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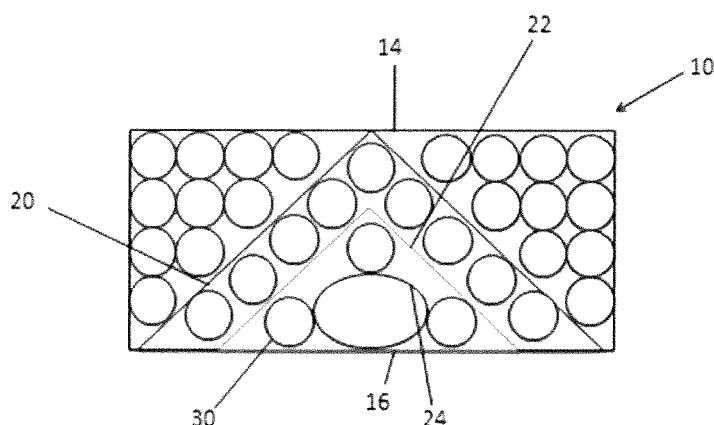
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(54) **Container for consumer articles with two spacers and process for making same**

(57) The present invention relates to a container (10) for consumer articles, the container (10) comprising a box portion, a first spacer (20) which is mounted within the box portion, and a second spacer (22) which is mounted within the first spacer (20), wherein the box portion comprises a box front wall (14), a box rear wall (16), a

box bottom wall and two box side walls (12) extending between the box front wall (14) and the box rear wall (16) and wherein the first (20) and second (22) spacers are mounted essentially perpendicular to the box bottom wall. The present invention further relates to a process for making same.

Figure 5



Description

[0001] The present invention relates to a container for consumer articles comprising a box portion and a spacer mounted within the box portion, and a method for producing the container for consumer articles.

[0002] It is known to package consumer articles in containers formed from folded laminar blanks. For example, elongate smoking articles, such as cigarettes, cigarillos and cigars, are commonly sold in rigid, box-shaped containers. These containers can be hinged lid containers, having a box portion with a lid connected to the box about a hinge line extending across the rear wall of the container. In use, the lid is pivoted about the hinge line to open the pack and to provide access to the smoking articles held in the box. In some cases, the container further includes an inner frame partly wrapped around the consumer articles. This may provide further rigidity to the container as well as protect the consumer articles. In cases where the inner frame extends above an upper edge of the box portion, the inner frame typically also provides a surface against which the lid can close.

[0003] There is a need to provide containers with an internal volume that is bigger in size than the volume occupied by the consumer articles they hold. This excess internal volume may result in articles being displaced or shaken within the container during transport of the unopened container. The consumer articles are free to move around and may easily be shaken during transport of the container. In the case of cigarettes, this may cause some loose tobacco material to fall out the tobacco rods or the breakage of some cigarettes.

[0004] In order to overcome this problem, GB 2 206 328 discloses a cigarette package comprising a planar spacer element which is located between the foil bundled cigarettes and the rear wall of the package to take up the space difference between the foil bundle and the box enclosure. The planar spacer has a thickness sufficient to take up the remaining space in the package and is as wide as the interior of the package. However, the planar spacer in GB 2 206 328 is not flexible, that is, once the first cigarettes have been removed from the package by the consumer an empty space results. Thus, the remaining cigarettes can be displaced or shaken and as a consequence damaged during the continued use of the package.

[0005] It would be desirable to provide an improved container for consumer articles such that the consumer articles are more effectively held within the internal volume of the container even after the removal of the first consumer articles. Thus, such a novel container will hold after removal of one or more of the consumer goods the remaining consumer goods in place at least to a certain extent and will limit to some degree the movement of the consumer goods within the container. It would be particularly desirable to provide such a container that can be readily produced without significant modification of existing container designs or packaging equipment.

[0006] In order to solve this problem the invention provides a container for consumer articles, the container comprising a box portion, a first spacer which is mounted within the box portion, and a second spacer which is mounted within the first spacer and optionally a third spacer which is mounted within the second spacer, wherein the box portion comprises a box front wall, a box rear wall, a box bottom wall and two box side walls extending between the box front wall and the box rear wall and wherein the first and second and optionally third spacers are mounted essentially perpendicular to the box bottom wall.

[0007] The invention further provides a method for making the container of the invention.

[0008] The presence of a first and a second spacer and optionally further spacers within the box portion of the container of the invention has the advantage that the possible movement of consumer goods within the container is further limited and as a consequence also the possible damage resulting from these movements is limited. Even if some or most of the consumer goods are removed from the container, the presence of the first and the second spacers restricts the possible movement of the remaining consumer goods much more than in a container without a spacer or with one single spacer. Thus, the consumer goods are safely kept and held in the container of the invention.

[0009] The box portion of the container of the invention comprises a box front wall, a box rear wall, a box bottom wall and two box side walls extending between the box front wall and the box rear wall and wherein the container optionally further comprises a lid portion comprising a lid front wall, a lid rear wall, a lid top wall and two lid side walls extending between the lid front wall and the lid rear wall.

[0010] The terms "front", "rear", "top", "bottom", "side", "upper", "lower", "height", "width", "depth" and other terms used to describe relative positions of the components of the container according to the invention refer to the container in an upright position with the consumer goods housed in the container and with an open end of the box portion at the top and the consumer goods accessible from the upper end at the front. These terms are used in an analogous manner when referring to the first and second and optionally further spacers which will be defined further below.

