89 and 90 with selected pairs of vertical mounting slots 29 and 34, or 30 and 35, or 31 and 36, or 32 and 37. The display tray 88 is mounted by first inserting the mounting tabs 89 and 90 into the selected pair of mounting slots and then tilting the tray upwards and inwards towards the front panel 12 of the display stand 10 until the lower edges 91 and 92 resting on the lower edges of the mounting slots while the front edges 93 and 94 of the vertical portion of the mounting tabs abut the rear surface of the front panel 12. The rear surface of the rear panel

of the display tray 88 will also abut the front panel 12 so that the display tray 88 is securely mounted to the front panel 12 of the display stand 10.

As shown in Figures 14 and 15, an abutment 95 may be provided on the front panel 12 and located just below the casing 41. The abutment 95 may be formed by another scored rectangular pattern 96 formed in the lower portion of the front panel 12. The pattern 96 has three scored sides and a foldable side 97 which is foldable relative to the front panel 12 similar to the scored pattern of the upper brace 21. The pattern 96 may be pulled outward of the front panel 12 and then foldable outward relative to the front panel 12 along its foldable edge 97. It has a lower portion 98 and a top portion 99 with a mounting tab 100 located at the upper edge of the top portion 99. After it has been pulled and pivoted outwards along its foldable side 97 to the position perpendicular to the front panel 12, the upper portion 99 may then be bent downwards to a skewed position until the mounting tab 100 engages with a horizontal latching slot 101 located below the pattern 96 for maintaining the abutment 95 in the rigidly supported manner. An extended opening 102 is formed in the front panel 12 above the mounting tab 100 so as to facilitate the pulling of the scored pattern 96 outwards from the front panel 12.

Although the present invention has been shown and described with respect to specific details of a certain preferred embodiment, it is not intended that such details limit the scope and coverage of the invention other than as expressly set forth in the following claims, keeping in mind reasonable equivalent variations thereof.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A tilt back merchandise display stand comprising:

a rectangular vertically extending rear panel,

a rectangular front panel, said front panel being slanted rearwardly and upwardly towards a top edge to space closer therein to said rear panel ,

two triangular side panels mounted between said rear panel and said front panel and being foldable vertically along a middle vertical fold line therein, and said side panels being foldable until said rear panel and said front panel are juxtaposed to one another,

a horizontal fold line located at a generally middle position of said rear panel, said side panels, and said front panel, said display stand being foldable along said horizontal fold line to a collapsed condition after said side panels having been folded along said vertical fold line,

a brace panel located inside said stand and positioned adjacent to a bottom opening of said stand and being accessible through said bottom opening, said brace panel having a mounting edge therein mounted to said front panel, and said brace panel being selectively pivotable inside said stand relative to said mounting edge in a cantilever manner to locate at a first position lying in a horizontal transverse position within said stand and to a second position lying vertically juxtaposed to said front panel,

a mounting tab formed at a second edge of said brace panel and located opposite to said mounting edge,

a latching slot formed at said rear panel and located opposite to said mounting edge of said brace panel, and said mounting tab of said brace panel being engageable with said latching slot with said brace panel located in said transverse position, and

two spaced open mounting slots formed at said top edge of said front panel.

2. A tilt back merchandise display stand according to Claim 1 including two additional spaced mounting slots formed at said horizontal fold line of said front panel.

3. A tilt back merchandise display stand according to Claim 2 including a scored rectangular pattern formed in an upper portion of said front panel, said rectangular pattern having three scored sides and a foldable side and a scored mounting tab located opposite to said foldable side,

said scored rectangular pattern being pushable inwards of said stand relative to said foldable edge therein to form a second brace panel within said upper portion of said stand, a second latching slot formed in said rear panel and located directly opposite to said foldable edge of said rectangular pattern, said mounting tab of said second brace panel being engageable with said second latching slot with said second brace panel located in a transverse position within said upper portion of said stand.

4. A tilt back merchandise display stand according to Claim 3 including two generally S-shaped mounting hooks slidably mounted to said top edge in said open mounting slots of said front panel, a rectangular merchandise display shelving having a plurality of merchandise location shelves therein, said merchandise display shelving having a rear panel with two rear mounting slots formed therein, said merchandise display shelving being mountable to said front panel of said display stand by slidably engaging said rear mounting slots with said S-shaped mounting hooks mounted on said front panel.

5. A tilt back merchandise display stand according to Claim 4 wherein said merchandise display shelving has a rectangular frame, and a plurality of horizontal mounting slots are formed on two vertical side walls of said rectangular frame,

a plurality of merchandise display trays are located within said rectangular frame to form a plurality of shelving therein, each one of said trays having a rectangular tray with a higher rear panel and a lower front panel, and two side walls having a sloping upper edge sloping from said rear panel to said front panel therein, and a lower mounting tab extending downward from a lower edge of said side walls, each one of said merchandise display tray being removably mountable within said frame by engaging said lower mounting tab from said side walls therein to said horizontal mounting slots directly located on opposite side walls of said frame, and

a reinforced rectangular column located between said merchandise display trays mounted within said frame.

6. A tilt back merchandise display stand according to Claim 5 wherein said merchandise display shelving comprises a top merchandise display shelving and a separate lower merchandise display shelving, said top merchandise display shelving being mounted to said top edge of said front panel with said S-shaped mounting hooks, and said lower merchandise display shelving being mounted

to said additional mounting slots of said front panel by two additional S-shaped mounting hooks mounted at said additional mounting slots of said front panel.

