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2,507,947

DISPLAY STRUCTURE WITH SUPPORTING EASEL

Filed May 23, 1947

2 Sheets-Sheet 1

FIG. 1

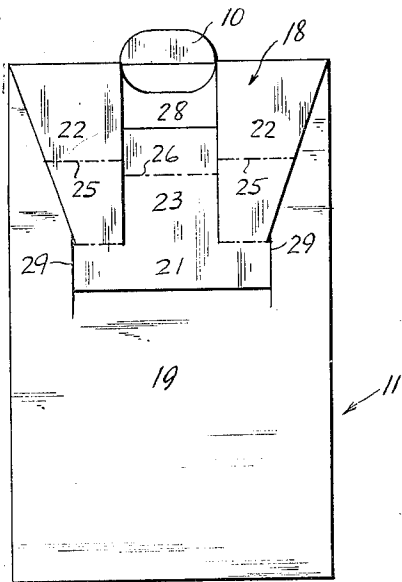


FIG. 3

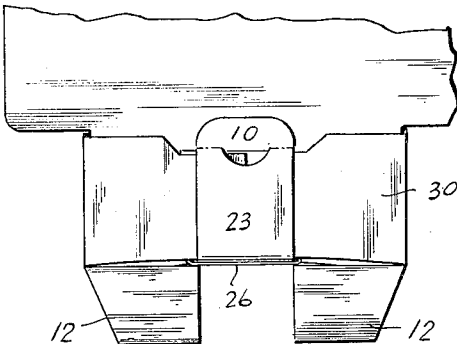


FIG. 2

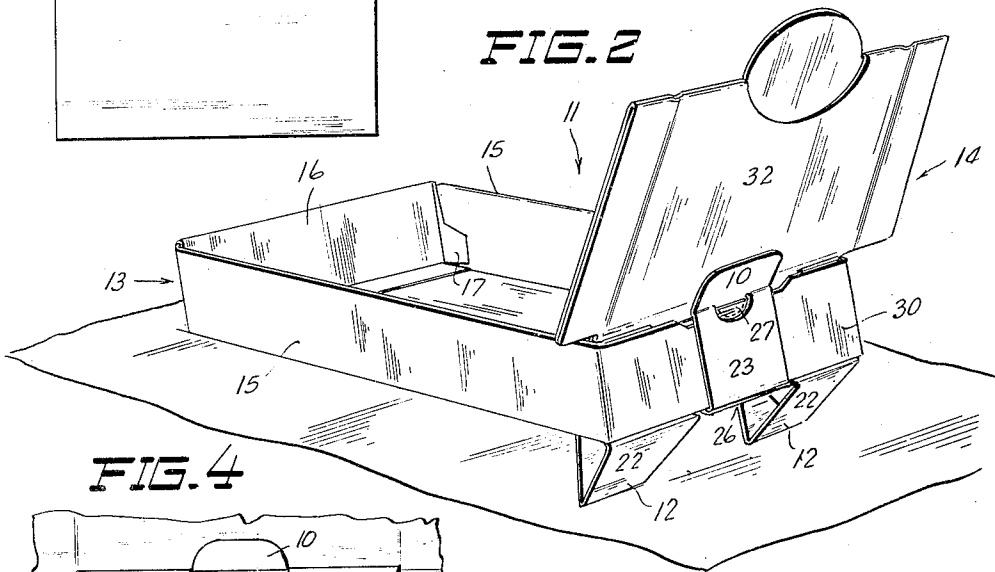
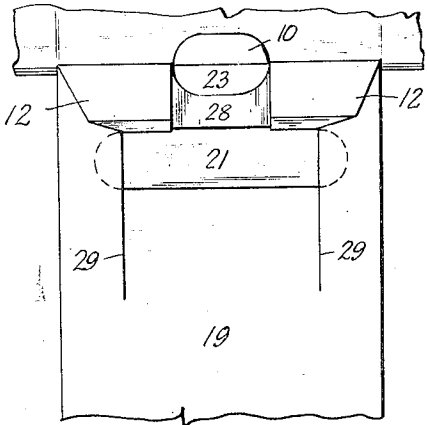


