Nov. 27, 1962 E. KUFLIK 3,065,848

DISPLAY MEANS

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Fig. 1.

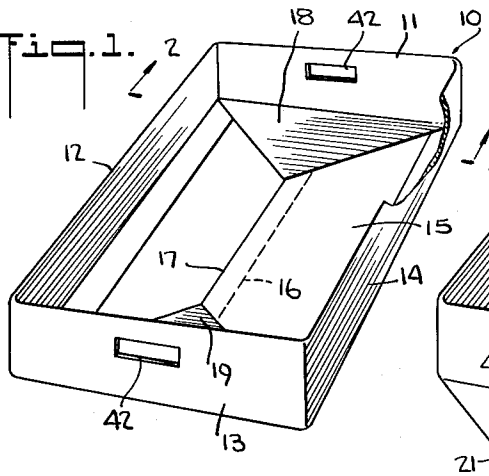
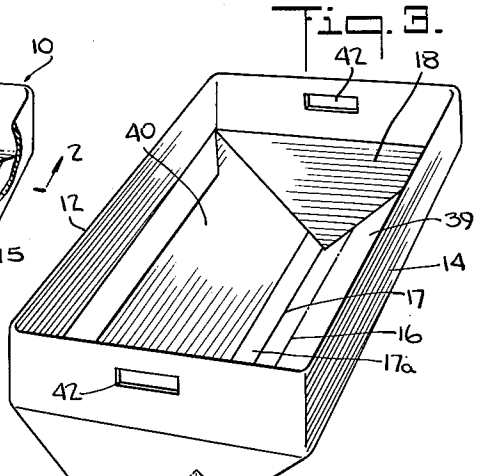
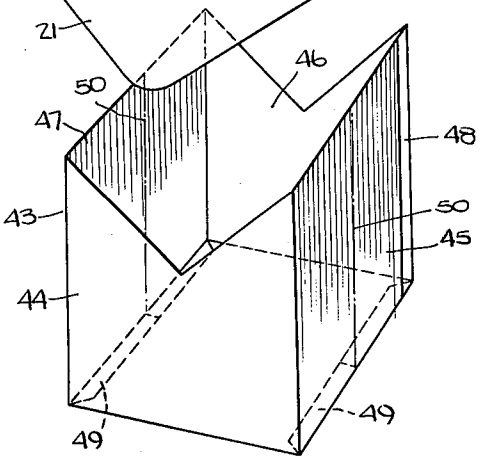


Fig. 3.





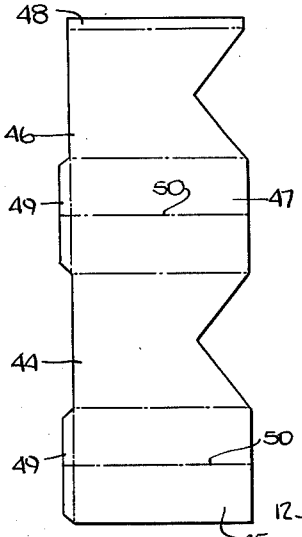


Fig. 5.

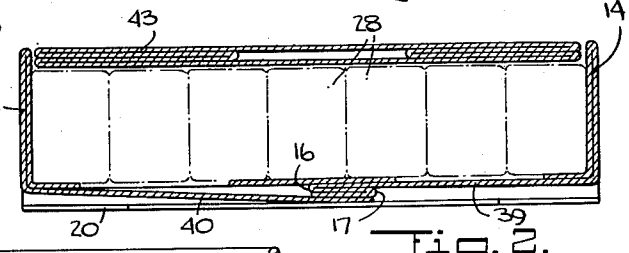


Fig. 2.

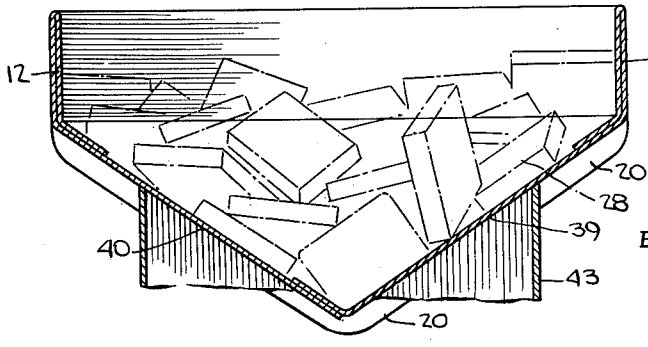


Fig. 4.