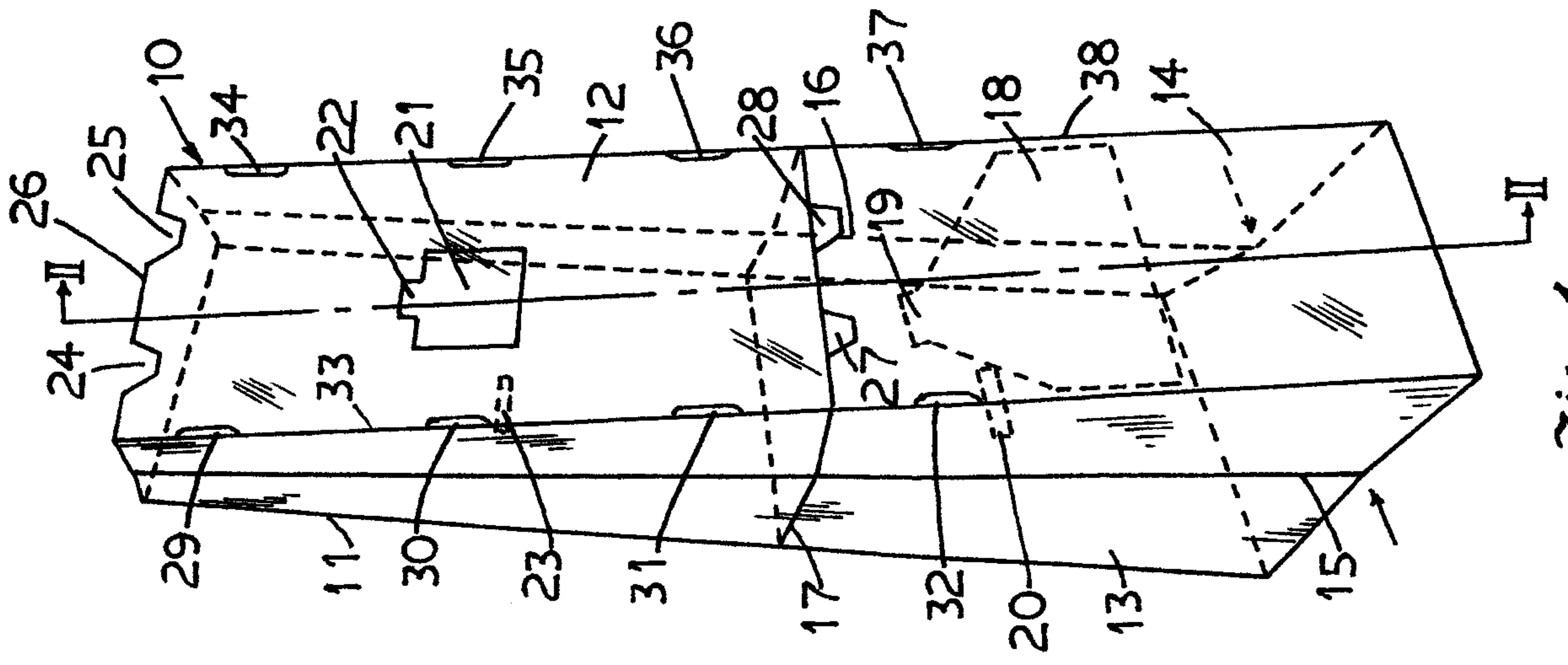


Fig. 1.

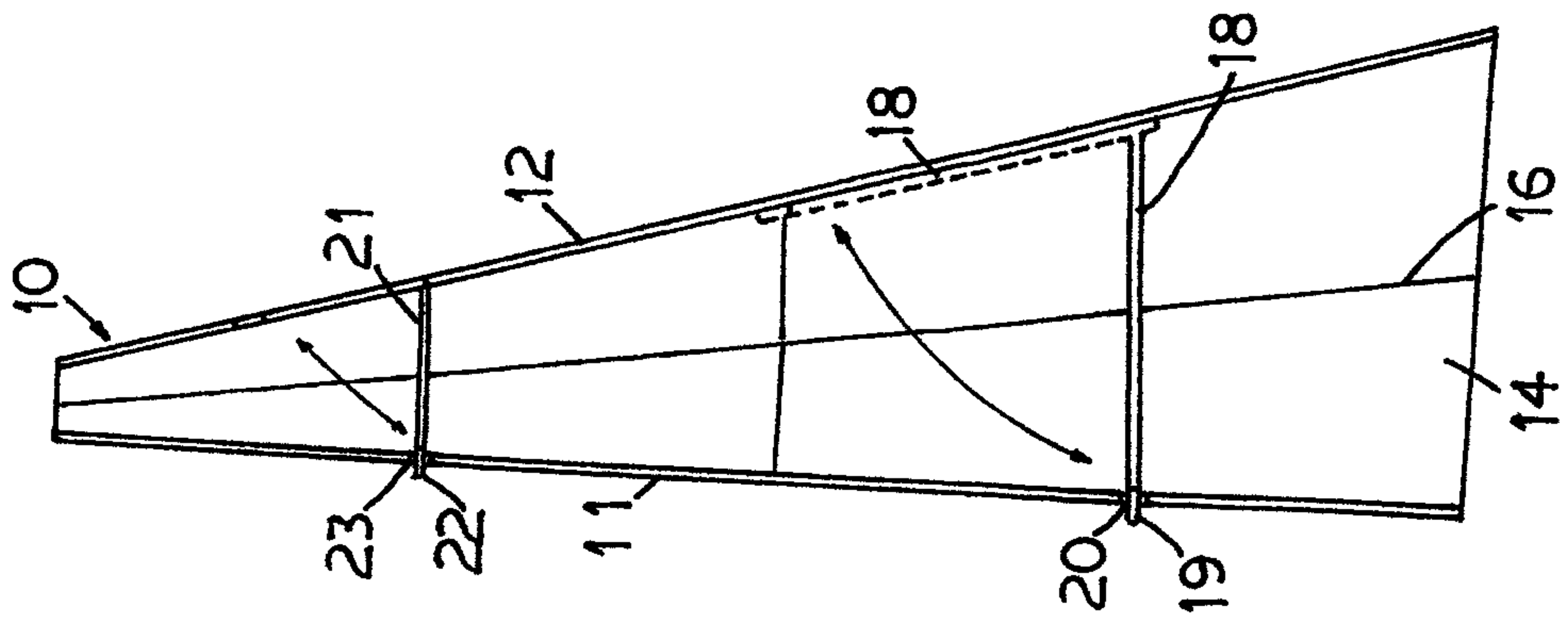


Fig. 2.

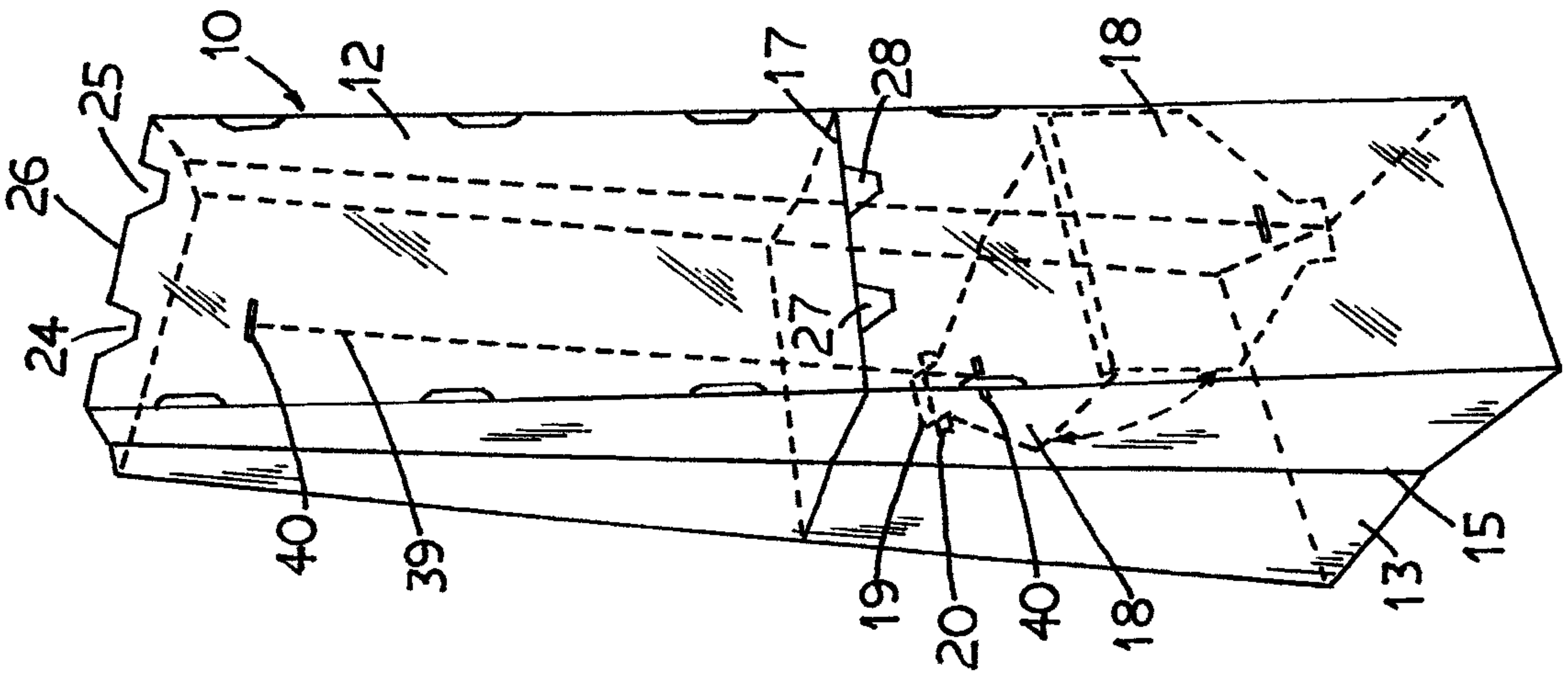


Fig. 3.

