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(54) **Composite package**

(57) A package includes two or more separately formed cartons each containing one or more articles. The two or more cartons are conjoined by virtue of a panel unitarily formed with a first one of the two or more cartons.

The panel serves as part of a wall of the first carton and serves to connect the first carton to at least one other of the two or more cartons so that the two or more cartons form a single package.

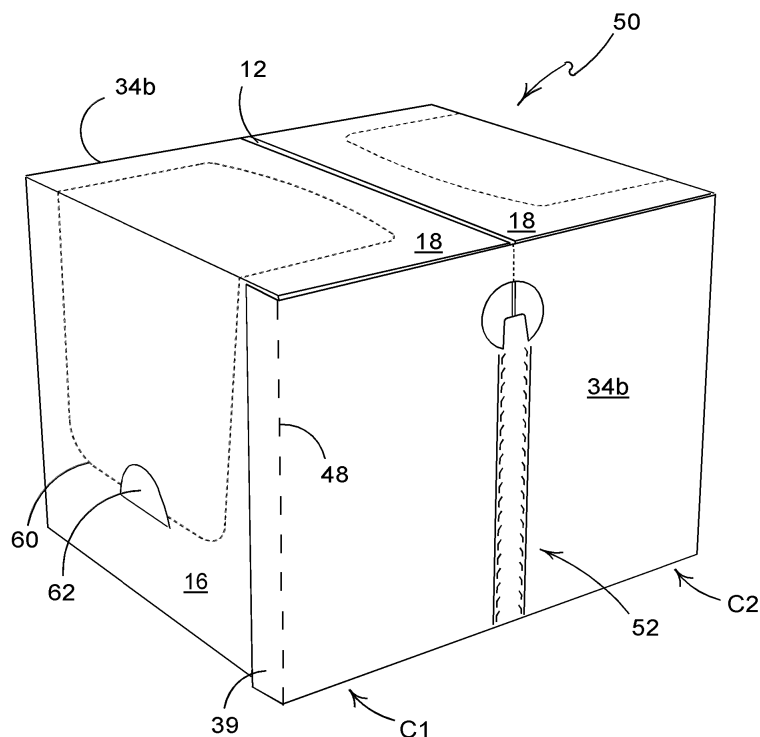


FIGURE 2

Description

FIELD OF THE INVENTION

[0001] The invention relates to a package, carton and one or more blanks for forming individual cartons. More specifically, but not exclusively, the invention relates to package comprising at least two conjoined cartons.

BACKGROUND OF THE INVENTION

[0002] In the field of packaging it is required that packages are robust and suitable for their purpose, yet at the same time it is important, for economical and environmental reasons, that a minimum amount of material is utilised in forming the package. Compression strength of packages and cartons is important because often in storage and retail environments many packages will be stacked on top of one another and the load imparted to lower cartons is significant. Though the articles contained within packages can offer some support, not all articles do. Soft, flexible or fragile articles for example do not offer any or any significant assistance in supporting a carton loaded under compression.

[0003] Additionally in the field of packaging it is important that a durable package that has protected an article or a group of articles throughout their journey from a manufacturing plant, through distribution chains, to a storage and/or retail point, can then, once finally taken home by a consumer easily be opened.

[0004] The present invention seeks to provide an improvement over known packages.

SUMMARY OF INVENTION

[0005] According to a first aspect, the invention provides a package comprising two or more cartons each containing one or more articles, the two or more cartons being united by virtue of a panel hinged to the one carton serving as part of a wall of that carton and serving to connect the one carton to at least one other of the two or more cartons so that the connected cartons form a package that is unitary in nature.

[0006] Preferably, the package comprises two or more cartons, wherein a panel hinged to a first of the cartons serves as part of an end wall of that first carton and serves to provide a first connection between the first carton and a second carton and wherein a panel hinged to the second carton serves as part of an end wall of that second carton and serves to provide a second connection between the second carton and another of the two or more cartons.

[0007] More preferably, the package comprises two cartons, wherein the panel hinged to the second carton serves as part of an end wall of that second carton and serves to provide a second connection between the second carton and the first carton and wherein the first and second connections are disposed on opposite sides of

the package.

[0008] Preferably, the two or more cartons are each formed from separate blanks of material.

[0009] Optionally, the one carton has a tubular structure, the ends of which are closed by composite end walls formed from a series of end flaps and wherein the panel hinged to the one carton forms part of that composite end wall.

[0010] Preferably, each of the two or more cartons are fully enclosed unitary cartons irrespective of the panel hinged to the one carton serving to connect the one carton to at least one other of the two or more cartons.

[0011] Optionally, the package comprises means for separating the cartons of the package and/or each carton of the package comprises means for gaining access to the contents of that carton.

[0012] Preferably, the panel hinged to the one carton is sized such that it overlaps and reinforces a complete wall of one other of the two or more cartons. More preferably, the one other of the two or more cartons has a tubular structure, the ends of which are closed by composite end walls formed from a series of end flaps and wherein the complete wall reinforced by the panel is one of the composite end wall.

[0013] Optionally, at least two cartons are disposed such that abutting walls of those cartons provide a support to a compression load applied to the package in a direction substantially parallel with the plane of those abutting walls.

[0014] Optionally, the first panel comprises a glue flap hingedly connected thereto.

[0015] Preferably, the first panel serves as part of the end wall of the second carton and wherein the second panel serves as part of the end wall of the first carton.

[0016] Optionally, the first panel comprises a first glue flap hingedly connected thereto, and the first glue flap serves as part of a front or back wall of the second carton, the front or back wall being disposed adjacent to the end wall of the second carton.

[0017] Optionally, the second panel comprises a second glue flap hingedly connected thereto, and the second glue flap serves as part of a front or back wall of the first carton, the front or back wall being disposed adjacent to the end wall of the first carton.

[0018] According to a second aspect, the invention provides a blank for forming a carton, the blank comprising a plurality of panels for forming the carton walls and comprising a panel hinged thereto, which panel is foldable to form part of a wall of the carton formed from that blank and which panel is operable to provide a connection between that carton formed from the blank and another carton.

[0019] Another aspect of the invention provides a part-formed blank comprising a blank according to the immediately preceding paragraph, wherein two of the plurality of panels are secured together.

