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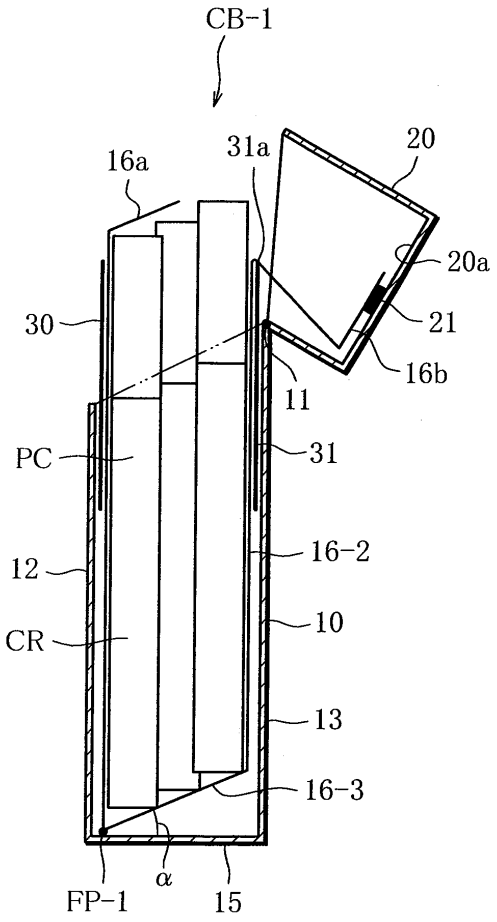
(54) **CIGARETTE BOX**

(57) A cigarette box (CB) includes a box body (10) and a lid (20) connected to the box body by a hinge (11), and contains an inner pack (PC) with an inner frame (30) located therebetween, the inner pack including an inner wrapper (16) and a cigarette bundle wrapped in the inner wrapper. The inner wrapper (16) has front and rear faces (16-1, 16-2) respectively covering the front and rear faces of the cigarette bundle, a single bottom face (16-3) covering the lower end face of the cigarette bundle, and a closed face (16-4) exposably closing the upper end face of the cigarette bundle. The cigarette box further includes a pull-up mechanism including a first operator (16a) capable of moving back and forth as the lid (20) is opened and closed, and the pull-up mechanism pulls the rear face (16-2) of the inner wrapper upward as the operator moves in a forward direction, to cause the bottom face (16-3) of the inner wrapper to lift obliquely together with the cigarette bundle. The pull-up mechanism further includes a linear fixed portion (FP-1) where the inner wrapper is partly fixed to the box body (10) at a location near a boundary line (BL-1) between the front and bottom walls of the box body, and an interlocker (31) capable of interlocking forward movement of the operator with pull-up movement of the rear face (16-2) of the inner wrapper.

FIG. 2



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Description

Technical Field

[0001] The present invention relates to cigarette boxes. More particularly, the present invention relates to a cigarette box containing cigarettes (paper-wrapped cigarettes) and having a structure for lifting rows of cigarettes in tiers so that a cigarette can be easily taken out of the cigarette box.

Background Art

[0002] A cigarette box includes a box body (box body part) and a lid connected to the box body by a hinge formed at an upper edge of the box body. To take out a cigarette, the lid is opened and then a cigarette is taken out of the box body. However, when the cigarettes are in a fully packed state especially just after the cigarette box is unsealed, it is difficult to take out a single cigarette from among those contained in the cigarette box. If a cigarette is picked forcibly, the cigarette end (filter) may possibly be crushed or the filters of cigarettes around the one being taken out may be needlessly touched with the user's fingers.

[0003] A means of relieving the difficulty in taking one cigarette out of those closely packed in a cigarette box has been proposed, for example, in Patent Document 1. Patent Document 1 discloses a structure for pulling up cigarettes. The structure is constituted by a wrapper in which cigarettes are wrapped and of which part is bonded to the bottom wall of the box body, and a "gripping tab (42)" formed at one end of the wrapper. As the gripping tab is pulled, an unbonded portion of the wrapper raises (away from the bottom wall), so that the front row of cigarettes is pushed up higher than the other cigarettes, making it easy for the user to take out a cigarette.

Citation List

Patent Literature

[0004] Patent Document 1: JP (Unexamined Japanese Patent Publication) No. H02-19245

Summary of Invention

Technical Problem

[0005] In the case of the cigarette box disclosed in Patent Document 1, however, immediately after the lid is opened, the cigarettes remain packed flat, as in conventional cigarette boxes. Some of the cigarettes are not pushed up until the "gripping tab" is pulled with the lid opened, as stated above.

[0006] In this manner, the cigarette box of Patent Document 1 requires two actions to push up the cigarettes, namely, open the lid and then pull the gripping tab. Also, the wrapper is made of thin paper material and thus may possibly be damaged if pulled with a force greater than a permissible force. Conversely, if the pull force is too weak, the amount of lift of the cigarettes may be inconveniently small or the cigarettes may possibly return to their original position.

[0007] The present invention was made in view of the above circumstances, and an object thereof is to provide a cigarette box of which a lid has only to be opened by a user, whereupon rows of cigarettes contained in the cigarette box are lifted in tiers as soon as the lid is opened, allowing the user to take out a cigarette with ease.

Solution to Problem

[0008] The above object is achieved by a cigarette box according to the present invention, which comprises: a box body having an open upper end, a front wall, a rear wall, a pair of side walls, and a bottom wall; a lid connected to the box body by a hinge and capable of opening and closing the open upper end of the box body; and an inner pack contained in the box body with an inner frame therebetween and including an inner wrapper and a cigarette bundle wrapped in the inner wrapper, the inner frame being located adjacent to the front wall of the box body and projecting from the upper end of the box body, wherein:

the inner wrapper has front and rear faces respectively covering front and rear faces of the cigarette bundle, a single bottom face covering a lower end face of the cigarette bundle, and a closed face formed by folding a portion of the inner wrapper and exposably closing an upper end face of the cigarette bundle,

the cigarette box further comprises a pull-up mechanism including a first operator capable of moving back and forth as the lid is opened and closed or a second operator separate from the inner wrapper and capable of moving back and forth in a lifting/lowering direction with respect to the box body, the pull-up mechanism pulls one of the front and rear faces of the inner wrapper upward as the operator moves in a forward direction, to cause the bottom face of the inner wrapper to lift obliquely together with the cigarette bundle, and

the pull-up mechanism further includes a linear fixed portion where the inner wrapper is partly fixed to the box body at a location near a boundary line between the front and bottom walls of the box body or near a boundary line between the rear and bottom walls of the box body, and an interlocker capable of interlocking forward movement of the operator with pull-up movement of the front or rear face of the inner wrapper.

[0009] In a first aspect, the pull-up mechanism includes, as the first operator, the fixed portion located near

the boundary line between the front and bottom walls of the box body and a folded flap forming part of the closed face of the inner wrapper and bonded to an inner surface of the lid, and the interlocker includes a folding tucker located adjacent to the rear face of the inner pack and projecting upward from the upper end of the box body, the folding tucker allowing the rear face of the inner wrapper to be pulled up by the folded flap as the lid is opened, and causing the rear face of the inner wrapper to be folded back at an upper edge thereof when the rear face of the inner wrapper is pulled out of the box body.

[0010] The upper edge of the folding tucker may have a height determined in accordance with an amount of lift of the bottom face of the inner wrapper.

[0011] The folding tucker preferably forms, in cooperation with the inner frame, a tubular inner sleeve surrounding an outer periphery of the inner pack.

[0012] In a second aspect, the pull-up mechanism includes, as the second operator, the fixed portion located near the boundary line between the rear and bottom walls of the box body and the inner frame slidable in the lifting/lowering direction with respect to the box body, and the interlocker includes an access opening formed in the front wall of the box body and exposing the inner frame therethrough to allow sliding force to be applied to the inner frame, and a bonded portion where the inner frame and the front face of the inner wrapper are bonded to each other, the bonded portion causing the front face of the inner wrapper to be pulled up as the inner frame is slid upward.

[0013] Preferably, the inner frame has a U-shaped cross section and is slidable along inner surfaces of the front and side walls of the box body, and slide-up movement of the inner frame in a closed state of the lid interlocks with opening movement of the lid, in addition to pull-up movement of the front face of the inner wrapper.

[0014] In a third aspect, the box body includes
a body inner part having a body lower element surrounding lateral sides of the inner pack in cooperation with the inner frame, bonded to the inner wrapper of the inner pack by the inner frame and having the upper end and an open lower end, and the lid connected to the upper end of the body lower element by the hinge, and
a body outer part containing the body lower element with the lid exposed and having the front wall, the rear wall, the pair of side walls and the bottom wall, the body outer part including a riser portion which permits the body inner part to move up and down between a lowered position where the bottom face of the inner wrapper is located at the bottom wall of the body outer part and a raised position where the bottom face of the inner wrapper is located at a distance from the bottom wall of the body outer part, and which faces a rear surface of the lid when the body inner part is in the lowered position with the lid closed,
wherein the pull-up mechanism includes at least the fixed portion located near the boundary line between the rear and bottom walls of the body outer part, and the body inner part serving as both the second operator and the interlocker.

[0015] Preferably, the pull-up mechanism further includes an access opening formed in the riser portion of the body outer part and exposing the rear surface of the lid to permit lifting/lowering movement of the body inner part.

[0016] The riser portion of the body outer part may have a height determined in accordance with an amount of lift of the bottom face of the inner wrapper.

Advantageous Effects of Invention

[0017] With the cigarette box according to the present invention, the user has only to open (lift) the lid at top of the box body, as with ordinary cigarette boxes, whereupon the cigarettes are arranged in tiers as soon as the lid is opened. That is, the user has only to open the lid in order to lift the packed cigarettes in tiers, so that the user can easily pick one cigarette without being annoyed by the trouble and care associated with picking of one cigarette from among the packed cigarettes.

Brief Description of Drawings

[0018]

FIG. 1 is a side view of a cigarette box according to a first embodiment of the present invention, illustrating a state in which a lid of the cigarette box is closed.
FIG. 2 is a side view of the cigarette box according to the first embodiment of the present invention, illustrating a state in which the lid is opened.
FIG. 3 is a perspective view illustrating an external appearance of the cigarette box of FIG. 2 with its lid opened.
FIG. 4 is a side view of a cigarette box according to a second embodiment of the present invention, illustrating a state in which a lid of the cigarette box is closed.
FIG. 5 is a side view of the cigarette box according to the second embodiment of the present invention, illustrating a state in which the lid is opened.
FIG. 6 is a perspective view illustrating an external appearance of the cigarette box in the state shown in FIG. 4.
FIG. 7 is a perspective view illustrating an external appearance of the cigarette box in the state shown in FIG. 5.
FIG. 8 is a side view of a cigarette box according to a third embodiment of the present invention, illustrating a state in which a lid of the cigarette box is closed.
FIG. 9 is a side view of the cigarette box according to the third embodiment of the present invention, illustrating a state in which the lid is opened.
FIG. 10 is a perspective view illustrating the shapes and relationship of a body outer part, a body inner part and an inner frame, all included in the cigarette

box of the third embodiment.

FIG. 11 is a perspective view illustrating an external appearance of a front part of the cigarette box in the state shown in FIG. 8.

FIG. 12 is a perspective view illustrating an external appearance of a rear part of the cigarette box in the state shown in FIG. 8.

FIG. 13 is a perspective view illustrating an external appearance of the front part of the cigarette box in the state shown in FIG. 9.

FIG. 14 is a perspective view illustrating an external appearance of the rear part of the cigarette box in the state shown in FIG. 9.

FIG. 15 illustrates a blank for an inner wrapper preferred for use in the cigarette box of the present invention.

Description of Embodiments

[0019] Cigarette boxes according to embodiments of the present invention will be described below with reference to the drawings.

[0020] FIGS. 1 and 2 illustrate a cigarette box CB-1 according to a first embodiment, wherein FIG. 1 is a side view showing a state in which a lid is closed, and FIG. 2 is a side view showing a state in which the lid is opened.