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Fig. 5.

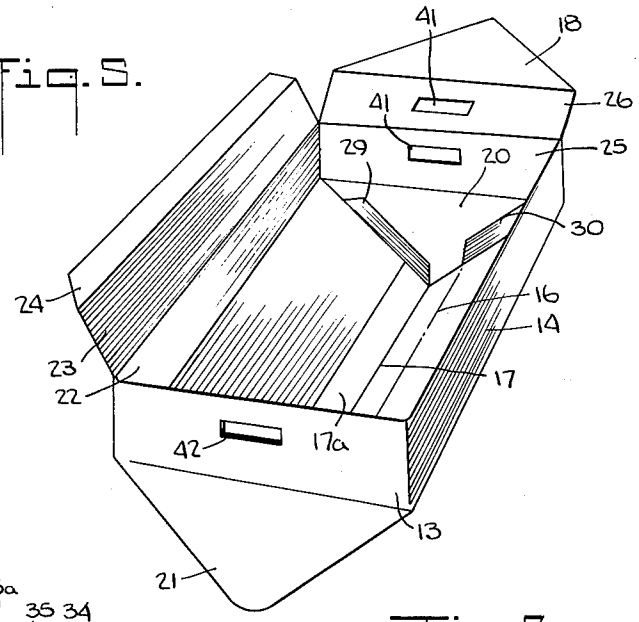


Fig. 6.

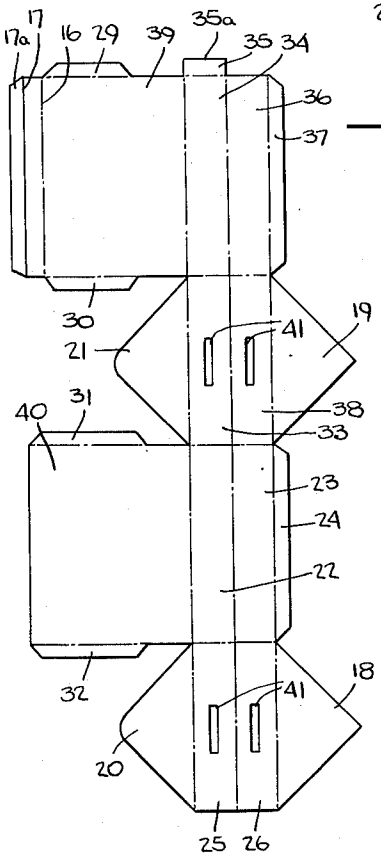
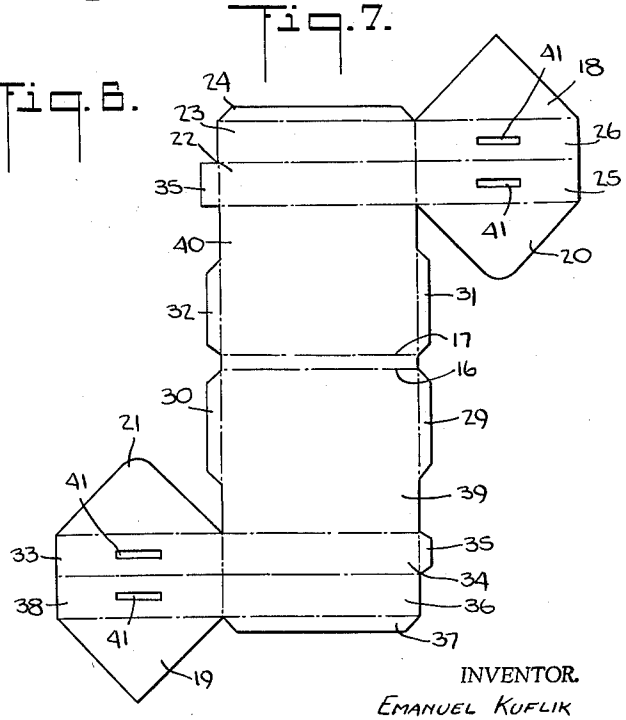


Fig. 7.



