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References cited:
CH-A- 525 817
US-A- 1 953 418
US-A- 3 132 790

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Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a pack for smoking articles, to a carton for packs of smoking articles and to a smoking article pack blank assembly.

[0002] Typically, smoking articles are sold in disposa-ble packs that have a substantially parallelepiped shape formed by a bottom wall, four side walls extending from the bottom wall, and an opening opposite to the bottom wall through which smoking articles can be removed from the pack. A lid is provided to cover the opening, the lid commonly being hinged to one of the side walls.

[0003] Cigarettes are often tightly together packed inside a new pack, and closely confined by the side walls of the pack. This can make it difficult to extract the first cigarette when the pack is first opened. Subsequent cigarettes may also be inconvenient to remove, because the side walls often extend most or all of the way along the length of the cigarettes, which are commonly arranged in the pack with their longitudinal axes parallel to the side walls.

[0004] Cigarette packs with mechanisms for moving a cigarette outside the confines of the pack for easier removal have been proposed. US 1,842,891 describes a cigarette pack comprising two parallelepiped receptacles each designed to hold a single layer of cigarettes and hinged together book-fashion along edges of the two receptacles parallel to the length of cigarettes in the pack, so that the receptacles are face-to-face when the pack is closed. Each receptacle has an opening in its inner face adjacent to the hinge, through which cigarettes are dispensed. A pair of flaps arranged inside the two receptacles at the hinge act to guide a cigarette in a transverse direction out though one of the openings when the receptacles are rotated away from one another about the hinge, the cigarette completely leaving the pack while supported on the flaps.

[0005] US 1,588,104 describes a cigarette pack that comprises a parallelepiped receptacle having two halves that are hinged together along a back surface of the receptacle along a direction parallel to the length of cigarettes in the pack. The adjacent and facing sides of the two halves are openings through which cigarettes can be removed from the pack, the two openings being face-to-face when the pack is closed. To open the pack, the back surface is partially folded back on itself along the hinge to expose the two openings. A resilient sheet is positioned inside the receptacle against the back surface which acts to urge cigarettes in both halves of the receptacle in a transverse direction towards the openings when the pack is opened. This is intended to make it easier to remove cigarettes from the pack by ensuring that cigarettes are always close to the opening when the pack is opened.

[0006] In both these examples, the cigarettes are presented at the openings in a direction transverse to their length, and the openings are large enough for a cigarette to pass through in that direction. This makes it likely that when the pack is opened, a cigarette pushed towards and through the opening will fall out of the pack and be dropped, as there is little difference in position between a cigarette still within the confines of the pack and a cigarette that has been pushed totally through the opening. Thus, these packs address the problem of ejecting a cigarette from a pack to facilitate removal therefrom in a less than satisfactory manner.

[0007] Packs which disclose lengthwise ejection of the cigarettes from a single receptacle on opening are described in DE-A-3924165, which discloses a pack comprising all the technical features of the preamble of claim 1, and US-A-1 953 418, which discloses a carton comprising all the technical features of the preamble of claim 12.