[0021] As illustrated in FIGS. 1 and 2, the cigarette box CB-1 includes a box body 10, and a lid 20 pivotable about a hinge 11 formed at an upper end (upper side) of the box body 10. Specifically, the cigarette box CB-1 has a peripheral wall constituted by a front wall 12, a rear wall 13, and right and left side walls 14R and 14L located right and left, respectively, between the front and rear walls (the side walls are not illustrated in FIGS. 1 and 2 with a view to showing cigarettes CR contained in the cigarette box). The peripheral wall has a bottom closed with a bottom wall 15. Also, the peripheral wall is open at an upper end thereof, and the upper end of the rear wall 13 serves as the hinge 11 to allow the lid 20 to open and close with respect to the upper edge of the box body 10.

[0022] The cigarette box CB-1 is provided with a mechanism for lifting a plurality of cigarettes CR contained in the box body 10. The mechanism is configured in the manner described below to attain the purpose.

[0023] A bundle of cigarettes CR is wrapped in its entirety in a sheet-like inner wrapper 16 to form an inner pack PC. The inner wrapper 16 may be made of a material conventionally used for wrapping cigarettes, and a preferred example includes a sheet material having paper and a metal foil laminated one upon the other.

[0024] The inner wrapper 16 arranged inside the cigarette box CB-1 has such a form that portions thereof facing the respective inner surfaces of the front wall 12, the bottom wall 15 and the rear wall 13 are continuous and have no cuts therein. Specifically, the inner wrapper 16 has front and rear faces 16-1 and 16-2 covering the front and rear faces, respectively, of the cigarette bundle, and a single bottom face 16-3 covering the lower end face of the cigarette bundle. An upper portion of the inner wrapper 16 is tucked down to form a closed face (face closed by the folded end portions of the inner wrapper) 16-4 that exposably closes the upper end face of the cigarette bundle.

[0025] The cigarette box CB-1 is characterized by a configuration whereby, when the cigarettes CR are in a fully packed state immediately after the cigarette box is unsealed, one cigarette CR can be easily taken out of the cigarette box. FIG. 1 illustrates the cigarette box, as viewed from one side thereof, in which the cigarettes CR are fully packed.

[0026] Thus, in the side view as illustrated, the inner wrapper 16 is wrapped around the bundle of packed cigarettes CR generally in the form of the letter U. The end portions of the inner wrapper 16 are long enough to be tucked down, as stated above. Before the cigarette box CB-1 is unsealed, the end portions (front and rear end flaps 16a and 16b) of the inner wrapper 16 are folded down onto the mouthpieces (in the illustrated example, filters FL) of the cigarettes CR, thereby forming the aforementioned closed face 16-4.

[0027] The dimension of the inner wrapper 16 in its width direction (in FIG. 1, direction perpendicular to the paper surface) is greater than the corresponding dimension of the bundle of cigarettes CR, and the marginal side portions on each side of the inner wrapper are folded one upon the other to cover the corresponding side face of the bundle of cigarettes CR. Consequently, the cigarettes CR are covered in their entirety with the inner wrapper 16.

[0028] Where the cigarette box CB-1 shown in FIGS. 1 and 2 contains 20 cigarettes CR, for example, the cigarettes are arranged in multiple rows, namely, a first row RW-1 of seven cigarettes nearest to the front wall, a second row RW-2 of six cigarettes located in the middle, and a third row RW-3 of seven cigarettes nearest to the rear wall.

[0029] That portion of the inner wrapper 16 which faces the bottom wall 15 is partly fixed to the bottom wall 15 in the vicinity of a boundary line BL-1 between the front wall 12 and the bottom wall 15. Specifically, part of the inner wrapper 16 is fixed on the bottom wall 15 in linear form along the boundary line BL-1, thus forming a fixed portion FP-1. The fixed portion FP-1 may be obtained by bonding part of the inner wrapper 16 to the bottom wall 15 by an adhesive that is used to construct the box body 10, for example.

[0030] Because of the fixed portion FP-1, as the inner wrapper 16 is pulled up along the rear wall 13 located opposite the fixed portion FP-1, the bottom face 16-3 of the inner wrapper 16 facing the bottom wall 15 turns around the fixed portion FP-1 serving as a base point (center) and becomes inclined with the right side lifted as viewed in the figure.

[0031] The fixed portion FP-1 is in the form of a line (either a continuous line or a dashed line) extending along the boundary line BL-1, as stated above. Accordingly, the rows of cigarettes CR can be lifted stepwise, or in

tiers, as shown in FIG. 2. It is not desirable that the line width of the fixed portion FP-1 be unnecessarily increased (e.g. to a width exceeding the radius of the cigarette CR). If the width of the fixed portion FP-1 is too large, the inclined area of the inner wrapper 16 decreases, making it difficult to lift the rows of cigarettes stepwise. In view of this, the line width of the fixed portion FP-1 is preferably set to about 2 to 6 mm, or to 75% or less of the diameter of the cigarettes CR contained in the cigarette box.

[0032] The cigarette box CB-1 is provided with an inner frame 30, described later, which is attached to the inside of the box body 10, has higher rigidity than the inner wrapper 16 and reinforces the box body 10 from inside.

[0033] A pull-up mechanism for pulling up the inner wrapper 16 will be explained. When the lid 20 is opened, the pull-up mechanism pulls the inner wrapper 16 upward along the rear wall 13 located opposite the fixed portion FP-1 with respect to the central axis (longitudinal axis) of the cigarette box CB-1. As a result, the bottom face 16-3 of the inner wrapper 16 in contact with the bottom wall 15 turns around the fixed portion FP-1 serving as a base point, as stated above, and becomes inclined as shown in FIG. 2, so that the cigarette rows RW-1, RW-2 and RW-3 are lifted in tiers.

[0034] The pull-up mechanism exemplified in FIGS. 1 and 2 includes the inner wrapper 16 of which one end portion extends from near the rear wall 13 toward the lid 20 and has a distal end (rear end flap 16b) fixed (bonded) to the inner surface 20a of the lid 20, thus forming a bonded portion 21. The rear end flap 16b functions as a first operator (claim 1) that moves back and forth as the lid 20 is opened and closed. Thus, while the lid 20 is closed, the inner wrapper 16 is in an undeformed state (FIG. 1), or an initial state, in which the inner wrapper is in the form of the letter U as stated above, and as the lid 20 is opened as illustrated in FIG. 2, the inner wrapper 16 is pulled in conjunction with the opening movement of the lid 20. That is, the opening movement of the lid 20 links with, or interlocks with, the pull-up movement of the inner wrapper 16. As a result, the bottom face of the inner wrapper 16 in contact with the bottom wall 15 is inclined upward with respect to the fixed portion FP-1 serving as a base point, whereby the cigarette rows can be lifted in tiers. Referring further to FIG. 3, the pull-up mechanism of the cigarette box CB-1 will be explained in more detail.

[0035] FIG. 3 is a perspective view showing an external appearance of the cigarette box CB-1 and illustrates a state in which the lid 20 is opened for the first time after the cigarette box is unsealed. The cigarette box CB-1 has the pull-up mechanism that works in conjunction with the opening movement of the lid 20. Thus, the user has only to open the lid 20, as with conventional cigarette boxes, and need not perform an additional action to pick one cigarette from among the closely packed cigarettes. Also, the amount of movement of the inner wrapper 16 depends upon the degree of opening of the lid 20, and therefore, the extent to which the inner wrapper 16 is pulled remains unchanged and thus is stable. Once the lid 20 is opened, the open state of the lid is usually maintained unless and until the lid is forcibly closed. Consequently, the rows of cigarettes remain lifted in tiers as shown in FIG. 3, and the user may take time to pick one cigarette.

[0036] As shown in FIGS. 2 and 3 in particular, the inner frame 30 is located close to the front wall 12 of the cigarette box CB-1 and is fixed so as to project from the upper end of the front wall 12.

[0037] Also, the cigarette box CB-1 has a plate-like folding tucker 31 arranged between the rear wall 13 and the bundle of cigarettes CR. The folding tucker 31 is located on the same side as the rear face of the inner pack PC and projects upward from the upper end of the box body 10. The rear end flap 16b, which is one end portion of the inner wrapper 16, is bonded to the inner surface 20a of the lid 20 as stated above, and when the inner wrapper 16 is pulled out of the box body 10, it is folded back at the upper edge 31a of the folding tucker 31 with its rear face 16-2 in contact with the upper edge 31a. That is, the rear face 16-2 of the inner wrapper 16 is associated with an improved structure (interlocker) whereby the amount of pull of the inner wrapper can be increased when the inner wrapper is pulled up and the rear face 16-2 is folded back at the upper edge 31a of the folding tucker 31 in contact therewith. With this structure, the inner wrapper can be pulled up without fail when the lid 20 is opened.

[0038] Since the inner wrapper and the folding tucker 31 are configured such that the inner wrapper comes into contact with the upper edge 31a of the folding tucker 31, the amount of lift of the individual rows of cigarettes CR (i.e. inclination angle α at the fixed portion) can be adjusted appropriately by changing the height of the upper edge 31a.

[0039] An outer blank for forming the cigarette box CB-1 may be modified in such a manner that the box body 10, the lid 20 and the folding tucker 31 can be made from a single outer blank.

[0040] Conventional inner frames are used for reinforcing the cigarette box and generally have a U-shaped cross section (when viewed from above) to support the inner surfaces of the front and right and left side walls of the cigarette box. In the cigarette box CB-1 of the first embodiment, on the other hand, the folding tucker 31 is preferably arranged on the same side as the rear face of the inner pack PC so as to project from the rear wall 13.

[0041] As a preferred configuration, the cigarette box CR-1 is provided with a novel inner frame obtained by connecting a structural member functioning as the folding tucker to the rear side (rear part) of an inner frame with an ordinary structure so that the inner frame and the structural member may cooperatively form a tubular shape (rectangular tube) surrounding the outer periphery of the inner pack PC. That is, the inner frame 30 exemplified in this embodiment is a tubular inner sleeve having the folding tucker 31 at its rear part. With such a tubular

inner sleeve, not only the cigarette box CR-1 can be more reliably reinforced but the amount of lift of the inner wrapper can be adjusted appropriately through adjustment of the height of the folding tucker 31 additionally provided near the rear wall 13. In other words, the height of the upper edge of the folding tucker 31 may be determined in accordance with the required lift amount of the bottom face of the inner wrapper.

[0042] With the cigarette box CB-1 of the aforementioned first embodiment, the user has only to open the lid, as with ordinary cigarette boxes, in order to lift the rows of packed cigarettes in tiers, so that the user can easily pick one cigarette at all times without being annoyed by the trouble and care associated with picking of one cigarette from among the packed cigarettes.

[0043] A cigarette box CB-2 according to a second embodiment of the present invention will now be described with reference to the drawings.

[0044] FIGS. 4 and 5 illustrate the cigarette box CB-2 according to the second embodiment, wherein FIG. 4 is a side view showing a state in which a lid is closed, and FIG. 5 is a side view showing a state in which the lid is opened.

[0045] As illustrated in FIGS. 4 and 5, the cigarette box CB-2 includes a box body 40, and a lid 50 pivotable about a hinge 41 formed at an upper end (upper side) of the box body 40. Specifically, the cigarette box CB-2 has a peripheral wall constituted by a front wall 42, a rear wall 43, and right and left side walls 44R and 44L located right and left, respectively, between the front and rear walls (the side walls are not illustrated in FIGS. 4 and 5 in order to show cigarettes CR contained in the cigarette box). The peripheral wall has a bottom closed with a bottom wall 45. Also, the peripheral wall is open at an upper end thereof, and the upper end of the rear wall 43 serves as the hinge 41 to allow the lid 50 to open and close with respect to the upper edge of the box body 40.

[0046] The cigarette box CB-2 is also provided with a mechanism for lifting a plurality of cigarettes CR contained in the box body 40. The mechanism is configured in the manner described below to attain the purpose.

[0047] A bundle of cigarettes CR is wrapped in its entirety in a sheet-like inner wrapper 46 to form an inner pack PC. The inner wrapper 46 may be made of a material conventionally used for wrapping cigarettes, and a preferred example includes a sheet material having paper and a metal foil laminated one upon the other.