[0020] Another aspect of the invention provides a carton formed from the blank or the part-formed blank re-

ferred to in the preceding paragraphs having a panel hinged thereto, which panel forms part of a wall of the carton and which panel is operable to connect that carton to another carton.

[0021] Preferably, the carton has a tubular structure, the ends of which tubular structure are closed by composite end walls formed from a series of end flaps and wherein the panel hinged to the one carton forms part of that composite end wall.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] Exemplary embodiments of the invention will now be described with reference to the accompanying drawings, in which:

- Fig. 1 shows a plan view of a blank for forming a carton according to a first embodiment of the invention;
- Fig. 2 shows a package comprising a pair of cartons each formed from the type of blank shown in Figure 1;
- Fig. 3 shows the package of Figure 2 wherein a tear strip provided for opening the package and separate the cartons has been partly deployed;
- Fig. 4 shows the cartons of the package of Figures 2 & 3 being separated after complete operation of the tear strip;
- Fig. 5 shows the separated cartons in an open condition; and
- Figs. 6 to 10 show schematic illustrations of nested arrangements of multiple cartons for forming single packages comprising a number of connected cartons.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0023] The present invention relates to packages comprising one or more cartons each for containing one or more articles. The illustrated example shows a pair of paperboard cartons C1, C2, however it will be understood that other suitable foldable sheet materials can be used. The articles to be held by the cartons are not shown in the illustrations. The size, configuration, number and shape of articles to be packaged may affect the size, configuration and certain structural aspects of a carton and it should be understood that the cartons depicted and the blank for making them are non-limiting examples only. The invention may be applied to a variety of carton structures useful for containing a variety of articles. The package formed comprises at least two cartons and it is not necessary for those cartons to be formed of the same material. However, in the preferred example, both cartons are formed of paperboard material and both cartons are similarly dimensioned.

[0024] In Figure 1, there is shown a blank 10 for forming

a carton C1 such as those shown in Figures 2 to 5. The blank 10 comprises a series of panels including: back panel 12, bottom panel 14, front panel 16 and top panel 18. These primary panels 12, 14, 16, 18 are hinged together in series along fold lines 22, 24 & 26 respectively.

[0025] Turning to the construction of the carton, it is envisaged that the carton can be formed by a series of sequential folding operations in a straight line machine so that the carton is not required to be rotated or inverted to complete its construction. The folding process is not limited to that described below and may be altered according to particular manufacturing requirements.

[0026] A glue panel 19 is hinged along fold line 20 to the back panel 12 so that the back panel 12 and top panel 18 can be secured together thereby forming a standard tubular type carton with open ends. This type of carton structure is known as a Regular Shipping Carton 'RSC'. In other applications of the invention the specific order and arrangement of panels that form the structural walls of the carton may differ from the present example. Indeed the glue panel 19 is entirely optional and in other applications the carton may be held in an erect form by other means including, but not exclusively: mechanical lock and/or mechanical fastener.

[0027] To close the ends of the carton, a series of end flaps are hinged to each end edge of the main panels. End flaps 30a, 32a, 34a, 36a are hinged along fold lines 40a, 42a, 44a, 46a, to the primary panels 12, 14, 16, 18 along their right hand side (as viewed in Figure 1). Similarly, end flaps 30b, 32b, 34b, 36b are hinged along fold lines 40b, 42b, 44b, 46b, to the primary panels 12, 14, 16, 18 along their left hand side (as viewed in Figure 1).

[0028] Closing the ends of a carton using a number of foldable end flaps to create a composite end wall is known in the art. The blank 10 will be printed, cut and scored at the carton manufacturing plant, where the glue flap 19 will also be deployed and manipulated to affix back panel 12 to top panel 18. This is achieved simply by applying a bead of adhesive to the glue flap 19 and then folding the blank 10 about fold line 24 so that top panel 18 contacts the bead of adhesive. Pressure may be applied to affix the top panel 18 to the glue flap 19 and as such to the back panel 12. In this part-formed, but flat-folded condition, the blank 10 will be shipped from the manufacturing plant, to a plant where the blank is converted in to a carton by expanding the flat-folded blank 10 into a tubular form and loading articles through one or both of the open ends. The end flaps 30a, 32a, 34a, 36a are folded into overlapping relationship to close the right hand end of the carton. In applications where the articles are top- or endloaded, from one end; the right end of the carton may be closed first; the carton loaded through the left hand end and then that left hand end closed.

[0029] The present invention differs from conventional cartons by the provision of a much extended end flap or connector panel 34b. This extended end flap 34b is unitarily formed with the blank 10 and hinged to the

to the front panel 16 along the fold line 44b to be used as a last closing flap for closing the left-hand end of the carton. The extended end flap 34b also acts as a joining flap for securing a first carton C1 (such as the above-described carton) to a second carton C2 (such as another carton formed from a separate blank substantially identical to blank 10). In order to achieve the second function, the extended end flap 34b is provided with a glue flap 39 which is hinged to the extended end flap 34b along fold line 48.

[0030] The second carton C2 formed from another blank 10 can be affixed to the first carton C1 by means of the extended end flaps 34b of the first and second cartons C1, C2. The two cartons C1, C2, to be secured are nestled or juxtaposed preferably so that the back panels 12 of the cartons C1, C2 are in a face-contacting relationship (or the cartons C1, C2 are in a back-to-back contacting relationship) and so that the ends of each carton are aligned. Manipulating two cartons C1, C2 in this way can be automated by packaging apparatus or alternatively achieved manually.

[0031] Adhesive is applied to the respective glue flaps 39 of the cartons C1, C2, and the extended end flaps 34b are folded about the respective fold lines 44b toward the respective cartons C1, C2 thereby completing closure of the left-hand-end of each carton C1, C2. The extended end flap 34b of the first carton C1 is also brought into overlapping relationship with the right-hand end of the juxtaposed second carton C2 and thereby further secures the closed right-hand end of that second carton C2. The glue flap 39 of the extended end flap 34b of the first carton C1 is folded about fold line 48 and is brought into flat-face contact with the front panel 16 of the second carton C2 and thereby the two cartons C1, C2 are joined together. Similarly the extended end flap 34b of the second carton C2 is folded to close the left-hand end of the second carton C2 and is brought into overlapping relationship with the right-hand-end of the first carton (thereby further securing the closed right-hand end of the first carton C1). Glue flap 39 of the extended end flap 34b of the second carton C2 is operated in exactly the same manner as described above (in relation to glue flap 39 of the first carton C1) in order to adhere the second extended end flap 34b to the front panel 16 of the first carton C1. The resulting dual carton, yet single or unitary package 50 is illustrated in Figure 2.

