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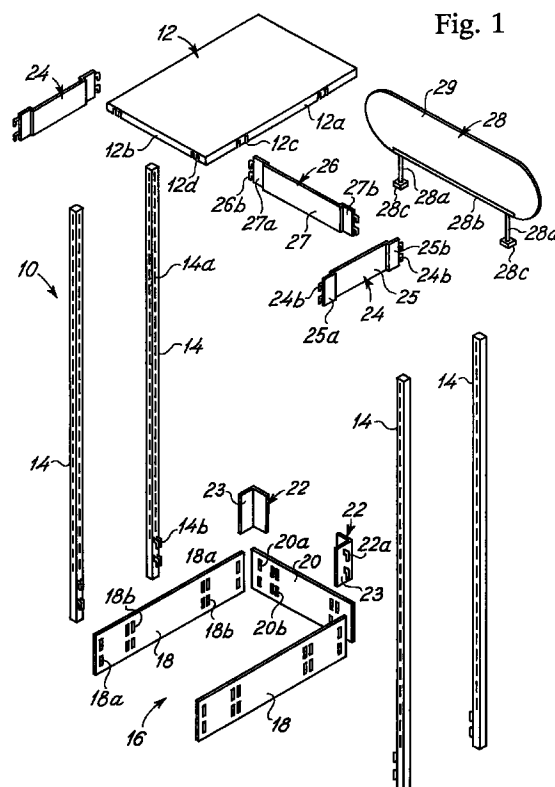
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(54) Display shelf system

(57) A display shelf system (10) for presentation of goods and to be placed in connection with a pallet containing the articles in question consists of two side portions (18) and a back portion (20) and is arranged to be positioned resting on a supporting surface. The pallet is supported on the supporting surface with the back portion (20) positioned behind the pallet and the side portions (18) positioned on each side of the pallet in such a way that the pallet is freely accessible from the front. The display shelf system (10) furthermore includes a number of poles or bearers (14) which are adapted to be fixated to the bottom portion (16) in positions extending upwardly from the bottom portion (16) and a top plate (12) which is adapted to be fixated to the poles or bearers (14) at the uppermost ends of these, the poles or bearers (14) being of such lengths that the top plate (12) is positioned above the pallet. In the display shelf system (10) the bottom portion (16) and the poles or bearers (14) and the top plate (12) and the poles or bearers (14) have cooperating locking means which are adapted to lock the poles or bearers (14) to the bottom portion (16) and correspondingly lock the top plate (12) to the poles or bearers (14), but allow separation of the poles from the bottom portion (16) and correspondingly allow separation of the top plate (12) from the poles or bearers (14). With the display shelf system (10) a construction is obtained which may be erected temporarily in any arbitrary place as the display shelf system (10) is composed of a number of individual components which may readily be assembled into a stable display rack and later on be disassembled for removal to another place within the same shop or, if required, to a totally different location.



EP 0 841 029 A2

Description

The present invention relates to a display shelf system for presentation of goods. Especially, the invention relates to a shelf system which is intended to be arranged in connection with a pallet containing articles which are presented on the display shelf system.

Within the retail trade a number of shelf systems and display shelf systems are known which are intended to be arranged permanently in a shop in order to present articles to a customer. Especially in supermarkets shelf systems are to a great extent used today which shelf systems are arranged so that below the shelf of the shelf system a pallet is placed containing the goods which are displayed on the shelf. Typically these known shelf systems are produced as through-going shelf systems having supporting legs, a back wall and shelf supporting means for fixating the display shelf. Moreover, certain shelves for keeping and storage of pallets are known, and similarly within the retail trade it is generally known to use shelves for arranging articles individually or in boxes. Examples of various shelf and rack assemblies are disclosed in French patent No. 1,470,353, US patent No. 1,104,297, US patent No. 1,667,913 and Swedish patent application No. 9300073-5.

Within the retail trade a continuous centralization and rationalization have taken place which has caused the trade with consumer goods to change from small specialist shops to larger supermarkets which out of consideration for a rational operation to a great extent handle the goods in their original packagings in which the goods are supplied from the supplier or from the wholesaler. Thus, at present the articles are to a great extent supplied on pallets and are positioned in the shop on the pallet which is thereafter opened in order to present the articles to the customers. When using this rational presentation form in connection with presentation of new types of goods it is not immediately possible to present the new articles as the organization of the shop generally only permits positioning of the goods on pallets in specifically determined groups in the existing shelf assemblies. Moreover, in certain cases it may be required to extend the area of the shop temporarily and in this connection provide a rack or a shelf assembly which is easy to move, to erect and later on to remove.

A special purpose of the present invention is to provide a display shelf system for presentation of articles and to be placed in connection with pallets, especially enclosing the pallet containing the articles in question, which display shelf system may be erected temporarily in an arbitrary place as the display shelf system is composed of a number of individual components which may readily be assembled to constitute a stable display shelf system and later on be disassembled in order to be moved to another place within the shop in question or, if required, to a totally different location.

A special advantage of the display shelf system

according to the present invention is that the display shelf system enables adaption to an arbitrary pallet size as the pallet may constitute a so-called quarter pallets, a half pallet or a complete pallet, and furthermore allows presentation of either the short side or the long side of the pallet in question.

The above purpose and the above described advantage are obtained by a display shelf system for presentation of goods and to be placed in connection with a pallet containing the article in question which display shelf system is in accordance with the invention characterized by the rack constituting a bottom portion including two side elements and a back element and which is designed to be placed resting on a supporting surface on which the pallets are also supported with the back element placed behind the pallet and the side elements placed on each side of the pallet so that the pallet is accessible from the front, a number of poles or bearers which are adapted to be fixated to the bottom element i positions extending upwardly from the bottom portion and a top plate which is adapted to be fixated to the poles or the bearers at the uppermost ends of these as the poles or the bearers are of such lengths that the top plate is placed above the pallet and that the bottom element and the poles or bearers and the top plate and the poles or the bearers have cooperating locking means which are adapted to lock the poles or the bearers to the bottom element and correspondingly lock the top element to the poles or the bearers, but allow separation of the poles from the bottom element and correspondingly separation of the top element from the poles or the bearers.

The display shelf system according to the present invention is characterized by being constituted by mainly three elements, viz. a bottom element to be placed enclosing the bottom element of the pallet on three sides, a number of poles which are fixated to the bottom element and which serve the purpose of supporting the top element of the display shelf system. Depending on the construction in question and especially depending on the size of the display shelf system, the number of poles may vary from three or four and up to six, eight or even ten individual poles or bearers. The locking means serving the purpose of coupling the poles or the bearers and the bottom element together and correspondingly coupling and locking the top element to the poles or bearers may be designed in any arbitrary suitable manner and be designed identically for the two applications, i.e. locking of the poles to the bottom element and locking of the top element to the poles, or they may be differently designed.

In accordance with a first embodiment, the bottom element may be produced as an integrated unity, but in the presently preferred embodiment of the display shelf system according to the present invention the bottom element is constituted by detachable elements, more precisely two detachable side elements and a back element which are designed to be coupled together by

means of an assembly fitting. In the presently preferred embodiment of the display shelf system according to the present invention the side elements and the back element may be designed in such a manner that the display shelf system by substitution of side elements of one size by side elements of another size may readily be changed from a display shelf system for use in connection with one size of pallets into a display shelf system for use in connection with another size of pallets. Correspondingly, the display shelf system may in accordance with the presently preferred embodiment of the display shelf system according to the present invention be designed in such a manner that also the back element may be substituted for adaption to a specific pallet size.

In the presently preferred embodiment of the display shelf system according to the presently preferred invention the side elements are advantageously arranged to be fixated to the poles or the bearers and locked to these when the display shelf system is assembled. In this advantageous embodiment the display shelf system constitute a total of four poles or bearers which are adapted to be fixated in pairs to the side elements in the bottom element. Alternatively, also the back element may be adapted to serve the purpose of fixating one or more poles or bearers.

As explained above, the display shelf system according to the present invention is characterized by the fact that it may readily be modified in accordance with a specific application and used in connection with different pallet sizes and moreover be used for presentation of either the long side or the short side of the pallet. In this connection it must be observed that expressions such as short and long sides refer to the pallet in question, and likewise expressions such as crosswise and lengthwise refer to an orientation of the display shelf system placed enclosing the pallet and seen in relation to the longitudinal axis of the pallet in question defined as the axis parallel with the long side of the pallet. Thus, in accordance with the present invention the display shelf system may be designed in such a manner that the bottom element is designed to be placed with its side elements extending along the long sides of the appertaining pallet and with the back element placed along one of the short sides of the pallets or alternatively and furthermore be designed to be placed having its side elements extending along the short sides of the appertaining pallet and having the back element placed along one of the long sides of the pallet.

Especially, the display shelf system according to the present invention may in accordance with the teachings of the present invention especially be designed so that the side elements of the bottom element and the back element may be exchanged in order to allow the display shelf system to be altered from a display shelf system which is arranged to be located having its side elements extending along the long sides of the appertaining pallet and having the back element placed along

one of the short sides of the pallet, into a display shelf system which is arranged to be located with its side elements extending along the short sides of the appertaining pallet and with the back element placed along one of the long sides of the pallet, or vice versa.