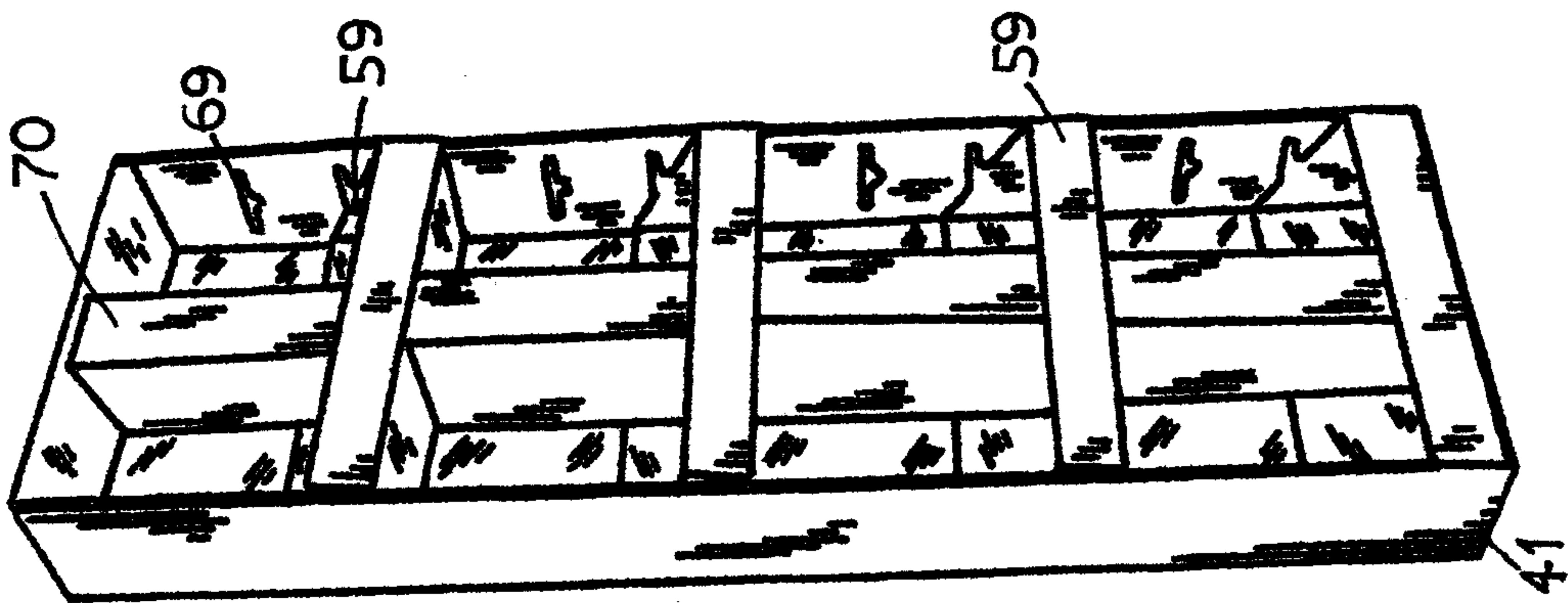
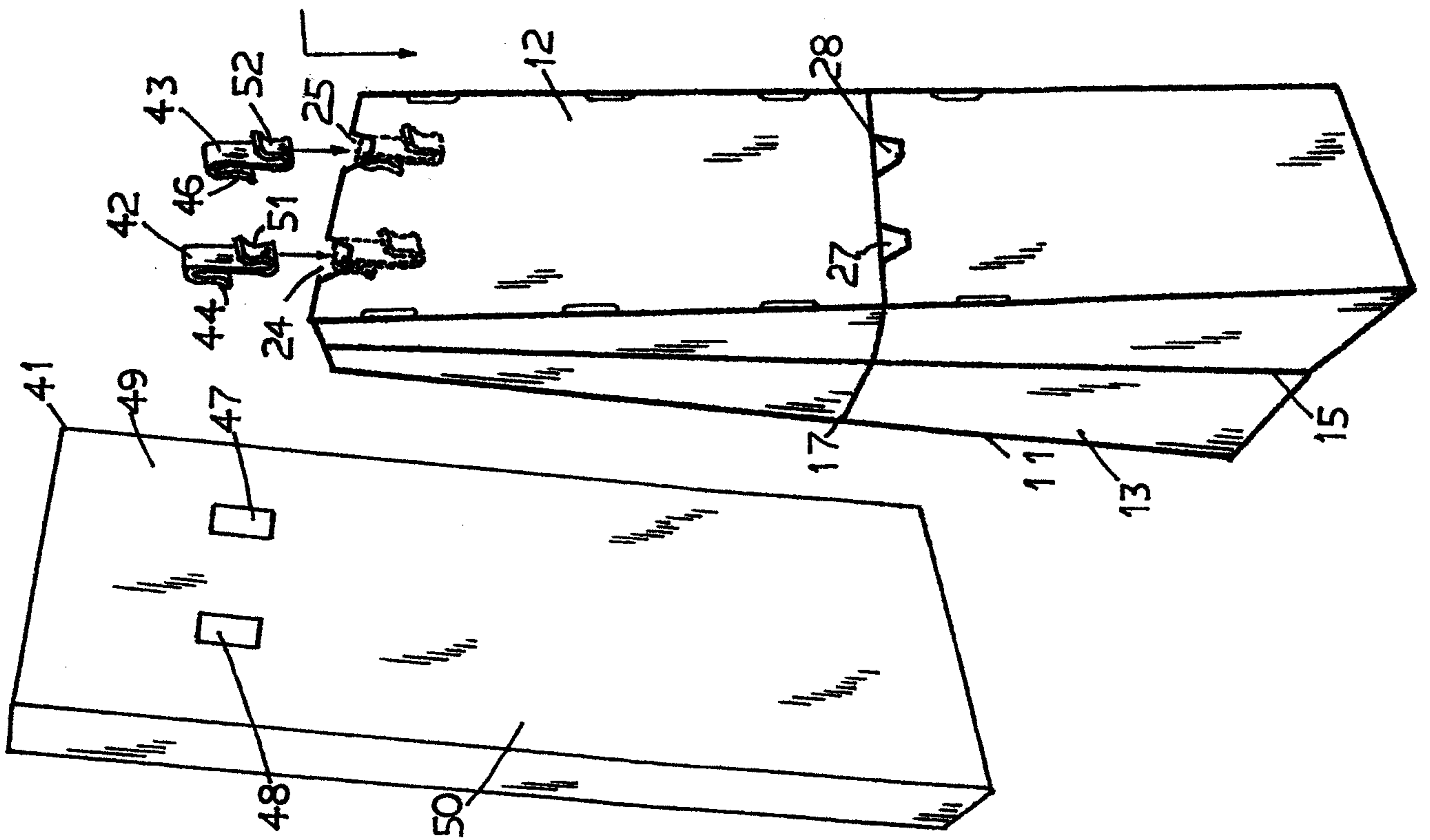


Fig. 4.



