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Description

This invention relates to article carriers which are economical to produce and at the same time are aesthetically pleasing in appearance.

US—A—3739940 discloses an article carrier having the features defined in the precharacterising part of the appended claim 1. In this known article carrier, at least a portion of the anchoring means or anchoring tabs for certain of the transverse partition panels is struck in part from one or more of the carrier end wall panels.

The object of this invention is to provide an article carrier of the type disclosed in US—A—3739940 which is more attractive in appearance. This is achieved by the fact that each of said transverse partition panel is struck entirely from said respective medial panel of the second pair and that each said anchoring tab is struck entirely from said respective transverse partition panel.

Brief description of the drawings

In the drawings, Fig. 1 is an isometric view of an article carrier constructed according to this invention; Fig. 2 is a plan view of the blank from which the carrier is formed; Figs. 3, 4, 5 and 6 depict intermediate stages through which the carrier is folded and glued into a complete and collapsed carrier as shown in Fig. 7; and Fig. 8 is an isometric view of a portion of the transverse partition structure.

Best mode for carrying out the invention

In the drawings the numeral 1 designates the bottom wall of the carrier to a side edge of which side wall 2 is foldably joined along fold line 3. In addition, bottom wall 1 is provided with medial fold line 4.

End wall panels 5 and 6 are foldably joined to the end edges of side wall 2 respectively along fold lines 7 and 8. In like manner end wall panels 9 and 10 are foldably joined respectively to the end edges of side wall 11 along fold lines 12 and 13. Anchoring flap 14 is joined to the lower edge of side wall 11 along fold line 15. Also medial panels 16 and 17 are joined respectively to end wall panels 10 and 6 along fold lines 18 and 19.

Medial structure for the carrier is provided in a form of medial panels 20 and 21 which are foldably joined respectively to end wall panels 9 and 5 along fold lines 22 and 23. In addition, medial partition panels 24 and 25 are joined to the upper and lower edges respectively of medial panel 21 along fold lines 26 and 27.

Handle structure for the carrier is provided in the form of handle panels 28, 29, 30 and 31. Handle panels 28 and 29 are joined respectively to medial panels 16 and 17 along fold lines 18 and 19 and handle panel 30 is joined to handle panel 28 along fold line 32. Hand cushioning means is provided in the form of flaps 33 and 34 which are joined respectively to handle panels 28 and 29 along fold lines 35 and 36. Additionally, handle panel 28 is joined to handle panel 29 along fold

line 37 and, in similar fashion, handle panel 30 is joined to handle panel 31 along fold line 38. Also locking tab 39 is joined to handle panel 29 along fold line 40.

Transverse partitioning structure for the carrier is provided in the form of transverse partition panels 41 and 42 which are joined respectively to medial panels 20 and 21 along fold lines 43 and 44.

Additional transverse partition structure is provided in the form of transverse partition panels 45 and 46. More specifically, transverse partition panel 45 is joined to medial panel 20 by means of fold line 47 and web panel 48. In similar fashion, transverse partition panel 46 is joined to medial panel 21 by means of fold line 49 and web panel 50.

Transverse partition panel 41 is provided with anchoring tab 51 which is joined thereto by means of fold lines 52 and 53. In like manner anchoring tab 54 is joined to transverse partition panel 42 along fold lines 55 and 56.

As best viewed in Fig. 2, anchoring tabs 57 and 58 are struck substantially respectively from transverse partition panels 45 and 46. Further anchoring tab 57 is joined to transverse partition tab 45 along angular fold lines 59 and 60 and, in like manner, anchoring tab 58 is joined to transverse partition panel 46 along angular fold lines 61 and 62. Anchoring tabs 57 and 58 are provided with bend lines 63 and 64.

According to another feature of this invention, keel panel 65 is joined to the lower edge of medial panel 20 along fold line 66 and locking aperture 67 is formed astride the fold line 66. Also locking tab 68 is formed along the periphery of locking aperture 67. To complete the locking structure, locking tab 69 is formed along the lower edge of medial panel 21.