FIG. 4



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FIG. 5

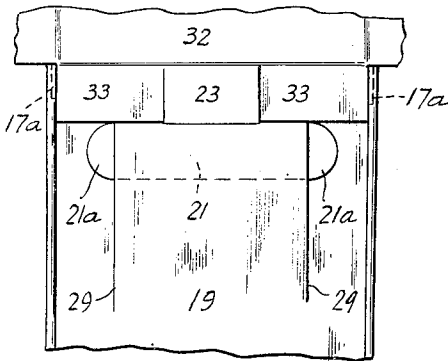


FIG. 6

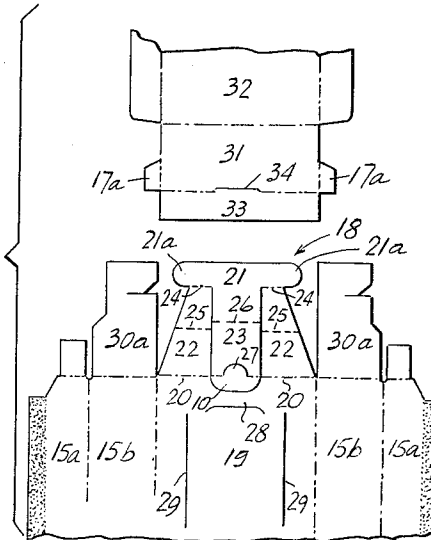


FIG. 7

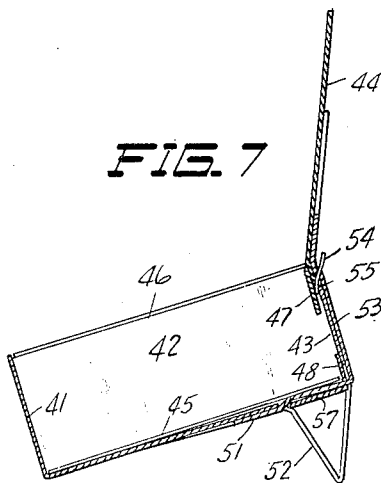
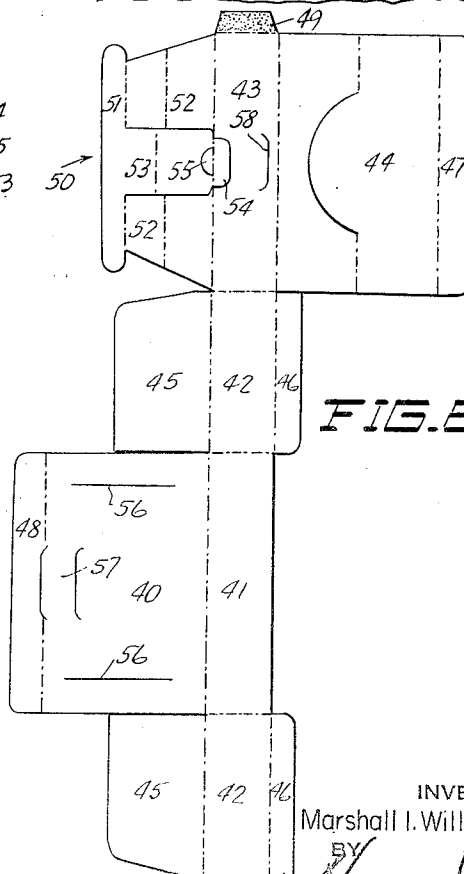


FIG. 8



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DISPLAY STRUCTURE WITH SUPPORTING
EASEL

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11 Claims. (Cl. 206—44)

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This invention relates to display structures, and particularly to those equipped with folding elements adapted to form supporting easels.

The invention is especially applicable to the folding paper box industry wherein sheet paper box board is suitably blanked out to form the structural elements of the desired product, automatic machinery standard in the industry being employed.

A primary object of the invention is to provide, in combination with display structure, a collapsible supporting easel capable of bearing considerable weight when set-up, of lying flat when in collapsed position, and of being easily and quickly set-up from collapsed position and vice-versa.

An object is to provide such a supporting easel in advantageous coactive combination with a folding display carton.

