

TETRAHEDRAL PACKAGE DISPLAY DEVICE AND METHOD FOR
INSERTING SUCH A PACKAGE INTO SAID DEVICE

BACKGROUND OF THE INVENTION

The present invention generally concerns display devices for consumer products and more particularly, devices for displaying tetrahedral packages in a positive eye-catching way during merchandising at the sale point. The invention also concerns a method for inserting a tetrahedral package into a display device.

5 Providing display devices for points of sale that will increase the noticeability of products for the consumer is a constant preoccupation for product manufacturers. However, a problem arises when the product to be displayed does not comprise a base suitable for it to be displayed standing upright on a shelf. This problem is all the more acute when one wishes the consumer to be able to purchase the product in a
10 single unit either in a supermarket or wet market. This is the case in particular for products packaged in tetrahedral packages. These packages are well known in the art and are generally used to package liquid, paste, solid particulate, dehydrated powder or granule type products. Until now these tetrahedral packages have thus been displayed in bulk in baskets or in bags disposed on shelves. This type of display has
15 several drawbacks. First, the nature of the product cannot be easily identified by the consumer who makes the choice. Moreover the bulk display is not pleasing to the eye and may give the consumer a negative image of the product and its manufacturer, and therefore fails to be attracted to the product.

The main object of the invention is thus to overcome the above mentioned
20 drawbacks by providing a device for displaying tetrahedral packages in a convenient and attractive way for both the consumer and retailer.

Another object of the invention is to provide a display device for displaying tetrahedral packages which allows a firm support and gripping of the package to be achieved while allowing the product to be easily removed from the display device and
25 the display device to be easily refilled.

Another object of the invention is to provide a display device for displaying tetrahedral packages which allows the consumer to be able to purchase the product in a single unit at the point of sales.

Another object of the invention is to provide a display device for displaying
30 tetrahedral packages which allows a positive product differentiation to be achieved.

Another object of the invention is to provide a display device for displaying tetrahedral packages which has a good visual impact on shelf display.

Another object of the invention is to provide a display device for displaying tetrahedral packages which is cost effective, i.e. inexpensive to produce and easy to implement by the retailers.

5 SUMMARY OF THE INVENTION

The invention therefore concerns a display device for tetrahedral packages, comprising a board and at least one opening formed in the board, wherein said opening has a substantially triangular shape comprising three edges, is sized to
10 receive a respective tetrahedral package, and is associated with holding means for retaining and/or gripping said package, wherein said holding means comprises at least one tab associated with one edge of the triangular opening and two flaps respectively associated with the two remaining edges of the opening, wherein said tabs at least
15 partially enter the surface defined by the triangular opening and wherein said flaps are able to be pushed backwards when said package is inserted into said opening. As a result of these features, one obtains a display device with a simple structure wherein the tetrahedral packages can be displayed in a well sorted and eye-catching way during their merchandising at the point of sale. In particular, the package can be easily snapped into the opening provided in the board and displayed in the upright position
20 which is visually attractive to the consumer. This new and innovative display device also allows a positive product differentiation to be achieved thereby improving the product positioning at the point of sale.

According to one preferred embodiment of the display device of the invention, said tab and flaps are defined by folding lines and pre-cut lines which are preformed in
25 the board. Since, in order to implement the device, the display board needs only to be cut and folded, the display device can be manufactured economically yet, owing to the original combination of the tab and flaps, offering a firm and secure grip and support of the packages when displayed. The display device according the invention can therefore be hung or supported vertically by a string or a hook without any risk of
30 the tetrahedral packages falling out of their respective openings or pockets.

According to another embodiment of the invention, the board of the display device has a top edge and a bottom edge, each of the openings is oriented so as to have an apex pointing downward, and the opening opens out onto the bottom edge via a channel or slot in which a narrow portion of the package can be inserted.
35 Furthermore, the board advantageously comprises a first part in which the triangular openings are arranged and a second part running along the bottom edge and attached

thereto, the second part extending at an angle with respect to the first part, the channel or slot extending in the second part.

This embodiment allows the display of tetrahedron packages arranged in chains instead of single units. This embodiment provides a display device for
5 tetrahedral packages which offers a good shelf visibility, an easy removal from and replenishment of the packages into the display device.

To improve the stability of the display structure and mechanical integrity, a third part having a top portion attached to the first part and a bottom edge attached to the second part is provided. To extend the capacity of such a display device, the third
10 portion advantageously comprises openings similar to those of first part for receiving further tetrahedral packages, each of the opening arranged in the third part being associated with a channel extending in the second part.