In order to form the carrier from the blank shown in Fig. 2, initially it is necessary to apply glue to handle panels 30 and 31 as shown by stippling in Fig. 2. Then it is simply necessary to elevate and fold handle panels 30 and 31 upwardly and to the right along fold line 32 into the positions shown in Fig. 3. Then medial partition panel 24 is folded rearwardly and downwardly, as viewed in Fig. 2, along fold line 26. Also medial panels 16 and 17 are elevated and folded to the left respectively along fold lines 18 and 19. The carrier then appears as shown in Fig. 3.

Thereafter glue is applied to anchoring tabs 51, 54, 57 and 58 as shown by stippling in Fig. 3. Following this the medial structure for the carrier is elevated and folded over along fold lines 7 and 12 into the positions shown in Fig. 4.

Then locking tab 39 is folded upwardly and to the right along fold line 40 into an interlocking relationship with medial panel 21 as best shown in Figs. 5 and 6. Also keel panel 65 is folded downwardly along fold line 66. The carrier then appears as shown in Fig. 5.

Following this operation, medial partition panel 25 is elevated and folded over along fold line 27. Also bottom wall 1 is folded along medial fold line

4 to occupy the position shown in Fig. 6. Then an application of glue is made to anchoring flap 14 as well as to medial panels 20 and 21, keel panel 65, riser panels 16 and 17, handle panels 30 and 31, and medial partition panels 24 and 25, as shown by stippling in Fig. 6. Then the portions of the carrier disposed above fold line 38 are simply elevated and folded downwardly to occupy the positions shown in Fig. 7 which represents the carrier in complete and collapsed condition.

In order to set up the carrier, it is simply necessary to expand side walls 2 and 11 into positions whereby bottom wall 1 folds into a flat plane. Then the associated end of bottom wall 1 is manipulated into locking engagement with locking tabs 68 and 69.

Since anchoring tabs 57 and 58 are struck substantially from the respective transverse partition panels 45 and 46 and not from end panels 9 and 5, when the carrier is fully assembled and glued, the structural relationships between transverse partition panels 45 and 46 and the other elements of the carrier cause these panels to assume an angular relationship with respect to the medial structure and the side walls which varies slightly from perpendicular. This causes the associated end cell to be somewhat larger in size than desired.

In order to compensate for the oversize end cells, the upper portions of transverse partition panels 45 and 46 are caused to bow slightly outwardly whereby proper spacing is achieved between the transverse partition panel and the associated end wall panel. This is accomplished by means of web panels 48 and 50 which, when the carrier is set up, cause the upper portions of transverse partition panels 45 and 46 to bow or bend toward the respective end wall panels 9 and 5.

To further cause transverse partition panels 45 and 46 to bend in an outward fashion along the upper portions thereof, angular fold lines 59—62 are provided. Since fold lines 59—62 diverge outwardly with respect to the ends of transverse partition panels 45 and 46, as the carrier is set up, additional stress is introduced along the upper portions thereof thereby causing them to bow outwardly.

Industrial applicability

By this invention a carrier is provided which is economical to produce, aesthetically pleasing and at the same time compensates for inherent undesirable angular dispositions of certain of the transverse partition panels.

Claims

1. An article carrier comprising a bottom wall (1), a pair of side walls (2, 11) joined respectively to the side edges of said bottom wall (1), end wall panels (5, 9, 6, 10) foldably joined respectively to the end edges of said side walls (2, 11) and extending inwardly therefrom, a first pair of medial panels (16, 17) foldably joined respectively to the medial

edges of said end wall panels (10, 6) at one end of the carrier and extending inwardly therefrom, a second pair of medial panels (20, 21) foldably joined respectively to the medial edges of said end wall panels (9, 5) located at the other end of the carrier and extending inwardly therefrom, handle structure (28—31) joined at one end to the upper portions of said medial panels (16, 17) of the first pair and extending upwardly therefrom, a full cell width single ply transverse partition panel (45, 46) foldably joined to each of said medial panels (20, 21) of the second pair and being initially disposed in a coplanar relationship therewith and being adapted to move through an angle of approximately 90° during formation of the carrier to a position extending substantially outwardly to the associated side wall (11, 2), and an anchoring tab (57, 58) joined to each said transverse partition panels (45, 46) remote from the respective one of said medial panels of the second pair and being adhered to said associated side wall, characterised in that each of said transverse partition panels (45, 46) is struck entirely from said respective medial panel (20) of the second pair and in that each said anchoring tab (57, 58) is struck entirely from said respective transverse partition panel (45, 46).