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3,065,848

DISPLAY MEANS

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Filed Nov. 28, 1961, Ser. No. 155,347
2 Claims. (Cl. 206—45.27)

This invention relates to packaging means and more particularly to a packaging means adapted for conversion between employment as a shipping container with close packed goods and employment as a display stand with disrupted goods.

Certain types of goods are closely packed in shipping containers so that a minimum of space is occupied for a given amount of contents. An example of such goods would be bars of soap. When soap is packed in a shipping container, the regular shape of the individual bars is taken advantage of by packing the plurality of bars regularly into the shipping container so that the entire volume thereof is closely packed with soap bars.

While such packing has the advantage of conserving shipping space and thus costs, a serious disadvantage inheres in the unpacking thereof at the retail outlet. It is difficult for the retailer to extract individual bars of soap, for example, when they are so closely packed. It is even more difficult for individual customers to extract individual bars when they are given shopping access to such containers for self-service.

Thus while regular packing in a shipping container is preferred for space conservation, random or disrupted packing in a display bin or container is preferred in order to allow the retail clerk or customer to retrieve an individual article easily. Moreover, random-packed goods have more proven psychological impetus to sell, and are therefore also preferred by retailers for that reason.

In the past the close-packed nature of such goods in their shipping container has been a source of some inconvenience to retailers. When the retailer has decided to attempt to use the shipping container as a display unit, he has found that the regularly packed items are disadvantageous for the reasons explained above. When he has attempted to disrupt or randomize them by hand to avoid these defects he has found this procedure to be difficult, and also has found that the shipping container was not large enough to contain all the regularly packed goods in the disrupted or randomized state where they demand greater volume.

Thus in the past the retailer has either abandoned altogether the convenience of using the shipping container as a display bin, or has laboriously disrupted the contents thereof by hand, storing the spill-over someplace else. In the former case, when transferring the goods to a larger display bin he has found that many types of articles are damaged by dumping, and that consequently hand transfer is best but most tedious. When another display bin is demanded there is of course the expense and inconvenience of having separate containers stored about. On the other hand when the usual shipping container is utilized as a display bin, even after all the aforesaid hand operations and disadvantages, the shipping container is usually rather unsightly as a display device since it necessarily has so many identifying markings upon it.

In general, the prior art situation has been one where a need has existed for some simple and practical means to enable the retailer to receive his close-packed shipping container and to display the goods therein to his customers in the inviting and convenient disrupted state while avoiding the difficulties above enumerated. It will be apparent, of course, that this problem extends to all regularly packed goods, not merely to soap bars which were mentioned specifically only to make the problem clear. To a large extent the problem extends to those

items that are not so regularly shaped, but that are tightly packed and that settle into a close packed condition during agitation.

It is therefore a principal object of this invention to provide a packaging device adapted to be fully stacked with a plurality of goods in full close-ordered shipping arrangement as a shipping container and further adapted for conversion to a display stand with automatic dislevelling of said goods upon said conversion so as to thereupon hold said plurality of goods in full disordered display arrangement.

Another object of this invention is to provide such a packaging device that will accommodate all the goods therein in either the close-ordered or the disheveled state.

Another object of this invention is to provide such a packaging device that automatically dishevels close-packed goods into random packed goods.

Another object of this invention is to provide such a packaging device that may be employed as a shipping container and as a display device so as to be relatively economical and convenient to a retailer.

Another object of this invention is to provide such a packaging device that combines the feature of minimum shipping volume as a shipping container with the feature of larger volume as a display device so as to prevent the need for transferring goods out of the device when it is converted to a display device with disheveled contents.

Another object of this invention is to provide such a packaging device that is relatively attractive so as to be highly desirable as a display device.

Another object of this invention is to provide such a packaging device that includes within it a stand for supporting it as a display device.

Still another object of this invention is to provide a relatively simple and economical planar configuration adapted to be folded into such a packaging device.

These and further objects and advantages of the invention will become more apparent upon examination of the detailed description below when taken with the appended drawings wherein like numerals denote like parts throughout the various views thereof.