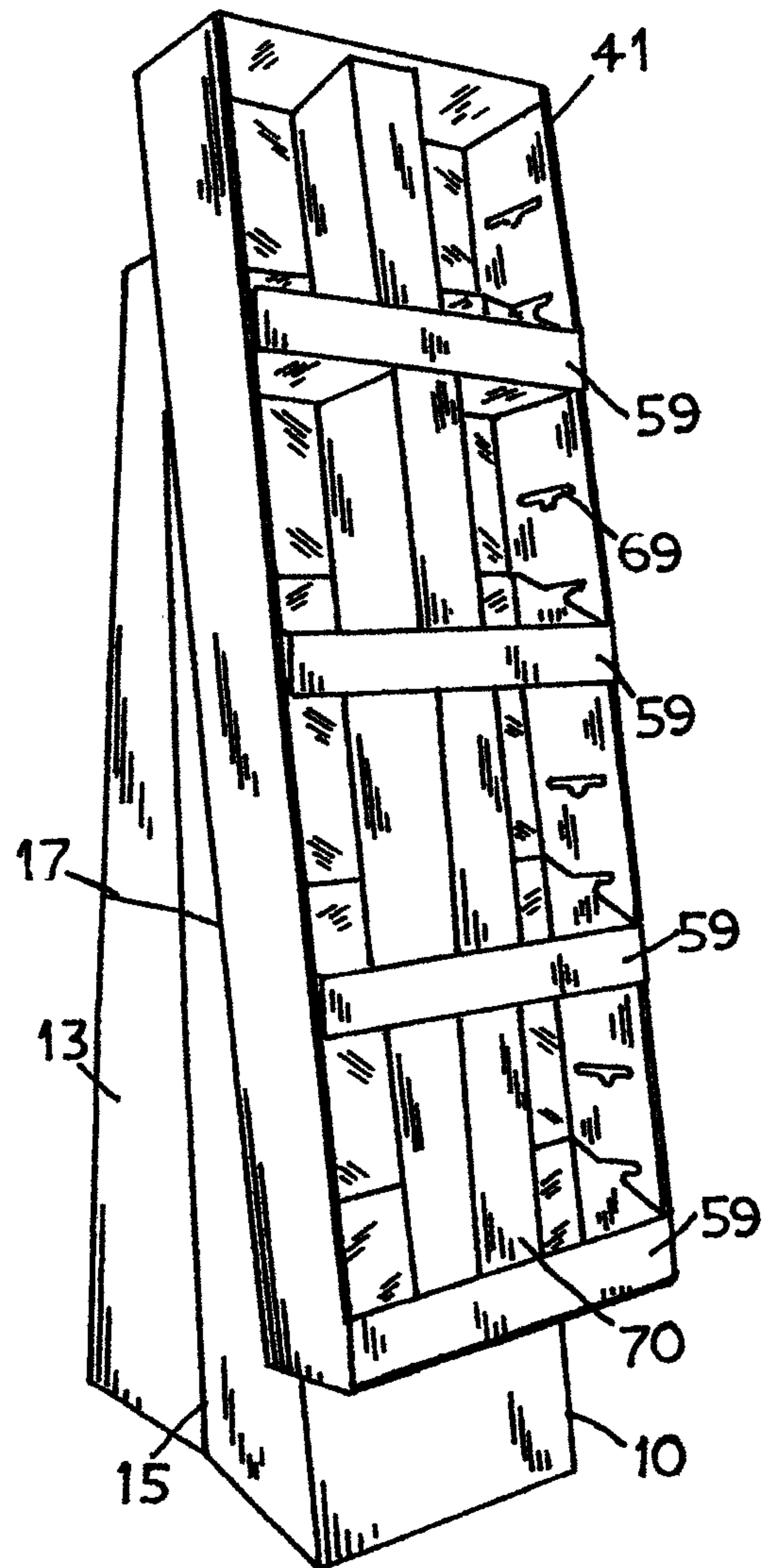
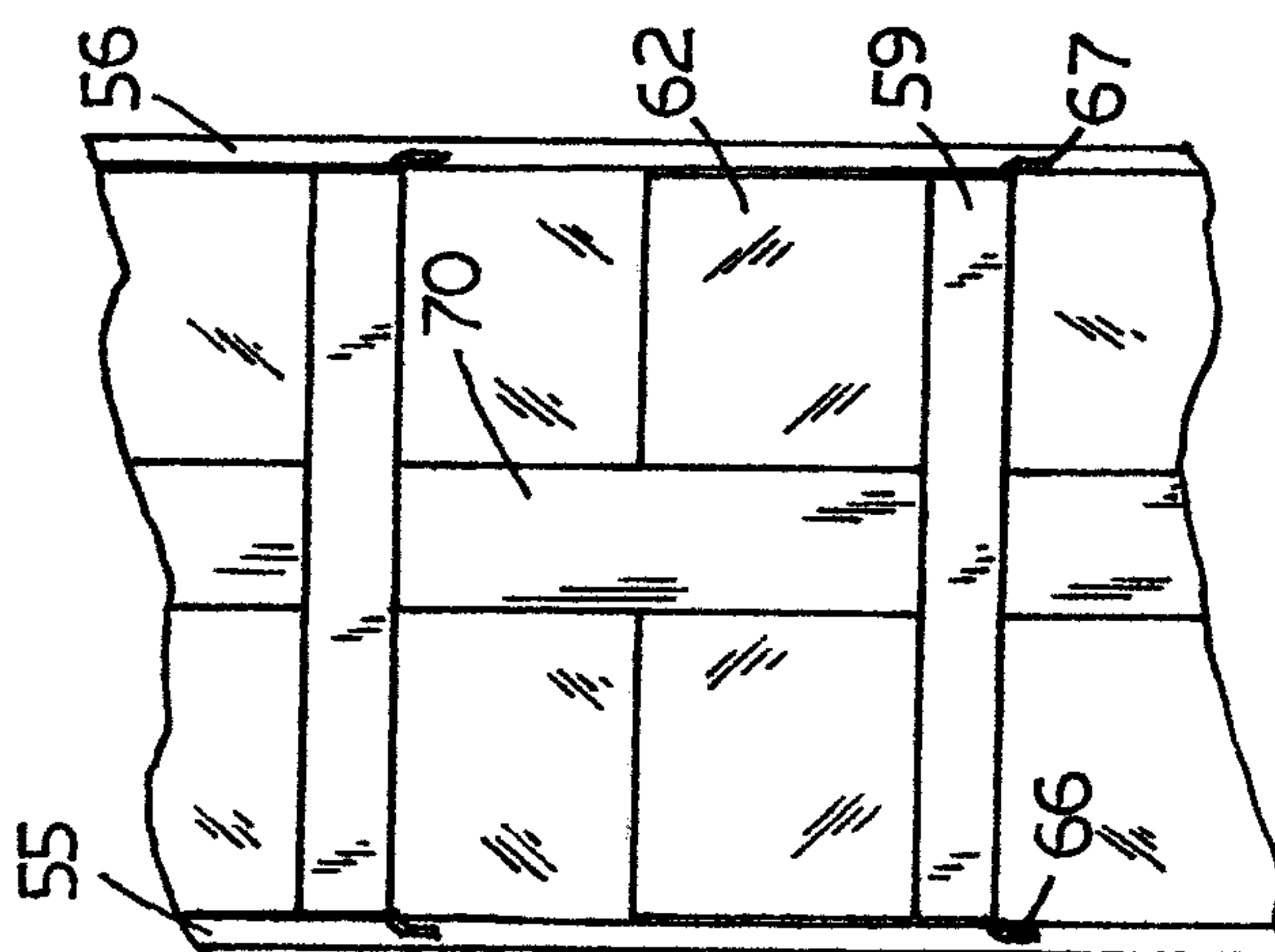