[0032] The above described method is not limiting. In other methods of construction, the extended end flap 34b may be directly affixed (by adhesive or other mechanical fixing) to the other end flaps 30b, 32b, 36b the first carton C1 and/or directly affixed to the end flaps 30a, 32a, 34a, 36a of the second carton C2. Other affixing means maybe deployed in other embodiments and as such, the glue flap 39 is optional. Indeed in an envisaged embodiment, the extended end flap 34b may be adhered directly to a second carton without the presence of glue flap 39 as described above. In yet a further envisaged embodiment, the extended end flap 34b may be locked, by a mechan-

ical locking mechanism to the second carton C2.

[0033] Once two cartons C1, C2 are conjoined or affixed, the composite package 50 formed is a robust structure that has an improved compression resistance compared to an RSC of similar overall dimension and formed from similar caliper paperboard. In addition, the formation of a composite package 50 from two cartons C1, C2, offers an additional benefit in that the individual blank size is reduced compared to forming a non-composite package having the same overall dimension (and hence capable of packaging the same amount of contents as the composite package 50) from one single blank. The two cartons C1, C2 are individual in that each carton is self contained and capable of securely containing articles on its own and does not rely on features of the other carton to ensure that it remains intact. Each carton C1; C2 is formed from its own blank 10 of material. In the preferred embodiment shown, the blank for each carton C1 is a unitary blank, however in other embodiments, more than one blank may be utilised to form each carton. It is preferable however, that each carton C1, C2 forming the composite package 50 is formed from its own blank. In this way smaller blanks 10 of material are required to form the overall composite package 50. These blanks 10 may be more efficiently nested when cut from a larger sheet of material compared to a single blank for forming the package 50 that would be significant in size. Only one such "large" blank may be formable from a starting sheet of paperboard, compared to say three "smaller" blanks 10, which could be cut from the same sized starting sheet of paperboard. As such, utilising smaller blanks 10 for forming smaller carton units C1, C2 that are provided with conjoining means for affixing the carton units C1, C2 together to form a composite package 50 having a unitary nature, may be more materially efficient compared to forming a single package unit.

[0034] The presence of internal upright structural carton walls 12, 12 in the composite package 50 contributes significantly to the compression strength or load bearing ability of the package 50. As such the combination of individual self contained carton units C1, C2 to form a composite package provides for a stronger package in terms of its ability to withstand a load applied parallel or substantially parallel to the plane of the internal structure walls 12, 12.

[0035] In order to separate the affixed cartons C1, C2, each extended end flap 34b is optionally provided with separation means 52. In the exemplary embodiment shown the separation means 52 comprises a pair of frangible connections 54a, 54b; which frangible connections 54a, 54b define a tear strip 58 therebetween; and an initiator tab 56. By grasping the initiator tab 56 (access thereto being provided by aperture 70) a user can pull the tear strip 58 downwardly and progressively break the frangible connections 54a, 54b. This is illustrated in Figure 3 and Figure 4. The separated cartons C1, C2 are shown Figure 5.

[0036] In order to gain individual access to each carton

C1, C2, each front and top panel 16, 18 is provided with a perforated or frangible line 60 and an initiator tab 62 disposed in close proximity to the frangible line 60. By pushing against the upper portion of the tab 62, a user can break a portion of frangible line 60 close to the tab 62; then the user can grasp an edge of a portion of front panel 16 and manipulate that portion by pulling it away from the carton in order to progressively break the frangible connection 60. Once removed, an opening 'O' is created and access to the internal volume of each carton is thereby obtainable (see Figure 5).

[0037] Many other means for obtaining access to a carton are known in the art and many of them would be applicable to cartons or packages having a carton-joining means of the present invention. The separating means 52 and access means 60/62 shown in the present example constitute mere examples of such separating means and are non-essential features of the invention.

[0038] In Figures 6 to 10, schematic illustrations are provided of exemplary ways in which multiple cartons C1, C2, C3 and so on could be nestled together using extended end flaps 34b to form a single composite package. Figure 6 shows two adjoining cartons C1, C2; Figure 7 shows four adjoining cartons C1, C2, C3, C4; Figure 8 shows six adjoining cartons C1, C2, C3, C4, C5, C6; Figure 9 shows nine adjoining cartons C1, C2, C3, C4, C5, C6, C7, C8, C9 and Figure 10 shows sixteen adjoining cartons C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16.

[0039] The glue flap 39 of the extended end flap 34b of one carton C1 which is shown as being used to affix that extended end flap 34b to the front panel 16 of a neighbouring carton C2 in Figures 2 and 3 has been omitted in the further examples of the present invention shown in the schematic illustrations of Figures 6 to 10. The extended end flaps 34b shown in Figures 6 to 10 may be attached using adhesive applied to its inside face and/or applied to a wall of the adjoining carton. In other embodiments, the optional glue flap 39 is used.

[0040] On Figure 6, where only two cartons C1, C2 are connected together, the cartons are joined to one another. Because the same carton blank has been used for each carton C1, C2, they each have an extended end flap 34b and as such, the extended end flap 34b of the first carton C1 is adjoined to the second carton C2 and the extended end flap 34b of the second carton C2 is adjoined to the first carton C1. By using the available extended end flaps 34b to adjoin the cartons C1 and C2 to one another, the connection loop has been closed. However, in each of the arrangements having more than two cartons connected and joined in a nestled configuration (Figures 7 to 10), an extended flap 34b of one carton has been used to adjoin that carton to a neighbouring carton, but that neighbouring carton has been joined to a different neighbouring carton. For example, consider Figure 7.

[0041] In the application of the present invention illustrated in Figure 7, a group of four cartons are adjoined

together using the extended end flaps 34b. A first carton C1 uses its extended end flap 34b to close its left-hand-end and to affix that first carton C1 to an adjacent second carton C2. The second carton C2 is disposed with its right-hand composite end (36a/34a/32a/30a) in abutment with the back panel 12 of the first carton C1 and the second carton uses its extended end flap 34b to close its left-hand-end and to affix that second carton C2 to a third carton C3.