In the drawings:

FIGURE 1 is a perspective view of a packaging device according to the present invention when disposed as a shipping container.

FIGURE 2 is a section view of the packaging device of the present invention when disposed as in FIGURE 1 taken along lines 2—2 therein showing the orderly arrangement of goods therein.

FIGURE 3 is an exploded perspective view of the packaging device of FIGURE 1 when disposed as a display stand upon a base member.

FIGURE 4 is a section view of the packaging device of the present invention when the tray thereof is disposed as in FIGURE 3, showing the disheveled contents thereof.

FIGURE 5 is a perspective view of the tray portion of the packaging device as shown in FIGURE 3 wherein two flap portions are untucked to show further internal details of construction.

FIGURE 6 is a plan view of one embodiment of a planar configuration adapted to be folded into the packaging device of FIGURES 1–5.

FIGURE 7 is a plan view of a second embodiment of a planar configuration adapted to be folded into the packaging device of FIGURES 1–5.

FIGURE 8 is a plan view of a planar configuration adapted to be folded into the base member of FIGURE 3.

Briefly, the packaging device of the present invention attains the foregoing objects by the provision of a tray member 10 having a flat bottom for shipping purposes as shown in FIGURE 1 so that regularly ordered goods

may be packed therein in a minimum shipping space, and which tray member **10** automatically is converted to the peaked bottom configuration shown in FIGURE 4 upon receipt by the retailer for use as a display stand so that the goods therein are disrupted into a random arrangement automatically and further so that the extra volume required by such disrupted goods is coordinately provided.

As best shown in FIGURES 1 and 2, the packaging device of the present invention comprises in general a rectangular tray member **10** having four sides indicated generally at **11**, **12**, **13**, and **14** and a bottom indicated generally at **15**. The bottom **15** has two longitudinal generally centrally located folds **16** and **17** therein, the portion between folds **16** and **17** being doubled over when bottom **15** is in the flat disposition of FIGURES 1 and 2. Flaps **18** and **19** are disposed flatly along the upper surface of bottom **15** from ends **11** and **13** to which they are respectively foldably attached. Similarly flaps **20** and **21** are disposed flatly along the lower surfaces of bottom **15** from ends **11** and **13** to which they are respectively foldably attached.

The general parts recited above combine to define a tray **10** having a flat bottom and consequently adapted to the regular stocking of goods **28** for shipping as shown in FIGURE 2. This general configuration will automatically convert when lifted to the configuration of FIGURE 3 with a downwardly peaked bottom **15** produced by the opening or unfolding of folds **16** and **17** so that goods **28** contained therein as in FIGURE 2 will be automatically disheveled as shown in FIGURE 4. In addition this automatic downward peaking produces the additional volume needed to accommodate the disheveled goods. The four sides **11**, **12**, **13** and **14** thus define a geometric area in a plane mutually perpendicular thereto at their mutual lower extremities that is exceeded in magnitude by the area included between folds **16** and **17**.

This general configuration of tray **10** will now be described in more detail, having additional reference to FIGURES 5, 6 and 7, in order to explain the construction of one embodiment of such a tray from a planar configuration, as well as to bring out the additional functions and advantages of the particular embodiment of flaps illustrated.

Sides **12** and **11**, indicated generally in FIGURE 1, may be seen in FIGURE 5 comprise a plurality of flaps. Sides **14** and **13** are of course respectively similar in construction, but are shown tucked into place in FIGURE 5. Side **12** thus comprises rectangular panel **22** and duplicate rectangular panel **23** foldably affixed thereto, with flap **24** foldably affixed to panel **23** at the side parallel to the fold line between panels **22** and **23**. When panel **23** with flap **24** is tucked in so that panel **23** lies along panel **22**, the side **12** produced thereby is appreciably strengthened, which is advantageous for shipping purposes. Bottom **15** is foldably affixed to opposed sides **12** and **14**, and folds **16** and **17** run essentially parallel to sides **12** and **14**.