2. An article carrier according to claim 1 further characterised in that each said anchoring tab (57, 58) is joined to said respective transverse partition panel (45, 46) by means of a pair of angular fold lines (59, 60; 61, 62).

3. An article carrier according to any of the preceding claims, characterised in that each said transverse partition panel (45, 46) is disposed at an angular relation to said associated side wall (11, 2) with respect to a notional perpendicular connection therewith.

4. An article carrier according to any of the preceding claims, further characterised in that the upper portion of each said transverse partition panel (45, 46) is bowed outwardly.

5. An article carrier according to any of the preceding claims, further characterised in that each said anchoring tab (57, 58) is joined to said respective transverse partition panel (45, 46) along a fold line (59, 60, 61, 62) which is spaced inwardly from the end of said transverse partition panel.

6. An article carrier according to any of the preceding claims, further characterised in that a keel panel (65) is foldably joined to the lower edge of one of said medial panels (20), of the second pair, a looking aperture (67) is disposed astride the fold line between said keel panel and said one medial panel (20) of the second pair, and a locking tab (68) is disposed along the periphery of said locking aperture and is arranged to cooperate with one end edge of said bottom wall to maintain the carrier in a set-up condition.

7. An article carrier according to claim 7, further characterised in that another locking tab (69) is formed along the lower edge of the other of said medial panels (21) of the second pair and arranged to cooperate with said one end edge of said bottom wall (1).

Patentansprüche

1. Warenträger mit einer Bodenwand (1), einem Paar an die betreffenden Seitenkanten der Bodenwand (1) faltbar angelenkte Seitenwände (2, 11), Stirnwände (5, 9; 6, 10), die an die betreffenden Endkanten der Seitenwände (2, 11) faltbar angelenkt sind und davon ausgehend sich nach innen erstrecken, einem ersten Paar Mittelwände (16, 17), die an die betreffenden Mittelkanten der Stirnwände (10, 6) an einem Ende des Trägers faltbar angelenkt sind und davon ausgehend sich nach innen erstrecken, einem zweiten Paar an die betreffenden Mittelkanten dieser Stirnwandteile (9, 5) faltbar angelenkte Mittelwände (20, 21), die sich am anderen Ende des Trägers und nach innen gerichtet davon erstrecken, eine Griffanordnung (28—31), die an einem Ende an den oberen Abschnitten des ersten Paares der Mittelwände (16, 17) angelenkt ist und davon ausgehend sich nach oben gerichtet erstreckt, einer einzelnen sich über die volle Zellenbreite erstreckenden Lage einer Querteilungswand (45, 46), die an jeder der Mittelwände (20, 21) des zweiten Paares faltbar angelenkt ist und die anfänglich in derselben Ebene davon liegend angeordnet sind und während der Bildung des Trägers in eine Stellung, die im wesentlichen außen an der zugehörigen Seitenwand (11, 2) verläuft, um einen Winkel von ungefähr 90° bewegt werden, und eine Verriegelungslasche (57, 58), die an jeder der Querteilungswände (45, 46) entfernt von der betreffenden der Mittelwände des zweiten Paares angelenkt ist und an der zugehörigen Seitenwand angeklebt ist, dadurch gekennzeichnet, daß jede dieser Querteilungswände (45, 46) vollständig aus der betreffenden Mittelwand (20) des zweiten Paares ausgestanzt ist und dadurch, daß jede Verriegelungslasche (57, 58) ganz aus der betreffenden Querteilungswand (45, 46) ausgestanzt ist.

2. Warenträger nach Anspruch 1, dadurch gekennzeichnet, daß jede Verriegelungslasche (57, 58) durch ein Paar winkelförmiger Falzlinien (59, 60; 61, 62) an der betreffenden Querteilungswand (45, 46) angelenkt ist.