[0011] As described above, the spacers used in the containers according to the invention are "mounted" essentially perpendicular to the box bottom wall. The term "mounted" means that the spacers are positioned with their lower ends or lower edges at the box bottom wall. The spacers can be glued or otherwise adhered to the box bottom wall. Preferably they are, however, not glued or adhered to the box bottom wall. In that latter case, it is more preferred that the first spacer has dimensions which are adapted to the inner dimensions of the box portion. For example, the first spacer can have an outer depth which corresponds to the inner depth of the box

portion such that the first spacer rightly fits into the box portion and is kept in place by some friction between the spacer and the box walls. Thus, adapting the first spacer's outer dimensions to the box portion's inner dimensions has the advantage that the first spacer can be mounted in the box portion without the need of any adhesion of the first spacer to the box portion. Nevertheless the first spacer will be correctly positioned and will be kept in place even after some of the consumer goods have been removed.

[0012] All spacers are more preferably mounted perpendicular to the box bottom wall. A slight deviation from a perpendicular arrangement of the spacers is acceptable as long as the removal of the consumer goods from the container is not negatively influenced.

[0013] As a consequence of the various spacers being mounted essentially perpendicular, and more preferred perpendicular, to the box bottom wall these various spacers are essentially parallel, and more preferred parallel, to each other.

[0014] It is also more preferred that all spacers are mounted such that there is a distance between the spacers. This, as a consequence, leads to a space between the spacers. For example, the distance can be about 5 millimeters or correspond to the diameter of a regular cigarette. Then, consumer goods, for example a row of regular cigarettes, can be filled within that space between two spacers. It is also more preferred that all spacers are mounted such that they are not lying flat at a neighbouring box wall but that a space results between the spacers and the surrounding box walls. Again consumer goods, for example cigarettes, can be filled within that space between a spacer and a box wall. Thus, the more preferred arrangement of the spacers within the box portion such that a space results between all spacers, between first spacer and the box walls and between second or, if present, third spacer and the box walls has the effect that the box portion is divided into smaller segments in which the possible movement of the consumer goods is limited and the consumer goods are more effectively held within the various segments of the container even after the removal of the first consumer articles.

[0015] The consumer articles are preferably elongate smoking articles, such as cigarettes, cigarillos and cigars. More preferably, the consumer articles are cigarettes. Thus, the container of the invention is preferably a container for elongate smoking articles and more preferably a cigarette pack. However, containers in accordance with the present invention can also be used with a variety of consumer goods other than smoking articles.

[0016] As a result of the elongate nature of the preferred smoking articles it is similarly preferred that the height (corresponding to the distance between the lower end of the container, that is, the box bottom wall, and the upper end of the container, that is, if present the lid top wall) of the container of the invention is larger than the width (corresponding to, for example, the maximum distance between the box side walls) of the container of the

invention. It is then also preferred that the width of the container of the invention is larger than the depth (corresponding to, for example, the maximum distance between the box front wall and the box rear wall) of the container of the invention.

[0017] The more preferred cigarette pack of the invention can either be a hinged-lid pack or a soft pack (that is, a container with a box portion made from a laminar blank of a thinner, more easily deformable material, such as, for example paper, than typically used for hinged-lid packs) or a pack having a sliding mechanism for opening the container. It will be appreciated that through appropriate choices of the dimensions, the cigarette packs according to the invention may be designed for different numbers of cigarettes of conventional size, king size, super-king size, slim or super-slim cigarettes, with diameters for the cigarettes ranging from 4 millimeters to 9 millimeters.

[0018] The first and second spacers and optionally further spacers are inserted into the box portion. These spacers are in general means to keep the consumer goods of the container in place. Preferably, the two spacers have a flat or sheet-like structure which is either bent or folded. If the flat or sheet-like spacer structure is bent, a more or less curved cross-section of the spacer will result. Preferably such a curved cross-section is semi-circular, circular, u-shaped, ellipsoid or oval. If the flat or sheet-like spacer structure is folded, at least one edge will result. Preferably such a spacer with at least one edge has a cross-section which is v-shaped, triangular, trapezoid or rectangular. More preferably, the cross-section of the spacers is circular, triangular or rectangular. It is also more preferred that the cross-section of the spacer is constant over the whole height of the spacer.

[0019] The bent spacer as described above preferably contains one spacer wall wherefrom the semi-circular, circular, ellipsoid or oval spacer can be made by connecting overlapping end areas of the spacer wall to each other, for example by gluing. However, the desired cross-section of the spacer can also be formed by the spacer wall in combination with one or more, preferably one, of the box walls. For example, a u-shaped spacer can be introduced as such into the box portion and placed with the ends of the spacer wall against one of the box walls, for example the box rear wall, in order to close the outer circumference of the spacer. Alternatively, such a u-shaped spacer can have a second spacer wall which is flat and connected to the ends of the first and u-shaped spacer wall. Of course, the semi-circular, circular, ellipsoid or oval spacer can also be made from two or more spacer walls in a similar way as described above for the u-shaped spacer. For example, an oval spacer can be prepared from two u-shaped spacer walls which are connected, for example glued, to each other.

[0020] The folded spacer as described above contains, as a result of the at least one edge, at least two spacer walls. As for the bent spacer, the desired cross-section of the folded spacer can be achieved by combining the

spacer walls to each other or by the spacer walls in combination with one or more, preferably one, of the box walls. In the simplest way a sheet-like structure can be folded once so that a v-shaped cross-section results for the spacer. Such a v-shaped spacer with two spacer walls can be introduced as such into the box portion and placed with the ends of the spacer walls against one of the box walls, for example the box rear wall, in order to close the outer circumference of the spacer. Alternatively, such a v-shaped spacer can have a third spacer wall which is flat and connected to the ends of the first and the second spacer walls. In both cases the resulting spacer will have triangular cross-section. Similarly, a spacer with a trapezoid or rectangular cross-section can be made either from one flat or sheet-like structure which is folded three times followed by connecting, for example gluing, overlapping end areas of the spacer walls to each other or from one flat or sheet-like structure which is folded two times and then inserted into the box portion such that the missing fourth spacer wall is supplemented by one of the box walls or from two or three flat or sheet-like structures which are, optionally after folding, connected to each other at overlapping end areas.