[0042] The third carton C3 is disposed in contact with the second carton C2, but is not in contact with the first carton C1. The third carton C3 is disposed with its composite right-end (30a, 32a, 34a, 36a) in abutment with the back panel 12 of the second carton C2. The third carton C3 uses its extended end flap 34b to further close its left-hand-end and to affix that third carton C3 to an adjacent fourth carton C4.

[0043] The fourth carton C4 is disposed such that its right-hand-end (36a/34a/32a/30a) is in contacting abutment with the back panel 12 of the third carton C3 and such that its back panel 12 is in contacting abutment with the right-hand-end (36a/34a/32a/30a) of the first carton C1. No panel of the fourth carton C4 is in face contacting relationship with a panel of the second carton C2. The fourth carton C4 uses its extended end flap 34b to close its left-hand-end and to affix that fourth carton C4 to the adjacent first carton C1 and thus create a nestled four carton arrangement. The resulting configuration is separable into the individual cartons C1, C2, C3, C4 in the same or similar manner to that described above in relation to the separation of only two cartons using a separating means 52 (or similar suitable separating mechanism).

[0044] In an alternative non-illustrated configuration to form a composite four-carton package, the first and second cartons are back-to-back; the third and fourth cartons are disposed back-to-back; the left-hand-composite end of the second carton abuts the right-hand composite end of the third carton; and the right-hand end of the first carton abuts the left-hand end of the fourth carton. In this arrangement no requirement exists for the ends and back to be the same width. However in this configuration, the extended end flaps 34b of the second and fourth cartons are folded and adhered in a corner configuration. In this corner configuration the extended end flap 34b of the second carton overlaps a front panel 16 and left-hand end of the third carton and the extended end flap 34b of the fourth carton overlaps a front panel 16 and left-hand-end of the first carton.

[0045] It is preferable, that if cartons are configured in the manner illustrated in Figures 7 to 10, that the composite end walls of each carton are equal in width to the front panels. Though this may not be necessary, the nestled cartons are most efficiently packaged when this is the case as no empty space exists in the core of the arrangement. As an additional benefit, the resulting multi-carton arrangement can have outer walls formed completely from extended end flaps which may readily pro-

vide a uniform and aesthetically pleasing out facing surface as well as a bill board effect for the branding and graphic media printed on the extended end flaps 34b.

[0046] In Figure 8, it is shown how the same mechanism can be used to link a group of six cartons which are adjoined in a looped series, in which the extended end flap 34b of the first carton C1 attaches that carton to the second carton C2; the extended end flap 34b of the second carton C2 attaches that carton to the third carton C3 and so on until the sixth carton C6 uses its extended end flap 34b to attach that sixth carton to the first carton C1.

[0047] A similar mechanism is used for the nine connected cartons C1, C2, C3, C4, C5, C6, C7, C8 and C9, which are coiled together to create a three x three carton arrangement as illustrated in Figure 9. The centre-most carton, C9 is attached to one of the outer cartons; in this case C8 by an extended end flap 34b. The cartons C8, C1, C2, C3, C4, C5, C6 and C7 are connected together and positioned around the centre-most carton C9. The cartons of the outer-loop, (cartons C8 to C1), are completely connected together by carton C7 in the bottom left-hand corner of the arrangement using its extended end flap 34b to connect to carton C8.

[0048] Many and various multiple-carton configurations are possible. The illustrated examples represent a sample of ways in which the mechanism taught by the present invention could be implemented. One further example is shown in Figure 10. This final illustrated arrangement does not in any way signify a final manner and/or configuration in which cartons may be adjoined. In Figure 10, sixteen cartons are looped together. Four inner-most cartons (C13, C14, C15 and C16) are surrounded by twelve outer-most cartons C1 to C12. The arrangement could be built by assembling and connecting pairs of inner and outer cartons. As such an innermost carton C13 is adjoined by its extended end flap 34b to a carton C12 (carton C12 will go on to form part of the outerloop). In a similar manner a carton C14 is adjoined by its extended end flap 34b to a carton C3 (carton C3 will go on to form part of the outerloop). Two further pairs of cartons C15 with C6 and C16 with C9 are also formed such that each of the four innermost cartons (C13, C14, C15 and C16) is attached to one of the outermost cartons (C12, C3, C6 and C9). Each of these outermost cartons (C12, C3, C6 and C9) has a free unconnected extended end flap 34b. Then the four innermost cartons (C13, C14, C15 and C16) of each pair (C13/C12, C14/C3, C15/C6 and C16/C9) are assembled in a two x two configuration (not illustrated) with their attached outermost cartons (C3, C6, C9 and C12) starting to form the outer-most loop. The outer-most loop is completed by adding in the remaining cartons C1, C2, C4, C5, C7, C8, C10, C11) which remaining cartons may have already been assembled into adjoined pairs (C1, C2; C4, C5; C7, C8; and C10, C11) having a free extended end flap 34b. Other methods of assembly may be possible. The resulting structure comprises sixteen adjoined cartons as shown in Figure 10.

[0049] It can be appreciated that various changes may

be made within the scope of the present invention, for example, the size and shape of the panels may be adjusted to accommodate articles of differing size or shape. The cartons may comprise more than six faces and may be nested together in a variety of nested configurations suitable for an extended end flap 34b of one carton to be used to attach that carton to another adjacent carton. In other embodiments of the invention it is envisaged that each carton may comprise more than one extended end flaps 34b; or that a carton formed from a first blank comprising two extended end flaps 34b may be coupled with a carton formed from a second blank comprising no extended end flaps. Though in the illustrated example the extended end flap 34b is rectangular and is sized to match the dimensions of two end walls; in other embodiments, the extended end flap 34b may not be the full size of the end walls and maybe printed with graphics such that a promotional and/or aesthetic feature is made.

[0050] It will be understood that a simple line of cartons could be connected together using extended end flaps and that three or more cartons could be adjoined in a linear fashion. In such an arrangement a carton having no extended end flaps 34b may form the final carton in the linear sequence or alternatively, the extended end flaps of two cartons may be overlaid.

[0051] It will be recognized that as used herein, directional references such as "top", "bottom", "front", "back", "end", "side", "inner", "outer", "upper" and "lower" do not limit the respective panels to such orientation, but merely serve to distinguish these panels from one another. Any reference to hinged connection should not be construed as necessarily referring to a single fold line only; indeed it is envisaged that hinged connection can be formed from one or more of the following, a short slit, a frangible line or a fold line without departing from the scope of the invention.