BRIEF DESCRIPTION OF THE DRAWINGS

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Other characteristics and advantages of the present invention will appear in the following description of a preferred embodiment of the display device, this embodiment being given by way of non-limiting example with reference to the annexed drawings, in which:

- 20 - Figure 1 is a perspective view of typical tetrahedral package intended to be displayed with the display device according to the invention;
- Figure 2 is a general front elevation view of a typical example of the display device according to the invention;
- Figure 3 a side view of the display device illustrated in Figure 2;
- 25 - Figures 4a, 4b and 4c are front elevation views of openings of the display device of the invention, intended to accommodate the tetrahedral package shown in figure 1, in various states of use;
- Figure 5 is a perspective front view a of second embodiment of the display device of the invention;
- 30 - Figure 6 is a perspective back view of the second embodiment shown in Figure 5;
- Figure 7 is perspective side view of a variant of the second embodiment of the display device shown in figure 5, and
- Figure 8 is an elevation view of the board, shown in an unfolded state, used
35 to make the variant of the display device shown in Figure 7.

DETAILED DESCRIPTION

Figure 1 shows a perspective view of a tetrahedral shaped package, designated by the general reference numeral 1, intended to be displayed in the display device of the invention. Typically this tetrahedral package is obtained from a tube 2, made of a suitable material, closed at its ends by band seals 4, 6 which are located in planes perpendicular to one another. Tetrahedral packages of this type are well known in the art and are used in many fields in particular in the food industry. They are suitable for containing any type of product such as liquid, paste, solid particulates, dehydrated powder or granules etc.

Figure 2 shows a general front view of a display device 8 for tetrahedral packages 1 according to the invention, said display device being notably intended to be installed in a point of sale for merchandising purposes. Display device 8 comprises a rectangular board or panel 10 which is made of corrugated plastic board or some other suitable material such as cardboard provided it is stiff enough to support the all packages to be disposed thereon. Board 10 is provided with anchoring means in the form of a string S attached in the top portion of board 10 so that display device can be hung in the point of sales. Other anchoring means such as hooks are equally appropriate. A plurality of separate substantially triangular shaped openings 12 are provided in board 10. Each triangular opening 12 is sized and configured to receive a given tetrahedral package 1 of the type described above. Preferably, and in order to take into account possible small variations in the dimensions of the packages and thus facilitate the insertion of packages 1 into openings 12, the width W_0 and the height H_0 of triangular opening 12 will be slightly larger than the width W_P and length L_P of tetrahedral package 1.

In the embodiment described, openings 12 have the shape of an isosceles triangle and are oriented on board 10 so as to have the apex of the triangle connecting the two large sides pointing downward. It goes without saying that the triangle could have a different shape as long as it can accommodate a tetrahedral package, for example the shape of an equilateral triangle. Although in the embodiment shown in figure 2, the openings are arranged according to a predetermined geometrical pattern of four horizontal rows wherein the end openings of each rows have inclined orientations, those skilled in the art will recognize that various others opening patterns may be used to achieve a desired esthetical effect without departing from the scope of the present invention.

To prevent packages 1 from falling out, each opening 12 is associated with holding means 14 for retaining and/or gripping packages 1. Preferably, holding means

14 comprises a tab 16 and two flaps 18 made integral with board 10. Tab 16 extends along the base (i.e. the top side) of triangular opening 12 whereas the flaps each extend along two mutually opposite sides of triangular opening 12. Tab 16 partially enters the surface of triangular opening 12 and fulfils a retaining function for package 1. In a preferred embodiment the width W_T of tab 16 is wider than the width W_B of package 1 band seals 4. On the other hand, flaps 18 are arranged so as to be able to be pushed backward upon inserting package 1 into opening 12 so as to fulfil a gripping function for package 1. In order to do so flaps 18 are folded backward from the two remaining mutually opposite edges of triangular opening 12. Openings 12 thus form pockets in which tetrahedral packages can be easily accommodated and firmly held in place respectively by tab 16 and flaps 18.