[0021] The bent and folded spacers can contain in addition spacer bottom walls.

[0022] Since the second spacer is mounted within the first spacer, the first spacer necessarily has to be hollow or have a lid which can be opened. Thus, only the second spacer but not the first spacer can contain in addition a spacer top wall. Adding a spacer top wall to the second spacer has the advantage for the manufacturer that the internal volume of the container can easily be adapted to the needed volume should the desired amount of consumer goods only require less volume than provided by the container.

[0023] The height of the spacers should not exceed the height of the container. Preferably, the heights of the first and second spacers are identical and larger than the width of the first spacer. The height of the spacers may also be slightly smaller, for example 0.5 to 3 centimeters smaller, than the height of the box portion. It is further preferred that the first and second spacers have the same height. Since the preferred elongate smoking articles typically have a height which corresponds to that of the box portion, this arrangement has the advantage that consumer goods such as cigarettes are exceeding the upper ends of the spacers and can easily be gripped by the consumer without the spacer being a barrier or hindrance therefor.

[0024] It is similarly preferred that the first spacer has a height which is slightly, for example 0.5 to 2 centimeters, smaller than the height of the second spacer. The second spacer is mounted within the first spacer. Thus, this arrangement has the additional advantage that the first spacer after removal of consumer goods such as cigarettes from the outer regions of the container cannot be a barrier or hindrance for the consumer who wishes to access the consumer goods being present in the inner

regions of the container such as within the second spacer. This is true in particular if the second spacer has a height which approximates the height of the box portion.

[0025] It is also preferred that a third spacer is present in addition to the first and second spacers, wherein this third spacer is mounted within the second spacer. It is then further preferred that all three spacers have the same height. This height is slightly smaller, for example 0.5 to 3 centimeters smaller, than the height of the box portion. It is further preferred that the first spacer has a height which is slightly, for example 0.5 to 2 centimeters, smaller than the height of the second spacer and that the second spacer has a height which is slightly, for example 0.5 to 2 centimeters, smaller than the height of the third spacer.

[0026] Preferably the cross-sections of the two spacers are similar due to the shape of the spacers all being generally the same, for example triangles. More preferably the cross-sections of the first and the second spacers - or if three or more spacers are present of all spacers - are adapted to each other such that a constant distance between first and second spacers or all spacers results. For example, if the cross-sections of the first and second spacers or all spacers are triangles with identical angles where the triangles only differ by the length of the sides of the triangles a constant distance between the two spacers or between all spacers will result. This has the advantage that consumer goods can safely be stored in-between two spacers. In addition, for the more preferred cigarette packs of the invention the dimensions of neighbouring spacers can be adjusted such that one or, if desired, two rows of cigarettes can be placed into the room between these two neighbouring spacers. For that purpose the distance between two spacers is for a cigarette pack preferably about 0.5 centimeters to about 1.2 centimeters. After removal of one or more of these cigarettes the remaining cigarettes will have because of the closeness of the spacer walls only limited flexibility for movement and will for that reason be safely kept in the partially emptied pack.

[0027] For the spacer where the spacer wall is connected to each other or the spacer walls are connected to each other such that a closed circumference results the cross-sectional area of the spacer is the area which is enclosed by the spacer wall or the spacer walls. For the spacer where the spacer wall is not connected to each other or the spacer walls are not connected to each other such that no closed circumference results the cross-sectional area of the spacer is the area which is enclosed by the spacer wall or the spacer walls and an imaginary straight line which connects the ends of the spacer wall or the ends of the spacer walls. The cross-sectional area of the box portion is the area which is enclosed by the box front wall, the box rear wall and the two box side walls.

[0028] A container is preferred wherein the cross-sectional area of the first spacer is about 20 percent to about 60 percent of the cross-sectional area of the box portion,

wherein the cross-sectional area of the second spacer is about 10 percent to about 40 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the first and second spacers is at least 10 percent, and wherein, if a third spacer is present, the cross-sectional area of the third spacer is about 5 percent to about 10 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the second and third spacers is at least 10 percent. Such a preferred container of the invention balances the volume available within the container such that the potential movement of the consumer goods is sufficiently limited to at least reduce the risk of potential damage.

[0029] A container is more preferred wherein the cross-sectional area of the first spacer is about 30 percent to about 50 percent of the cross-sectional area of the box portion, wherein the cross-sectional area of the second spacer is about 15 percent to about 30 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the first and second spacers is at least 15 percent, and wherein, if a third spacer is present, the cross-sectional area of the third spacer is about 5 percent to about 10 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the second and third spacers is at least 10 percent. Such a more preferred container of the invention even more balances the volume available within the container such that the potential movement of the consumer goods is further limited to further reduce the risk of potential damage.

[0030] A container is preferred wherein the outer depth of the first spacer corresponds to the inner depth of the box portion, or wherein the outer width of the first spacer corresponds to the inner width of the box portion, or wherein the outer depth of the first spacer corresponds to the inner depth of the box portion and the outer width of the first spacer corresponds to the inner width of the box portion. The advantage of all these arrangements is that the first spacer will be kept automatically by friction and adjacent walls of the box portion within the box portion and cannot or only hardly move within the box portion once the consumer goods are removed. This can be further supported by gluing or otherwise fixing the first spacer to one or more of the box walls. Similarly the second and third spacers can be glued or otherwise fixed to one or more of the box walls, for example, the box bottom wall.