[0048] The inner wrapper 46 arranged inside the cigarette box CB-2 has such a form that portions thereof facing the respective inner surfaces of the front wall 42, the bottom wall 45 and the rear wall 43 are continuous and have no cuts therein. Specifically, the inner wrapper 46 has front and rear faces 46-1 and 46-2 covering the front and rear faces, respectively, of the cigarette bundle, and a single bottom face 46-3 covering the lower end face of the cigarette bundle. An upper portion of the inner wrapper 46 is tucked down to form a closed face (face closed by the folded end portions of the inner wrapper) 46-4 that exposably closes the upper end face of the cigarette bundle.

[0049] The cigarette box CB-2 is characterized by a configuration whereby, when the cigarettes CR are in a fully packed state immediately after the cigarette box is unsealed, one cigarette CR can be easily taken out of the cigarette box. FIG. 4 illustrates the cigarette box, as viewed from one side thereof, in which the cigarettes CR are fully packed.

[0050] Thus, in the side view as illustrated, the inner wrapper 46 is wrapped around the bundle of packed cigarettes CR generally in the form of the letter U. The end portions of the inner wrapper 46 are long enough to be tucked down, as stated above. Before the cigarette box CB-2 is unsealed, the end portions (front and rear end flaps 46a and 46b) of the inner wrapper 46 are folded down onto the mouthpieces (in the illustrated example, filters FL) of the cigarettes CR, thereby forming the aforementioned closed face 46-4.

[0051] The dimension of the inner wrapper 46 in its width direction (in FIG. 4, direction perpendicular to the paper surface) is greater than the corresponding dimension of the bundle of cigarettes CR, and the marginal side portions on each side of the inner wrapper are folded one upon the other to cover the corresponding side face of the bundle of cigarettes CR. Consequently, the cigarettes CR are covered in their entirety with the inner wrapper 46.

[0052] Where the cigarette box CB-2 shown in FIGS. 4 and 5 contains 20 cigarettes CR, for example, the cigarettes are arranged in multiple rows, namely, a first row RW-1 of seven cigarettes nearest to the front wall, a second row RW-2 of six cigarettes located in the middle, and a third row RW-3 of seven cigarettes nearest to the rear wall.

[0053] That portion of the inner wrapper 46 which faces the bottom wall 45 is partly fixed to the bottom wall 45 in the vicinity of a boundary line BL-2 between the rear wall 43 and the bottom wall 45. Specifically, part of the inner wrapper 46 is fixed on the bottom wall 45 in linear form along the boundary line BL-2, thus forming a fixed portion FP-2. The fixed portion FP-2 may be obtained by bonding part of the inner wrapper 46 to the bottom wall 45 by an adhesive that is used to construct the box body 40, for example.

[0054] Because of the fixed portion FP-2, as the inner wrapper 46 is pulled up along the front wall 42 located opposite the fixed portion FP-2, the bottom face 46-3 of the inner wrapper 46 facing the bottom wall 45 turns around the fixed portion FP-2 serving as a base point (center) and becomes inclined with the left side lifted as viewed in the figure.

[0055] The fixed portion FP-2 is in the form of a line (either a continuous line or a dashed line) extending along the boundary line BL-2, as stated above. Accordingly, the rows of cigarettes CR can be lifted stepwise, or in tiers, as shown in FIG. 5. It is not desirable that the line width of the fixed portion FP-2 be unnecessarily increased (e.g. to a width exceeding the radius of the cig-

arette CR). If the width of the fixed portion FP-2 is too large, the inclined area of the inner wrapper 46 decreases, making it difficult to lift the rows of cigarettes stepwise. In view of this, the line width of the fixed portion FP-2 is preferably set to about 2 to 6 mm, or to 75% or less of the diameter of the cigarettes CR contained in the cigarette box.

[0056] The cigarette box CB-2 is provided with an inner frame 60, described later, which is attached to the inside of the box body 40, has higher rigidity than the inner wrapper 46 and reinforces the box body 40 from inside.

[0057] A pull-up mechanism for pulling up the inner wrapper 46 will be explained. Inner frames conventionally used for the purpose of reinforcement generally have a U-shaped cross section (as viewed from above) to support the inner surfaces of the front and side walls. The cigarette box CB-2 employs such an inner frame.

[0058] The pull-up mechanism includes the inner frame 60 that is slidable in a lifting/lowering direction (in the figures, up and down) along the inner surface of the box body 40. The inner frame 60 functions as a second operator (claim 1).

[0059] Also, a bonded portion 60a is provided as a joining portion that joins the inner frame 60 and the front face 46-1 of the inner wrapper 46 to each other to cause the front face 46-1 to be pulled up as the inner frame 60 is slid up. That is, part of the inner wrapper 46 is fixed at the bonded portion 60a to the inner frame 60 located inside the front wall 42. Consequently, the slide-up movement of the inner frame 60 links with, or interlocks with, the pull-up movement of the inner wrapper 46.

[0060] When the inner frame 60 is slid up, the pull-up mechanism pulls the inner wrapper 46 upward along the front wall located opposite the fixed portion FP-2 with respect to the central axis (longitudinal axis) of the cigarette box CB-2. As a result, the bottom face 46-3 of the inner wrapper 46 in contact with the bottom wall 45 turns around the fixed portion FP-2 serving as a base point, as stated above, and becomes inclined as shown in FIG. 5, so that the cigarette rows RW-1, RW-2 and RW-3 are lifted in tiers.

[0061] The inner frame 60 is formed not only as a slide member having a U-shaped cross section and disposed to slide along the inner surfaces of the front wall 42 and right and left side walls, but has an abutting portion 61 that abuts against the inner surface of the lid 50 when the upper end of the cigarette box is closed with the lid 50 (see FIG. 4). Consequently, when the inner frame 60 is pushed up, this push-up movement causes the lid 50 to swing upward and at the same time causes the inner wrapper 46 to be pulled upward. Namely, the push-up movement of the inner frame 60 interlocks with the swing-up movement of the lid 50 as well as with the pull-up movement of the inner wrapper 46.

[0062] While the lid 50 of the cigarette box CB-2 is closed, the inner wrapper 46 is in an undeformed state (FIG. 4) in which the inner wrapper is in the form of the letter U as stated above. As the inner frame 60 is slid upward to open the lid 50, the inner wrapper 46 is pulled as shown in FIG. 5. That is, the movement to open the lid 50 by means of the inner frame 60 causes the pull-up movement of the inner wrapper 46. Consequently, when the lid 50 is open, the bottom face of the inner wrapper 46 that was in contact with the bottom wall 45 is inclined upward with respect to the fixed portion FP-2 serving as a base point, whereby the cigarette rows can be lifted in tiers. Referring further to FIGS. 6 and 7, the pull-up mechanism of the cigarette box CB-2 will be explained in more detail.

[0063] FIGS. 6 and 7 are perspective views corresponding to FIGS. 4 and 5, respectively, and illustrating an external appearance of the cigarette box CB-2.

[0064] In FIGS. 6 and 7, an access opening 47 is shown which is not illustrated in FIGS. 4 and 5. The access opening 47 is a generally U-shaped cut formed in the front wall 42 of the box body 40. The slidable inner frame 60 is exposed through the access opening 47 and, therefore, can be moved upward by applying a sliding force to the inner frame 60 as indicated by an arrow in FIG. 6. The access opening is provided to allow the user to apply a sliding force to the inner frame 60 with his/her finger (e. g. thumb) in contact with the inner frame 60, and thus the shape thereof need not be such that the cut reaches the upper edge of the front wall as exemplified in FIGS. 6 and 7. That is, the access opening 47 may be a cut in the form of a circle, ellipse or rectangle, for example.

[0065] In the cigarette box CB-2 of the second embodiment, the aforementioned bonded portion 60a serving as the joining portion and the access opening 47 constitute an interlocker that interlocks the forward movement, or upward movement, of the inner frame 60 as the second operator with the pull-up movement of the inner wrapper 46.

[0066] With the cigarette box CB-2 configured as described above, as the user pushes up the inner frame 60, as indicated by the arrow in FIG. 6, from the state in which the lid 50 is closed, the lid 50 opens and the cigarette rows are lifted in tiers, as shown in FIG. 7. In the cigarette box CB-2 of this embodiment, the front row RW-1 is lifted highest, and accordingly, the other rear-side rows RW-2 and RW-3 are not illustrated in FIG. 7 (see FIG. 5).

[0067] By virtue of the pull-up mechanism incorporated in the cigarette box CB-2, the movement to open the lid 50 (lid opening movement) by means of the inner frame 60 and the movement to pull up the inner wrapper 46 are executed simultaneously.

[0068] With the aforementioned cigarette box CB-2 of the second embodiment, the user has only to slide the inner frame 60 upward to open the lid 50 and need not perform any additional action for picking one cigarette from among the fully packed cigarettes. Also, once slid up, the inner frame 60 remains there unless it is forcibly pushed back. Consequently, the rows of cigarettes remain lifted in tiers as shown in FIG. 7, so that the user may take time to pick one cigarette.

[0069] A cigarette box CB-3 according to a third embodiment of the present invention will now be described with reference to the drawings.

[0070] FIGS. 8 and 9 illustrate the cigarette box CB-3 according to the third embodiment, wherein FIG. 8 is a side view showing a state in which a lid is closed, and FIG. 9 is a side view showing a state in which the lid is opened.

[0071] As seen from FIGS. 8 and 9, the cigarette box CB-3 has a divided structure including a body outer part 70-1 and a body inner part 70-2.

[0072] More specifically, the body outer part 70-1 of the cigarette box CB-3 has a peripheral wall constituted by a front wall 72, a rear wall 73, and right and left side walls 74R and 74L located right and left, respectively, between the front and rear walls (the side walls are not illustrated in FIGS. 8 and 9 in order to show cigarettes CR contained in the cigarette box). The peripheral wall has a bottom closed with a bottom wall 75. The body inner part 70-2 is partly contained in the body outer part 70-1 so as to be movable (liftable) up and down relative to the body outer part 70-1. Thus, the cigarette box CB-3 has a structure such that the body inner part 70-2 including a lid 80 is movable up and down relative to the body outer part 70-1.

[0073] The body inner part 70-2 has a body lower element 81 contained in the body outer part 70-1, and the lid 80 attached to an upper portion of the body lower element 81. Specifically, the body inner part 70-2 has an upper end and an open lower end, and the lid 80 is connected to the upper end by a hinge 71.

[0074] The body lower element 81 of the body inner part 70-2 is arranged so as to surround the lateral sides of the inner pack (PC) in cooperation with an inner frame, described later. Also, the body lower element 81 is joined to the inner wrapper of the inner pack by the inner frame.

[0075] Referring further to FIG. 10, the body outer part 70-1, the body inner part 70-2 and the inner frame 90 will be explained in more detail. FIG. 10 is a perspective view so illustrated as to facilitate understanding of the shapes and positional relationship of the body outer part 70-1, the body inner part 70-2 and the inner frame 90. Each of the body outer part, the body inner part and the inner frame can be obtained by folding a corresponding single sheet-like blank.

[0076] As stated above, the body outer part 70-1 has the front wall 72, the rear wall 73, the right and left side walls 74R and 74L located right and left, respectively, between the front and rear walls, and the bottom wall 75 and is generally in the form of a hollow box opening upward. The rear wall 73 of the body outer part 70-1 has a construction such that an extension 73ex is folded back at an upper end 73tp of the rear wall 73. Specifically, the extension 73ex is folded so as to extend along the inner surface of the rear wall 73 (i.e. so as to be located inside the body outer part 70-1). A projection 73pr protrudes outward (in FIG. 10, downward) from a central portion of the distal end of the extension 73ex.

[0077] The body inner part 70-2 has the lid 80 connected to the upper edge of the body lower element 81 by the hinge 71, as stated above. The body lower element 81 is vertically movably contained in the body outer part 70-1. The rear wall 73 of the body outer port 70-1 and a rear wall 82 forming the body lower element 81 are disposed in contact with each other.