3. Warenträger nach einem der vorangegangenen Ansprüche, dadurch gekennzeichnet, daß jede Querteilungswand (45, 46) winkelförmig zur zugehörigen Seitenwand (11, 2) bezüglich einer gedachten senkrechten Verbindung damit angeordnet ist.

4. Warenträger nach einem der vorangegangenen Ansprüche, dadurch gekennzeichnet, daß der obere Abschnitt jeder Querteilungswand (45, 46) nach außen gebogen ist.

5. Warenträger nach einem der vorangegangenen Ansprüche, dadurch gekennzeichnet, daß jede Verriegelungslasche (57, 58) entlang einer Falzlinie (59, 60; 61, 62), die sich vom Ende der Querteilungswand nach innen gerichtet erstreckt, an der betreffenden Querteilungswand (45, 46) angelenkt ist.

6. Warenträger nach einem der vorangegangenen Ansprüche, dadurch gekennzeichnet, daß eine Kielwand (65) an der Unterkante einer der

Mittelwände (20) des zweiten Paares faltbar angelenkt ist, eine Verriegelungsöffnung (67) rittlings der Falzlinie zwischen der Kielwand und der einen Mittelwand (22) des zweiten Paares angeordnet ist und eine Verriegelungslasche (68) am Umfang der Verriegelungsöffnung angeordnet ist und angebracht ist, um mit einer Endkante der Bodenwand zusammenzuwirken, um den Träger in einem aufgerichteten Zustand aufrecht zu erhalten.

7. Warenträger nach Anspruch 6, dadurch gekennzeichnet, daß eine andere Verriegelungslasche (69) entlang der unteren Kante der anderen Mittelwände (21) des zweiten Paares ausgebildet ist und angebracht ist, um mit der einen Endkante der Bodenwand (1) zusammenzuwirken.

Revendications

1. Porte-objets comprenant une paroi inférieure (1), une paire de parois latérales (2, 11) reliées respectivement aux bords latéraux de cette paroi inférieure (1), des panneaux de paroi terminale (5, 9; 6, 10), reliés par pliage respectivement aux bords terminaux de ces parois latérales (2, 11) et s'en étendant vers l'intérieur, une première paire de panneaux médians (16, 17) reliés par pliage respectivement aux bords médians des panneaux de paroi terminale (10, 6) à une extrémité du porte-objets et s'en étendant vers l'intérieur, une deuxième paire de panneaux médians (20, 21) reliés par pliage respectivement aux bords médians des panneaux de paroi terminale (9, 5) situés à l'autre extrémité du porte-objets et s'en étendant vers l'intérieur, une structure de poignée (28 à 31) reliée à une extrémité des portions supérieures des panneaux médians (16, 17) de la première paire et s'en étendant vers le haut, un panneau de séparation transversale d'une seule épaisseur et ayant la largeur totale d'un compartiment (45, 46) relié par pliage à chacun des panneaux médians de la deuxième paire (20, 21), étant initialement disposé dans le même plan qu'eux et étant adapté pour se déplacer d'un angle d'environ 90° lors de la formation du porte-objets jusqu'à une position s'étendant pratiquement vers l'extérieur de la paroi latérale associée (11, 2) et une languette de fixation (57, 58) reliée à chacun des panneaux de séparation transversale (45, 46) éloigné du panneau médian respectif de la deuxième paire et collé à la paroi latérale associée, caractérisé en ce que chacun des panneaux de séparation transversale (45, 46) est découpé entièrement dans le panneau médian associé (20) de la deuxième paire et en ce que chaque languette de fixation (57, 58) est découpée entièrement dans le panneau de séparation transversale associée (45, 46).

2. Porte-objets selon la revendication 1, caractérisé en ce que chaque languette de fixation (57, 58) est reliée au panneau de séparation transversale associé (45, 46) au moyen de deux lignes de pliage obliques (59, 60; 61, 62).