The locking means for locking of the poles or the bearers to the bottom element may as explained above be constituted by arbitrary suitable locking means allowing a safe and reliable coupling and locking of the poles or the bearers to the bottom element and at the same time allowing a simple mounting and demounting of the display shelf system. Thus, in accordance with the display shelf system according to the present invention prior art snap locking constructions, bayonet locking constructions etc. may be used. However, the locking means of the presently preferred embodiment of the display shelf system according to the present invention are constituted by locking beaks which are adapted to cooperate with appertaining recesses or holes. In accordance with one embodiment of the display shelf system according to the present invention the locking beaks are provided on the side elements and/or on the back elements, whereas recesses or holes for receiving the locking beaks are provided in the poles or in the bearers. In the presently preferred embodiment of the display shelf system according to the present invention the locking beaks are provided on the poles or on the bearers whereas the recesses or the holes are provided in the side elements and/or the back elements of the bottom element.

For providing a stable construction, i.e. a stable display shelf system, in which the top element is reliably retained, it is preferred that the rack furthermore constitutes side connection elements to keep the poles or the bearers parallelly and mutually spaced apart and extending upwardly from the bottom element.

For presentation of the articles which are contained in the pallet positioned below the display shelf system and which are presented on the top element of the display shelf system it is preferred that the rack furthermore includes an advertisement board which may be mounted in an arbitrary manner in relation to the top element of the display shelf system, the poles or the bearers. However, in the presently preferred embodiment of the display shelf system according to the present invention it is preferred that the advertisement board is mounted resting on the uppermost ends of two of the poles or bearers of the display shelf system.

The top element in the display shelf system according to the present invention may constitute a plane surface on which the articles to be presented on the display shelf system may be displayed and which articles are enclosed in the pallet placed below the display shelf system. The display shelf system according to the present invention may furthermore be designed with a top surface which is provided with a separate top part providing an arbitrary presentation surface, i.e. a plane, a dome-shaped, a tortuous, a sloping etc. displaying

surface. Thus, it becomes possible to establish a display shelf system with a special and unique appearance for presentation of the articles which are to be presented on the display shelf system.

In the following the invention will be further explained with reference to the drawing in which

fig. 1 is a schematic, perspective and separated view of a first embodiment of a display and presentation rack according to the present invention,

fig. 2 is a schematic, perspective view of a detail of the display and presentation rack illustrated in fig. 1 according to the present invention,

fig. 3a and 3b are perspective views of two alternative embodiments of an assembly fitting for the display or presentation rack illustrated in fig. 1 according to the present invention,

fig. 4a is a perspective and schematic view of the display or presentation rack illustrated in fig. 1 according to the present invention in assembled condition and having a top plate mounted in a maximum height,

fig. 4b is a perspective, schematic and partly sectional view corresponding to fig. 4a of the display or presentation rack illustrated in fig. 1 in assembled condition and having the top plate lowered in relation to the location of the top plate illustrated in fig. 4a,

fig. 5b is a schematic, perspective and partly sectional view of an alternative or second embodiment of a display or presentation rack according to the present invention,

fig. 6 is a perspective, schematic and separated view of a third embodiment of a display or presentation rack according to the present invention,

fig. 7 is a perspective and schematic view of the display or presentation rack illustrated in fig. 6 in assembled condition,

fig. 8 is a perspective and schematic view corresponding to fig. 7 of an alternative application of the display and presentation rack according to the present invention illustrated in fig. 6,

fig. 9a, 9b, 9c, 9d, 9e and 9f are perspective and schematic views of alternative embodiments of a top plate for the display and presentation rack according to the present invention illustrated in fig. 6-8,

fig. 10 and 11 are perspective and schematic views

corresponding to fig. 7 and 8, respectively, of the application of the display and presentation rack according to the present invention illustrated in fig. 6-8, and

fig. 12a and 12b are perspective, schematic and partly sectional views of a modified embodiment of the display or presentation rack according to the present invention illustrated in fig. 6-8.

In figs. 1-5 of the drawing, a first embodiment of a presentation or display shelf system or rack according to the present invention is shown, and details of the rack and alternative applications of the rack are illustrated. In fig. 1 the rack is in its entirety designated the reference numeral 10, illustrated separately whereas the rack is illustrated in assembled condition in fig. 4a with a top plate 12 placed in a maximal height, whereas in fig. 4b the same top plate is placed in a lower height in the rack. The rack 10 is generally intended to be assembled enclosing a pallet which supports a box of articles which are to be presented by means of the display or presentation rack, as the rack is used for presenting the articles contained in the package on the top plate 12, possibly together with advertisement materials such as brochures, an exhibition of articles etc.

The rack 10 illustrated in fig. 1 generally includes the top plate 12 mentioned above, four bearers or legs 14 and a bottom element 16 constituted by two side plates 18 and a back plate 20 which are assembled by means of two assembly fittings 22. Furthermore, the rack includes one or more side connection elements 24 and a cross connection element 26 and an advertisement board 28. In the following, the individual components or elements will be described in further details. As is evident from fig. 1, the bearers or the legs 14 have a number of splittings 14a which are placed in equidistant distance and which are provided as through-going splittings or recesses. The bearers or the legs 14 may be produced of an arbitrary suitable material such as a plastics material, e.g. PVC, PP, PE, ABS or another suitable plastics material or metal, e.g. thin sheet steel or alternatively aluminum. With a view to the total weight of the rack it is preferred that the bearers like the other components of the rack are of a lightweight material, as it is an important feature of the rack according to the present invention that the rack is easy to carry and accordingly may readily be transported by one person from one place to another in dismantled condition. Moreover, the bearers 14 have at their lowest ends, as is evident from fig. 1, a number of outwardly protruding locking beaks 14b serving to engage with and lock the appertaining holes or perforations in the side plates 18. These holes or perforations are designated the reference numerals 18b, whereas a number of perforations serving the purpose of connecting the side elements 18 to the back element 20 are designated the reference numeral 18a which back element 20 correspondingly

has holes or perforations 20a for receiving the locking beaks 22a and holes or perforations 20a for receiving the locking beaks 22a and holes or perforations 20b which as will be described below may be used together with the locking beaks 14 on the bearers or the legs 14 when the rack is used in an alternative application.

Generally, the locking fittings 22 include a plate-shaped angle unit 23 from which the above mentioned locking beaks 22a extend outwardly as is evident from fig. 1 and moreover is shown in greater details in fig. 3b. In an alternative embodiment the locking fitting illustrated in fig. 3a and designated the reference numeral 22' may include the same plate-shaped angle unit 23 with locking beaks 22c extending inwardly herefrom which locking beaks as regards embodiment and function correspond to the locking beaks 22a of the locking fitting 22 illustrated in fig. 1 and 3b. The difference between the locking fitting 22' illustrated in fig. 3a and the locking fitting 22 illustrated in fig. 3b is the one that the locking fitting 22 is intended to be mounted within the appertaining side plate 18 and bounding the back plate 22 whereas the locking fitting 22' illustrated in fig. 3a is mounted outwardly or on the outer surface of the appertaining plates, i.e. the side plate 18 and the back plate 20. The side plates 18 and the back plates 20 may be produced of a thin plate material such as thin iron plate or aluminum plate or alternatively be cast in a plastics material, e.g. PVC, PP, PE, ABS or another suitable plastics material. Correspondingly, the locking fitting 22 or alternatively the locking fitting 22' may be produced of aluminum or preferably be injection-moulded in a plastics material, for instance in one of the above mentioned plastics materials.

The side connection elements 24 include a central plate-shaped portion 25 and two end plate portions 25a and 25d which are displaced in relation to the central plate-shaped portion 25 and from which locking beaks 24b protrude outwardly having the same embodiment as the locking beaks 14b on the legs or bearers 14 and the locking beaks 22a or alternatively the locking beaks 22c on the assembly fitting 22 and 22', respectively. Correspondingly, the cross connection element 26 has a central plate-shaped portion 24 which is dislocated in relation to the central plate-shaped portion 27 and from which two plate-shaped extensions 27a and 28b extend outwardly, and from which locking beaks 26b having the same embodiment as the locking beaks 24b on the side connection portions 24 protrude outwardly. Similarly, the side connection elements 24 and the cross connection element 26 may be produced of an arbitrary suitable material, for instance aluminum, thin iron sheet or a plastics material.

The top plate 12 is of an rectangular shape corresponding to the rectangular shape defined by the bottom element 16, the top plate 12 defining two long side edges and two short side edges. From the long side edges as well as from the short side edges skirts 12a and 12b, respectively, extend downwardly, as in fig. 1

only two of the downwardly producing skirts 12a and 12b are illustrated whereas the corresponding skirts on the two other side edges are not shown in fig. 1. In the skirts 12a and 12b two sets of splittings are provided, the distance between these two sets of splittings being the same on the short and the long edge sides of the plate and moreover corresponding to the length of the central plate-shaped portion 25 of the side connecting elements 24. The splittings in the skirt 12a are designated the reference numeral 12c, whereas the splittings in the skirt 1 are designated the reference numeral 12d. The top plate 12 is preferably produced of thin metal sheet such as thin iron sheet or alternatively thin aluminium sheet which has been bended or cast in the illustrated form at the downwardly protruding skirts 12a and 12b.

The advertisement board constitutes an equipment to the rack and consists of two legs 28a which are connected via an upwardly open U-shaped profile portion 28b and the lower end of which are connected to feet 28c serving the purpose of supporting and engage around the upper ends of two of the legs or bearers 14. In the upwardly open U-shaped profile rail 28b a plate-shaped board 29 is mounted which board may be of arbitrary configuration, for instance having the configuration illustrated in fig. 1 or alternatively having a rectangular, quadratic, triangular or arbitrary polygonal or other shape consisting of an arbitrary combination of geometric forms.