Figures 4a, 4b and 4c show front views of openings 12 intended to accommodate tetrahedral package 1 shown in figure 1, respectively in a state before a first use, in a state ready to be used, the package having been removed, and in a state fitted with the tetrahedral package to be displayed. As can be seen in figure 4a and 4b, opening 12, tab 16 the flaps 18 are respectively defined by lines 20a 20b, 20c represented in dotted lines and pre-cut lines 22a, 22b, 22c and 22d represented in bold lines, which are directly preformed in board 10. The lines form a base 20a and two mutually opposite sides 20b and 20c of the triangular opening 12. Lines 20b and 20c are folding lines which can be preformed in board 10. A first pre-cut line 22a extends along the axis of symmetry of the triangular opening 12 so as to delimit the two flaps 18, and a second pre-cut line 22b extends parallel to the base of the triangular opening 12 so as to delimit one tab 16 with third and fourth lateral pre-cut lines 22c and 22d, second pre-cut line 22b joining the ends of said third and fourth pre-cut lines 22c and 22d. Preferably, third and fourth lateral pre-cut lines 22c and 22d form an angle with folding lines 20 b and 20c. As a result of these combination of folding and pre-cut lines, tetrahedral packages 1 can be easily set in place and firmly retained on the board 10. Indeed, by applying pressure within the contour of opening 12 defined by lines 20a 20b, 20c, tab 16 and flaps 18 separate from each other. Flaps 18 can be folded backward to form a pocket which can accommodate package 1. Tab 16 will remain substantially in the plane of board 10 b, support and retain the band seal of package in said pockets. One easy way to insert package 1 in opening or pocket 12 is first to insert band seal 4 under tab 16, thereby bending tab 16 forward so as to prevent said package from falling forward and then rotate the package about band seal 4 disposed under tab 16 until the lateral sides of the package are gripped between flaps 18, thereby bending said flaps backwards so as to prevent said

package from falling backwards The manoeuvre can be performed in reverse to remove the package from display device according to the invention.

It will also be noted that, in order to facilitate the folding of flaps 18 and consequently the insertion of package 1 in opening 12, a triangular piece of material 24 disposed in the apex portion of the triangular opening opposite tab 16 can be removed by cutting.

As the holding means 14 only covers a very small portion of packages 1, the latter remain clearly visible to the consumer.

In Figures 5 and 6 there is shown a second embodiment of the display device for tetrahedral packages according to the invention which is very similar to that shown in Figures 1 to 4 in that it also comprises the same basic principle of gripping the tetrahedral packages. In these Figures the elements identical to those described in connection to Figures 1 to 4 are designated by the same numerals.

The only essential difference between the display device shown in Figures 1 to 4 and that shown in Figures 5 and 6 is that it is adapted to accommodate tetrahedral packages arranged in a chain wherein the successive packages are connected to one another by their respective band seals 4, 6.

For that purpose board 10 comprises preferably a row of openings 12, each opening 12 being oriented so as to have an apex 12a pointing downward. Further each opening 12 opens out onto a bottom edge 10a of board 10 via a channel or slot 30 in which a narrow portion such as band seal 4 or 6 of the first package of the chain can be inserted. Accordingly the first package of the chain of packages is firmly gripped in opening 12 and the remaining packages of the chain hang loose. Referring in particular to Figure 6 it can be seen that board 10 comprises a first part 10b in which triangular openings 12 are arranged and a second part 10c running along bottom edge 10a and attached thereto. Second part 10c extends at an angle, typically 90° with respect to first part 10b and channel or slot 30 extends in second part 10c. The top edge 10d of board 10 typically comprises anchoring means S allowing the display device to be hang.

In Figures 7 and 8 there is shown a variant of the second embodiment of the display device of the invention. In this variant board 10 comprises a third part 10d having a top portion 10e attached to first part 10b and a bottom edge 10f attached to second part 10c, third part 10d comprising openings 12 similar to those of first part 10b for receiving further tetrahedral packages, each of the opening 12 arranged in third part 10d being associated with a channel or slot 30 extending in second part 10c. In a preferred manner, first part 10b, second part 10c, and third part 10d are made from a single flat board folded appropriately along two parallel folding lines to form a

self supporting structure having substantially triangular shape in cross-section as can be seen in Figure 7. Advantageously, top portion 10e of third part 10d and top portion of first part 10b are attached to each other via complementary locking members 32, 34 arranged in respective parts 10b and 10d. Typically, the complementary members
5 comprises lugs 32 a and complementary slits 34. Such a display device provides thus the possibility of displaying two rows of tetrahedral packages arranged in a chain disposed respectively on two opposite sides of the display device.

The foregoing description will enable those skilled in the art to recognize additional improvements, modifications and/or applications which nonetheless fall
10 within the scope of the invention defined by the annexed claims. For example, one can envisage to arrange openings 12 in horizontal rows wherein adjacent openings are arranged head-to-tail so as to optimise the display space available on board 10.