3. Porte-objets selon l'une quelconque des revendications précédentes, caractérisé en ce que

chaque panneau de séparation transversale (45, 46) est disposé en faisant un angle avec la paroi latérale associée (11, 2) par rapport à une liaison perpendiculaire fictive avec elle.

4. Porte-objets selon l'une quelconque des revendications précédentes, caractérisé en ce que la portion supérieure de chaque panneau de séparation transversale (45, 46) est incurvée vers l'extérieur.

5. Porte-objets selon l'une quelconque des revendications précédentes, caractérisé en ce que chaque languette de fixation (57, 58) est reliée au panneau de séparation transversale associé 45, 46) le long d'une ligne de pliage (59, 60; 61, 62) qui est espacée vers l'intérieur de l'extrémité du panneau de séparation transversale.

6. Porte-objets selon l'une quelconque des revendications précédentes, caractérisé en ce qu'un

panneau de quille (65) est relié par pliage au bord inférieur de l'un des panneaux médians (20) de la deuxième paire, qu'une ouverture de verrouillage (67) est disposée à cheval sur la ligne de pliage entre le panneau de quille et le panneau médian (20) de la deuxième paire, et qu'une languette de verrouillage (68) est disposée le long de la périphérie de cette ouverture de verrouillage et est agencée pour coopérer avec un bord terminal de la paroi inférieure pour maintenir le porte-objets à l'état dressé.

7. Porte-objets selon la revendication 6, caractérisé en ce qu'une autre languette de verrouillage (69) est formée le long du bord inférieur de l'autre panneau médian (21) de la deuxième paire et disposée pour coopérer avec le bord terminal considéré de la paroi inférieure (1).