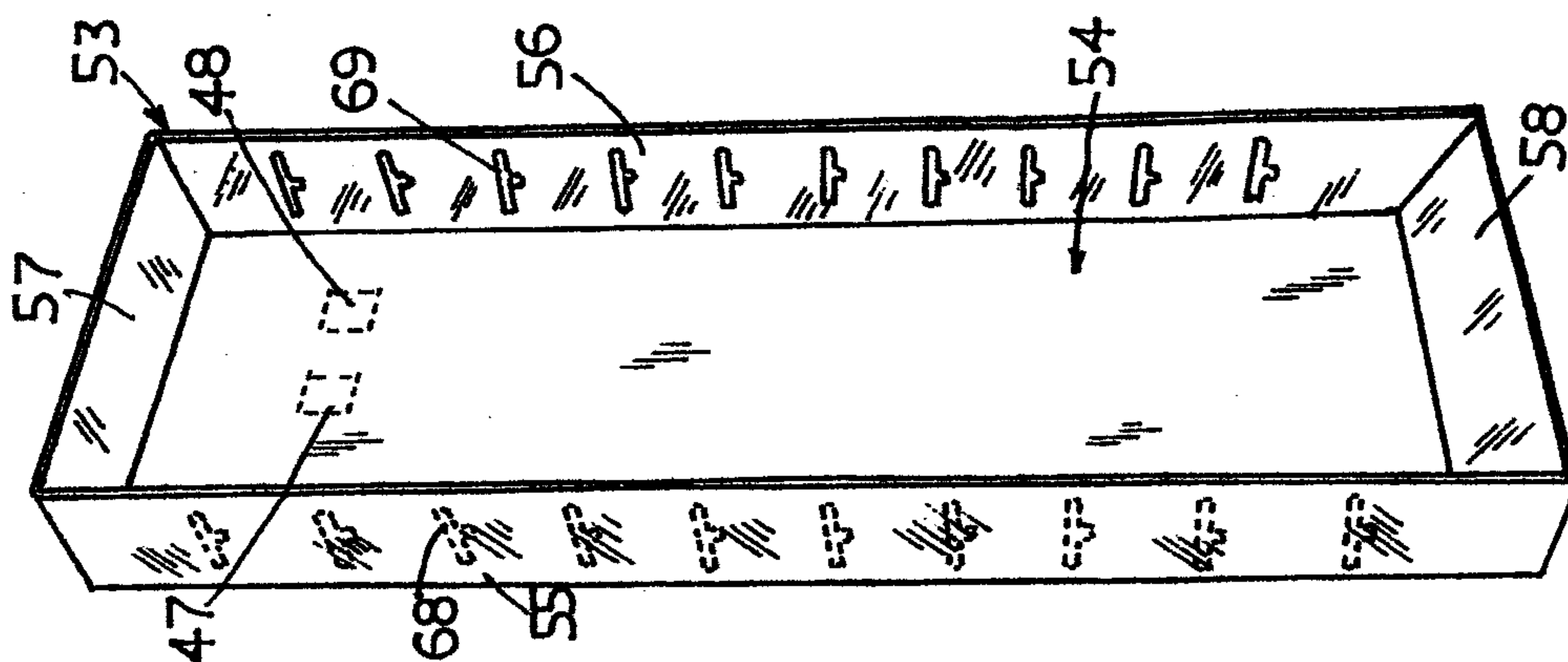
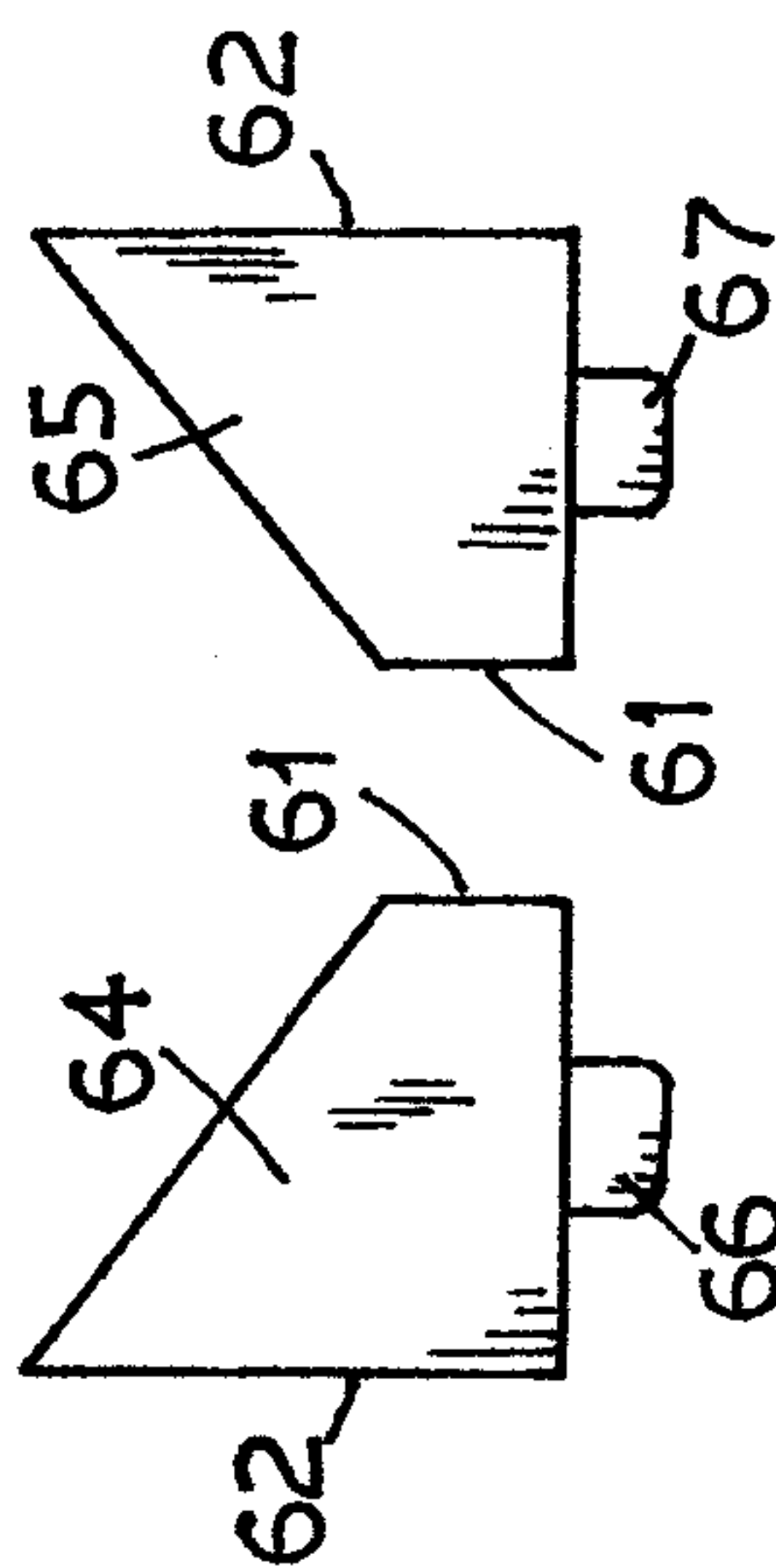