[0078] A rectangular opening 83 is formed through a central portion of the rear wall 82 of the body lower element 81. By making the projection 73pr protrude forward through the opening 83 during fabrication of the cigarette box, it is possible to restrict movement of the body inner part by allowing the lower end 73be of the extension 73ex to abut against the lower opening edge 83be of the opening 83. This provides a structure for restricting the raised position of the body inner part 70-2.

[0079] As for the lowered position of the body inner part 70-2, downward movement of the body inner part 70-2 is restricted as soon as the lower edge 80ed of the lid 80 abuts against the upper edge 70-1ed of the body outer part 70-1 (see FIG. 8).

[0080] The inner frame 90 is connected to the front of the body inner part 70-2 to form an integral structure (hereinafter referred to also as connection structure), which is then received in the body outer part 70-1.

[0081] More specifically, the inner frame 90 has a front wall 91, and right and left side walls 92R and 92L at the right and left sides, respectively, of the front wall 91. The side walls 92R and 92L are disposed in contact with the respective inner surfaces of the right and left side walls 84R and 84L of the body inner part 70-2 and are connected thereto with their lower edges located on a level with those of the right and left side walls 84R and 84L. Thus, the connection structure obtained by connecting the body inner part 70-2 and the inner frame 90 together includes a tubular structural part having a peripheral wall defining (surrounding) a space therein and having a rectangular cross-sectional shape. The connection structure is open at a lower end thereof. In FIGS. 8 and 9, the position of the open lower end of the connection structure is indicated by a dashed line EL.

[0082] In the following, further explanation of the cigarette box CB-3 will be made on the basis of the relationship of the body outer part 70-1, the body inner part 70-2 and the inner frame 90, explained above with reference to FIG. 10.

[0083] The body outer part 70-1 contains the body lower element 81 with the lid 80 exposed as shown in FIG. 8. Specifically, the body lower element 81 of the body inner part 70-2 is received in the body outer part 70-1 in such a manner that the body lower element 81 is allowed to move between the lowered position where the bottom face 76-3 of the inner wrapper 76 is located at the bottom wall 75, and the raised position where the bottom face 76-3 of the inner wrapper 76 is located at a distance from the bottom wall 75 as illustrated in FIG. 9.

[0084] The body outer part further includes a riser portion 73st that faces the rear surface of the lid 80 when

the body inner part 70-2 is in the lowered position with the lid 80 closed.

[0085] The riser portion 73st protrudes integrally from the rear wall 73 of the body outer part 70-1 so as to face the rear surface of the lid 80 of the body inner part 70-2 when the body inner part 70-2 is not raised and is in the lowered position (initial position) with the lid 80 closed. In other words, the riser portion 73st is configured such that while the body inner part 70-2 is in the lowered position shown in FIG. 8, the upwardly projecting riser portion 73st obstructs the opening movement of the lid 80. Accordingly, the body inner part 70-2 needs to be slid up first in order to open the lid 80.

[0086] The cigarette box CB-3 is also provided with a mechanism for lifting cigarettes CR contained therein. The mechanism is configured in the manner described below to attain the purpose.

[0087] A bundle of cigarettes CR is wrapped in its entirety in a sheet-like inner wrapper 76 to form an inner pack PC. The inner wrapper 76 may be made of a material conventionally used for wrapping cigarettes, and a preferred example includes a sheet material having paper and a metal foil laminated one upon the other.

[0088] The inner wrapper 76 arranged inside the cigarette box CB-3 has such a form that portions thereof facing the respective inner surfaces of the front wall 72, the bottom wall 75 and the rear wall 73 are continuous and have no cuts therein. More specifically, the inner wrapper 76 has front and rear faces 76-1 and 76-2 covering the front and rear faces, respectively, of the cigarette bundle, and a single bottom face 76-3 covering the lower end face of the cigarette bundle. An upper portion of the inner wrapper 76 is tucked down to form a closed face (face closed by the folded end portions of the inner wrapper) 76-4 that exposably closes the upper end face of the cigarette bundle.

[0089] The cigarette box CB-3 is characterized by a configuration whereby, when the cigarettes CR are in a fully packed state immediately after the cigarette box is unsealed, one cigarette CR can be easily taken out of the cigarette box. FIG. 8 illustrates the cigarette box, as viewed from one side thereof, in which the cigarettes CR are fully packed.

[0090] Thus, in the side view as illustrated, the inner wrapper 76 is wrapped around the bundle of packed cigarettes CR generally in the form of the letter U. The end portions of the inner wrapper 76 are long enough to be tucked down, as stated above. Before the cigarette box CB-3 is unsealed, the end portions (front and rear end flaps 76a and 76b) of the inner wrapper 76 are folded down onto the mouthpieces (in the illustrated example, filters FL) of the cigarettes CR, thereby forming the aforementioned closed face 76-4.

[0091] The dimension of the inner wrapper 76 in its width direction (in FIG. 8, direction perpendicular to the paper surface) is greater than the corresponding dimension of the bundle of cigarettes CR, and the marginal side portions on each side of the inner wrapper are folded one upon the other to cover the corresponding side face of the bundle of cigarettes CR. Consequently, the cigarettes CR are covered in their entirety with the inner wrapper 76.

[0092] Where the cigarette box CB-3 shown in FIGS. 8 and 9 contains 20 cigarettes CR, for example, the cigarettes are arranged in multiple rows, namely, a first row RW-1 of seven cigarettes nearest to the front wall, a second row RW-2 of six cigarettes located in the middle, and a third row RW-3 of seven cigarettes nearest to the rear wall.

[0093] That portion of the inner wrapper 76 which faces the bottom wall 75 is partly fixed to the bottom wall 75 in the vicinity of a boundary line BL-2 between the rear wall 73 and the bottom wall 75. Specifically, part of the inner wrapper 76 is fixed on the bottom wall 75 in linear form along the boundary line BL-2, thus forming a fixed portion FP-2. The fixed portion FP-2 may be obtained by bonding part of the inner wrapper 76 to the bottom wall 75 by an adhesive that is used to construct the box body 70, for example.

[0094] Because of the fixed portion FP-2, as the inner wrapper 76 is pulled up along the front wall 72 located opposite the fixed portion FP-2, the bottom face 76-3 of the inner wrapper 76 facing the bottom wall 75 turns around the fixed portion FP-2 serving as a base point (center) and becomes inclined with the left side lifted as viewed in the figure.

[0095] The fixed portion FP-2 is in the form of a line (either a continuous line or a dashed line) extending along the boundary line BL-2, as stated above. Accordingly, the rows of cigarettes CR can be lifted stepwise, or in tiers, as shown in FIG. 9. It is not desirable that the line width of the fixed portion FP-2 be unnecessarily increased (e.g. to a width exceeding the radius of the cigarette CR). If the width of the fixed portion FP-2 is too large, the inclined area of the inner wrapper 76 decreases, making it difficult to lift the rows of cigarettes stepwise. In view of this, the line width of the fixed portion FP-2 is preferably set to about 2 to 6 mm, or to 75% or less of the diameter of the cigarettes CR contained in the cigarette box.

[0096] In the cigarette box CB-3, the inner frame 90 is attached to the inside of the box body 70, has higher rigidity than the inner wrapper 76 and serves to reinforce the box body 70 from inside and to guide movement of the inner wrapper 76. The inner frame 90 is joined to the body inner part 70-2 to form the connection structure before being received in the body outer part 70-1, as explained above with reference to FIG. 10, and functions as a pull-up mechanism for pulling up the inner wrapper 76.

[0097] Inner frames conventionally used for the purpose of reinforcement generally have a U-shaped cross section (as viewed from above) to support the inner surfaces of the front and rear walls. The cigarette box CB-3 makes effective use of such an inner frame.

[0098] Referring to FIGS. 8 to 10, the pull-up mechanism of the cigarette box CB-3 includes the connection

structure slidable in the lifting/lowering direction (in the figures, up and down) along the inner surface of the body outer part 70-1 of the box body 70. The connection structure defines a space therein, in which the inner pack PC is arranged. That is, the connection structure serves also as a protection structure wherein the inner frame 90 and the body inner part 70-2 cooperatively surround the lateral sides of the inner pack PC. Also, the connection structure constitutes a slide member having a rectangular cross-sectional shape, and the inner frame 90 and the body inner part 70-2 forming the slide member function as a second operator (claim 1).

[0099] As shown in FIGS. 8 and 9, a bonded portion 90a is provided as a joining portion that joins the inner frame 90 and the front face 76-1 of the inner wrapper 76 to each other to cause the front face 76-1 to be pulled up as the inner frame 90 is slid up. That is, part of the inner wrapper 76 is fixed at the bonded portion 90a to the inner frame 90 located inside the front wall 72. Consequently, the slide-up movement of the inner frame 90 (connection structure) causes, or interlocks with, the pull-up movement of the inner wrapper 76.

[0100] When the inner frame 90 is slid up, the pull-up mechanism pulls the inner wrapper 76 upward along the front wall located opposite the fixed portion FP-2 with respect to the central axis (longitudinal axis) of the cigarette box CB-3. As a result, the bottom face 76-3 of the inner wrapper 76 in contact with the bottom wall 75 turns around the fixed portion FP-2 serving as a base point, as stated above, and becomes inclined as shown in FIG. 9, so that the cigarette rows RW-1, RW-2 and RW-3 are lifted in tiers.

[0101] As stated above, before the body inner part 70-2 is moved (and thus is in the lowered position) with the lid 80 closed, the riser portion 73st of the rear wall 73 of the body outer part 70-1 is located so as to face the rear surface of the lid 80 of the body inner part 70-2. An access opening 73de partly exposing the rear surface of the lid 80 is formed in the riser portion 73st to allow a sliding force to be applied to the body inner part 70-2 (connection structure). The access opening 73de is shown in FIGS. 10, 12 and 14, though not illustrated in FIGS. 8 and 9.

[0102] While the lid 80 of the cigarette box CB-3 is closed with the body inner part 70-2 located in the aforementioned lowered position, the inner wrapper 76 arranged in the form of the letter U is in an undeformed state (FIG. 8). Then, as the body inner part 70-2 is slid upward, the inner frame 90 joined to the body inner part 70-2 also slides upward, so that the inner wrapper 76 is pulled up as shown in FIG. 9. That is, the slide-up movement of the body inner part 70-2 to open the lid 80 is united with the pull-up movement of the inner wrapper 76 by the inner frame 90. Consequently, when the lid 80 is opened with the body inner part 70-2 located in the raised position, the bottom face of the inner wrapper 76 that was in contact with the bottom wall 75 is inclined upward with respect to the fixed portion FP-2 serving as a base point, whereby the cigarette rows can be lifted in tiers.

[0103] Referring further to FIGS. 11 to 14, the pull-up mechanism of the cigarette box CB-3 will be explained in more detail. FIGS. 11 and 12 are perspective views showing the external appearance of the cigarette box CB-3 in the state illustrated in FIG. 8, as viewed from the front and rear, respectively, of the cigarette box CB-3, and FIGS. 13 and 14 are perspective views showing the external appearance of the cigarette box CB-3 in the state illustrated in FIG. 9, as viewed from the front and rear, respectively, of the cigarette box CB-3.

[0104] The right and left side walls 74R and 74L, which are not shown in FIGS. 8 and 9, are illustrated in FIGS. 11 to 14. As shown in FIG. 13, the inner frame 90 and the body lower element 81 of the body inner part 70-2 are brought into contact with each other at their side walls (84R and 92R; 84L and 92L, see FIG. 10), and are joined together at their overlapping portions La by an adhesive. Thus, the connection structure including the structural part having a rectangular cross-sectional shape is formed. It is to be noted, however, that the connecting portions where the inner frame 90 and the body inner part 70-2 are connected to each other are not limited to the side walls as exemplified in the figures, and any desired configuration may be employed insofar as the inner frame 90 and the body inner part 70-2 cooperatively surround the lateral sides of the inner pack PC.