The rack illustrated in fig. 1 is assembled by joining together the side plates 17 with the back plate 20 by means of the two assembly fittings 22 and thereafter the legs or the bearers 14 are mounted to the side plates 18 as the locking beaks 14b of the legs or the bearers 14 are inserted in the appertaining holes or perforations 17b in the side plates 18. Thereafter, or simultaneously with the mounting of the legs or the bearers 14 to the side plates 18 the side connecting elements 24 are mounted, the central plate-shaped portion in each of the side connection elements 24 being brought to turn inwardly towards the interior space defined between the legs or the bearers 14. At the same time the cross connecting element 26 is mounted between the two rear or front legs. However, alternatively two cross connecting elements corresponding to the two side connecting elements may be used. The cross connecting element is mounted between the legs or bearers 14 placed opposite each other in the same height as the side connecting elements 24 so that the upper edges of the plate-shaped portions 25 and the upper edge of the plate-shaped portion 24 produce a support for the top plate 12, the splittings 12c in the skirt 12a allowing the top plate to be lowered and lock around the side connection elements 24 and around the cross connecting element or cross connecting elements 26. Finally, the board 28 is mounted as illustrated in fig. 4a, the feet 8c being placed catching around the two upper ends of the legs or bearers 14.

It has to be observed that the poles or bearers 14 in fig. 4a, 4b and 5 of the drawing are illustrated without the cross-going holes or perforations 14a only out of clearness considerations.

As is evident from fig. 4a and 4b the top plate 12 may be mounted either in its upper position illustrated in fig. 12 or lowered in relation to this upper position as illustrated in fig. 4b, the side connecting elements 24 and the cross connecting element 24 in the position of the top plate 12 illustrated in fig. 4a being mounted in the upper holes or perforations 14a in the legs or bearers 14, but in the position illustrated in fig. 4b being mounted in holes or perforations 14a in a lower position in the legs or bearers 14.

A special feature of the display or presentation rack according to the present invention is that the rack allows placing of a pallet either with its short side facing outwardly or with its broad side facing outwardly as the rack may alternatively be assembled by means of two plates corresponding to the back plate 20 and a single plate corresponding to the side plate 18 whereas the bearers or legs 14 are correspondingly fixated to the two plates 20 which hereafter constitute side plates. In this alternative arrangement, the central plate-shaped portions 25 of the side connection elements 24 in the perforations 12d are received in the skirts 12b along the short side edges of the top plate 12 which are therefore in this alternative arrangement mounted with their long side facing outwardly. This alternative arrangement or mounting of the display or presentation rack according to the present invention is illustrated in fig. 5 which by the way illustrates a modified or other embodiment of the rack as the bottom portion 16 is made up of side plates 20' and a back plate 18' which are distinct from the above described back plate 20 and the above described side plates 18, respectively, by the side plates 20' and the back plate 18' being designed as L-shaped profiled portions, the side plates 20' having a lowermost, outwardly protruding bended edge portion 21 whereas the back plate 18' correspondingly has a bended, outwardly protruding edge portion 19. In fig. 5 the illustrated board 28' is designed with a larger width than the above described advertisement board 28 in order to allow the board 28' to be mounted in the same way as the above described board 28 resting on and fixated to the rearmost leg 14 of the display or presentation rack. Moreover, in fig. 5 the assembly fitting 22' illustrated in fig. 3a is used instead of the assembly fitting 22 used in fig. 3b and in fig. 1 and 4a.

In fig. 6, 7, and 8 a third embodiment of the display or presentation rack according to the present invention is illustrated corresponding to fig. 1, 4a and 5. In this third embodiment a bottom portion 16'' is used which has L-profile shaped side plates 18'' mainly corresponding to the above described back plate 18' illustrated in fig. 5, but formed with a double set of holes or perforations 18a'' for cooperation with an assembly fitting 22'' being distinct from the assembly fitting 22' illustrated in

fig. 3a and fig. 5 by the number of locking beaks 22c being doubled. In the third embodiment of the display or presentation rack according to the present invention illustrated in fig. 6 the same legs or bearers 14 are used as in the above described embodiment, however without the cross-going holes or perforations 14a.

At the same time, in the rack illustrated in fig. 6 which is in its entirety designated the reference numeral 10'' another top plate 12'' is used which is illustrated in details in fig. 9c and 9d and which consists of a preferably cast shell construction defining a circumferential skirt including a side wall 12a'' and a side wall 12b'' and corresponding side walls which are not shown in fig. 6 and which extend along the long edge side and the short edge side of the plate, respectively, corresponding to the above described skirts 12a and 12b illustrated in fig. 1. Inside the cast shell construction 12'' recesses are provided serving the purpose of receiving and locking of the upper ends of the poles or bearers 14 for fixating of the poles or bearers 14 in perpendicular positions and at the same time locking of the top plate 12'' in relation to the poles or bearers 14. In the side walls 12a'' and 12b'' on the top plate 12'' through-going holes or perforations 12c'' and 12d'', respectively are furthermore provided, the perforations being configured in triangular patterns for receiving and locking of protruding locking pins on angle-shaped fittings 28a'' serving the purpose of fixating a plate 29'' in a board corresponding to the above described board 28. Each of the fittings 28a'' consist of a supporter to the end of which a triangular plate is connected and from which supporter pins protrude inwardly for receipt in the perforations 12c'' or 12d'' and from the other end of which an upwardly open U-shaped profile rail for receipt of an end of the plate 29'' extends.

The third embodiment of the display or presentation rack according to the present invention illustrated in fig. 6 may similarly to the above described first embodiment be mounted in two alternative ways illustrated in fig. 7 and 8, respectively. In the arrangement illustrated in fig. 7 two plate portions 20'' are used as side plates together with one plate portion 18'' as back plate, the top plate 12'' being so to speak mounted crosswise having its long edge facing forward and being placed above the aperture in the bottom portion 16''. To the contrary, in fig. 8 the top plate 12'' is mounted lengthwise, two plate portions 18'' as side plates being used as a bottom portion and one plate portion 20'' as back plate.

In figs. 9a, 9b, 9c, 9d, 9e and 9f the building-up of the top plate 12'' shown in fig. 6, 7 and 8 is illustrated together with possible supplements of the top plate 12''. In fig. 9c the top plate 12'' is illustrated seen from above and in the same position as in figs. 6, 7 and 8 illustrating the upper portion and the downwardly protruding skirt portions 12a'' and 12b''. In fig. 9d the top plate 12'' is illustrated seen from below and in fig. 9d the embodiment of the interior of the shell construction of the top plate 12'' is disclosed. In fig. 9d two walls 12a''' and

12b''' are illustrated which are positioned parallelly with the outer skirts 12a'' and 12b'' and which via cross connecting walls 12e'' define the above described recesses for receipt of the upper ends of the poles or bearers 14. This shell construction constituting the top plate 12'' may, as is evident from figs. 9a and 9b of the drawing, be supplemented with a superstructure which may for instance be of the shape as a triangular box 13 as illustrated in fig. 9a, providing a sloping presentation surface above which the board 28'' is mounted. Alternatively, a triangular box 13' as illustrated in fig. 9b may be used, thus providing two sloping presentation surfaces facing each side, respectively, and enabling presentation of articles enclosed in a box positioned on a pallet positioned below and received in the display or presentation rack.

Alternatively a plate construction of arbitrary shape may be used, for instance a plate construction 13'' illustrated in fig. 9e with an undulated top plate or a plate construction 13''' illustrated in fig. 9b having a plane, sloping top plate in connection with the top plate 12''.

Figs. 10 and 11 illustrate, corresponding to figs. 7 and 8, the application of a display or presentation rack 10'' according to the present invention for presentation of articles, for instance sun protection lotion or toilet paper as illustrated in figs. 10 and 11, respectively, which articles are presented displayed on the top plate, possibly together with supplementary articles and which articles are contained in a box 30 mounted on a pallet 32, which are readily received in the display or display shelf system and may be inserted in the interior of the rack by means of a lift truck and removed when the box 30 is emptied of articles.

In figs. 12 and 12b another special feature of the display or presentation rack according to the present invention is illustrated, i.e. the modular embodiment of the rack which firstly - as described above with reference to figs. 7 and 8 of the drawing and corresponding to figs. 10 and 11 of the drawing - allows the rack to be turned in two alternative ways for placing of a box positioned on a plate either crosswise or lengthwise in relation to the rack and secondly enables adaption of the display or presentation rack to the size of a specific box of articles or the number of boxes of articles and appertaining pallets. In fig. 12a, a modified rack is illustrated corresponding to the rack illustrated in fig. 7 which rack illustrated in fig. 12a is in its entirety designated the reference numeral 10''' and constitutes so to speak a double rack compared to the rack illustrated in fig. 7, two plate portions 20'' being used as side portions in the bottom portion of the rack which two plate portions are made up by means of an assembly fitting 31 consisting of a plate from which a number of locking beaks protrude inwardly corresponding to the locking beaks 22a on the assembly fitting 22 and the locking beaks 22c on the assembly fittings 22' and 22''. Correspondingly, the top plate 12''' illustrated in fig. 12a constitutes a double plate in relation to the top plate 12'' illustrated in fig. 7 or

constitutes alternatively a construction which is made up of two of the top plates 12'' illustrated in fig. 7 which is assembled by means of a bottom locking fitting which is inserted in the slots or recesses in which the poles or bearers 14 are received. In the arrangement illustrated in fig. 12a two boxes may corresponding to fig. 7 and 10 be mounted behind each other on two appertaining pallets. In an alternative arrangement illustrated in fig. 12b two boxes corresponding to the arrangement illustrated in figs. 8 and 11 beside each other may be mounted as in fig. 12b two side plates 18'' and two back plates 20'' coupled together are used in the bottom portion of the rack which back plates 20'' are assembled by means of the above described assembly fitting 31.