A further object is to provide the above in such a way as to be readily and economically manufactured on existing types of automatic machinery standard with the paper-boxmaking industry.

These and other objects and features of the invention will be fully dealt with in the following detailed description of the preferred specific embodiments which are illustrated in the accompanying drawings as concrete examples of the inventive concepts involved.

In the drawings:

Fig. 1 illustrates, in bottom plan, one type of folding display carton equipped with supporting easel structure pursuant to the invention, the supporting easel being shown in its collapsed position;

Fig. 2 is a perspective view, looking from the rear, of the same carton as set up in display position;

Fig. 3 is a view in rear elevation of the carton in the set-up position of Fig. 2, portions of the cover display panels being broken away for convenience of illustration;

Fig. 4 is a fragmentary view in bottom plan of the set-up display carton of Fig. 4;

Fig. 5 is a similar fragmentary view in top or inside plan;

Fig. 6 is a fragmentary composite view of the two blanks employed to form the display carton of the foregoing views, only the easel-forming and related parts of the blanks being shown;

Fig. 7 illustrates, in central vertical section running from front to back, another embodiment of the invention employing a single blank in its construction; and

Fig. 8 is a view of the blank used in the construction of the display carton of Fig. 7.

Referring now to the drawings, and particularly to Figs. 1 through 6 thereof, which present one conventional type of display carton to which the invention has been applied in novel combina-

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tion, such carton being made up of the two blanks of Fig. 6, and being shown in Fig. 1 as it appears filled with merchandise for shipping and storage and with the supporting easel collapsed flat: the easel structure is disposed at the rear or back end of the carton, ready in the flat position of Fig. 1 for immediate and convenient setting up by merely pulling the tab 10. The position assumed by the easel structure relative to the display carton proper 11 upon pulling of the tab 10 is well illustrated in Fig. 2. Legs 12, 12 are formed at the back of the carton, thereby elevating the back relative to the front and placing the display carton proper in a sloping position where its contents are readily visible, for instance to customers when used by retail merchants on a counter or display table.

The display carton 11 includes a walled, open container part 13 and a corresponding cover part 14, the latter being shown in its folded display position in Fig. 2. The two parts 13 and 14 are interrelated and securely attached to each other in their combined capacity of display carton. In this instance, a portion of the supporting easel structure acts to lock the two together.

The parts 13 and 14 are made up from individual blanks, shown separately and fragmentarily in Fig. 6. The particular structural characteristics of either the container part 13 or the cover part 14 are unimportant except insofar as they tie in directly with the easel structure about to be described. They may be of a variety of conventional constructions. The illustrated form results in a well reinforced and sturdy product, but is shown only by way of example. The portions broken away in the representation of the respective blanks are merely continuations of conventional members obvious to those skilled in the art. They have nothing to do with the invention.

As illustrated, the container side walls 15, 15, Fig. 2, are double, being formed by folding over the side wall panels 15a, 15a, of the blank of Fig. 6, upon their respective companion panels 15b, 15b, and gluing, as indicated. This is done during the manufacture of the carton. In the setting up of the type of container illustrated, a double front wall 16, Fig. 2, is formed and positioned by the use of conventional locks 17.

The major portion of the easel structure is provided in connection with the container part 13. It is blanked out of a terminal panel 18, Fig. 6, extending from one end, the back or rear end, of the bottom wall panel 19. A divided score line 20, 20 hinges such terminal panel 18 relative to the bottom wall panel 19, and permits it to be folded back upon the outside face of the latter, as shown in Fig. 1.

The terminal panel 18 is cut and scored to provide a transverse slide member 21, having the

oppositely projecting ears 21a, 21a, and a pair of mutually spaced longitudinal leg members 22, 22. Between the leg members, defined by cut lines, is a tongue member 23. The respective joinders between leg members 22, 22 and the slide member 21 are defined by score lines 24, 24, and intermediate the lengths of the respective leg members are transverse score lines 25, 25. The tongue member 23 is here formed with a hinged grasping tab, hereinbefore identified by the numeral 10, cut from the bottom wall panel 19, and possesses a catch formation 27. A transverse slit spaced below the flap cut-out in bottom wall panel 19, defines a band member 28.