[0105] The access opening 73de, which is not illustrated in FIGS. 8 and 9, is shown in FIGS. 12 and 14. The access opening 73de is a semicircular cut formed in the riser portion 73st. The rear surface of the slidable body inner part 70-2 is exposed through the access opening 73de and, therefore, can be moved upward by applying a sliding force to the body inner part 70-2 (connection structure) as indicated by an arrow in FIG. 12. The access opening 73de is provided to allow the user to apply a sliding force to the body inner part 70-2 with his/her finger (e.g. thumb) in contact with the body inner part 70-2, and thus the shape thereof need not be such that the cut reaches the upper edge of the rear wall as exemplified in the figures. That is, the access opening may be a cut in the form of a circle, ellipse or rectangle, for example.

[0106] It is to be understood, however, that the access opening 73de configured as described above is a preferred example. Where the access opening 73de is not formed in the riser portion 73st, the user may hold the side walls of the lid 80 with his/her fingers and then pull up the lid 80 to move the body inner part 70-2 (connection structure) upward.

[0107] In the cigarette box CB-3 of the third embodiment, the aforementioned bonded portion 90a serving as the joining portion and the combination of the inner frame 90 and the body inner part 70-2 serving as the second operator constitute an interlocker that interlocks the forward movement, or upward movement, of the second operator with the pull-up movement of the inner wrapper 76.

[0108] In the cigarette box CB-3 configured as de-

scribed above, as the lid 80 in the closed state shown in FIG. 8 is opened as shown in FIG. 9, the rows of cigarettes are lifted in tiers as shown in FIG. 13. In the cigarette box CB-3 of this embodiment, the front row RW-1 is lifted highest, and accordingly, the other rear-side rows RW-2 and RW-3 are not illustrated in FIG. 13 (see FIG. 9).

[0109] Also, in the aforementioned cigarette box CB-3, when the connection structure constituted by the inner frame 90 and the body inner part 70-2 is not raised and remains in the lowered position (initial position) with the lid 80 closed, the riser portion 73st of the rear wall 73 and the connection structure are located at the same height. This configuration is, however, only an example. The height of the riser portion 73st may be set as desired to determine the lift amount of the bottom face of the inner wrapper. That is to say, the height of the riser portion 73st may be determined in accordance with the required lift amount of the bottom face of the inner wrapper.

[0110] With the aforementioned cigarette box CB-3 according to the third embodiment, as the user slides the body inner part 70-2 upward to open the lid 80, the connection structure moves and the rows of cigarettes are lifted in tiers. It is therefore unnecessary for the user to perform an additional action for picking one cigarette from among the fully packed cigarettes. Also, once the connection structure is raised, it remains there unless the body inner part 70-2 is forcibly returned by closing the lid 80. Consequently, the rows of cigarettes remain lifted in tiers as shown in FIG. 13, so that the user may take time to pick one cigarette.

[0111] In the following, a preferred inner wrapper for use in the aforementioned cigarette box CB will be described with reference to FIG. 15. As stated above, the inner wrapper (16, 46, 76) for wrapping the inner pack (PC) therein is a single sheet and is arranged inside the cigarette box generally in the form of the letter U with no cuts therein, whereby the rows of cigarettes can be lifted in tiers.

[0112] In order to ensure smooth movement of the inner wrapper, a slit is preferably cut in part of the inner wrapper in the vicinity of the fixed portion where the inner wrapper is fixed to the bottom wall (15, 45, 75) of the box body (10, 40, 70). More specifically, the inner wrapper is fixed to the bottom wall by a linearly applied adhesive or the like, and since the inner wrapper turns around the fixed portion (FP-1 or FP-2), a slit formed near the fixed portion enables the inner wrapper to bend easily, thus allowing the bottom face of the inner wrapper to smoothly assume an inclined position.

[0113] FIG. 15 illustrates a blank 100 with slits, for use as the inner wrapper. In FIG. 15, FR denotes a region corresponding to the front face, RE denotes a region corresponding to the rear face, and BA denotes a region corresponding to the bottom face. Chain line LN across the front face FR indicates a cutting line along which a frontside unnecessary flap is torn off after the cigarette box is opened for the first time.

[0114] Slits 110 are formed on outer sides of the region BA where the blank 100 is fixed by an adhesive. The widthwise outward portions are portions (marginal side portions) for covering the individual sides of the inner pack PC. The blank 100 exemplified in FIG. 15 is applicable to the aforementioned first to third embodiments.

[0115] In the case of the first embodiment, the inner wrapper is fixed to box body at a location near the front boundary line between the front and bottom walls, and accordingly, the blank 100 to be used preferably has slits 110a formed in the outer side portions and between the front face FR and the bottom face BA. On the other hand, in the case of the second and third embodiments, the inner wrapper is fixed to box body at a location near the rear boundary line between the rear and bottom walls, and accordingly, the blank 100 to be used preferably has slits 110b formed in the outer side portions and between the rear face RE and the bottom face BA.

[0116] The present invention is not limited to the foregoing embodiments.

[0117] In the above description of the embodiments, the fixed portion where the inner wrapper is fixed to the box body is situated on the bottom wall of the box body at a location near the boundary line between the front and bottom walls or near the boundary line between the rear and bottom walls, but the location of the fixed portion is not limited to such locations. The fixed portion may be situated on either the front or rear wall of the box body insofar as the fixed portion is located in the vicinity of the corresponding boundary line.

[0118] Also, in the foregoing embodiments, cigarettes are arranged in three rows, but the number of cigarette rows is not limited to three. The number of cigarette rows may be smaller than three, namely, two, or may alternatively be greater than three, namely, four or more.

Reference Signs List

[0119]

CB (CB-1, CB-2, CB-3): cigarette box
CR: cigarette
PC: inner pack
10, 40, 70: box body
11, 41, 71: hinge
12, 42, 72: front wall
13, 43, 73: rear wall
14, 44, 74 (14R, 14L; 44R, 44L; 74R, 74L): side wall
15, 45, 75: bottom wall
16, 46, 76: inner wrapper
16-1, 46-1, 76-1: front face
16-2, 46-2, 76-2: rear face
16-3, 46-3, 76-3: bottom face
16-4, 46-4, 76-4: closed face
47: access opening
20, 50, 80: lid
21: bonded portion
30, 60, 90: inner frame
60a, 90a: bonded portion

31: folding tucker
31a: upper edge
61: abutting portion
70-1: body outer part
70-2: body inner part
73st: riser portion
73de: access opening
81: body lower element
100: blank for inner wrapper
BL-1, BL-2: boundary line
FP-1, FP-2: fixed portion

Claims

1. A cigarette box comprising: a box body having an open upper end, a front wall, a rear wall, a pair of side walls, and a bottom wall; a lid connected to the box body by a hinge and capable of opening and closing the open upper end of the box body; and an inner pack contained in the box body with an inner frame therebetween and including an inner wrapper and a cigarette bundle wrapped in the inner wrapper, the inner frame being located adjacent to the front wall of the box body and projecting from the upper end of the box body, wherein:

the inner wrapper has front and rear faces respectively covering front and rear faces of the cigarette bundle, a single bottom face covering a lower end face of the cigarette bundle, and a closed face formed by folding a portion of the inner wrapper and exposably closing an upper end face of the cigarette bundle,
the cigarette box further comprises a pull-up mechanism including a first operator capable of moving back and forth as the lid is opened and closed or a second operator separate from the inner wrapper and capable of moving back and forth in a lifting/lowering direction with respect to the box body, the pull-up mechanism pulls one of the front and rear faces of the inner wrapper upward as the operator moves in a forward direction, to cause the bottom face of the inner wrapper to lift obliquely together with the cigarette bundle, and
the pull-up mechanism further includes a linear fixed portion where the inner wrapper is partly fixed to the box body at a location near a boundary line between the front and bottom walls of the box body or near a boundary line between the rear and bottom walls of the box body, and an interlocker capable of interlocking forward movement of the operator with pull-up movement of the front or rear face of the inner wrapper.

2. The cigarette box according to claim 1, wherein:

the pull-up mechanism includes, as the first operator, the fixed portion located near the boundary line between the front and bottom walls of the box body and a folded flap forming part of the closed face of the inner wrapper and bonded to an inner surface of the lid, and
the interlocker includes a folding tucker located adjacent to the rear face of the inner pack and projecting upward from the upper end of the box body, the folding tucker allowing the rear face of the inner wrapper to be pulled up by the folded flap as the lid is opened, and causing the rear face of the inner wrapper to be folded back at an upper edge thereof when the rear face of the inner wrapper is pulled out of the box body.

3. The cigarette box according to claim 2, wherein the upper edge of the folding tucker has a height determined in accordance with an amount of lift of the bottom face of the inner wrapper.

4. The cigarette box according to claim 3, wherein the folding tucker forms, in cooperation with the inner frame, a tubular inner sleeve surrounding an outer periphery of the inner pack.

5. The cigarette box according to claim 1, wherein:

the pull-up mechanism includes, as the second operator, the fixed portion located near the boundary line between the rear and bottom walls of the box body and the inner frame slidable in the lifting/lowering direction with respect to the box body, and
the interlocker includes an access opening formed in the front wall of the box body and exposing the inner frame therethrough to allow sliding force to be applied to the inner frame, and a bonded portion where the inner frame and the front face of the inner wrapper are bonded to each other, the bonded portion causing the front face of the inner wrapper to be pulled up as the inner frame is slid upward.

6. The cigarette box according to claim 5, wherein:

the inner frame has a U-shaped cross section and is slidable along inner surfaces of the front and side walls of the box body, and
slide-up movement of the inner frame in a closed state of the lid interlocks with opening movement of the lid, in addition to pull-up movement of the front face of the inner wrapper.

7. The cigarette box according to claim 1, wherein:

the box body includes
a body inner part having a body lower element

surrounding lateral sides of the inner pack in co-operation with the inner frame, bonded to the inner wrapper of the inner pack by the inner frame and having the upper end and an open lower end, and the lid connected to the upper end of the body lower element by the hinge, and a body outer part containing the body lower element with the lid exposed and having the front wall, the rear wall, the pair of side walls and the bottom wall, the body outer part including a riser portion which permits the body inner part to move up and down between a lowered position where the bottom face of the inner wrapper is located at the bottom wall of the body outer part and a raised position where the bottom face of the inner wrapper is located at a distance from the bottom wall of the body outer part, and which faces a rear surface of the lid when the body inner part is in the lowered position with the lid closed, and

the pull-up mechanism includes at least the fixed portion located near the boundary line between the rear and bottom walls of the body outer part, and the body inner part serving as both the second operator and the interlocker.

8. The cigarette box according to claim 7, wherein the pull-up mechanism further includes an access opening formed in the riser portion of the body outer part and exposing the rear surface of the lid to permit lifting/lowering movement of the body inner part.

9. The cigarette box according to claim 7 or 8, wherein the riser portion of the body outer part has a height determined in accordance with an amount of lift of the bottom face of the inner wrapper.