Even though the invention is described above with reference to a number of presently preferred embodiments of the invention it will be evident to people skilled in the art that numerous modifications and variations of the present invention may be performed within the scope of the invention without deviating from the aim and spirit of the invention as the invention is defined in the following patent claims.

Claims

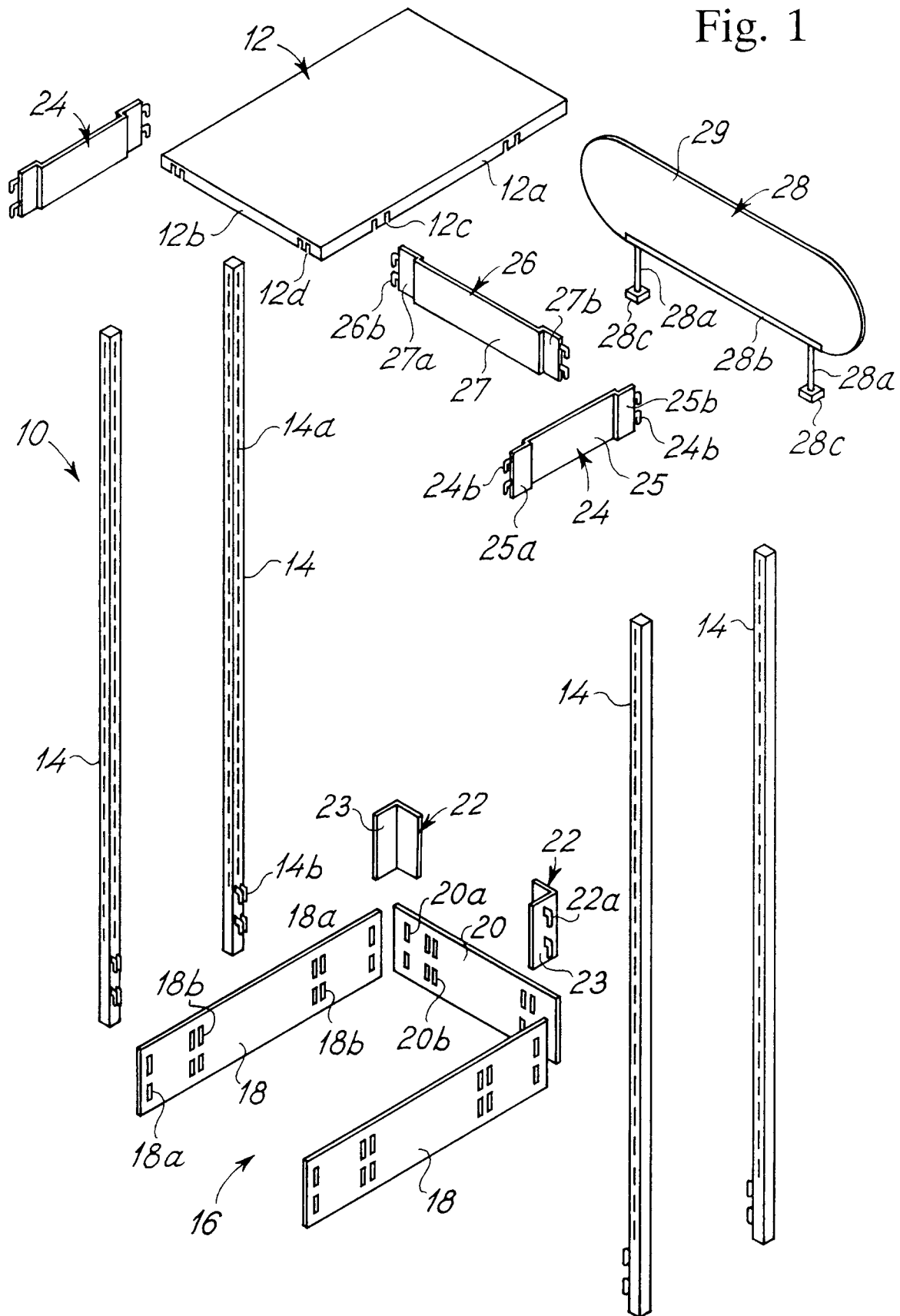
1. Display shelf system for presentation of articles and for being placed in connection with a pallet containing the articles in question, **CHARACTERIZED** in the rack consisting of a bottom portion constituting two side elements and a back element and which is arranged to be placed resting on a supporting surface on which the pallet is also supported with the back element placed behind the pallet and the side elements placed in each side of the pallet so that the pallet is freely accessible from the front, a number of poles or bearers which are arranged to be fixated to the bottom component in positions extending upwardly from the bottom portion and a top plate which is arranged to be fixated to the poles or the bearers at their upper ends, the poles or bearers having such lengths that the top plate is placed above the pallet and that the bottom element and the poles or bearers and the top plate and the poles or bearers have cooperating locking means which are arranged to lock the poles or the bearers to the bottom component and correspondingly lock the top plate to the poles or bearers, but allow separation of the poles from the bottom component and correspondingly separation of the top plate from the poles or the bearers.
2. Display shelf system according to claim 1, **CHARACTERIZED** in the bottom component being composed of two loose side components and a back component which are coupled together by means of assembly fittings.
3. Display shelf system according to claim 2, **CHAR-**

ACTERIZED in the display shelf system being composed of a total of four poles or bearers which are adapted to be fixated in pairs to the side elements in the bottom portion.

4. Display shelf system according to claim 2 or 3, **CHARACTERIZED** in the bottom portion being arranged to be placed with the side elements extending along the long sides of the appertaining pallet and with the back portion placed along one of the short sides of the pallet. 5 10
5. Display shelf system according to any of the claims 2-4, **CHARACTERIZED** in the bottom component being arranged to be positioned with the side elements extending along the short sides of the appertaining pallet and with the back element positioned along one of the long sides of the pallet. 15
6. Display shelf system according to any of the claims 2-5, **CHARACTERIZED** in the side elements and the back element of the bottom portion being exchanged so that the display shelf system is altered from a display shelf system which is designed to be positioned with the side elements extending along the long sides of the appertaining pallet and with the back element positioned along one of the short sides of the pallets into a display shelf system which is designed to be positioned with the side elements extending along the short sides of the appertaining pallet and with the back portion positioned along one of the long sides of the pallet, or vice versa. 20 25 30
7. Display shelf system according to any of the claims 1-7, **CHARACTERIZED** in the locking means for locking of the poles or bearers to the bottom portion being constituted by locking beaks which are arranged to cooperate with appertaining recesses or holes. 35 40
8. Display shelf system according to claim 7, **CHARACTERIZED** in the locking beaks being provided on the poles or the bearers whereas the recesses or holes are provided in the side portions and/or the back portion of the bottom element. 45
9. Display shelf system according any of the claims 1-8, **CHARACTERIZED** in the rack further consisting of side connection elements to keep the poles or bearers parallel in a mutual distance extending upwardly from the bottom portion. 50
10. Display shelf system according to any of the claims 1-9, **CHARACTERIZED** in the rack further consisting of an advertisement board which is mounted resting on the uppermost ends of the two poles or bearers. 55

11. Display shelf system according to any of the claims 1-10, **CHARACTERIZED** in the top plate being provided with a separate top portion producing a plane, a dome-shaped, a tortuous, a sloping etc. displaying surface