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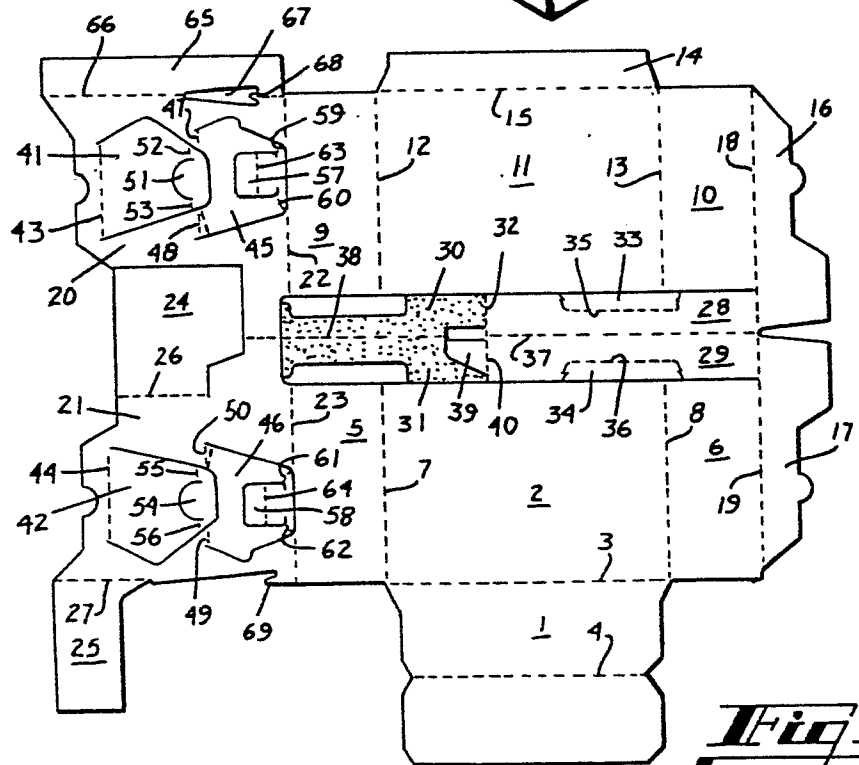
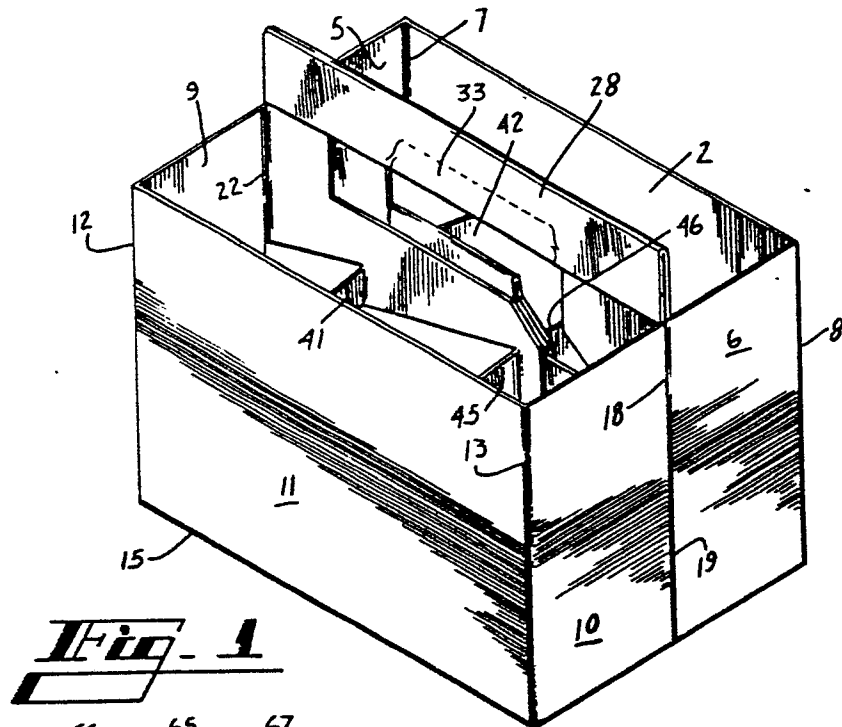
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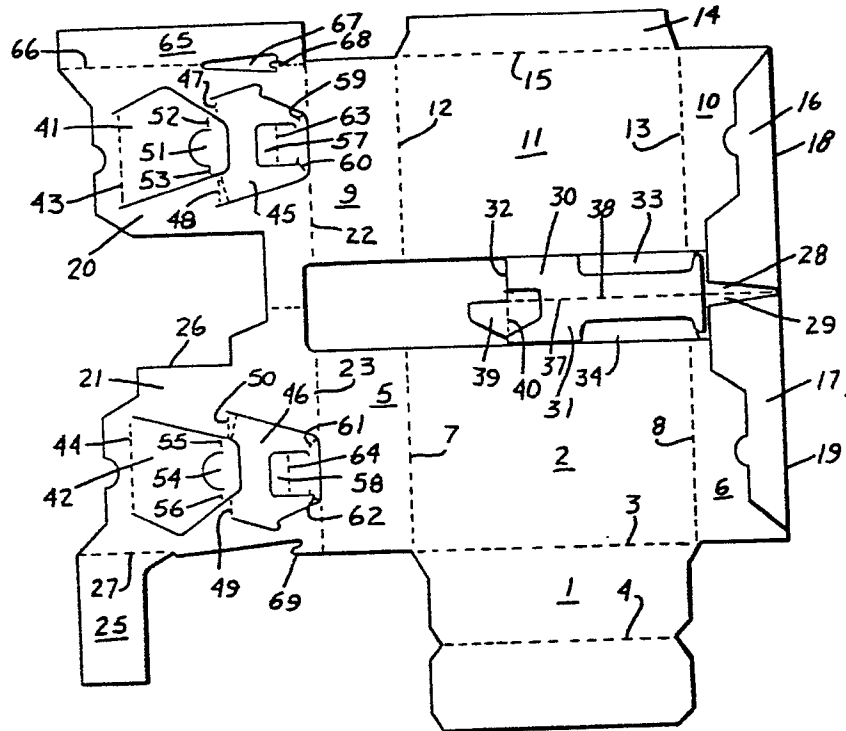