Claims

1. A package comprising two or more cartons (C1, C2, C3) each containing one or more articles, the two or more cartons being conjoined by virtue of a first panel (34b) unitarily formed with a first one (C1) of the two or more cartons, the first panel serving as part of a wall of the first carton (C1) and serving to connect the first carton to at least one other (C2) of the two or more cartons so that the two or more cartons form a single package (50).
2. A package according to claim 1, wherein the first panel (34b) serves as part of an end wall (34b, 36b, 32b, 30b) of the first carton (C1) and serves to provide a first connection between the first carton and a second one of the two or more cartons and wherein a second panel (34b) hinged to the second carton (C2) serves as part of an end wall (34b, 36b, 32b, 30b) of the second carton (C2) and serves to provide

a second connection between the second carton and another (C1, C3) of the two or more cartons.

3. A package according to claim 2, wherein the second connection comprises a connection between the second carton and the first carton and wherein the first and second connections are disposed on opposite sides of the package. 5
4. A package according to any preceding claim wherein the two or more cartons are formed from separate blanks of material respectively. 10
5. A package according to any preceding claim, wherein the first carton (C1) and/or the at least one other carton has a tubular structure, opposed ends of the tubular structure are closed by composite end walls respectively, each of the composite end walls being formed from a series of end flaps (36b, 34b, 32b, 30b; 36a, 34a, 32a, 30a and wherein the first panel (34b) forms part of one of the composite end walls. 15 20
6. A package according to any preceding claim, further comprising separation means (52) for separating the two or more cartons and/or wherein each of the two or more cartons comprises means (62, 60) for gaining access to contents of each carton. 25
7. A package according to any preceding claim, wherein the first panel is sized such that it overlaps and reinforces a complete wall of the at least one other carton. 30
8. A package according to any preceding claim, wherein the first panel is hingedly connected to the first carton and provided with a tear strip, and said separation means comprises the tear strip. 35
9. A package according to any of claims 1 to 8, wherein the first panel comprises a glue flap hingedly connected thereto. 40
10. A package according to claim 2 or 3 wherein the first panel serves as part of the end wall of the second carton and wherein the second panel serves as part of the end wall of the first carton. 45
11. A package according to claim 10, wherein the first panel comprises a first glue flap hingedly connected thereto, and the first glue flap serves as part of a front or back wall of the second carton, the front or back wall being disposed adjacent to the end wall of the second carton. 50
12. A package according to claim 11, wherein the second panel comprises a second glue flap hingedly connected thereto, and the second glue flap serves as part of a front or back wall of the first carton, the 55

front or back wall being disposed adjacent to the end wall of the first carton.

13. A blank for forming a carton, the blank comprising a plurality of wall panels for forming carton walls and a connector panel hinged to at least one of the wall panels, the connector panel is foldable to form part of a wall of a carton formed from the blank and the connector panel is operable to provide a connection between a carton formed from the blank and another carton.
14. A part-formed blank comprising the blank according to claim 13 wherein two of the wall panels are secured together.
15. A carton formed from the blank of claim 13 or the part-formed blank of claim 14.