Side **11** comprises panel **25**, duplicate panel **26** foldably affixed thereto, and generally triangular flap **18** foldably affixed to panel **26** parallel to the fold line between panels **25** and **26**. Opposed sides **11** and **13** are free of bottom **15** except as hereafter described. As shown in FIGURE 1, flap **18** lies flat along bottom **15** when the tray **10** is disposed as a shipping container, that is with bottom **15** flatly disposed. As shown in FIGURE 3, flap **18** folds downwardly (because of the downward movement of goods **28** therein) when the bottom **15** is dropped into the downwardly peaked display configuration. When tray **10** is in this peaked configuration the triangular apex and adjacent sides of triangular flap **18** abut the end of the peaked configuration of bottom **15** and tend to lock it in place. As mentioned above, sides **14** and **13** are similarly constructed as sides **12** and **11** respectively, as will become more clear when the panel configurations of FIGURES 6 and 7 are particularly described below.

As best shown in FIGURES 3 and 5, tabs **29** and **30** are foldably affixed to bottom **15** so that they rest upon the inner face of the contiguous panels such as panel **25** for tab **30** when bottom **15** is flatly disposed, and each is then also disposed between panels such as panel **25** and panel **26** for tab **30**. When bottom **15** is downwardly disposed in a peaked configuration, tabs **29** and **30** rest against the inner face of bottom end flap **20** and are then disposed between bottom end flap **20** and triangular flap **18**. It will be appreciated that tabs **29** and **30** help to seal their end of tray **10** in both the flat and peaked configurations. Duplicate flaps and tabs that cooperate at the opposite end of tray **10** adjacent flap **21** will be described below in connection with FIGURES 6 and 7.

When developing a planar surface suitable for forming into the tray **10** configuration of FIGURES 1–5 inclusive, several considerations are important. Two embodiments of such a planar surface are shown in FIGURES 6 and 7. The configuration of FIGURE 6 has the advantage of being linearly repetitive while the configuration of FIGURE 7 is only symmetrically repetitive. The advantage in FIGURE 6 then is that the configuration may be cut from a strip in a constantly repetitive pattern along the axis of side panels **25**, **22**, **33**, **34** with a minimum of wastage. Units such as that shown in FIGURE 6 can then be separated from the endlessly repetitive cutout along line **35***a* on tab **35**. The configuration of FIGURE 7 does not have these advantages to the same extent, but has a compensating advantage in having fold lines **16** and **17** both integral, that is, in this embodiment panels **39** and **40** that comprise bottom **15** when assembled, are integrally formed. The advantage here resides in avoiding a large stapled or glued joint here and also having an assured degree of strength. The choice of embodiments between these two will thus be a matter of manufacturing and use requirements.

In the embodiment of FIGURE 6 panels **25**, **22**, **33** and **34** are integrally connected as already described. Panels **23** and **24** are foldably integral with panel **22** as already described. Panels **36** and **37** are duplicates of panels **23** and **24** and are foldably integral with panel **34** in the same manner. Panels **34**, **36** and **37** thus cooperate to form side **14** in the same manner as panels **22**, **23**, and **24** cooperate to form side **12** which has already been described. Similarly panel **26** and flap **18** are foldably integral with panel **25** so as to form side **11** as already described, and panel **38** and flap **19** are foldably integral with panel **33** so as to form side **13** which is a duplicate of side **11** as are the respective panels and flaps thereof.

In this embodiment a flap **35** appears at the free end of panel **34**, although it alternatively may appear at the free end of panel **25**. The function of flap **35** in either case is to allow the affixing of the free end of panel **34** to the free end of panel **25** so as to cooperate with the appropriate foldings to define the rectangular enclosure of sides **11**, **12**, **13** and **14** are shown in FIGURES 1–5 inclusive. Also in this embodiment of FIGURE 6 a flap **17***a* is foldably affixed to the free edge of panel **39** parallel to panel **34**. In the figure the flap **17***a* is affixed to panel **39** but since the function of the flap is to foldably attach panel **39** to panel **40** along fold line **17**, the flap **17***a* may appear on either panel **39** or **40**. Appearing at the opposed side edges of panels **40** and **39** are tabs **31** and **32**, and tabs **29** and **30** respectively.