When the terminal panel is folded back upon the bottom wall panel, tongue member 23 is passed through the abovementioned transverse slit, and so passes under the retaining influence of band member 28, see especially Fig. 1. The ears 21a, 21a of slide member 21 are inserted within a pair of longitudinally extending slits 29, 29, which are arranged in mutually spaced substantially mutually parallel relationship in bottom wall panel adjacent terminal panel 18, and which, together, form a slideway which slide member 21 slidably engages. These slits, it will be noted, preferably terminate short of the joinder between bottom wall panel 19 and terminal panel 18 by a distance determined so that ears 21a, 21a will abut at the slit ends when catch tab 27 is held in easel set-up engagement with the back wall of container part 13, as hereinafter explained.

The said back wall, identified 30 in Figs. 2 and 3, is formed by the interlocking end panels 30a, 30a, Fig. 6. When the grasping tab 10 is pulled, thereby setting up the supporting easel from the flat collapsed condition of Fig. 1 to the set-up position of Fig. 2, the catch formation 27 is hooked over the top edge of back wall 30, as illustrated, to retain the supporting easel in its set-up condition.

Pulling the grasping tab 10 and, thus, the tongue 23, it will be noted, causes longitudinal leg members 22, 22 of the flat-lying terminal panel 18 to buckle outwardly on their intermediate transverse lines 25, 25 as slide member 21 is pulled toward the back of the container, such leg members assuming respective V-formations and providing the sturdy load-supporting easel legs 12, 12 of Fig. 2 by the time catch formation 27 is in secure engagement with back wall 30. In such position, slide member 21 is at the rearward terminus of its travel in the slideway formed by the pair of slits 29, 29, and abuts against band member 28 as a limit stop, see Fig. 4. Also, the oppositely projecting ears 21a, 21a of slide 21 advantageously abut against the terminal ends of slits 29, 29 as additional limit stops in the position of Fig. 4, though in embodiments such as the ones illustrated where tongue-retaining bands are provided, it is not necessary to rely upon the slideway proper to provide the limit stop, nor is it absolutely necessary to provide a limit stop in every case, though by the provision and proper placement of same, the tongue 23 may be tensioned somewhat in the locking engagement of the catch formation, which is an advantage in maintaining tight locking and preventing play in the supporting easel legs. In this connection it should be noted that the tongue 23 is desirably scored transversely at an intermediate location, see the score line 26, so it will fold easily into the locking position of Fig. 2.

When it is desired to re-collapse the supporting easel structure from the set-up condition of Fig.

2 to the flat condition of Fig. 1, the tab 10 need merely be pulled to release the catch formation 27 from locking engagement. Pressure on the legs 12, 12 will result in their immediate collapse.

The cover part 14 of the display carton 13, as shown, is essentially of conventional construction, being formed of panel sections appropriately defined in its blank of Fig. 6 such that when folded back from its container covering position (not shown) it will assume the display panel formation of Fig. 2, as is well understood by those skilled in the art. It is preferably, however, attached to the container part 13 in a novel manner in the assembly of the carton, the easel structure playing a part in such attachment. While such novel manner of assembly is preferred, it is not necessary. It may be attached in other ways.

As illustrated, an end wall panel 31 extends from cover panel 32 in hinged relationship therewith, and terminates in a flap 33, a slit 34 being formed midway along the scored line of joinder between panel 31 and flap 33 for the purpose of receiving the tongue member 23 of the easel structure. The end wall panel 31 extends down into the container 13 and fits closely against the back wall 30 thereof, the flap 33 fitting closely against the bottom wall panel 19 and overlying the band member 28. Thus, the tongue member 23 of the easel structure may be passed through the band member 28 and, at the same time, over the overlying portion of flap 33, see Fig. 5, to emerge finally through the slit 34 at the base of back wall 30, see Figs. 1 and 2. In this manner tongue member 23 serves to secure cover part 14 to container part 13.

Tabs 17a, 17a, Fig. 6, mate with corresponding notches of the respective inside thicknesses of the double side walls 15, 15 at the back of the container part, see Fig. 5, to provide additional securing of cover part to container part in the style of the conventional lock 17, Fig. 2.