WHAT IS CLAIMED IS

1. A display device for tetrahedral packages comprising a board and at least one opening formed in the board, wherein said opening has a substantially triangular shape comprising three edges, is sized to receive a respective tetrahedral package, and is associated with holding means for retaining and/or gripping said package,
5 wherein said holding means comprises at least one tab associated with one edge of the triangular opening and two flaps respectively associated with the two remaining edges of the opening, wherein said tabs at least partially enter the surface defined by the triangular opening and wherein said flaps are able to be pushed backwards when said package is inserted into said opening.
- 10 2. A display device according to claim 1, wherein said tab or tabs and flaps are integral with said board.
3. A display device according to any of the preceding claims, wherein said tab is defined by pre-cut lines and wherein said flaps are defined by folding lines and pre-cut lines, said folding lines and pre-cut lines being preformed in said board.
- 15 4. A display device according to any of the preceding claims, wherein the opening has the shape of an isosceles or equilateral triangle.
5. A display device according to claim 3, wherein the folding lines extend along two mutually opposite sides of the triangular opening, and wherein a first pre-cut line extends along the axis of symmetry of the triangular opening so as to delimit the
20 two flaps and a second pre-cut line extends parallel to the base of the triangular opening so as to delimit one tab with third and fourth lateral pre-cut lines, said second pre-cut line joining the ends of said third and fourth pre-cut lines.
6. A display device according to claim 5, wherein said third and fourth pre-cut lines form an angle with the side of the triangular opening associated therewith.
- 25 7. A display device according to any of the preceding claims, wherein a portion of said board disposed in the apex portion of the opening opposite said tab is removed by cutting.
8. A display device according to any of the preceding claims wherein said opening is oriented so as to have one apex pointing downward.
- 30 9. A display device according to any of the preceding claims, wherein the openings are distributed according to a predetermined geometrical pattern.
10. A display device according to any of the preceding claims, wherein the board further comprises anchoring means.

11. A display device according to any of the preceding claims, wherein the board can be made of any rigid or semi-rigid material such as plastic board, paper board or any corrugated board etc.

12. A display device according to any of the preceding claims, wherein said
5 board has a top edge and a bottom edge, wherein each of said openings is oriented so as to have an apex pointing downward and wherein said opening opens out onto said bottom edge via a channel in which a narrow portion of the package can be inserted.

13. A display device according to claim 12, wherein said board comprises a first part in which said triangular openings are arranged and a second part running
10 along said bottom edge and attached thereto, said second part extending at an angle with respect to said first part, wherein said channel extends in said second part.

14. A display device according to claim 13, comprising a third part having a top portion attached to said first part and a bottom edge attached to said second part.

15. A display device according to claim 14 wherein said third portion comprises openings similar to those of said first part for receiving further tetrahedral packages, each of the opening arranged in said third part being associated with a channel extending in said second part.

16. Method for inserting a tetrahedral package formed of a tube closed at its ends by band seals onto a display device comprising a board and at least one opening
20 formed in the board, wherein said opening has a substantially triangular shape comprising three edges, is sized to receive a respective tetrahedral package, and is associated with holding means for retaining and/or gripping said package, wherein said holding means comprises at least one tab extending from one edge of the triangular opening and two flaps extending from the two remaining edges of the
25 triangular opening, said flaps being able to be pushed backwards, said method comprising the successive steps of :

inserting a first band seal under said tab, thereby bending said tab forward so as to prevent said package from falling forward, and

rotating the tetrahedral package in said opening about said first band seal
30 disposed under said tab until the lateral sides of the package are gripped between flaps, thereby bending said flaps backwards so as to prevent said package from falling backwards.

17. A display device for tetrahedral packages comprising a board and at least one opening formed in the board, wherein said opening has a substantially triangular
35 shape comprising three edges, is sized to receive a respective tetrahedral package, and is associated with holding means for retaining and/or gripping said package, wherein said holding means comprises at least one tab associated with one edge of

- the opening and two flaps respectively associated with the two remaining edges of the opening, wherein said tab at least partially enter the surface defined by the triangular opening and said flaps are able to be pushed backwards when said package is inserted into said opening, said display device comprising at least one tetrahedral
- 5 packages inserted in one of said opening, and wherein said tab extends in front of at least a portion of said package and said flaps extends behind said package.