Fig. 1



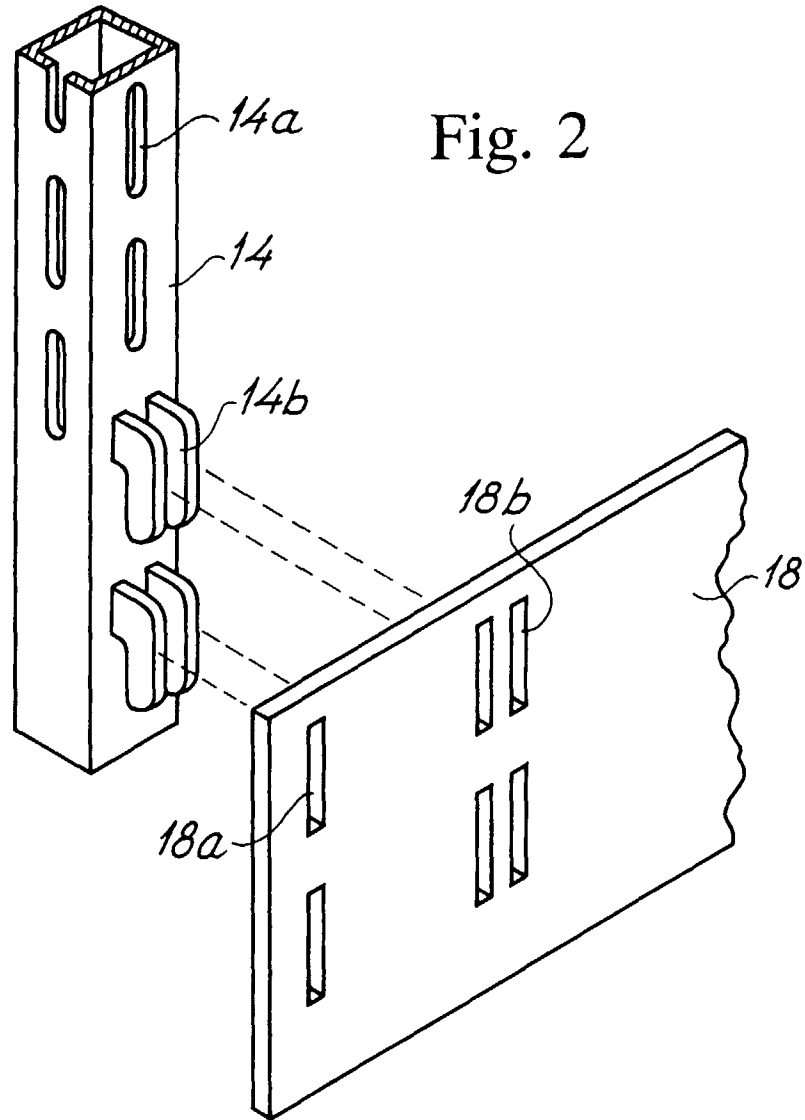


Fig. 3a

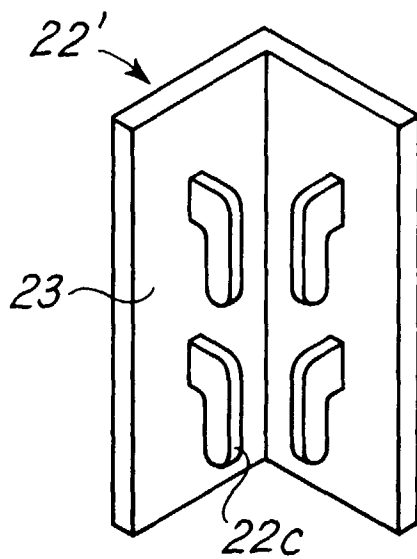


Fig. 3b

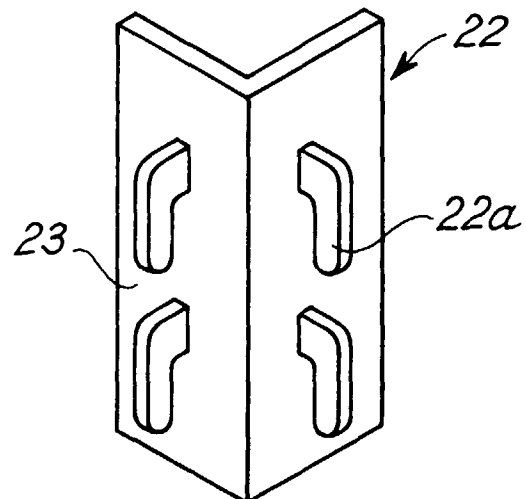


Fig. 4a