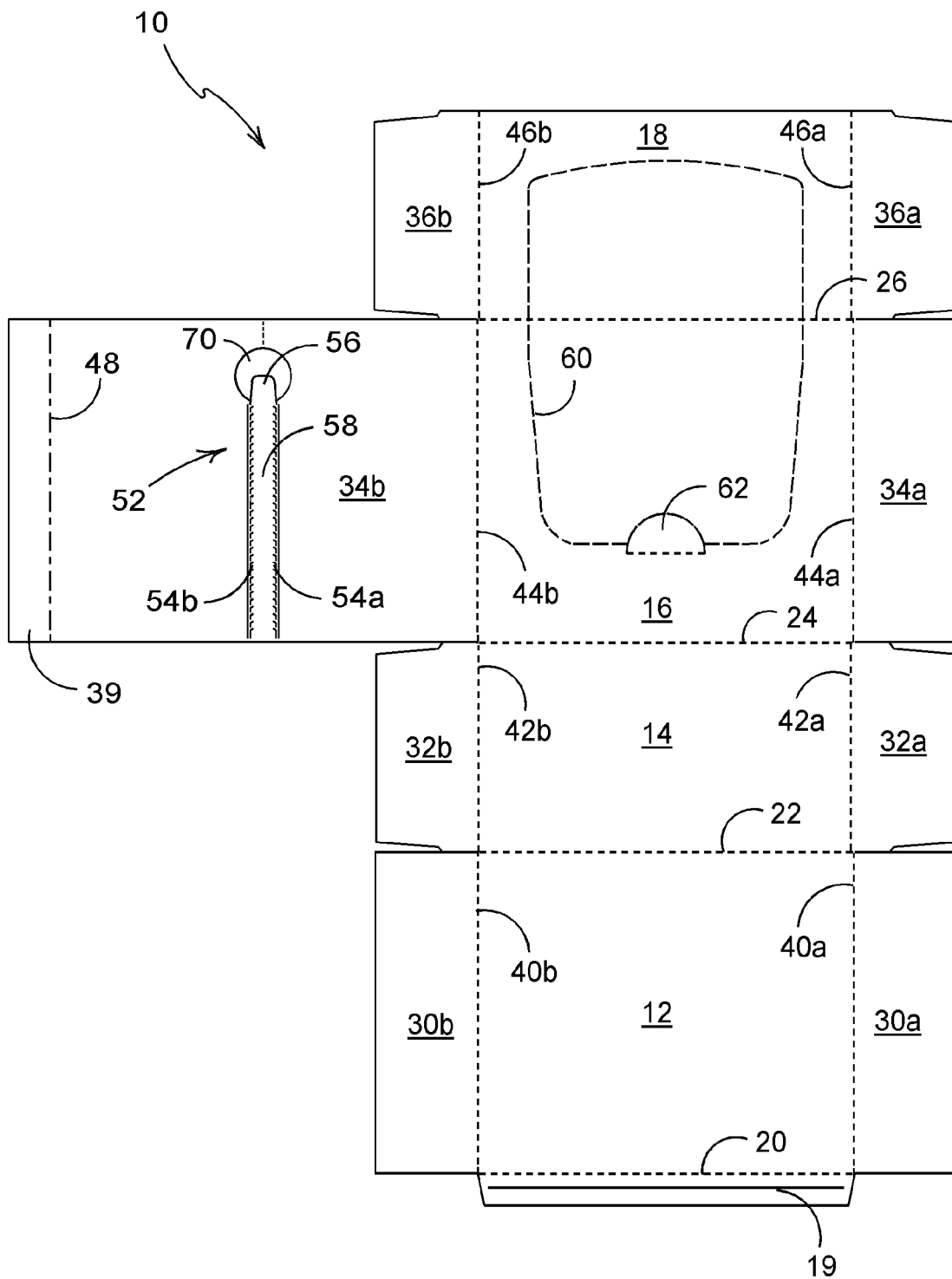


FIGURE 1

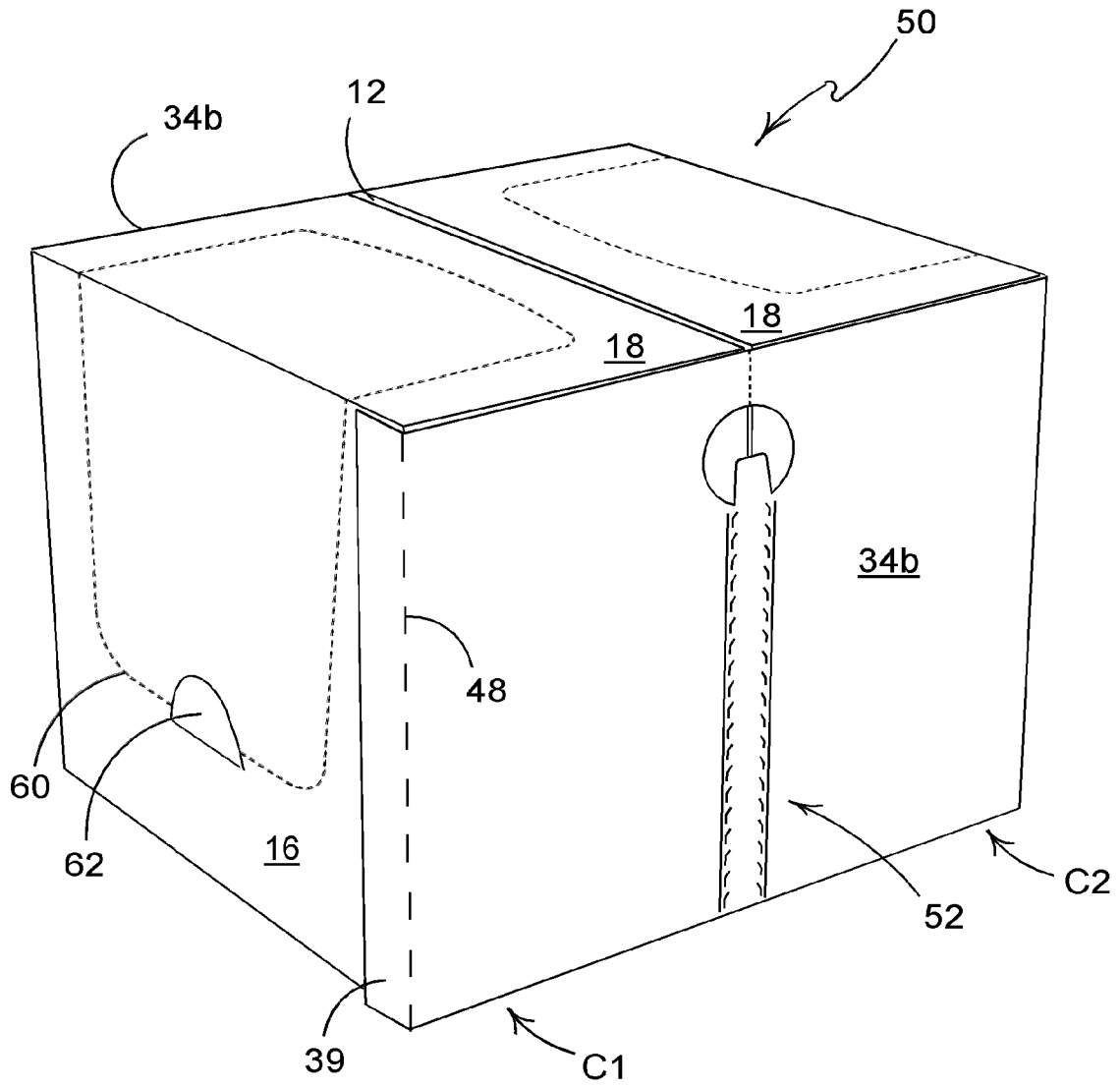


FIGURE 2

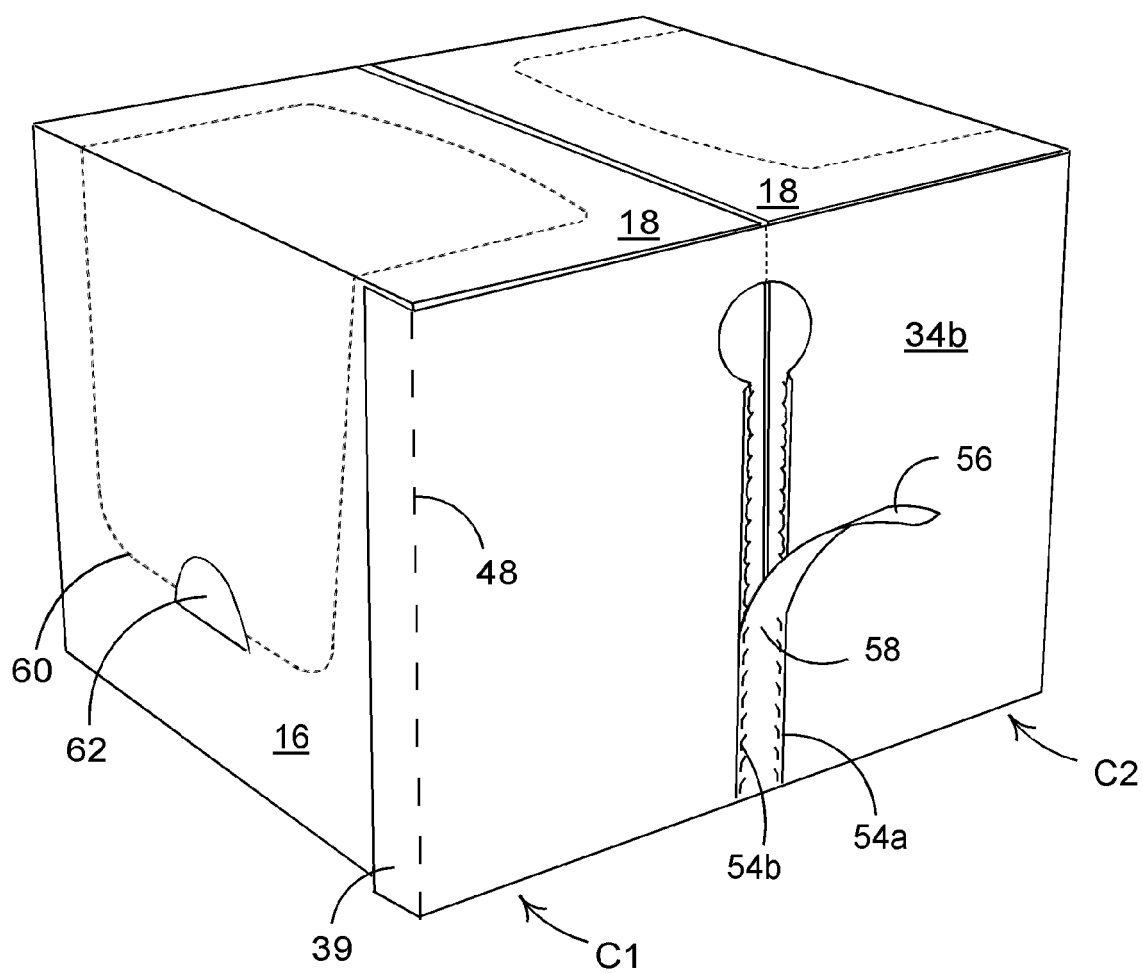


FIGURE 3

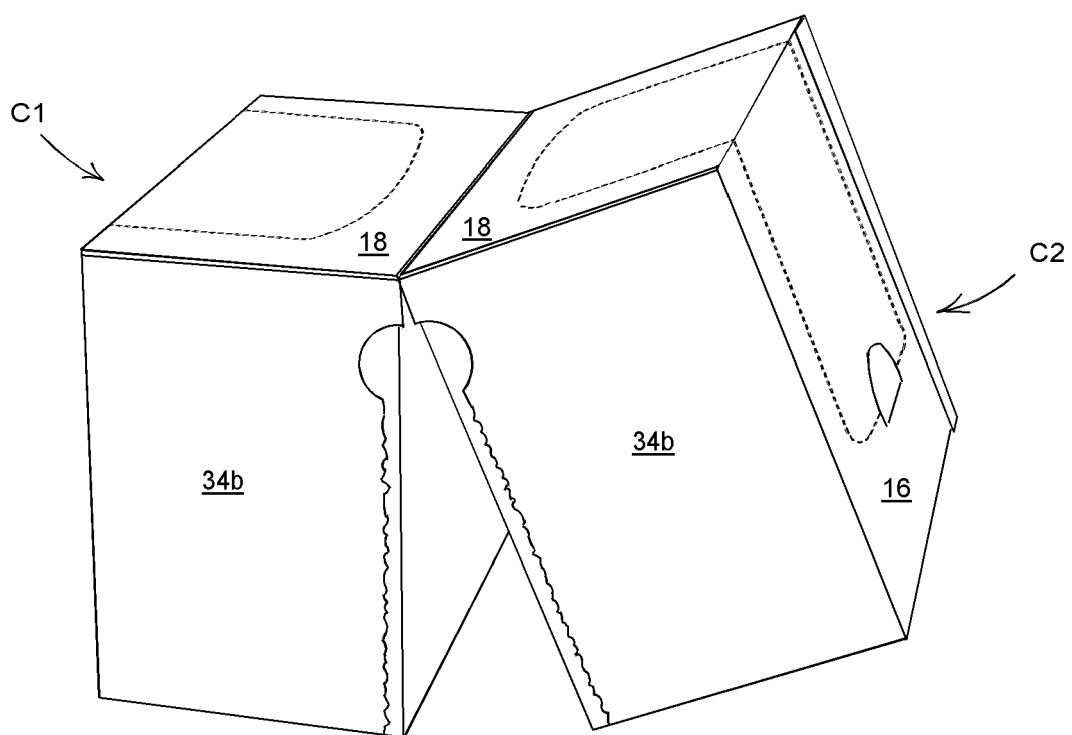


FIGURE 4

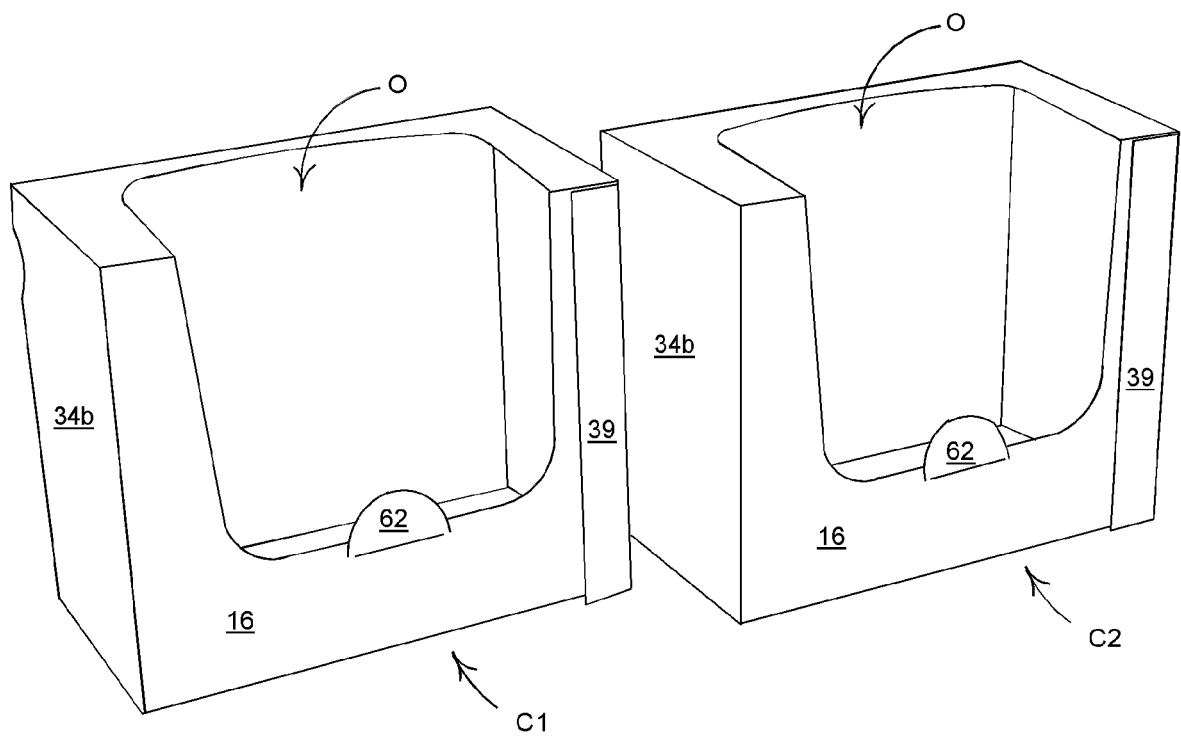


FIGURE 5