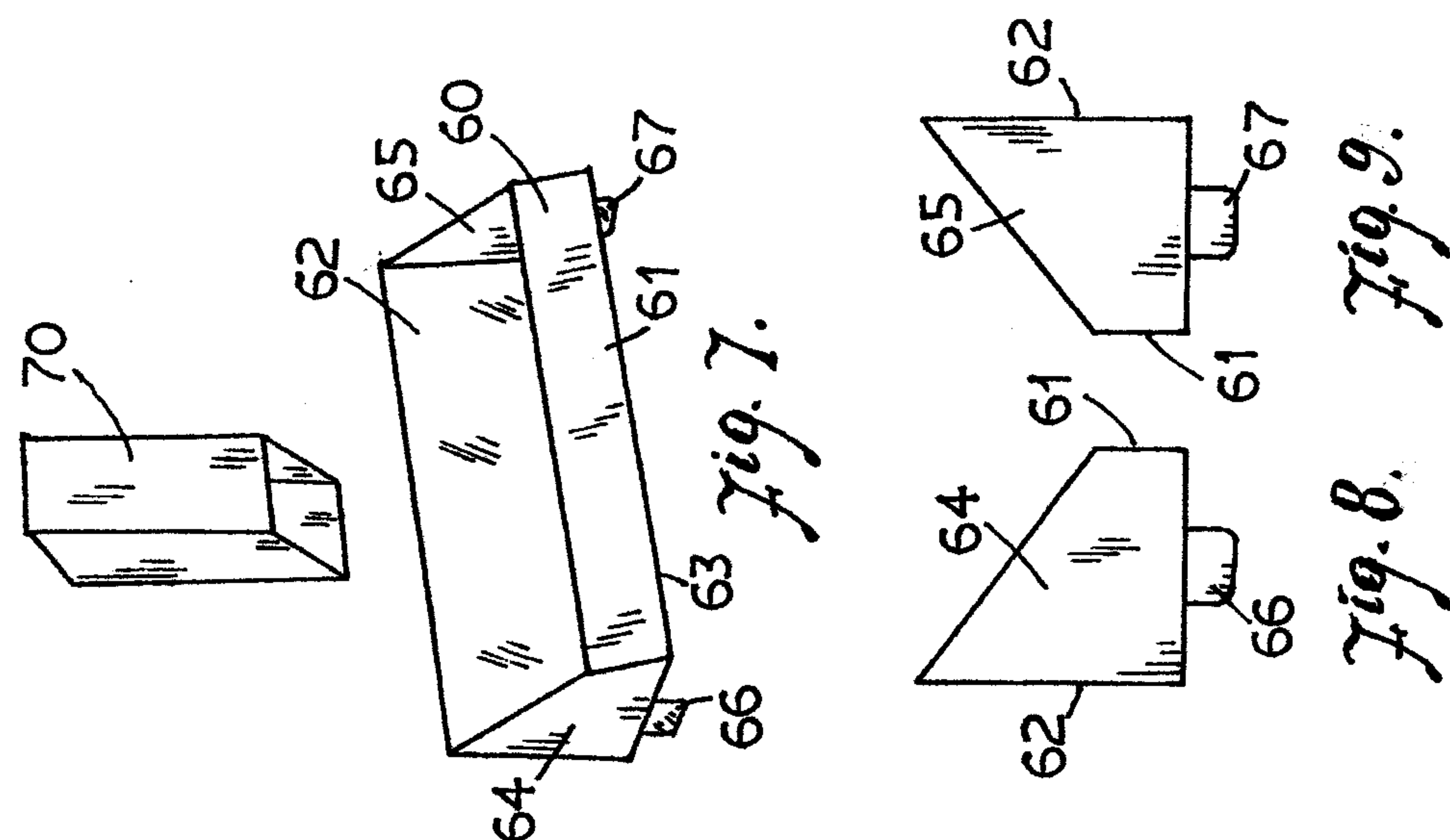
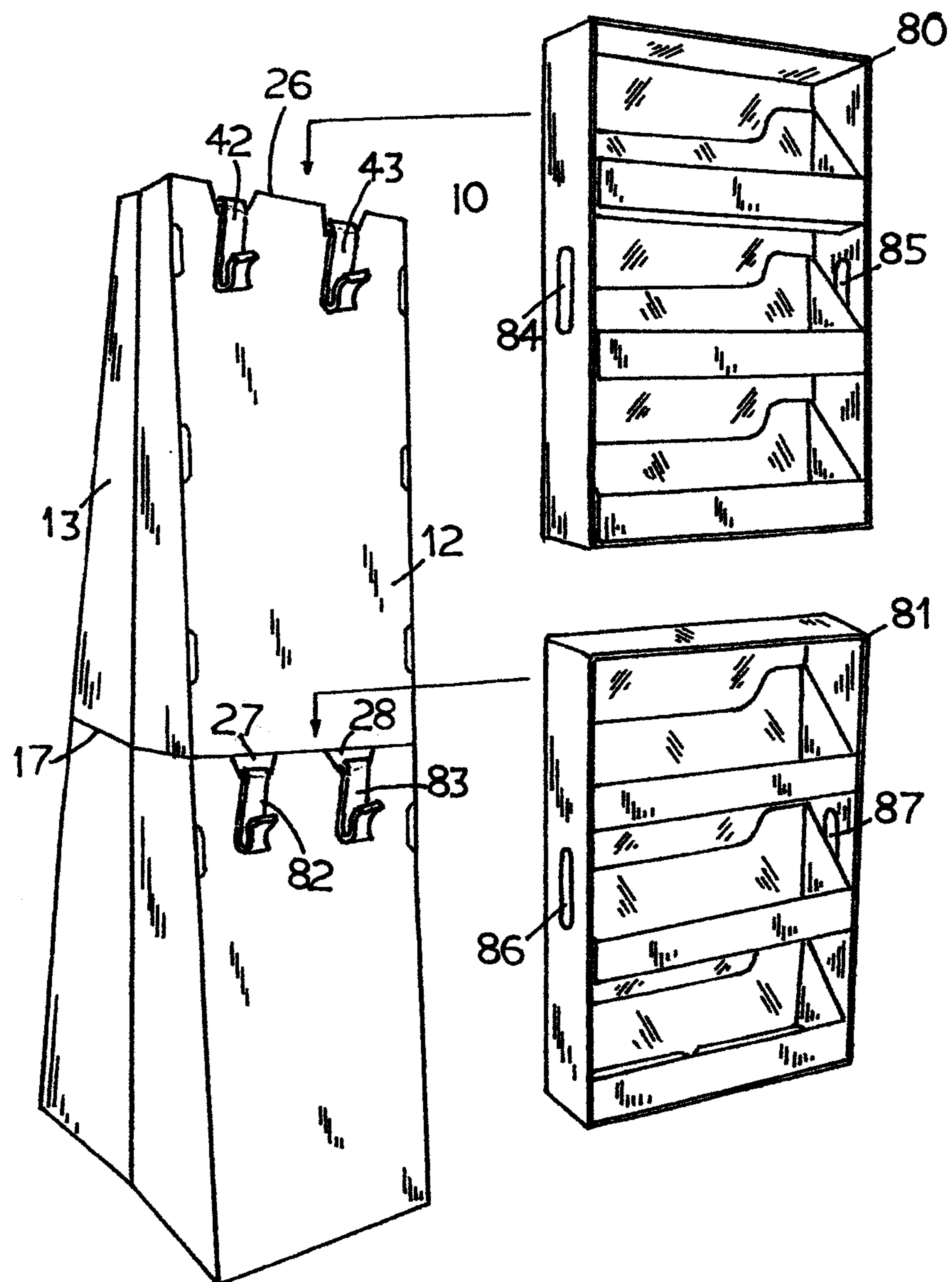