[0031] For the preferred containers of the invention containing smokable articles and in particular for the more preferred cigarette packs of the invention the smoking articles, in particular the cigarettes, are located within the box portion but not within the first and second and optionally third spacers, or the smoking articles are located within the box portion and within the first and second and optionally third spacers, or the smoking articles are located within the box portion and within one of the first, second and third spacers but not within the other

two spacers of the first, second and third spacers, or the smoking articles are located within the box portion and within two of the first, second and third spacers but not within the remaining spacer of the first, second and third spacers. It can be seen that the presence of two, three or even four or more spacers gives the manufacturer a high degree of flexibility. More or less cigarettes can be packed into one container. The room within a given spacer can be packed completely or only partially or completely left free, as desired and needed by the manufacturer. Irrespective of the packing chosen, the limitation of the possible movement for the smoking articles and in particular the cigarettes by the presence of the spacers will keep these in place, even if some of the smoking articles or cigarettes have been removed.

[0032] The material for the container is preferably cardboard or paper, more preferably the material for the container is cardboard. This material for the container has a base weight of 140 grams per square meter to 250 grams per square meter, preferably 160 grams per square meter to 240 grams per square meter, more preferably 180 grams per square meter to 230 grams per square meter. All base weights mentioned in the subject application are determined according to ASTM D646 - 13 (in conjunction with ASTM D685 - 12).

[0033] The spacers can be made from any sheet or sheet-like material. Preferably, the spacer is made of a laminate, a cardboard, a paper or a foil, or a plastic. More preferably, the spacers are made from cardboard or paper or plastic. The spacers can have a base weight of at least 120 grams per square meter, preferably 130 to 250 grams per square meter and more preferably 160 to 230 grams per square meter (determined according to ASTM D646 - 13 (in conjunction with ASTM D685 - 12) - see above).

[0034] The container of the invention can be prepared by the carrying out, not necessarily in that order, the steps of:

- (a) providing a main blank for forming a box portion and optionally a lid portion,
- (b) forming from the main blank the box portion comprising a box front wall, a box rear wall, a box bottom wall and two box side walls extending between the box front wall and the box rear wall, and optionally the lid portion comprising a lid front wall, a lid rear wall, a lid top wall and two lid side walls extending between the lid front wall and the lid rear wall,
- (c) providing a first spacer blank for forming a first spacer,
- (d) forming the first spacer from the first spacer blank by bending or folding the spacer blank into the desired shape, such as a triangle or a rectangle, optionally by connecting overlapping ends of the spacer blank to each other,
- (e) providing a second spacer blank for forming a second spacer,
- (f) forming the second spacer from the second spacer

er blank by bending or folding the spacer blank into the desired shape, such as a triangle or a rectangle, optionally by connecting overlapping ends of the spacer blank to each other, and

(g) introducing the first and second spacers into the box portion of the container such that the first spacer is mounted essentially perpendicular to the box bottom wall within the box portion and

that the second spacer is mounted essentially perpendicular to the box bottom wall within the first spacer,

and optionally

(h) providing a third spacer blank for forming a third spacer,

(i) forming the third spacer from the third spacer blank by bending or folding the spacer blank into the desired shape, such as a triangle or a rectangle, optionally by connecting overlapping ends of the spacer blank to each other,

(j) introducing the third spacer into the box portion of the container such that the third spacer is mounted essentially perpendicular to the box bottom wall within the second spacer.

[0035] Assembling or forming the box portion and optionally the lid portion from the main blank will typically be done in the conventional way by folding the laminar main blank and sealing overlying panels of the laminar blank together in order to retain the container in the assembled shape. This may be achieved using conventional glues or adhesives.

[0036] At an appropriate time during the process the consumer goods are introduced into the container. This can be at the end of the process after all spacers have been inserted into the container. It can, however, also be done during the process. For example for cigarettes as the consumer goods, the cigarettes might be placed onto a spacer blank. The spacer is then formed around the cigarettes and the resulting bundle introduced into the container. For that purpose the cigarettes can be wrapped into an inner liner and then placed onto the spacer blank.

[0037] Containers according to the invention may comprise box portions in the shape of a rectangular parallelepiped, with right-angled longitudinal and right-angled transverse edges. Alternatively, the box portion may comprise one or more rounded longitudinal edges, rounded transverse edges, bevelled longitudinal edges or bevelled transverse edges, or combinations thereof. For example, the container according to the invention may comprise, without limitation:

- one or two longitudinal rounded or bevelled edges on the front wall, and/or one or two longitudinal rounded or bevelled edges on the back wall,
- one or two transverse rounded or bevelled edges on the front wall, and/or one or two transverse rounded or bevelled edges on the back wall,

- one longitudinal rounded edge and one longitudinal bevelled edge on the front wall, and/or one transverse rounded edge and one transverse bevelled edge on the back wall,

- 5 - one or two transverse rounded or bevelled edges on the front wall and one or two longitudinal rounded or bevelled edges on the front wall,

- two longitudinal rounded or bevelled edges on a first side wall or two transverse rounded or bevelled edges on the second side wall.

[0038] Where the container comprises one or more rounded edges and is made from one or more laminar blanks, preferably the blanks comprise three, four, five, six or seven scoring lines or creasing lines to form each rounded edge in the assembled container. The scoring lines or creasing lines may be either on the inside of the container or on the outside of the container. Preferably, the scoring lines or creasing lines are spaced from each other by between about 0.3 millimeter and 4 millimeter.

[0039] Preferably, the spacing of the creasing lines or scoring lines is a function of the thickness of the laminar blank. Preferably, the spacing between the creasing lines or scoring lines is between about 0.5 and about 4 times larger than the thickness of the laminar blank.

[0040] Where the box portion of the container comprises one or more bevelled edge, preferably the bevelled edge has a width of between about 1 millimetre and about 10 millimetre, preferably between about 2 and about 6 millimetre. Alternatively, the container may comprise a double bevel formed by three parallel creasing or scoring lines that are spaced such that two distinct bevels are formed on the edge of the container.