Though the illustrated double wall construction has structural advantages for certain uses, the invention may be also employed to advantage with single wall construction, as will be obvious to those skilled in the art.

A somewhat different form of display carton, made up from the single blank of Fig. 8, is illustrated in Fig. 7. Its general style is that of a simple conventional type of display carton whose cover is integral with the container proper.

It comprises a bottom wall panel 40 serving as a closure panel, front wall panel 41, side wall panels 42, 42, rear or back wall panel 43, and foldable display cover panel 44. Bottom closure flaps 45, 45 extend from the lower edges of respective side wall panels 42, 42, and cover-supporting flaps 46, 46 from the upper edges thereof, a tuck-in flap 47 extends from cover panel 44, a similar tuck-in flap 48 from bottom wall panel 40, and a glue lap 49 from rear or back wall panel 41, all as conventional in the art.

From the lower edge of back wall panel 43 extends a terminal panel 50, which corresponds to the terminal panel 18 of the previously described embodiment. Such terminal panel 50 is blanked out to provide a slide member 51, leg members 52, 52, and a tongue member 53, the latter being provided with a grasping tab 54 and catch formation 55.

The slideway is associated with bottom wall panel 40, mutually spaced, elongated, and substantially parallel slits 56, 56 providing the same in the manner in which the similar slits 29, 29

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provide the slideway for the previously described embodiment.

A tongue-retaining band 57 is defined in bottom wall panel 40 by appropriate slits, as shown, and a keeper slit 58 is provided in back wall panel 43 for engagement by the catch formation 55 when the tongue is pulled out and the supporting easel thereby set up; see Fig. 7.

Operation of the supporting easel, that is, its setting up and collapse, is accomplished in the same manner as in the prior embodiment; the difference between the two embodiments residing in the nature of the cartons and the manner of assembling the same.

In both embodiments it will be seen that the slide member extends transversely of the desired direction of slope of the carton; that is the slope when in set-up display position, and that the leg members are hinged to the slide member and extend backwardly therefrom substantially along the direction of slope. It will be seen, also that the leg members are hinged to the carton proper remote from and backwardly of the collapsed position of the slide member, and that the slideway extends in substantially parallel relationship with the leg members. These are generic characteristics of any display structure incorporating the novel supporting easel arrangement of the invention.

Whereas the invention is illustrated and described with respect to certain preferred embodiments thereof it should be understood that various changes may be made in said embodiments and that various other embodiments may be constructed on the basis of the teachings herein by those skilled in the art without departing from the generic scope of the invention as defined by the following claims.

I claim:

1. In display structure, a supporting easel foldable from collapsed to set-up condition and vice-versa, comprising a slide member extending transversely of the desired direction of slope of said display structure; a pair of mutually spaced legs having one set of ends hinged to said slide member adjacent respective opposite ends thereof and extending backwardly therefrom substantially along the said direction of slope, said legs having the opposite set of ends hinged to said display structure remote from and backwardly of the collapsed position of said slide member, and said legs, further, being intermediately jointed; a slideway formed in said display structure and extending substantially parallel with said leg means, and said slide member being slidably retained by said slideway; an elongated tongue extending backwardly from said slide member and between and beyond said legs for actuating said slide member; and catch means associated with said tongue means for retaining said supporting easel in set-up condition.

2. In a folding display structure of paper box board or the like, a supporting easel foldable from collapsed to set-up condition and vice-versa, comprising a terminal panel extending from said display structure in hinged relation thereto, said terminal panel being cut and scored to provide a transverse slide member adjacent the free end thereof, a pair of mutually spaced longitudinal leg members, scored transversely at and intermediate the ends thereof, and extending between said slide member and the joiner of said terminal panel with said display structure, and a longitudinal tongue member disposed between said leg members and extending beyond

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the same backwardly thereof; said supporting easel comprising further slideway means associated with said display structure and extending substantially parallel with said leg members, said slide member being slidably retained by said slideway means; and a catch formation provided adjacent the end of said tongue member.