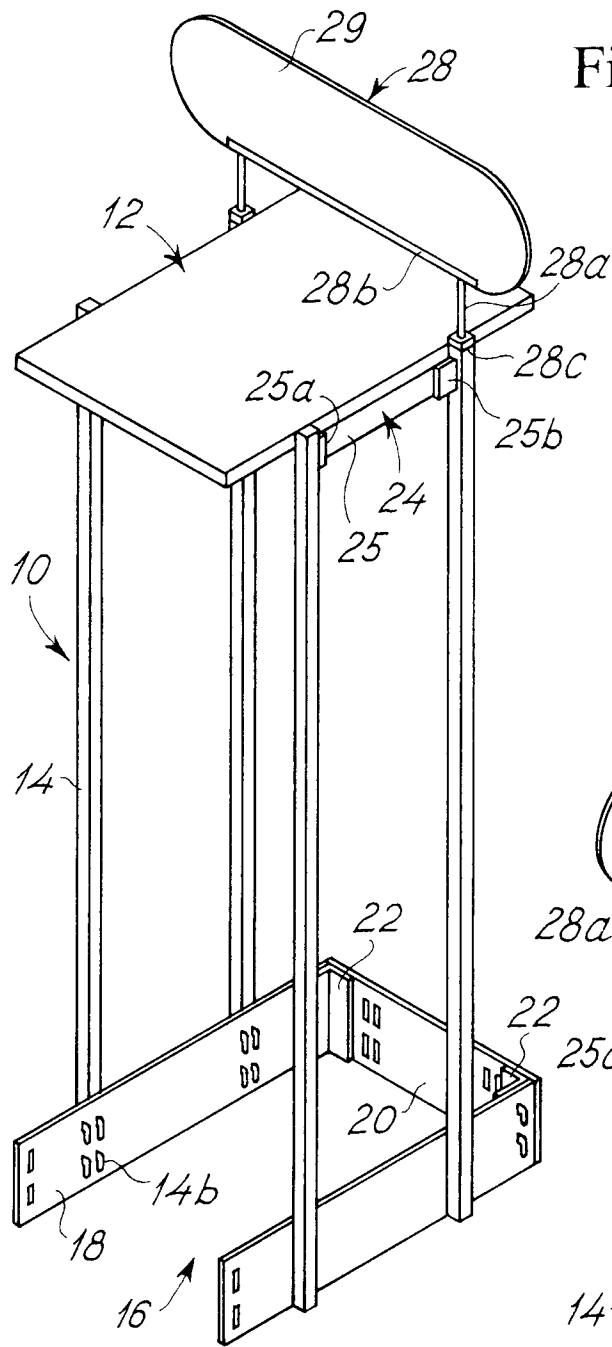


Fig. 4b

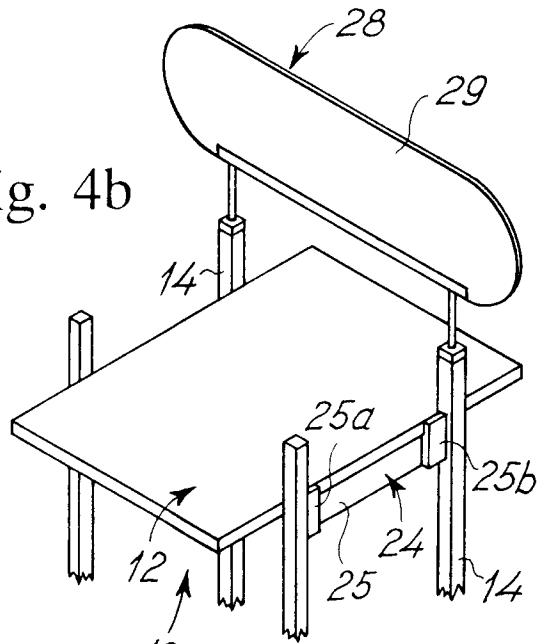


Fig. 5

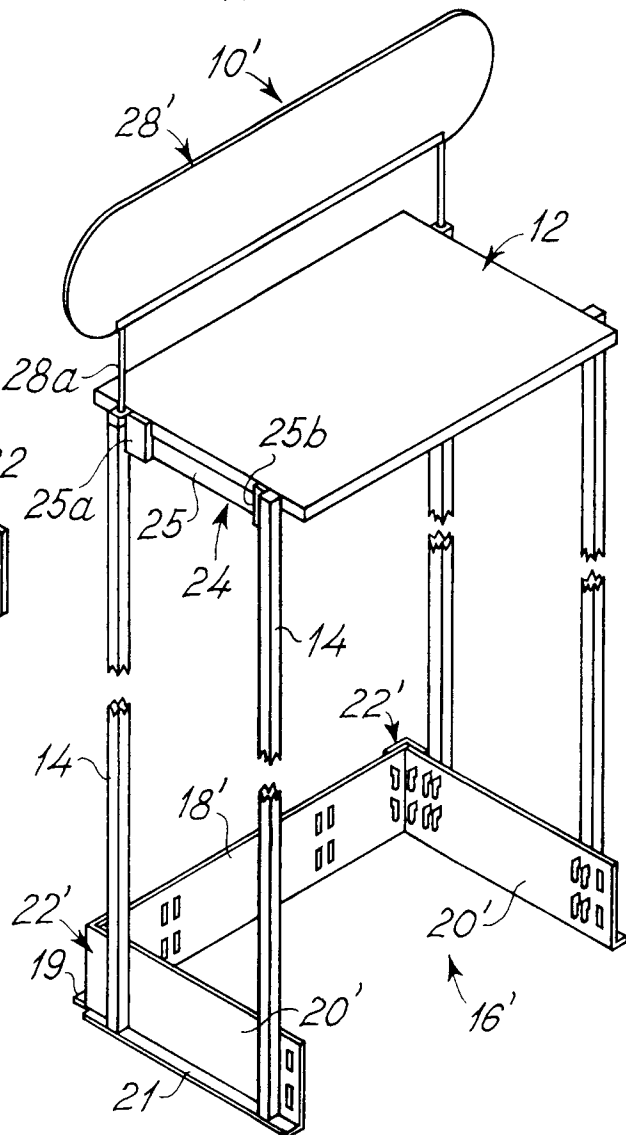
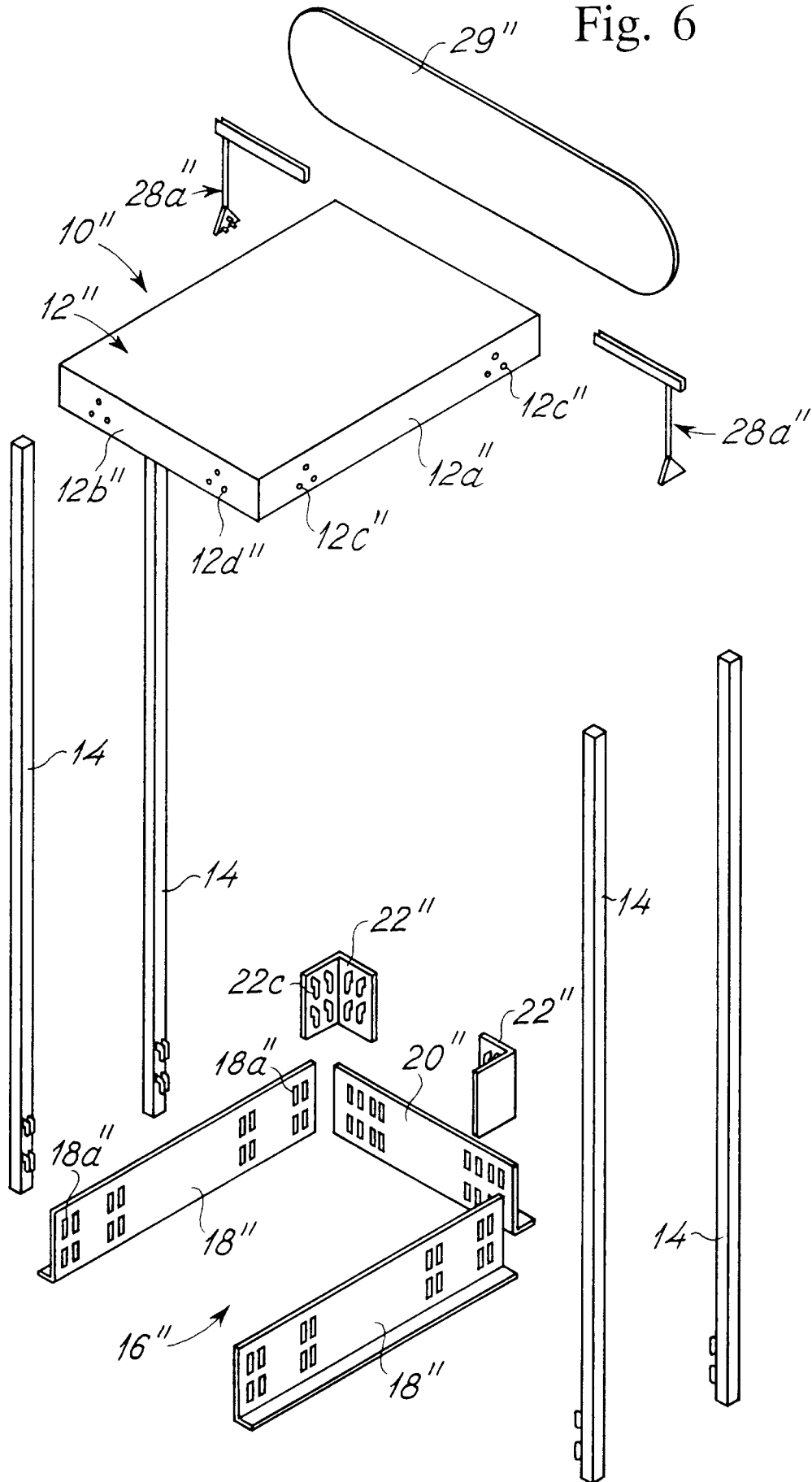