[0041] Where the box portion of the container comprises a bevelled edge and is made from one or more laminar blanks, the bevel may be formed by two parallel creasing lines or scoring lines in the laminar blank. The creasing lines or scoring lines may be arranged symmetrically to the edge between a first wall and a second wall. Alternatively, the creasing lines or scoring lines may be arranged asymmetrically to the edge between the first wall and the second wall, such that the bevel reaches further into the first wall of the container than into the second wall of the container.

[0042] Through an appropriate choice of the dimensions of the box portion, containers according to the invention may be designed to hold different total numbers of consumer goods, preferably smoking articles, or different arrangements of smoking articles. For example, through an appropriate choice of the dimensions thereof, containers according to the invention may be designed to hold a total of between ten and twenty smoking articles.

[0043] Containers according to the present invention may hold smoking articles of the same type or brand, or of different types or brands. In addition, both filterless smoking articles and smoking articles with various filter tips may be contained, as well as smoking articles of differing length (for example, between about 40 millime-

ter and about 180 millimeter), diameter (for example, between about 4 millimeter and about 9 millimeter). In addition, the smoking articles may differ in strength of taste, resistance to draw and total particulate matter delivery.

[0044] The length, width and depth of containers according to the invention may be such that, in the closed position, the resultant overall dimensions of the container are similar to the dimensions of a typical disposable hinge-lid pack of twenty cigarettes.

[0045] Preferably, containers according to the invention have a height of between about 60 millimeter and about 150 millimeter, more preferably a height of between about 70 millimeter and about 125 millimeter, wherein the height is measured from the top wall to the bottom wall of the container.

[0046] Preferably, containers according to the invention have a width of between about 12 millimeter and about 150 millimeter, more preferably a width of between about 70 millimeter and about 125 millimeter, wherein the width is measured from one side wall to the other side wall of the container.

[0047] Preferably, containers according to the invention have a depth of between about 6 millimeter and about 100 millimeter, more preferably a depth of between about 12 millimeter and about 25 millimeter wherein the depth is measured from the front wall to the back wall of the container (comprising the hinge between box and lid).

[0048] Preferably, the ratio of the height of the container to the depth of the container is in between about 0.3 to 1 and about 10 to 1, more preferably between about 2 to 1 and about 8 to 1, most preferably between about 3 to 1 and 5 to 1.

[0049] Preferably, the ratio of the width of the container to the depth of the container is between about 0.3 to 1 and about 10 to 1, more preferably between about 2 to 1 and about 8 to 1, most preferably between about 2 to 1 and 3 to 1.

[0050] Containers according to the invention may be shrink-wrapped or otherwise over wrapped with a transparent polymeric film of, for example, high or low density polyethylene, polypropylene, oriented polypropylene, polyvinylidene chloride, cellulose film, or combinations thereof in a conventional manner. Where containers according to the invention are over wrapped, the over wrapper may include one or more tear tapes. In addition, the over wrapper may be printed with images, consumer information or other data. The additional outer wrapper may advantageously protect the surface of the container for example against abrasion during handling.

[0051] As well as housing a group of smoking articles, the container may further comprise other consumer goods, for example matches, lighters, extinguishing means, breath-fresheners or electronics. The other consumer goods may be attached to the outside of the container, contained within the container, for example within one of the spacers, along with the smoking articles, in a separate compartment of the container or combinations thereof.

[0052] The exterior surfaces of containers according to the invention may be printed, embossed, debossed or otherwise embellished with manufacturer or brand logos, trademarks, slogans and other consumer information and indicia.

[0053] A preferred embodiment of the subject invention is the combination of the above-described preferred meanings. A particular preferred embodiment of the subject invention is the combination of the above-described more preferred meanings.

[0054] The invention will be further described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows a cross-sectional view of a container according to the subject invention with the outer box walls, first and second spacers and several cigarettes;

Figure 2 shows a cross-sectional view of a similar container with a slightly different second spacer; and Figures 3 to 5 are cross-sectional views of containers according to the subject invention with the outer box walls, first, second and third spacers and again several cigarettes.

[0055] In Figure 1 the container 10 can be seen with the box side walls 12, the box front wall 14 and the box rear wall 16. Two spacers are mounted within the container 10, namely a first spacer 20 and within same the second spacer 22. Both these spacers have an oval cross-section. It can be seen that the volume within the container 10 is somehow divided into different portions. Two of these portions are the outer areas of the container 10 where two separate groups of ten cigarettes 30 each are located. Further ten cigarettes 30 are present between the first spacer 20 and the second spacer 22. The volume within the second spacer 22 is empty so that a total of thirty cigarettes 30 results for the container 10 of Figure 1.

[0056] Figure 2 shows a further embodiment of the invention which is very similar to the container 10 of Figure 1. Whereas the box portion and the first spacer 20 remained unchanged, the second spacer 22 now has a rectangular cross-section. The result of this minor modification is that the volume between first 20 and second 22 spacers is no now smaller. As a consequence only four cigarettes 30 can now be provided in-between the first 20 and second 22 spacers. A total of twenty-four cigarettes 30 results for the container 10 of Figure 2. This exemplifies that the use of two spacers gives the manufacturer in a very easy way a high flexibility to adjust the container's volume according to the needs of a specific situation.