In assembling the configuration of FIGURE 6 into the tray of FIGURES 1–5, the tab **35***a* is affixed by stapling, gluing, or other expedients, to the opposed end of panel **25**, thus entailing folding panels **34**, **33**, **22**, **25** into a rectangle along their foldable borders. Flap **17***a* is then similarly affixed to panel **40** so that the edge of panel **40** coincides with fold line **17** on panel **39**. The other fold lines are then made as indicated in FIGURES 3 and 5 particularly. It will be noted that each of panels **33**, **38**,

25, 26 has a rectilinear aperture 41 approximately centered therein. As shown in FIGURES 1, 3, and 5, these apertures cooperate upon folding to define handles 42 for a purpose hereinafter described. The shape of the apertures 41 may of course be varied from that shown. The tray shown in FIGURES 1–5 is folded from this embodiment. A tray according to the embodiment discussed below will not have flap 17*a* as shown in FIGURE 5.

The embodiment shown in FIGURE 7 is in all ways similar to that just described, except for the differing advantages already recited, and certain tabs. In the embodiment shown in FIGURE 7 tab 17*a* is omitted, since panels 39 and 40 are integrally joined along fold line 17, thus avoiding the necessity of this largest sealing line. Tabs 35 appear at both the extreme of panel 25 and the extreme of panel 34, rather than at either one as in the embodiment of FIGURE 6. In all other respects the two embodiments are the same, their relative appropriateness depending on manufacturing considerations, as already explained.

Shown in FIGURES 3 and 4 is a base member 43 which is a means for supporting tray 10 as a display stand when tray 10 is disposed with its bottom in the downwardly peaked configuration. This base 43 is folded from the panel shown in FIGURE 8, and may be disposed flatly upon the goods 28 in the flat bottomed tray 10 for shipping storage as shown in FIGURE 2.

Base 43 comprises two notched panels 44 and 46 foldably longitudinally alternating with rectangular panels 45 and 47 as shown in FIGURE 8. Tab 48 appears at an extreme edge of the series of panels, in FIGURE 8, at the edge of panel 46. Tabs 49 appear at the lower edges of panels 47 and 45. They are thus opposite the notches of notched panels 44 and 46. Fold lines 50 appear centrally in panels 45 and 47, for a purpose hereinafter described.

The panel of FIGURE 8 is folded into the base 43 of FIGURE 3 by affixing tab 48 to the opposed edge of panel 45 and making the appropriate folds as indicated. As shown in FIGURE 3, tabs 49 are folded under and consequently lock fold lines 50 against closing so that base 43 remains rectangular. When tabs 49 are unfolded, fold lines 50 are adapted to collapse inwardly toward one another until the entire base 43 is flattened as shown in FIGURE 2.

In operation, the device of the present invention is employed as follows. A tray 10 is disposed with its bottom in the flat configuration, and loaded with close-ordered goods 28 and surmounted with a flattened base 43, all as shown in FIGURE 2. The assembly may then be girdled with rope, or paper bonds, or fiber glass bonds, or any other device to help hold flaps 20 and 21 against the flattened bottom. This is optional however. In any event, tray 10 with the contents described, is then placed into a close-fitting shipping carton (not shown) which does not form a part of the present invention. The goods are thus shipped, and it is an advantage of the present invention that no advertising or identifying matter need appear on tray 10, because it may appear instead on the outer shipping carton. Tray 10 may thus be designed for attractiveness. Another feature, already recited, is the minimum space for shipping allowed by the flat bottomed configuration of tray 10.

When the retailer receives the shipping carton, he breaks it open and removes base member 43 and unfolds it into the configuration of FIGURE 3 at the place where he intends to display his goods. He then lifts tray 10 out by handles 42. If a rope or other device was girdling tray 10, he may first cut it if he desires to immediately utilize tray 10 as a display device. In either event, when tray 10 is unencumbered and lifted by handles 42, the goods 28 packed closely therein for shipping drop downwardly into the disheveled arrangement of FIGURE 4. The disheveling is automatic as is the provision of the required additional volume needed to accommodate disheveled goods. The tray 10 is then placed upon base 43 in the orientation indicated in FIGURES 3 and 4. The notched configuration of the base 43 assures complete support of the abutting downwardly peaked bottom of tray 10. End flaps 20 and 21 depend along the ends of base 43 adding to its decorative appearance by hiding the notches of base 43 and giving a more unitary appearance. The steps can be reversed if the displayed goods 28 are to be stored somewhere in the retailer's shop for some time, the goods again occupying little space when the tray 10 and base 43 are again refolded to a flat configuration.