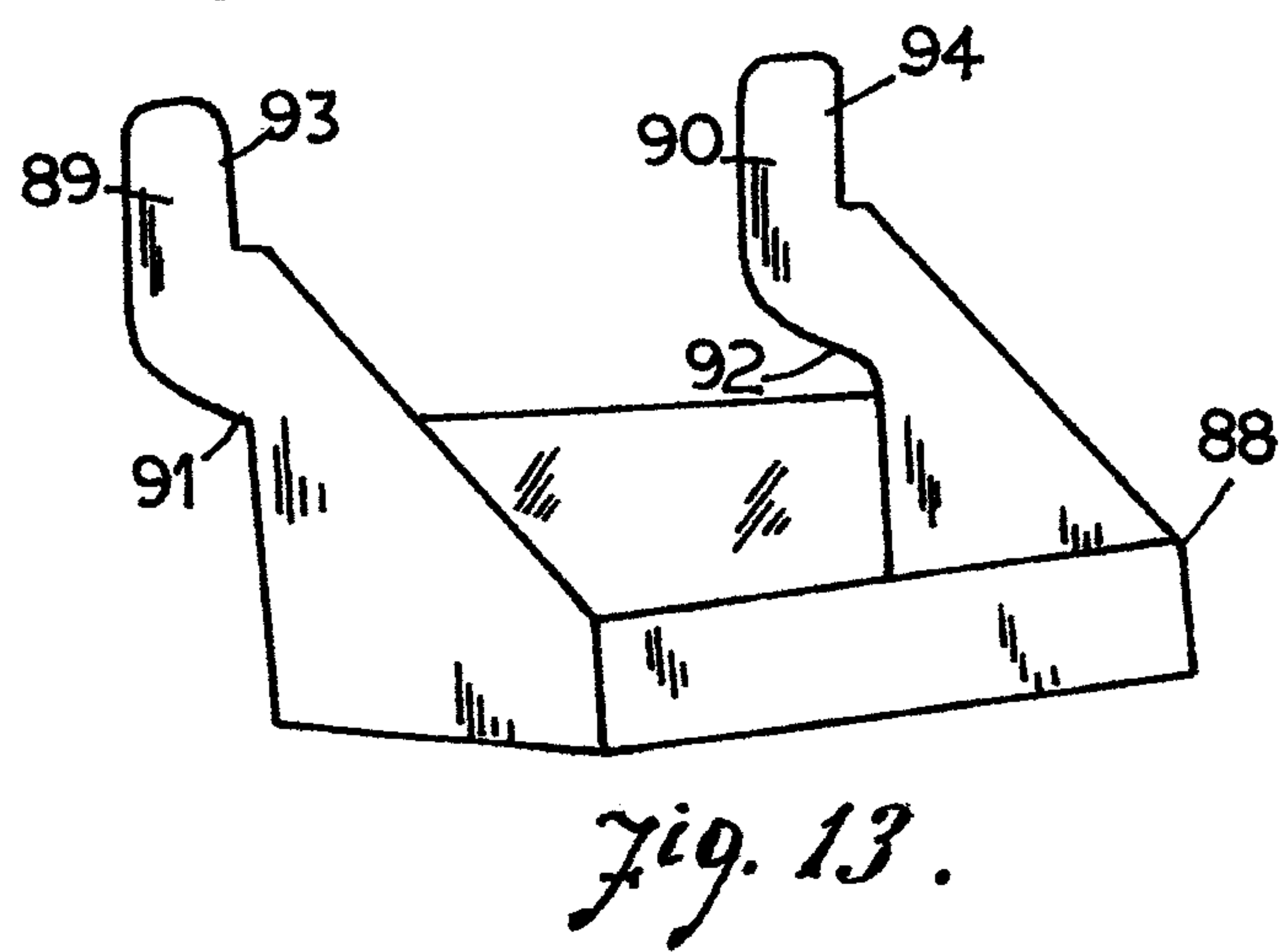
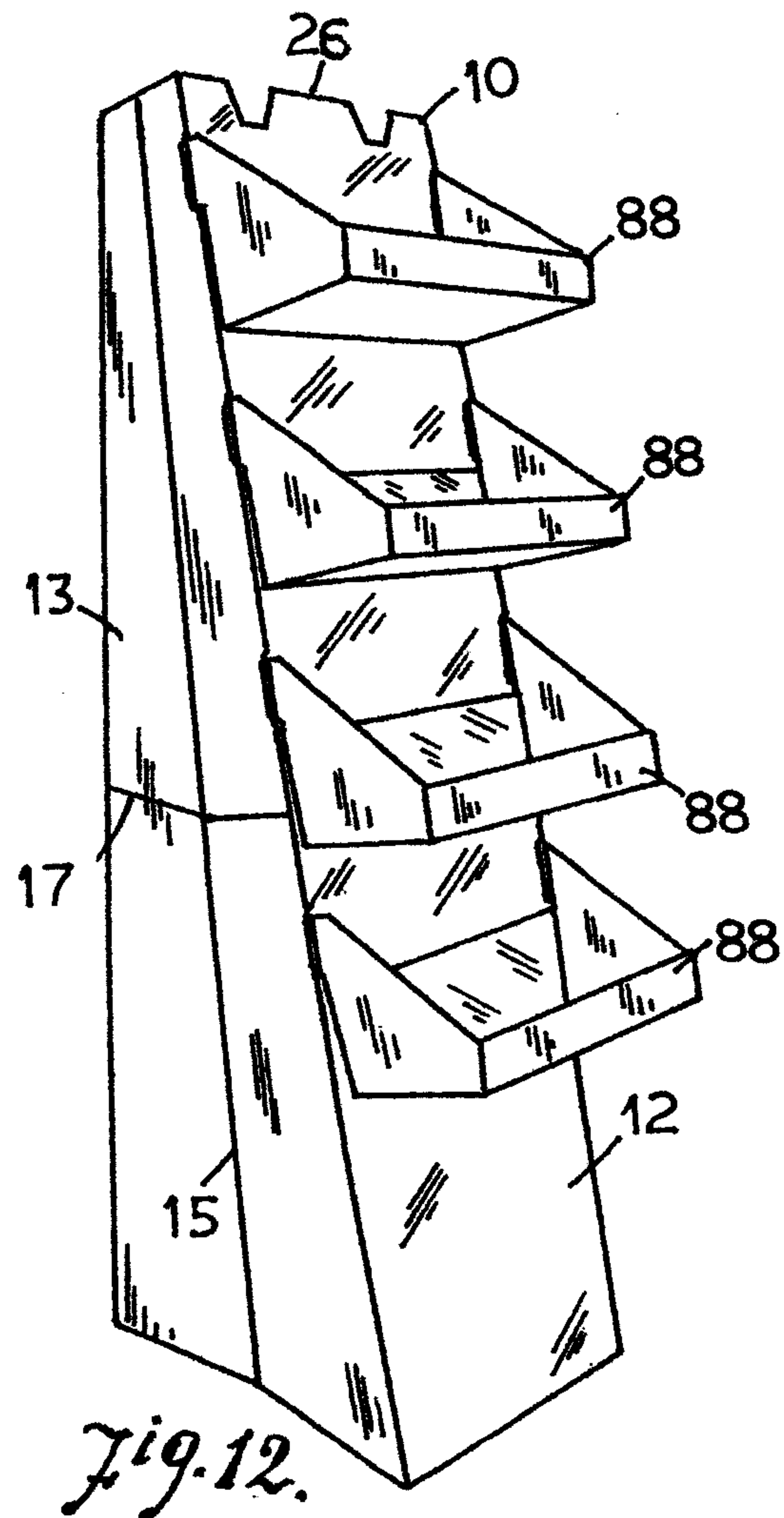