[0057] Figure 3 shows a container 10 with three spacers. The first spacer 20 has an outer width which corresponds to the inner width of the box portion and is for that reason kept between box front wall 14 and box rear wall 16. Second spacer 22 is mounted within first spacer

20, and third spacer 24 is mounted within second spacer 22. All three spacers have a triangular cross-section and are designed such that they have identical angles and only differ in the lengths of their sides. This leads to a constant distance between the spacers which distance corresponds for the embodiment of Figure 3 to the diameter of a cigarette 30. The embodiment of Figure 3 has again two bundles of ten cigarettes 30 each in its outer areas, nine cigarettes 30 within the volume between first spacer 20 and second spacer 22, no cigarette within the volume between second spacer 22 and third spacer 24, and one cigarette 30 within third spacer 24. Thus, a total of thirty cigarettes 30 results for the container 10 of Figure 3 again proving the high flexibility which can be achieved with the container 10 of the invention.

[0058] Figures 4 and 5 then show alternative embodiments of the one depicted in Figure 3. In both cases the third spacer 24 is replaced by one with a different cross-section. In Figure 4 the third spacer 24 has a rectangular cross-section. In Figure 5 the third spacer 24 has an oval cross-section. In both cases there are no cigarettes within the third spacer 24 but now three cigarettes 30 between second 22 and third 24 spacers. Thus, the total number of cigarettes in the two embodiments of Figures 4 and 5 is now thirty- two again underlying the flexibility of the claimed system.

Claims

1. A container (10) for consumer articles, the container (10) comprising:
 - a box portion,
 - a first spacer (20) which is mounted within the box portion, and
 - a second spacer (22) which is mounted within the first spacer (20),
 - wherein the box portion comprises a box front wall (14), a box rear wall (16), a box bottom wall and two box side walls (12) extending between the box front wall (14) and the box rear wall (16) and
 - wherein the first (20) and second (22) spacers are mounted essentially perpendicular to the box bottom wall.
2. The container (10) according to claim 1 wherein the cross-sections of the first (20) and second (22) spacers are semi-circular, circular, u-shaped, ellipsoid, oval, v-shaped, triangular, trapezoid, rectangular, or any combination thereof.
3. The container (10) according to claim 1 or claim 2 comprising a third spacer (24) which is mounted essentially perpendicular to the box bottom wall within the second spacer (22).
4. The container (10) according any one of the preceding claims wherein the cross-sections of all spacers are the same.
5. The container (10) according any one of the preceding claims wherein all spacers are mounted within the box portion such that a space results between all spacers, between first spacer and the box walls and between second or, if present, third spacer and the box walls.
6. The container (10) according to any one of the preceding claims wherein the cross-sectional area of the first spacer (20) is about 20 percent to about 60 percent of the cross-sectional area of the box portion, wherein the cross-sectional area of the second spacer (22) is about 10 percent to about 40 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the first (20) and second (22) spacers is at least 10 percent, and wherein, if a third spacer (24) is present, the cross-sectional area of the third spacer (24) is about 5 percent to about 10 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the second (22) and third (24) spacers is at least 10 percent.
7. The container (10) according to claim 6 wherein the cross-sectional area of the first spacer (20) is about 30 percent to about 50 percent of the cross-sectional area of the box portion, wherein the cross-sectional area of the second spacer (22) is about 15 percent to about 30 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the first (20) and second (22) spacers is at least 15 percent, and wherein, if a third spacer (24) is present, the cross-sectional area of the third spacer (24) is about 5 percent to about 10 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the second (22) and third (24) spacers is at least 10 percent.
8. The container (10) according to any one of the preceding claims wherein the outer depth of the first spacer (20) corresponds to the inner depth of the box portion, or wherein the outer width of the first spacer (20) corresponds to the inner width of the box portion, or wherein the outer depth of the first spacer (20) corresponds to the inner depth of the box portion and the outer width of the first spacer (20) corresponds to the inner width of the box portion.
9. The container (10) according to any one of the preceding claims wherein the heights of all spacers are identical and larger than the width of the first spacer (20).

10. The container (10) according to anyone of claims 1 to 8 wherein,
if two spacers are present, the height of the second spacer (22) is larger than the height of the first spacer (20) and the height of the box portion is larger than the height of the second spacer (22), and wherein,
if three spacers are present, the height of the third spacer (24) is larger than the height of the second spacer (22), the height of the second spacer (22) is larger than the height of the first spacer (20) and the height of the box portion is larger than the height of the third spacer (24).
11. The container (10) according to any of the preceding claims wherein the consumer articles are smoking articles, more preferably cigarettes (30).
12. The container (10) according to claim 11 wherein the smoking articles are located within the box portion but not within the first (20) and second (22) and optionally third (24) spacers, or wherein the smoking articles are located within the box portion and within the first (20) and second (22) and optionally third (24) spacers, or wherein the smoking articles are located within the box portion and within one of the first (20), second (22) and third (24) spacers but not within the other two spacers of the first (20), second (22) and third (24) spacers, or wherein the smoking articles are located within the box portion and within two of the first (20), second (22) and third (24) spacers but not within the remaining spacer of the first (20), second (22) and third (24) spacers.
13. The container (10) according to claim 11 wherein the smoking articles are located within the box portion and within the outer spacer or out spacers but not within the innermost spacer.
14. A process for preparing a container (10) for consumer articles according to any of the preceding claims, comprising the steps of:
- (a) providing a main blank for forming a box portion,
 - (b) forming from the main blank the box portion comprising a box front wall (14), a box rear wall (16), a box bottom wall and two box side walls (12) extending between the box front wall (14) and the box rear wall (16),
 - (c) providing a first spacer blank for forming a first spacer (20),
 - (d) forming the first spacer (20) from the first spacer blank,
 - (e) providing a second spacer blank for forming a second spacer (22),
 - (f) forming the second spacer (22) from the second spacer blank, and
 - (g) introducing the first (20) and second (22) spacers into the box portion of the container such that the first spacer (20) is mounted essentially perpendicular to the box bottom wall within the box portion and that the second spacer (22) is mounted essentially perpendicular to the box bottom wall within the first spacer (20), and optionally
 - (h) providing a third spacer blank for forming a third spacer (24),
 - (i) forming the third spacer (24) from the third spacer blank,
 - (j) introducing the third spacer (24) into the box portion of the container (10) such that the third spacer (24) is mounted essentially perpendicular to the box bottom wall within the second spacer (22).
15. The process of claim 14 further comprising the steps of introducing consumer goods at an appropriate time into the container (10).
- Amended claims in accordance with Rule 137(2) EPC.**
1. A container (10) for consumer articles, the container (10) comprising:
- a box portion,
 - a first spacer (20) which is mounted within the box portion, and
 - a second spacer (22) which is mounted within the first spacer (20),
- wherein the box portion comprises a box front wall (14), a box rear wall (16), a box bottom wall and two box side walls (12) extending between the box front wall (14) and the box rear wall (16), wherein the first (20) and second (22) spacers are mounted essentially perpendicular to the box bottom wall, and wherein the cross-sectional area of the first spacer (20) is 20 percent to 60 percent of the cross-sectional area of the box portion, wherein the cross-sectional area of the second spacer (22) is 10 percent to 40 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the first (20) and second (22) spacers is at least 10 percent.
2. The container (10) according to claim 1 wherein the cross-sections of the first (20) and second (22) spacers are semi-circular, circular, u-shaped, ellipsoid, oval, v-shaped, triangular, trapezoid, rectangular, or any combination thereof.