What has been described is a shipping and display device that satisfies a long felt need in the retailing arts. The device is simple, economical, and automatic in use. It can be good looking, since it needn't have printed matter on it. It combines the best features of shipping containers with the best of display stands, without sacrificing any, and with complete interchangeability. Its use saves a great deal of labor by the retailer, and expense for extra display stands, as well as creating a more uniform and pleasant appearing store.

The description herein has been of workable and desirable embodiment of the invention. This has been set forth to illustrate the inventive principles, that are not however to be limited thereto. Those skilled in the art will be able to practice the inventive principles in many ways within the scope of the inventive principles without departing therefrom. All such variations are contemplated as part of the invention.

What is claimed is:

1. A packaging device adapted to be fully stacked with a plurality of goods in full close-ordered shipping arrangement as a shipping container and further adapted for conversion to a display stand with automatic disheveling of said goods upon said conversion so as to thereupon hold said plurality of goods in full disordered display arrangement comprising a generally rectangular tray member having four sides and a bottom, said bottom being affixed to an opposed pair of said sides and being free of a second pair of said sides and having two longitudinal folds therein both running essentially parallel to the pair of sides affixed to said bottom with portions of the bottom between the folds doubled over when the latter are closed, said four sides defining a geometric area in a plane mutually perpendicular thereto at the mutual lower extremities of said sides, said bottom exceeding said area by the area of the portion included between said two longitudinal folds, said bottom being downwardly peaked when said folds are open and being substantially flat when said portions are doubled over, a pair of first tabs each foldably depending from the outer face of one of said second sides so as to be foldable up under said bottom when it is flatly disposed and to be foldable downwardly along and outwardly of the free sides of said bottom when it is in said peaked configuration, a pair of second tabs each triangular in outline and foldably depending from the inner face of one of said second sides so as to be foldable up along the upper surface of said bottom when it is flatly disposed and to be foldable downwardly when said bottom is in said peaked configuration so that the triangular apex and adjacent sides thereof abut said peaked configuration, and upwardly disposed third tabs on each free edge of said bottom, said third tabs slidably resting against said second sides when said bottom is flatly disposed and being closely secured between said first and second tabs when said bottom is in said peaked configuration.

2. A packaging device adapted to be fully stacked with a plurality of goods in full close-ordered shipping arrangement as a shipping container and further adapted for conversion to a display stand with automatic disheveling of said goods upon said conversion so as to thereupon hold said plurality of goods in full disordered display arrangement comprising a generally rectangular tray member having four sides and a bottom, said bottom

being affixed to an opposed pair of said sides and being free of a second pair of said sides and having two longitudinal folds therein both running essentially parallel to the pair of sides affixed to said bottom with portions of the bottom between the folds doubled over when the latter are closed, said four sides defining a geometric area in a plane mutually perpendicular thereto at the mutual lower extremities of said sides, said bottom exceeding said area by the area of the portions included between said two longitudinal folds, said bottom being downwardly peaked when said folds are open and being substantially flat when said portions are doubled over, a pair of first tabs each foldably depending from the outer face of one of said second sides so as to be foldable up under said bottom when it is flatly disposed and to be foldable downwardly along and outwardly of the free sides of said bottom when it is in said peaked configuration, a pair of second tabs each triangular in outline and foldably depending from the inner face of one of said second sides so as to be foldable up along the upper surface of said bottom when it is flatly disposed and

to be foldable downwardly when said bottom is in said peaked configuration so that the triangular apex and adjacent sides thereof abut said peaked configuration, and upwardly disposed third tabs on each free edge of said bottom, said third tabs slidably resting against said second sides when said bottom is flatly disposed and being closely secured between said first and second tabs when said bottom is in said peaked configuration, means for selectively holding said bottom flat with said portions doubled over for shipping, and means for supporting said tray with said bottom in said downwardly peaked condition for display.

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