Fig. 3

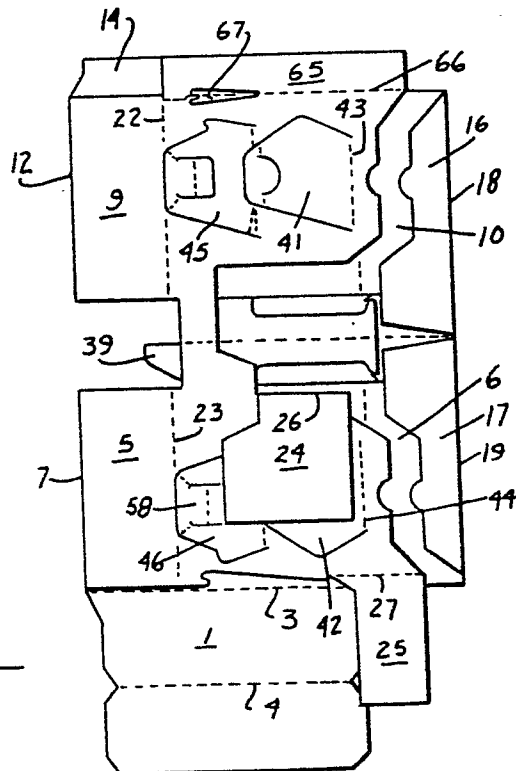


Fig. 4

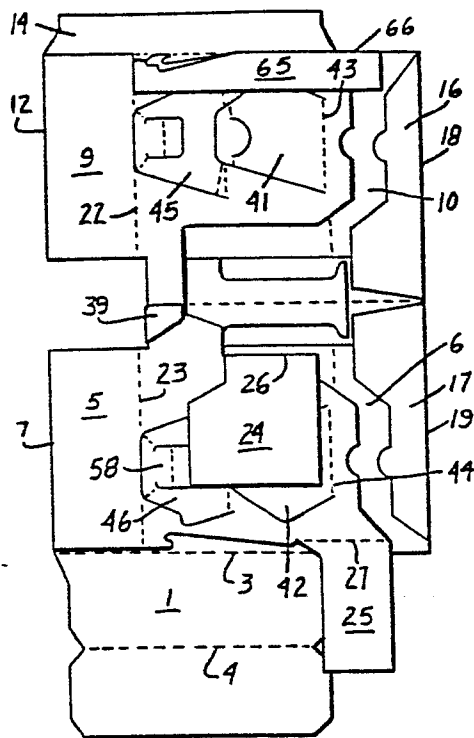


Fig. 5

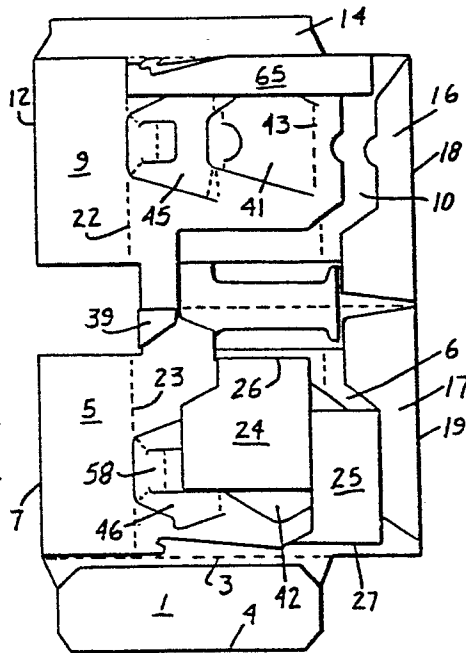


Fig. 6

Fig. 8

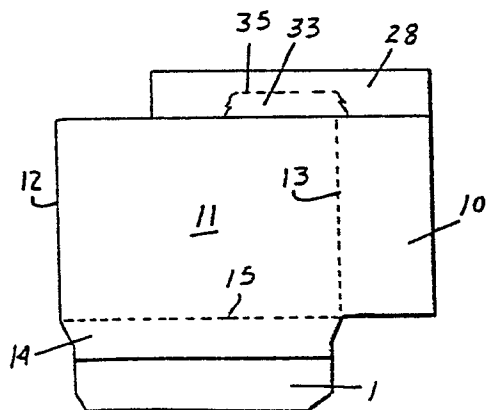


Fig. 7