3. The container (10) according to claim 1 or claim 2 comprising a third spacer (24) which is mounted essentially perpendicular to the box bottom wall within the second spacer (22). 5
4. The container (10) according any one of the preceding claims wherein the cross-sections of all spacers are the same. 10
5. The container (10) according any one of the preceding claims wherein all spacers are mounted within the box portion such that a space results between all spacers, between first spacer and the box walls and between second or, if present, third spacer and the box walls. 15
6. The container (10) according to any one of claims 3 to 5 , wherein the cross-sectional area of the third spacer (24) is 5 percent to 10 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the second (22) and third (24) spacers is at least 10 percent. 20
7. The container (10) according to anyone of the preceding claims wherein the cross-sectional area of the first spacer (20) is 30 percent to 50 percent of the cross-sectional area of the box portion, wherein the cross-sectional area of the second spacer (22) is 15 percent to 30 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the first (20) and second (22) spacers is at least 15 percent, and wherein, if a third spacer (24) is present, the cross-sectional area of the third spacer (24) is 5 percent to 10 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the second (22) and third (24) spacers is at least 10 percent. 25
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8. The container (10) according to any one of the preceding claims wherein the outer depth of the first spacer (20) corresponds to the inner depth of the box portion, or wherein the outer width of the first spacer (20) corresponds to the inner width of the box portion, or wherein the outer depth of the first spacer (20) corresponds to the inner depth of the box portion and the outer width of the first spacer (20) corresponds to the inner width of the box portion. 40
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9. The container (10) according to any one of the preceding claims wherein the heights of all spacers are identical and larger than the width of the first spacer (20). 50
10. The container (10) according to any one of claims 1 to 8 wherein, if two spacers are present, the height of the second spacer (22) is larger than the height of the first spacer (20) and the height of the box portion is larger than the height of the second spacer (22), and wherein, if three spacers are present, the height of the third spacer (24) is larger than the height of the second spacer (22), the height of the second spacer (22) is larger than the height of the first spacer (20) and the height of the box portion is larger than the height of the third spacer (24). 55
11. The container (10) according to any of the preceding claims wherein the consumer articles are smoking articles, more preferably cigarettes (30).
12. The container (10) according to claim 11 wherein the smoking articles are located within the box portion but not within the first (20) and second (22) and optionally third (24) spacers, or wherein the smoking articles are located within the box portion and within the first (20) and second (22) and optionally third (24) spacers, or wherein the smoking articles are located within the box portion and within one of the first (20), second (22) and third (24) spacers but not within the other two spacers of the first (20), second (22) and third (24) spacers, or wherein the smoking articles are located within the box portion and within two of the first (20), second (22) and third (24) spacers but not within the remaining spacer of the first (20), second (22) and third (24) spacers.
13. The container (10) according to claim 11 wherein the smoking articles are located within the box portion and within the outer spacer or out spacers but not within the innermost spacer.
14. A process for preparing a container (10) for consumer articles according to any of the preceding claims, comprising the steps of:
 - (a) providing a main blank for forming a box portion,
 - (b) forming from the main blank the box portion comprising a box front wall (14), a box rear wall (16), a box bottom wall and two box side walls (12) extending between the box front wall (14) and the box rear wall (16),
 - (c) providing a first spacer blank for forming a first spacer (20),
 - (d) forming the first spacer (20) from the first spacer blank,
 - (e) providing a second spacer blank for forming a second spacer (22),
 - (f) forming the second spacer (22) from the second spacer blank, and
 - (g) introducing the first (20) and second (22) spacers into the box portion of the container such that the first spacer (20) is mounted essen-

tially perpendicular to the box bottom wall within the box portion and
that the second spacer (22) is mounted essentially perpendicular to the box bottom wall within the first spacer (20),
and optionally
(h) providing a third spacer blank for forming a third spacer (24),
(i) forming the third spacer (24) from the third spacer blank,
(j) introducing the third spacer (24) into the box portion of the container (10) such that the third spacer (24) is mounted essentially perpendicular to the box bottom wall within the second spacer (22)

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such that the cross-sectional area of the first spacer (20) is 20 percent to 60 percent of the cross-sectional area of the box portion, wherein the cross-sectional area of the second spacer (22) is 10 percent to 40 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the first (20) and second (22) spacers is at least 10 percent, and
such that, if a third spacer (24) is present, the cross-sectional area of the third spacer (24) is 5 percent to 10 percent of the cross-sectional area of the box portion, and wherein the difference between the cross-sectional areas of the second (22) and third (24) spacers is at least 10 percent.