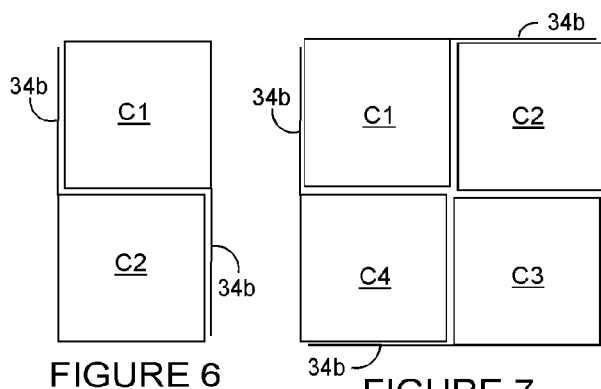


FIGURE 6

FIGURE 7

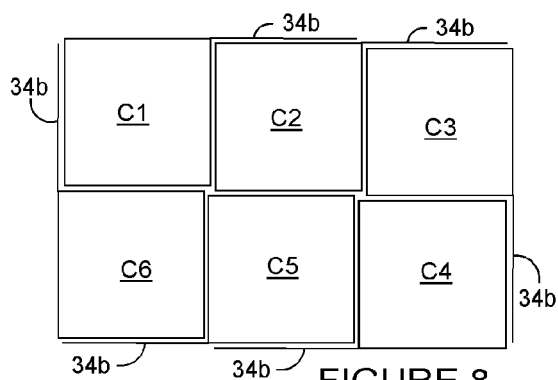


FIGURE 8

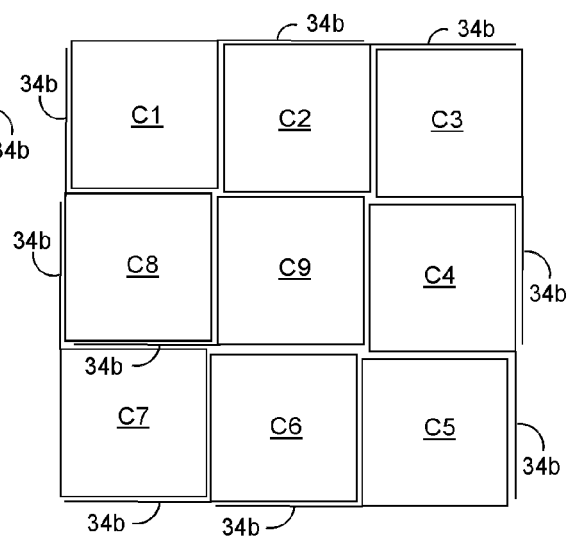


FIGURE 9

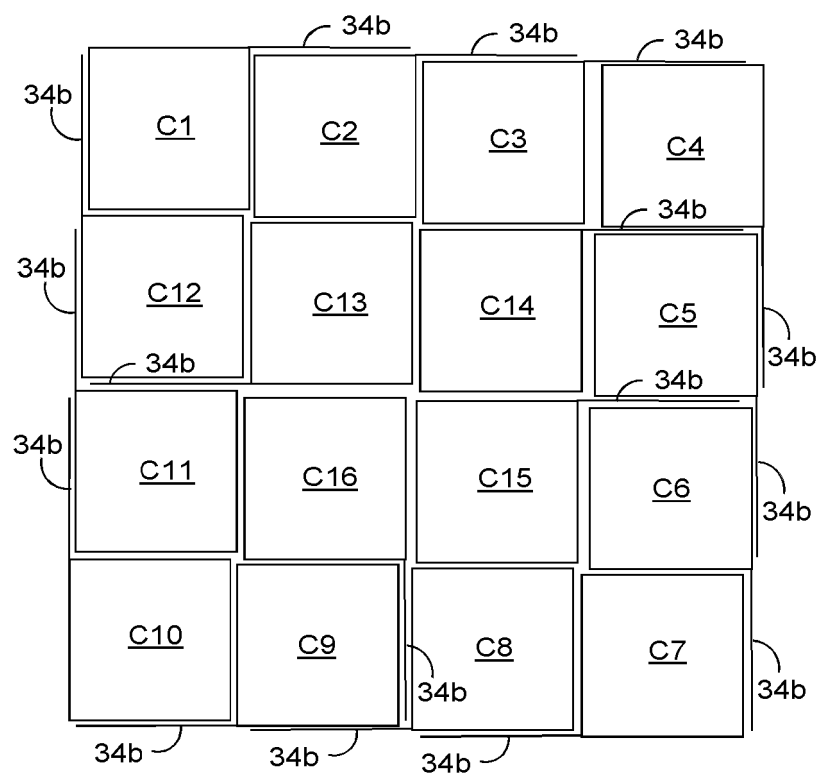


FIGURE 10



EUROPEAN SEARCH REPORT

Application Number
EP 10 15 4298

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 23 April 2010	Examiner Cazacu, Corneliu
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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23-04-2010

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