SUMMARY OF THE INVENTION

[0008] In a first aspect the invention provides a pack for smoking articles comprising a first receptacle for receiving a plurality of smoking articles arranged parallel to one another, the receptacle having an opening at a first end through which the smoking articles may be dispensed along a direction parallel to their longitudinal axes, and a rotatable flap positioned inside a second end of the first receptacle opposite the first end, which when rotated contacts an end of at least one smoking article and urges the at least one smoking article through the opening, characterised by a second receptacle for receiving a plurality of smoking articles arranged parallel to one another, the second receptacle having an opening at a first end through which the smoking articles may be dispensed along a direction parallel to their longitudinal axes; wherein the second receptacle is rotatably joined to the first receptacle by a hinge at their second ends; the rotatable flap of the first receptacle extends to the second receptacle and comprises an interior portion disposed inside the first receptacle for contacting an end of at least one smoking article therein, and an exterior portion integral with or secured to the second receptacle; and rotation of the first and second receptacles away from one another about the hinge causes rotation of the rotatable flap so as to urge the at least one smoking article in the first receptacle through the opening of the first receptacle. This provides a pack which includes an assembly for ejecting smoking articles from the pack, to facilitate removal of the first article from tightly packed contents, for example, but which obviates the risk of the ejected smoking article falling out of the pack or being dropped. By dispensing the smoking articles along their length, rather than in a transverse direction, it is possible to arrange that they be brought into a position in which part of the smoking article protrudes from the pack to be grasped for removal but the greater part of the smoking article remains safely held within the pack. Convenient
dimensions for the rotatable flap give a flap that can push a smoking article partly out through an opening arranged at the opposite end of the receptacle, but not by an amount that risks the smoking article being fully or almost fully ejected through the opening and hence dropped. Further, a rotatable flap is a particularly simple ejection mechanism that can be provided with just one component, and which can be configured in such a way as to add negligible weight or bulk to a pack.

[0009] Fixing of part of the rotatable flap inside the second receptacle provides an attractively simple arrangement for actuation of the rotatable flap inside the first receptacle, so that smoking articles can be dispensed with very little effort by the smoker. It also allows the flap to be totally hidden inside the pack, which keeps it safe from damage, and also gives a good outer appearance to the pack and offers interest to the smoker since it is not immediately apparent how the smoking articles have been ejected. The second receptacle may also be used for smoking articles, or alternatively for matches, a lighter, an ash or butt receptacle or other smoking accessories.

[0010] In the event that the second receptacle is used for smoking articles, the second receptacle may also comprise a rotatable flap positioned inside a second end of the second receptacle opposite the first end, which when rotated contacts an end of at least one smoking article in the second receptacle and urges the at least one smoking article through the opening; the rotatable flap of the second receptacle extending to the first receptacle and comprising an interior portion disposed inside the second receptacle for contacting an end of at least one smoking article therein, and an exterior portion integral with or secured to the first receptacle; rotation of the first and second receptacles away from one another about the hinge causing rotation of the rotatable flap of the second receptacle so as to urge the at least one smoking article in the second receptacle through the opening of the second receptacle. This gives a pack with two receptacles, the contents of both of which can be conveniently dispensed by the simple action of rotating the receptacles apart from one another.

[0011] The interior and exterior portions of the rotatable flap or flaps may be coplanar. This gives a simple flap configuration, which can be straightforwardly and rapidly fabricated by cutting the required shape from a planar sheet of suitable material. The rotatable flap or flaps can be arranged parallel with bottom walls of the first receptacle and the second receptacle when the receptacles are unrotated with respect to one another. For example, the flaps can be positioned flush with the bottom walls, and the required fixing of the exterior portions can be readily effected by gluing them to the inside surface of the bottom walls.

[0012] The pack may comprise a lid configured to cover the openings of both receptacles. The lid may be hingedly attached to one of the receptacles. A lid of this type can be used to keep the two receptacles folded against one another in their unrotated, closed position if the lid extends partly over the outside of the receptacles.

[0013] In other embodiments, the rotatable flap may extend through a side wall of the receptacle and comprise an interior portion disposed inside the receptacle for contacting the end of at least one smoking article and an exterior portion disposed outside the receptacle which can be actuated to rotate the interior portion. This offers an ejection mechanism for a single receptacle pack that can be directly operated by the smoker, in contrast to the dual-receptacle arrangements that exploit relative rotation of the receptacles.

[0014] The exterior portion may be arranged at an angle to the interior portion such that when the flap is unrotated, the interior portion is flush with a bottom wall of the receptacle and the exterior portion is flush with the side wall of the receptacle. A flap configured in this manner does not protrude from the pack, and hence offers a neat appearance and reduces the risk that the flap will become caught up and damaged. Also, such a rotatable flap can be integrated into a conventional cigarette pack design to give a pack with an ejection mechanism that is the same size as a conventional pack and can therefore be handled by existing packing, transporting, display and vending apparatus.