3. The combination recited in claim 2 wherein the slideway means terminates short of said terminal panel by a predetermined distance.

4. The combination recited in claim 2 wherein the slideway means comprises a pair of spaced substantially parallel slits, and the slide member has oppositely projecting end tabs which fit into said slits.

5. A folding display embodying a supporting easel, comprising panel wall members arranged to form an open display container; a terminal panel extending from an end of the bottom wall panel of said display container in hinged relation thereto; said terminal panel being cut and scored to provide a transverse slide member adjacent the free end thereof, a pair of mutually spaced longitudinal leg members, scored transversely intermediate the ends thereof, and extending between said slide member and the joiner of said terminal panel with said bottom wall panel, and a longitudinal tongue member disposed between said leg members and extending beyond the same backwardly thereof; slideway means associated with the said bottom wall panel adjacent the said terminal panel, the terminal panel being folded back upon the outer face of the bottom wall panel, and the said slide member slidably engaging the said slideway means so that pulling of said tongue member acts to set up the supporting easel; and a catch formation disposed adjacent the end of said tongue member and adapted to engage with the adjacent end wall of said display container for retaining the supporting easel in set-up condition.

6. The combination recited in claim 5 wherein the slideway means comprises a pair of spaced substantially parallel slits formed in the bottom wall panel and terminating a predetermined distance short of the joiner of the terminal panel with the bottom wall panel of the display container, the distance being determined by the placement of the catch formation of the tongue relative to the part of the display container which it engages when the supporting easel is set-up, and wherein the slide member has oppositely projecting end tabs which fit into said slits and are stopped by the said termination of said slits when the supporting easel is set-up.

7. A folding display carton embodying a supporting easel, comprising panel wall members arranged to form an open display container; a terminal panel extending from an end of the bottom wall panel of said display container in hinged relation thereto, said terminal panel being cut and scored to provide a transverse slide member adjacent the free end thereof, a pair of mutually spaced longitudinal leg members, scored transversely intermediate the ends thereof, and extending between said slide member and the joiner of said terminal panel with said bottom wall panel, and a longitudinal tongue member disposed between said leg member and extending beyond the same backwardly thereof; slideway means associated with the said bottom wall panel adjacent the said terminal panel, the terminal panel being folded back upon the outer face of the bottom wall panel, and the said slide member

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slidably engaging the said slideway means so that pulling of said tongue member acts to set up the supporting easel; a catch formation disposed adjacent the end of said tongue member and adapted to engage with the adjacent end wall of said display container for retaining the supporting easel in set-up condition; and panel wall members arranged to form a display cover for said display container, a portion of said display cover extending into adjacency with the said terminal panel and being slotted, and said tongue member extending through said slotted portion, securing said cover to said container.

8. A folding display carton embodying a supporting easel, comprising panel wall members arranged to form a carton; a terminal panel extending from the lower edge of the back wall panel of said carton in hinged relation thereto, said terminal panel being cut and scored to provide a transverse slide member adjacent the free end thereof, a pair of mutually spaced longitudinal leg members, scored transversely intermediate the ends thereof, and extending between said slide member and the joinder of said terminal panel with said back wall panel, and a longitudinal tongue member disposed between said leg members and extending beyond the same backwardly thereof; slideway means associated with the bottom wall panel of said carton adjacent the said terminal panel, the said slide member slidably engaging the said slideway means so that pulling of said tongue member acts to set up the supporting easel; and a catch formation disposed

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adjacent the end of said tongue member and adapted to engage with the said back wall panel for retaining the supporting easel in set-up condition.

9. The combination recited in claim 8 wherein a band member is defined in the bottom wall panel in registry with the tongue member, the latter passing under said band member.

10. The combination recited in claim 8 wherein the slideway means comprise a pair of spaced substantially parallel slits formed in the bottom wall panel, and the slide member has oppositely projecting end tabs which fit into said slits.

11. The combination recited in claim 1 wherein a retaining band member is associated with the slideway in registry with the tongue, said tongue passing under said band member, and said band member being disposed as a limit stop against which the slide member abuts when said tongue is pulled out a distance sufficient to render the catch means operative.

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