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15. The process of claim 14 further comprising the steps of introducing consumer goods at an appropriate time into the container (10).

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Figure 1

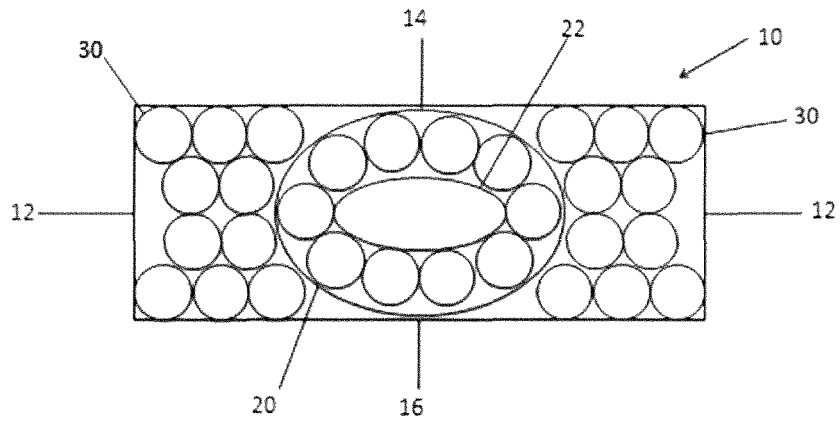


Figure 2

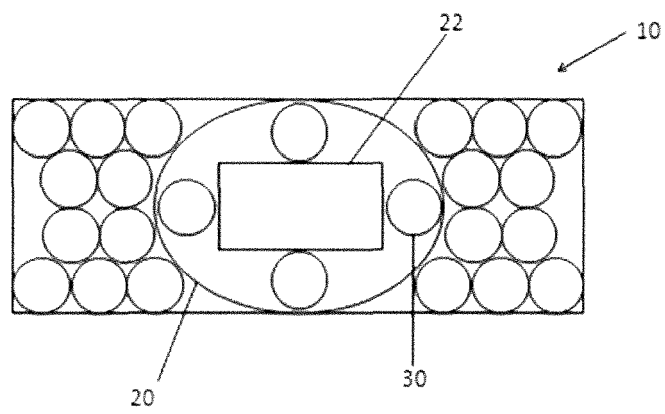


Figure 3

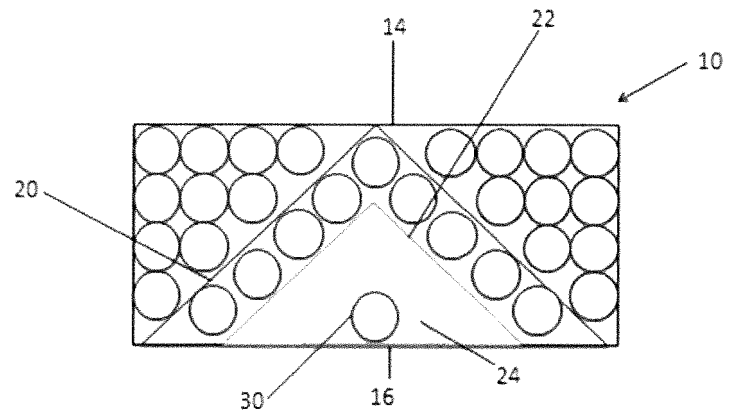


Figure 4

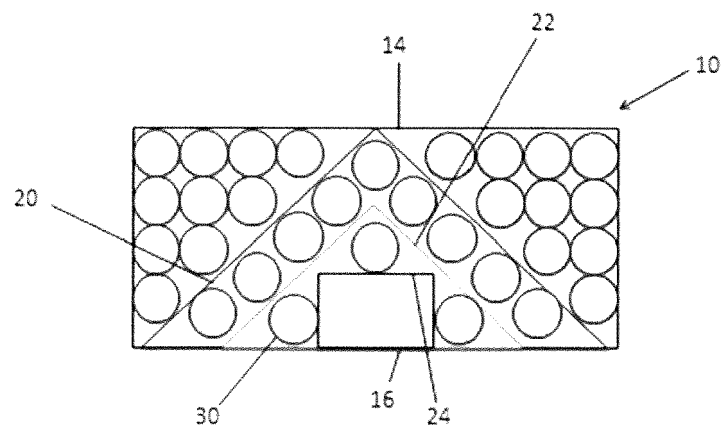
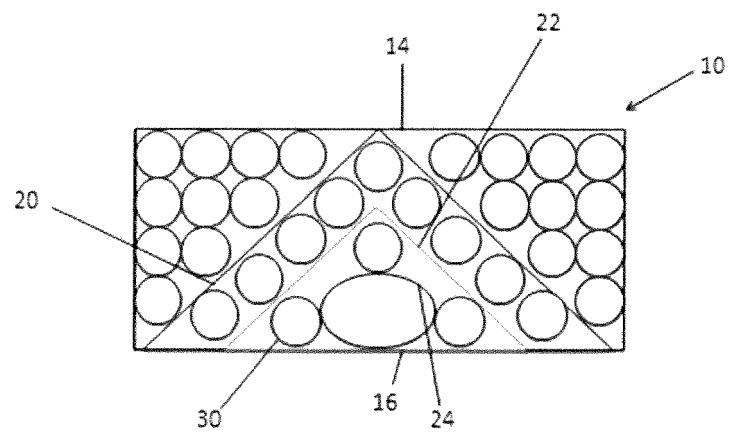


Figure 5





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Application Number
EP 14 19 5491

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Place of search Munich		Date of completion of the search 8 May 2015	Examiner Weyand, Tim
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The members are as contained in the European Patent Office EDP file on
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