Fig. 5.



*Fig. 11.*



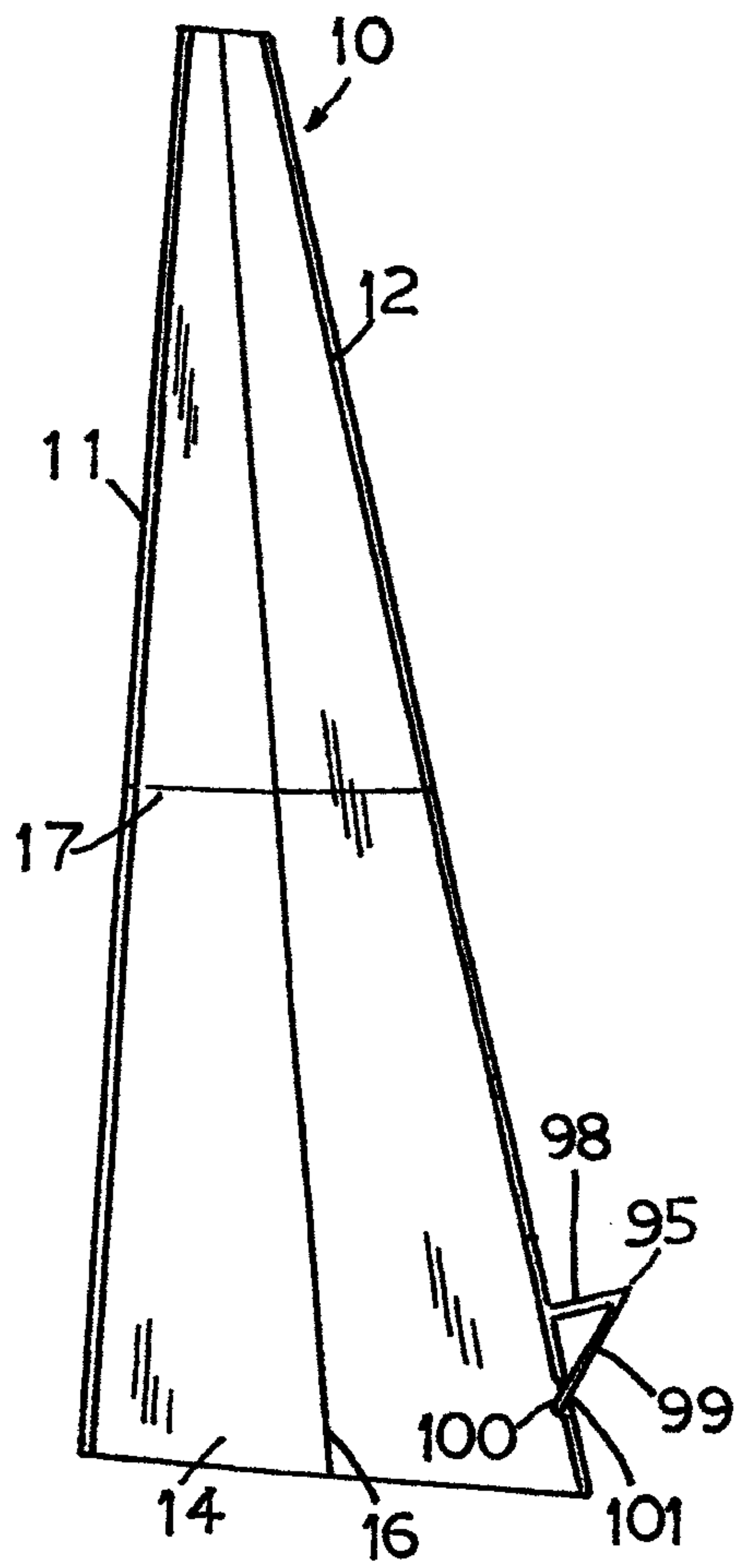


Fig. 15.

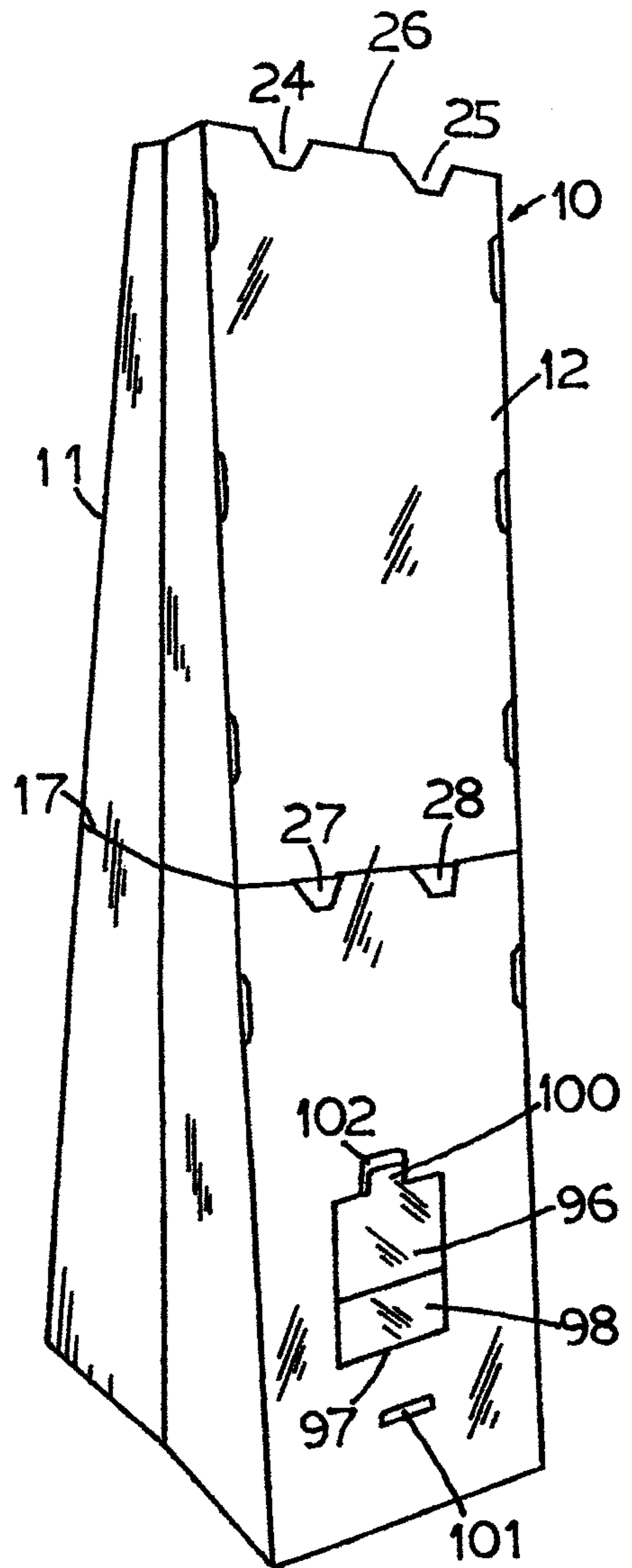


Fig. 14.