Fig. 6



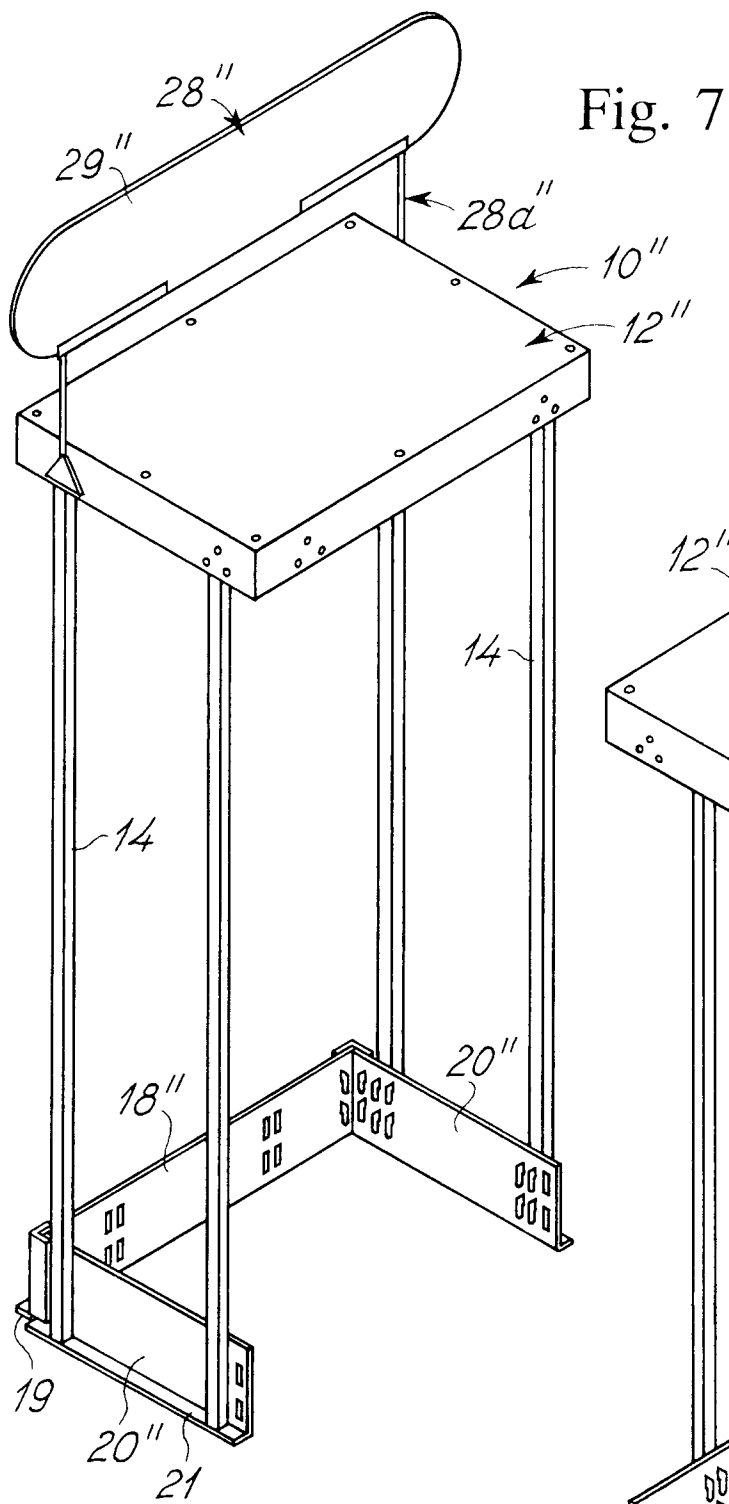


Fig. 8

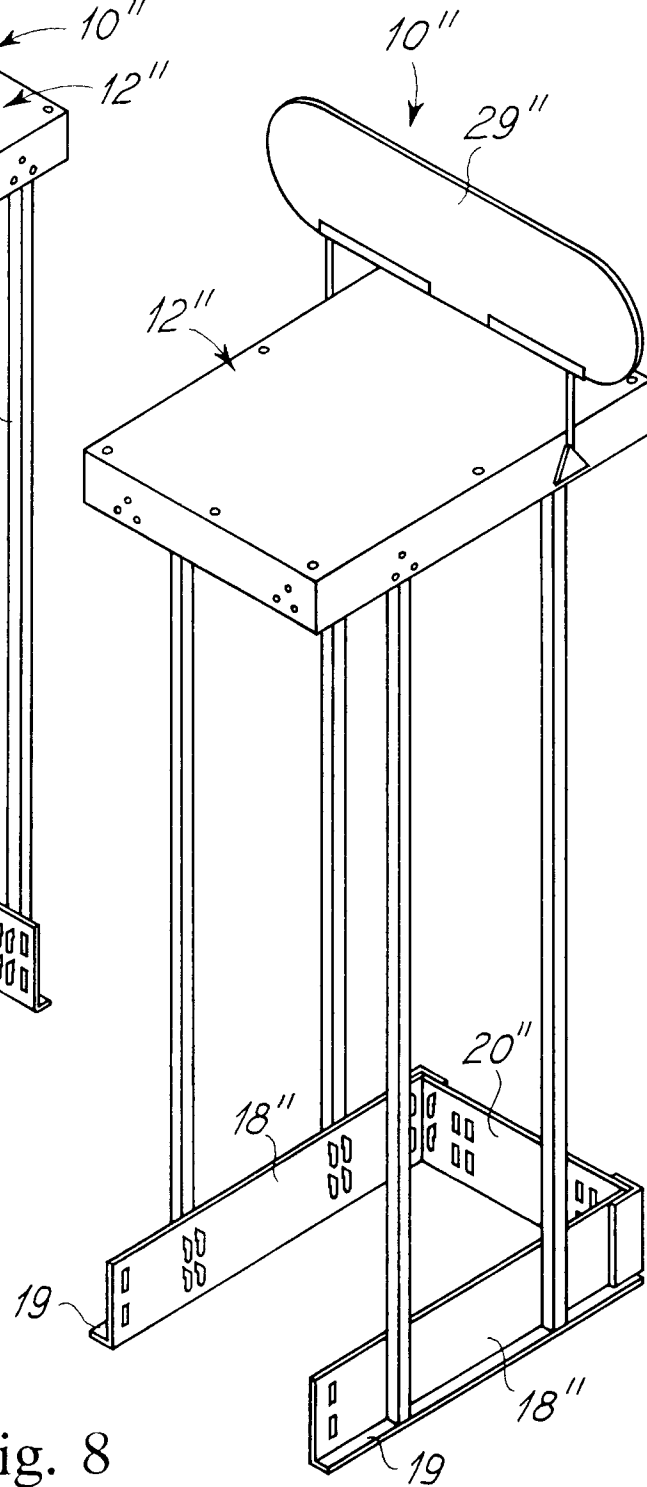


Fig. 9a

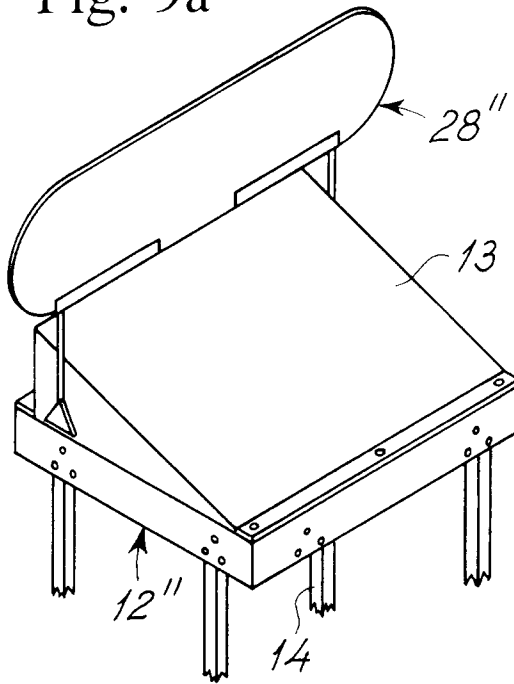


Fig. 9b

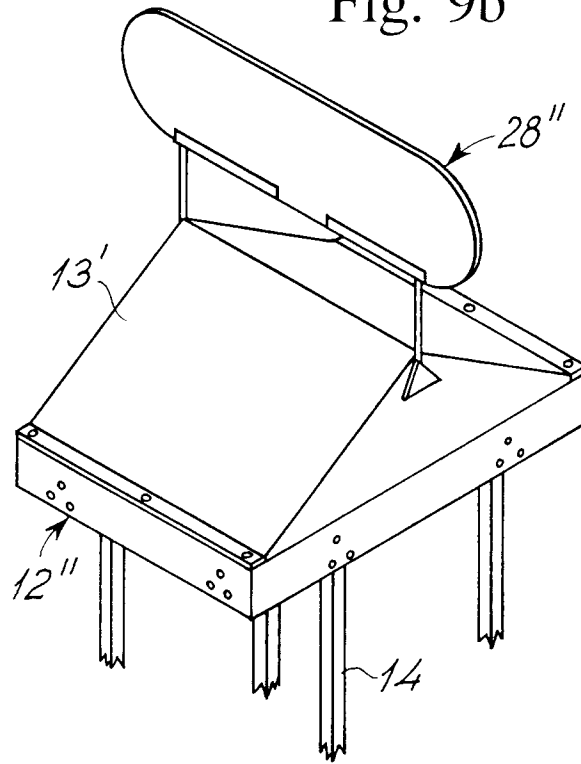


Fig. 9c

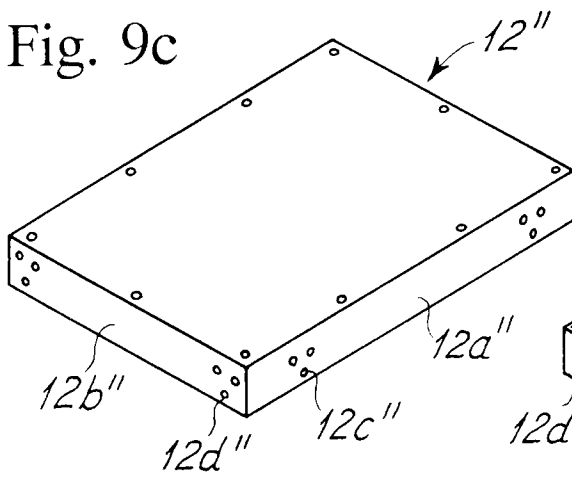


Fig. 9d

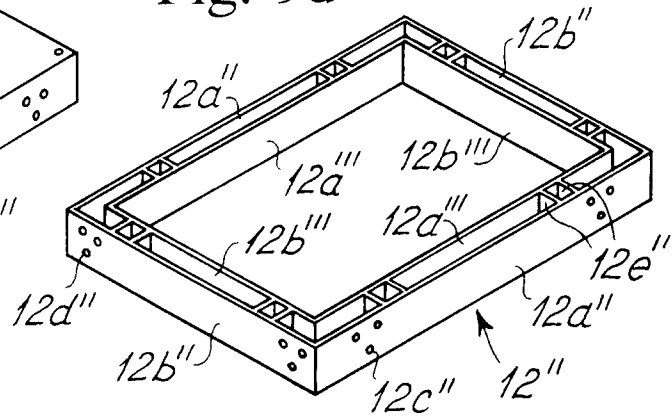


Fig. 9e

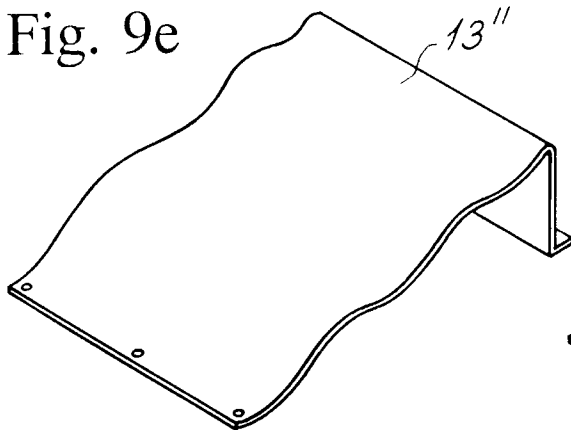
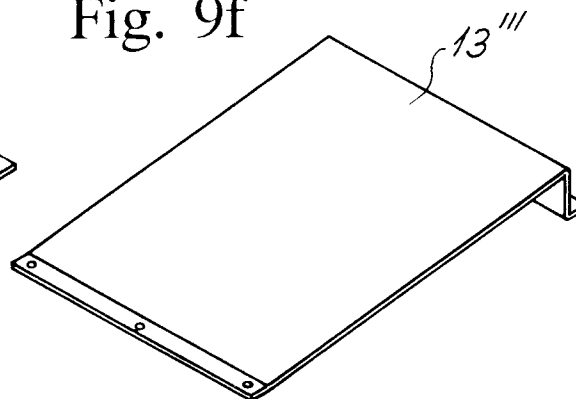