FIG. 1

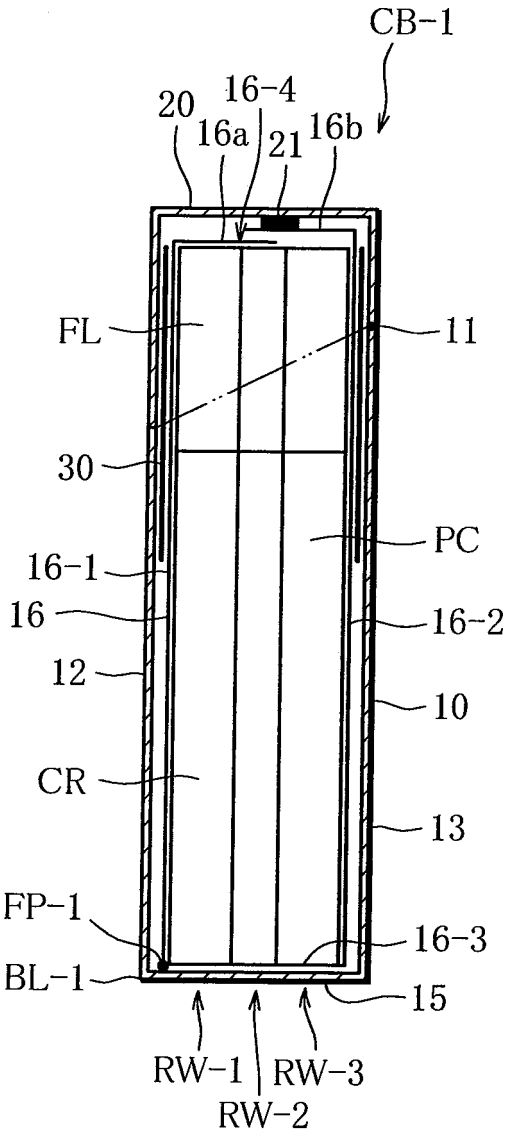

CB-1
20
16-4
16a
21
16b
FL
11
30
PC
16-1
16
16-2
12
10
CR
13
FP-1
16-3
BL-1
15
RW-1
RW-3
RW-2

FIG. 2

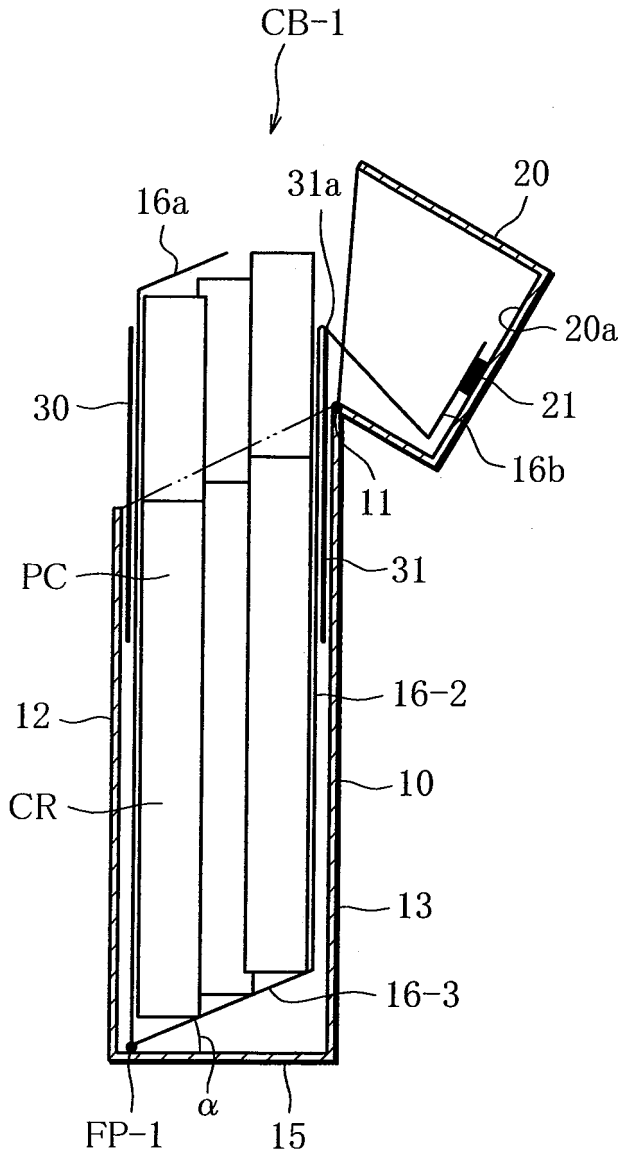


FIG. 3

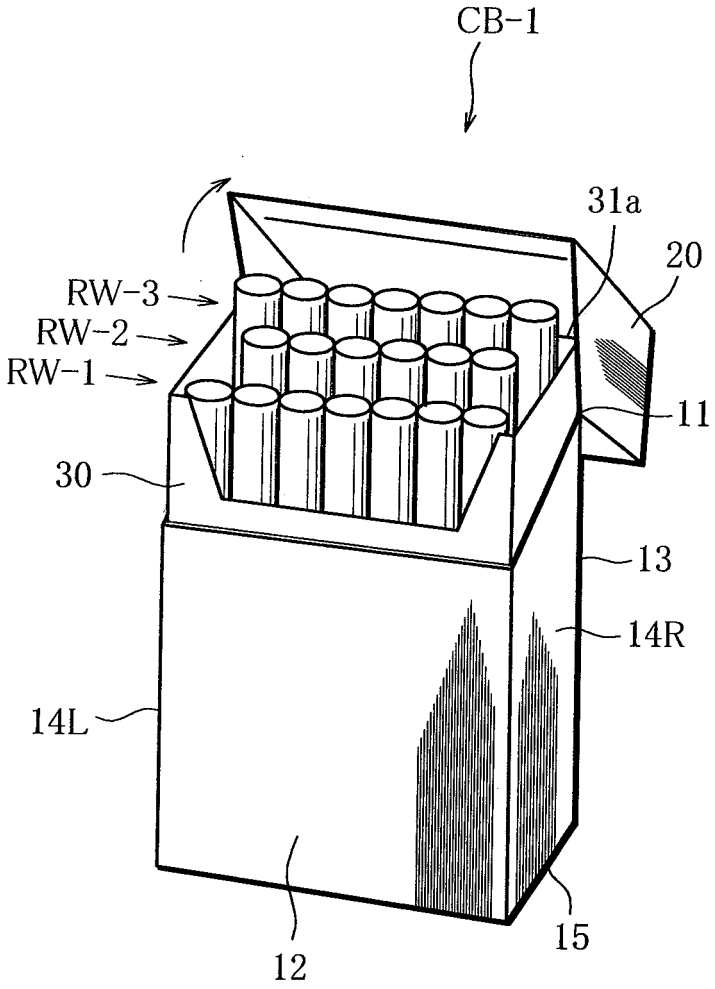
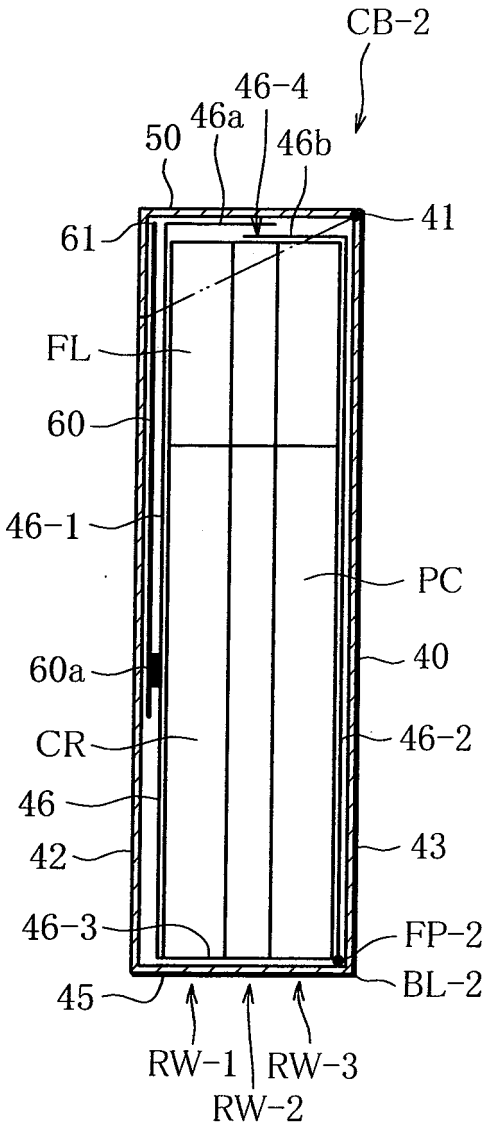


FIG. 4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RW-2

FIG. 5

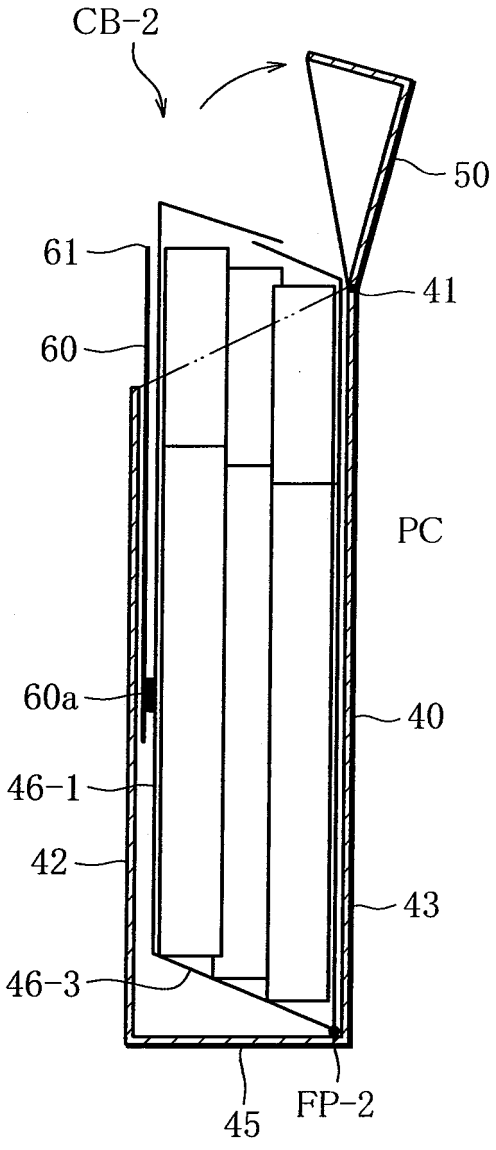


FIG. 6

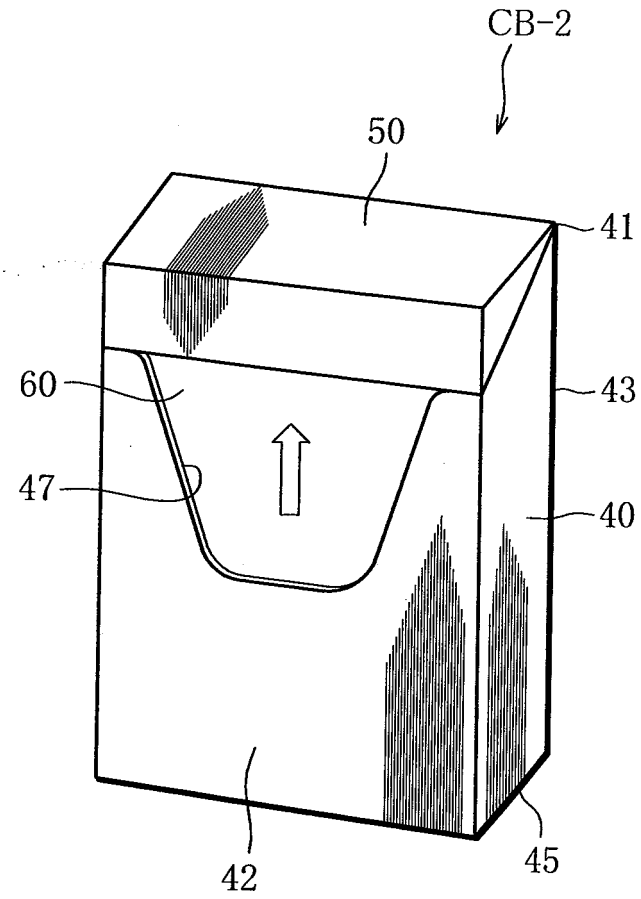


FIG. 7

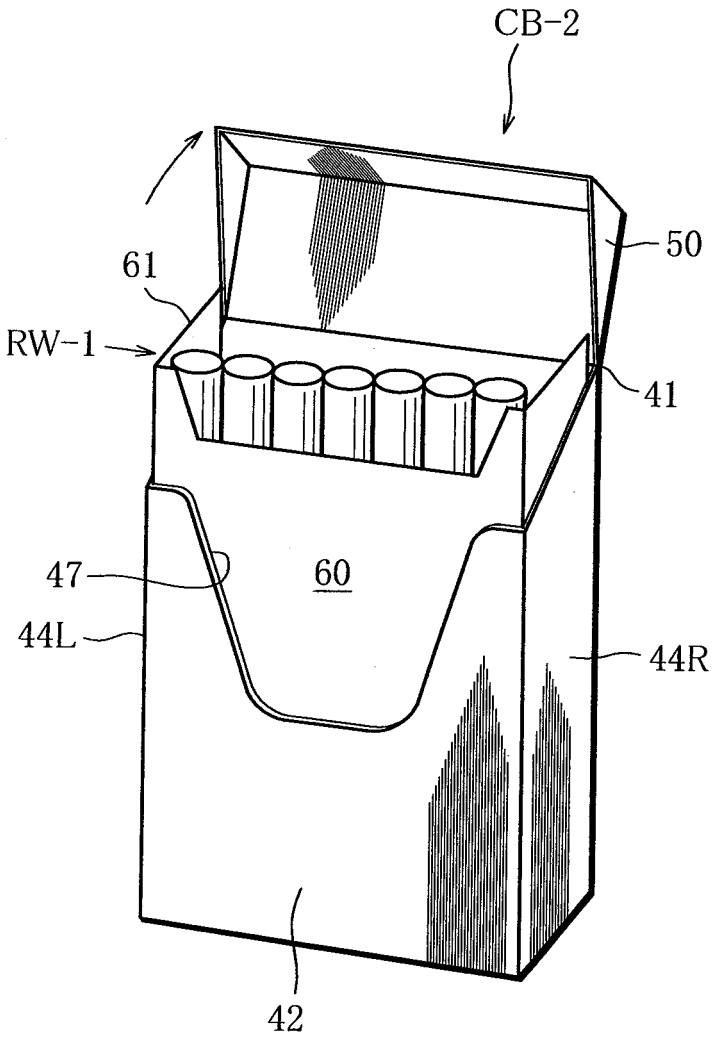
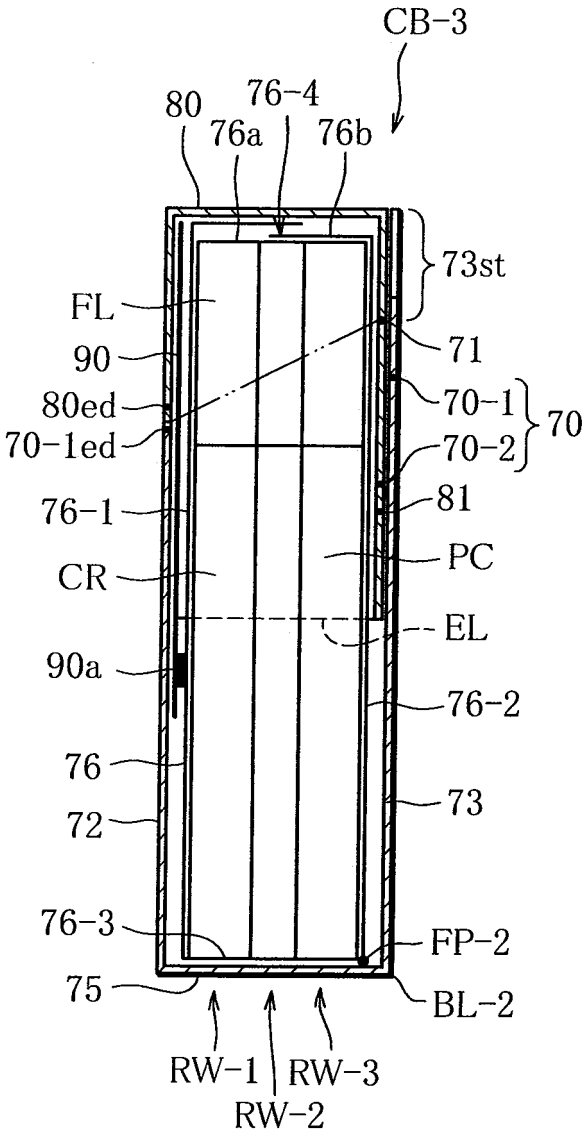


FIG. 8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RW-2

FIG. 9

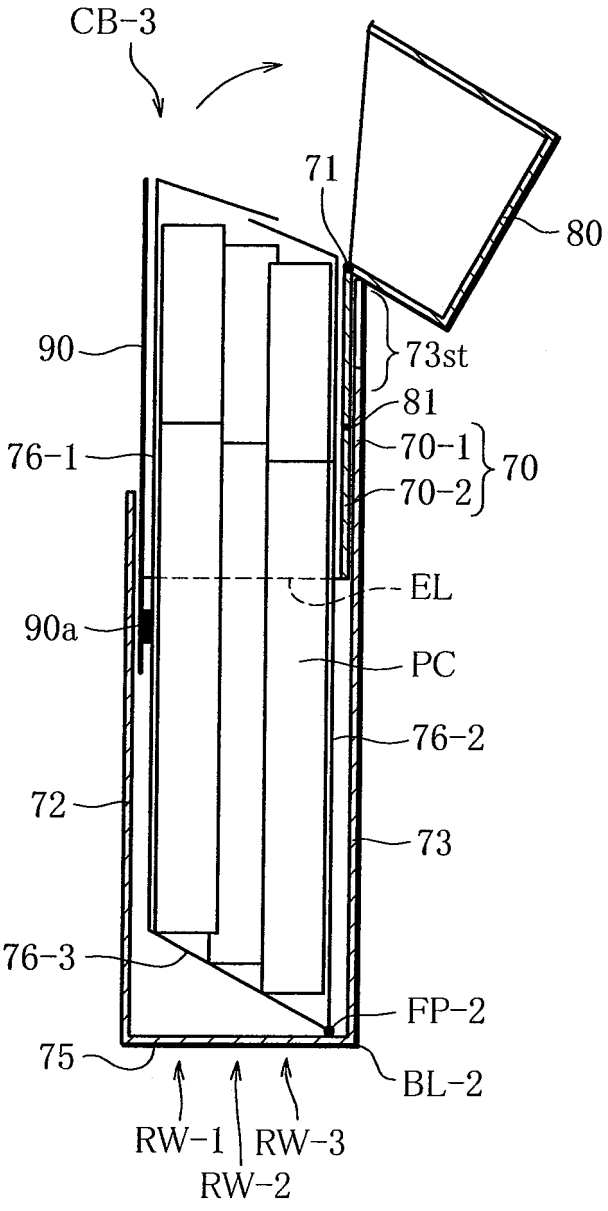
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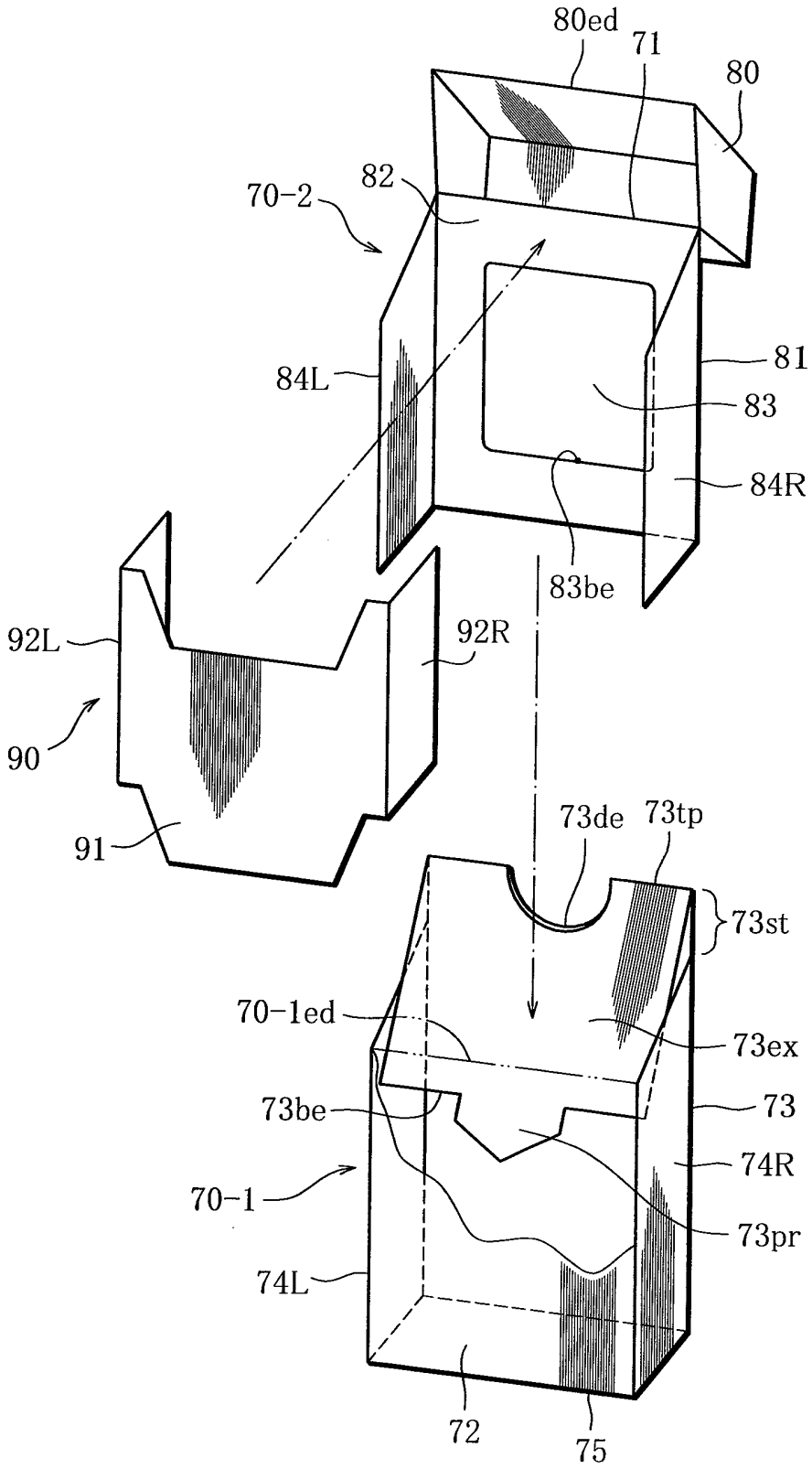
FIG. 10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92R
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74L
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FIG. 11