Fig. 9f



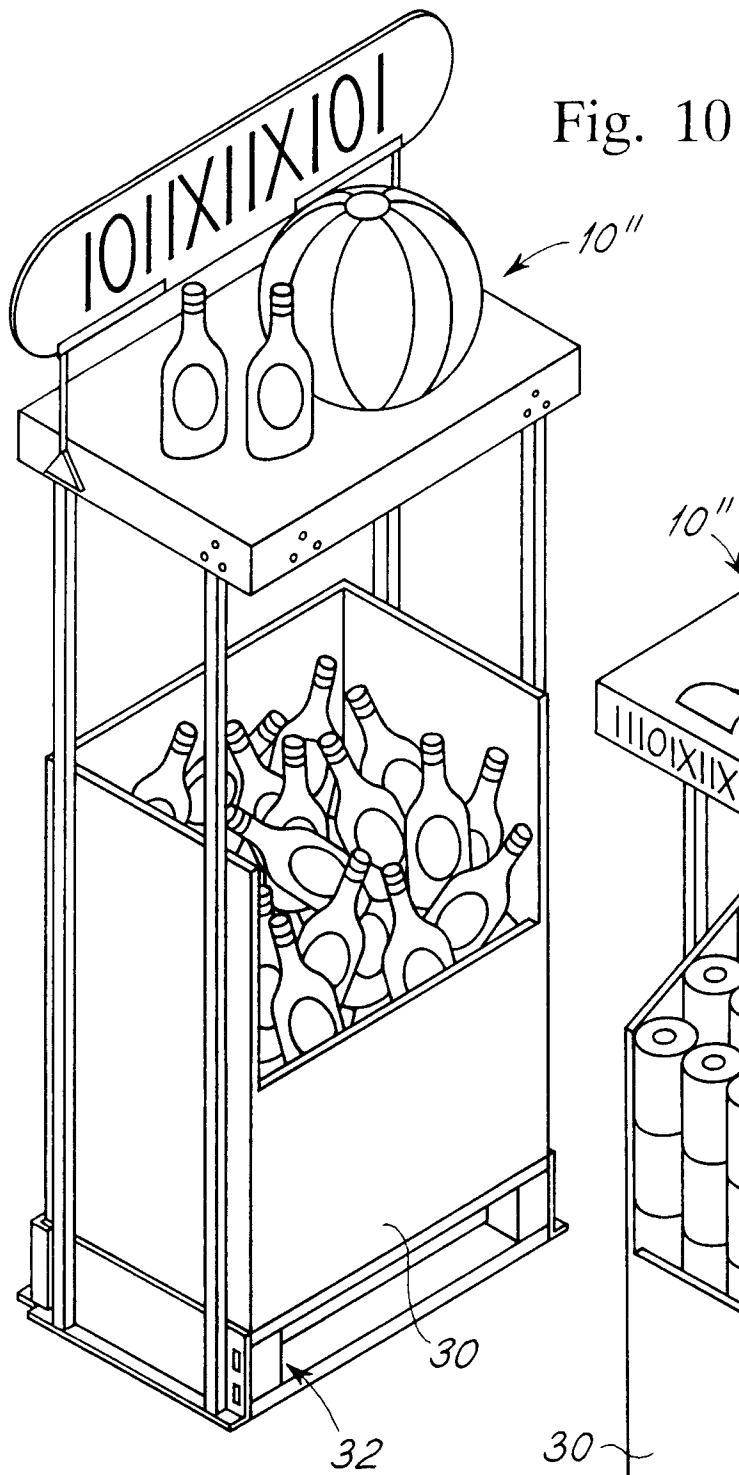
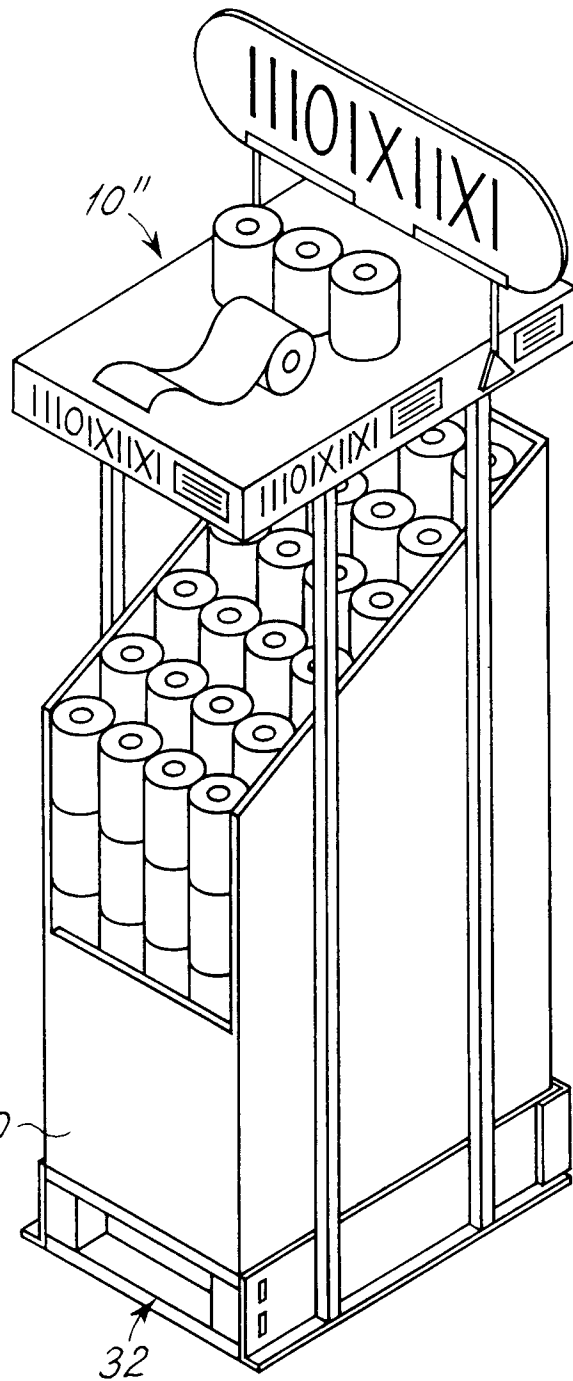


Fig. 11



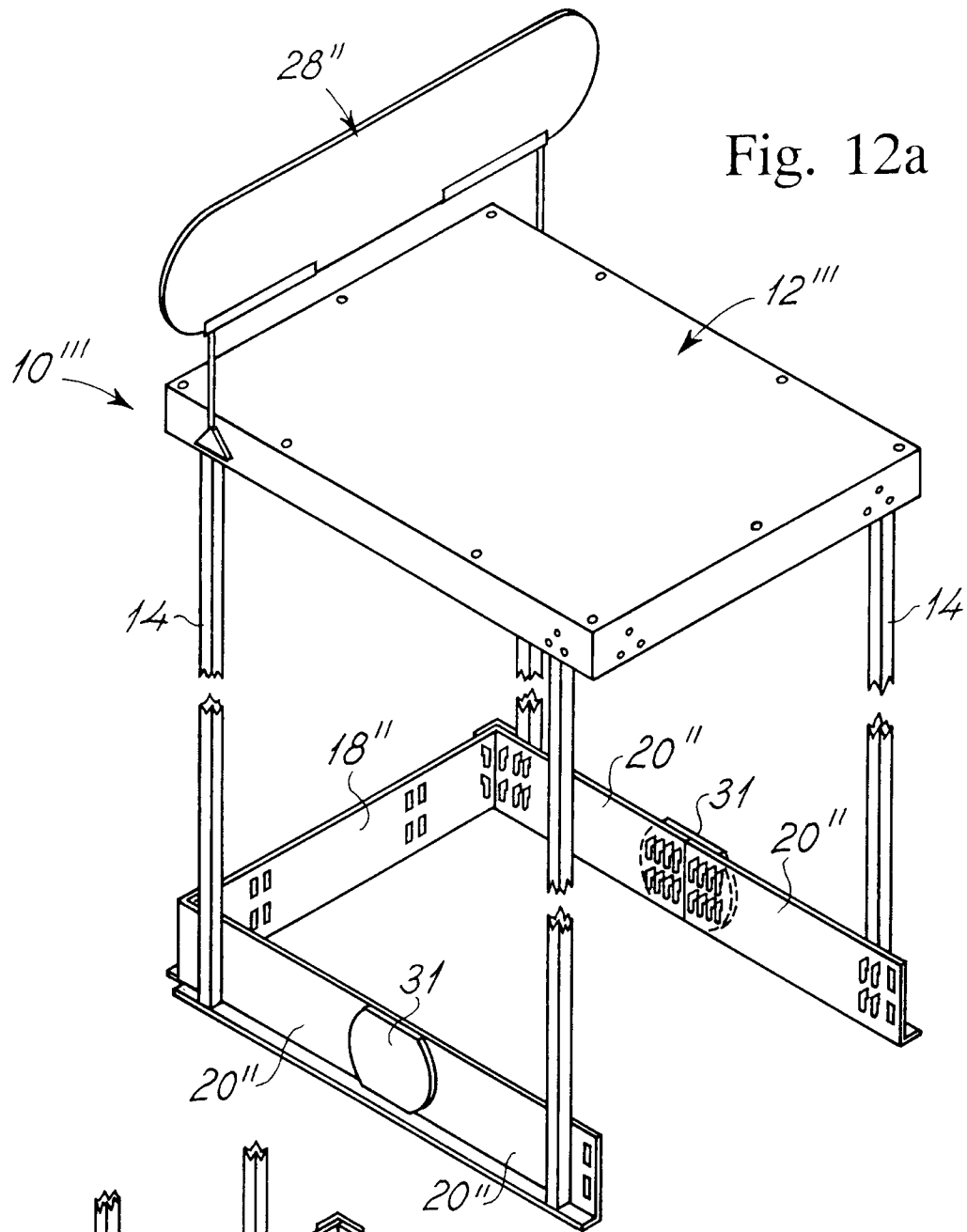


Fig. 12a

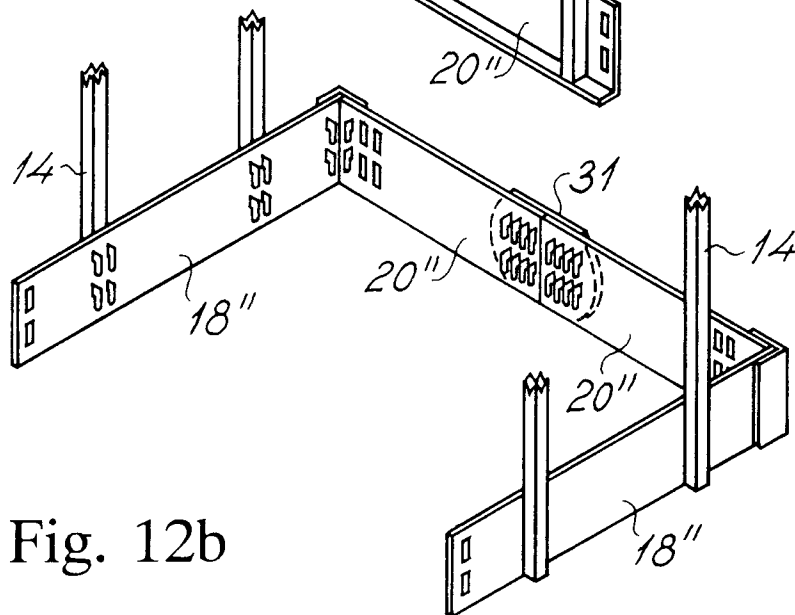


Fig. 12b