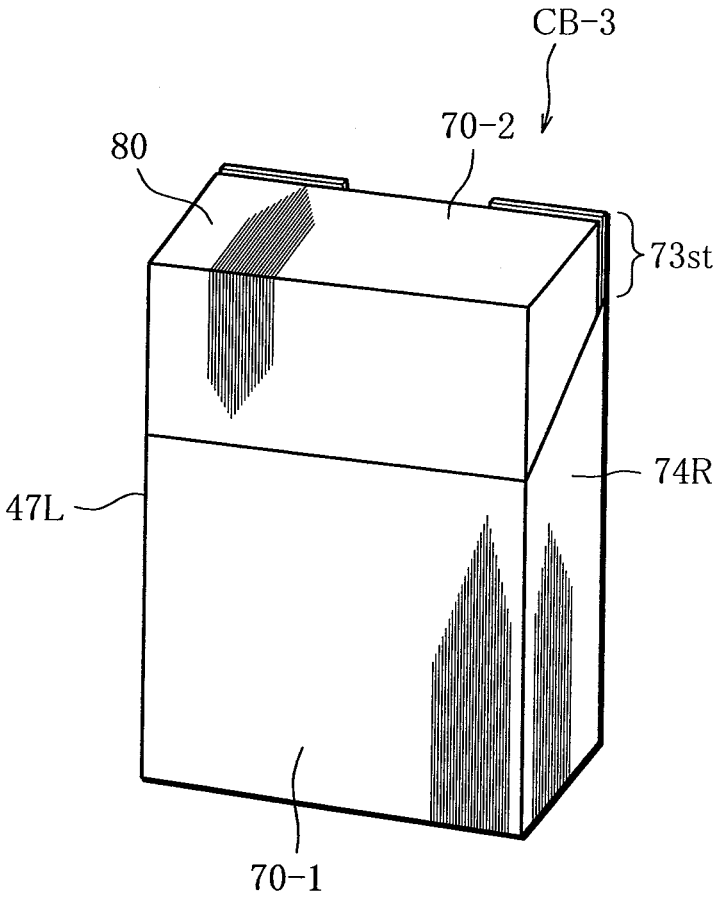


FIG. 12

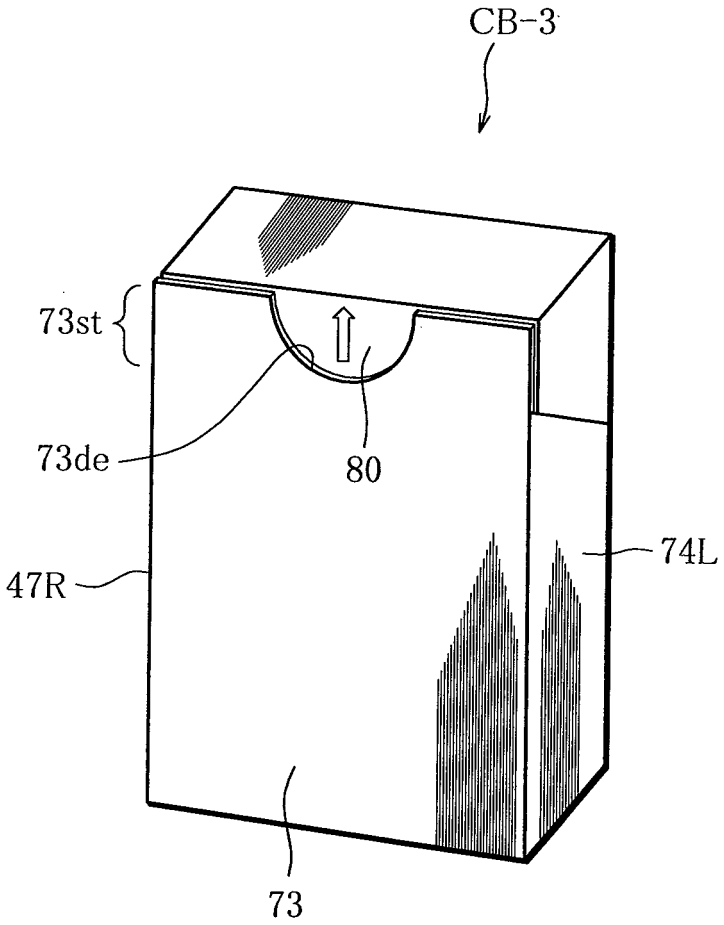


FIG. 13

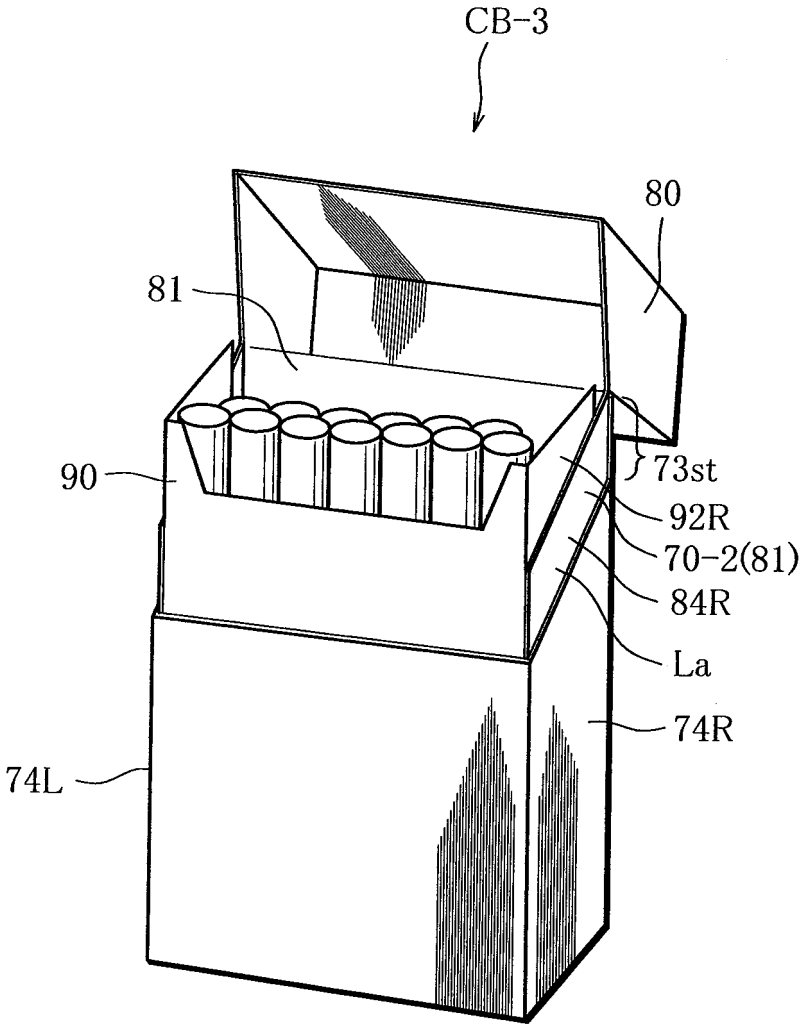


FIG. 14

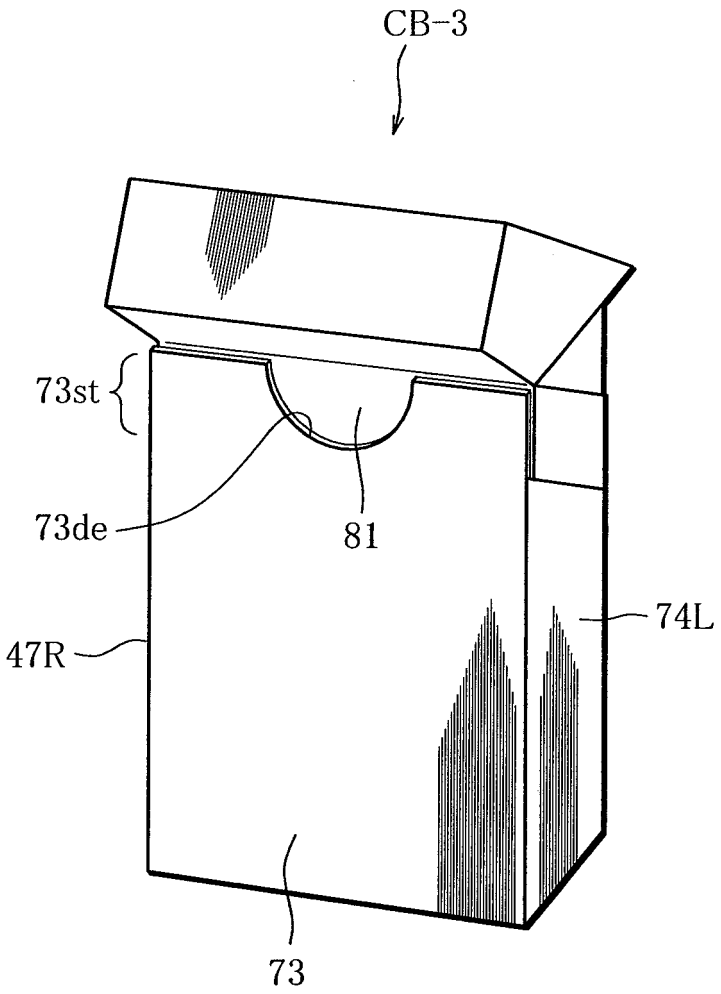
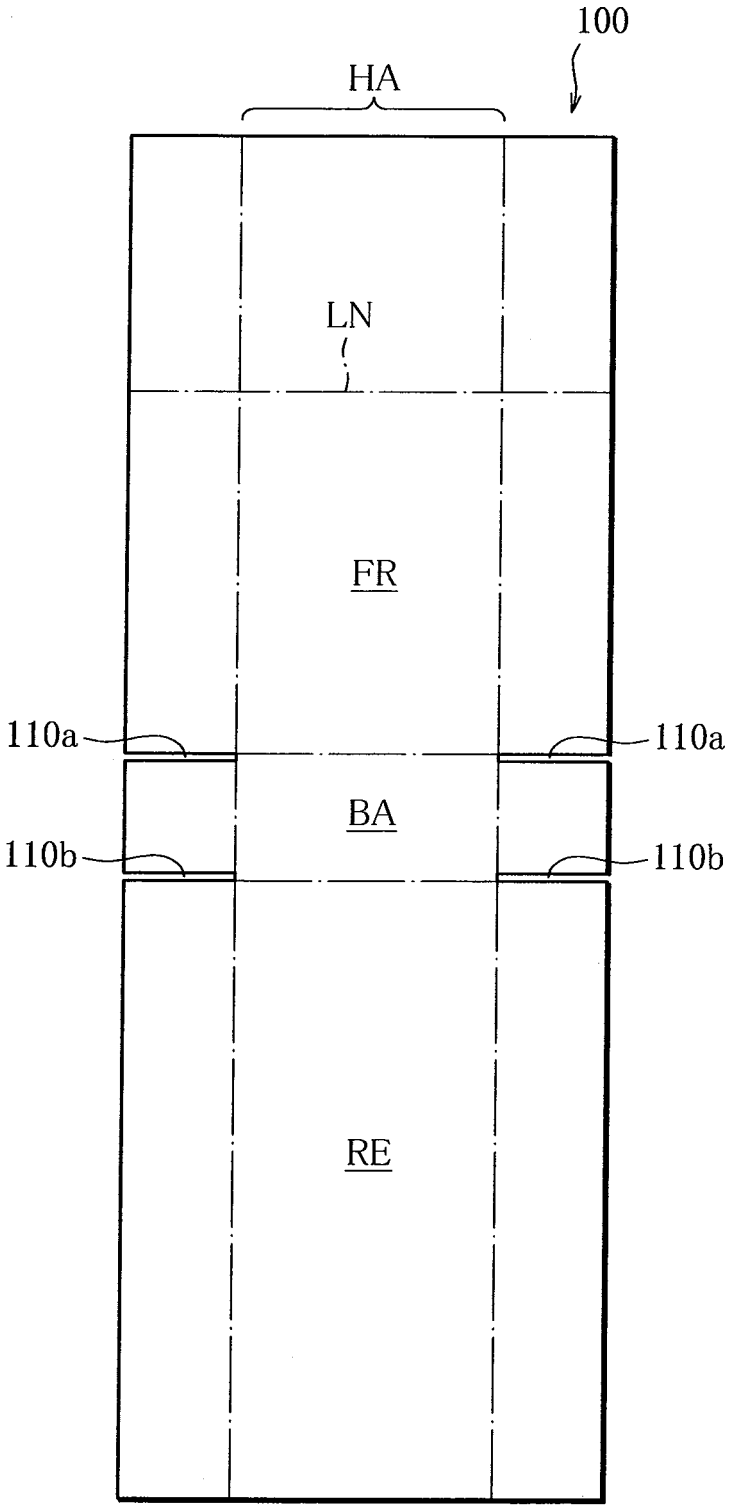


FIG. 15



INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2011/077168

A. CLASSIFICATION OF SUBJECT MATTER
B65D85/10(2006.01)i, *A24F15/00*(2006.01)i, *B65D5/42*(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D85/10, A24F15/00, B65D5/42

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2012
Kokai Jitsuyo Shinan Koho	1971-2012	Toroku Jitsuyo Shinan Koho	1994-2012

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2-19245 A (Focke & Co. (GmbH & Co.)), 23 January 1990 (23.01.1990), entire text; fig. 1 to 5 & US 4949841 A & EP 330969 A1 & DE 3806819 A & DE 58905865 D & BR 8900985 A & CA 1328647 A	1-9
A	JP 1-308741 A (Focke & Co. (GmbH & Co.)), 13 December 1989 (13.12.1989), entire text; fig. 1 to 3 & US 4942961 A & EP 330938 A1 & DE 3806818 A & DE 58905653 D & BR 8900984 A & CA 1327188 A	1-9

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Date of the actual completion of the international search	Date of mailing of the international search report
07 February, 2012 (07.02.12)	21 February, 2012 (21.02.12)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2011/077168

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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A	JP 3113879 U (Thrash Co., Ltd.), 22 September 2005 (22.09.2005), entire text; fig. 1 to 11 (Family: none)	1-9
A	JP 2011-184103 A (G.D S.p.A.), 22 September 2011 (22.09.2011), entire text; fig. 1 to 10 (Family: none)	1-9
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Patent documents cited in the description

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