[0015] The or each rotatable flap may be configured to contact the ends of all smoking articles received in the receptacle. Every smoking article in the recepticle will therefore be urged from the pack each time the rotatable flap is operated, without any effort or input required by the smoker. Alternatively, the or each rotatable flap may be configured to contact the ends of less than the maximum number of smoking articles that can be received in the receptacle. This allows just one or a few smoking articles to be pushed from the pack, which addresses the difficulty of removing the first smoking article from a tightly packed receptacle while using a minimum of material for the rotatable flap. This ejection mechanism can be enjoyed by the smoker for the whole pack, however, simply by shaking the remaining smoking articles into a position in which they will be engaged by the rotatable flap.

[0016] The pack may be fabricated from one or more foldable blanks. Existing pack fabrication technology can hence be exploited to make packs according to the invention.

[0017] Each receptacle may have a parallelepiped shape defined by a bottom wall and four side walls extending from the bottom wall substantially at right angles. Packs according to the invention can be given an appearance and size similar to those of conventional smoking article packs, so that the packs can be handled with existing apparatus.

[0018] The principle of a rotatable flap for ejection of the contents of a pack can be extended from packs containing smoking articles to cartons containing packs of smoking articles as set out in claim 12 hereinafter.

[0019] A further aspect of the invention is directed to blanks for assembling packs according to embodiments
of the invention. In a first embodiment, a smoking article pack blank assembly comprises a first receptacle blank and a second receptacle blank, the first receptacle blank comprising a bottom panel and four side panels erectable around the bottom panel to form a first receptacle for a plurality of smoking articles arranged with their longitudinal axes orthogonal to the bottom panel, and an aperture in the bottom panel, the aperture having at least one edge coincident with an edge of the bottom panel; and the second receptacle blank comprising a bottom panel and four side panels erectable around the bottom panel to form a second receptacle for a plurality of smoking articles arranged with their longitudinal axis orthogonal to the bottom panel, and a flap cut out from the bottom panel and a side panel depending from the bottom panel along a perimeter running between two points located on the edge of the bottom panel opposite to an edge from which the said side panel depends; the flap and the aperture positioned so as to be aligned when the erected blanks are placed such that the side panel of the second receptacle blank opposite the side panel having the flap is face to face with a side panel of the first receptacle blank having the aperture adjacent to its edge.

[0020] The flap may extend from the edge of its associated bottom panel by a distance not greater than the distance by which the aperture extends from the edge of its associated bottom panel.

[0021] Alternatively, the flap may have a fold line parallel to the edge of its associated bottom panel, and may extend from the edge of its associated bottom panel by a distance such that when the flap is folded along the fold line, the flap has a dimension from the edge of its associated bottom panel not greater than the distance by which the aperture extends from the edge of its associated bottom panel. This allows the flap to be made from a double thickness of pack material, giving it additional strength and rigidity for lifting the smoking articles.

[0022] The flap may have an end portion remote from the edge of its associated bottom panel that has a width greater than the width of the remainder of the flap such that folding the flap along its fold line positions the end portion against the bottom panel of the second receptacle blank. For example, the flap may be substantially T-shaped. The wider portion helps to secure the folded flap in position and maintain its integrity in use.

[0023] The blank assembly may further comprise an outer blank erectable around the erected first receptacle blank and the erected second receptacle blank when placed face-to-face, to connect the erected first and second receptacle blanks by a hinge line coincident with the edge of the bottom panel of the first receptacle blank having the aperture edge and also with the edge of the bottom panel of the second receptacle blank having the two points of the flap perimeter. The outer blank may comprise a lid portion erectable to form a hinged lid that can be closed over both the erected first receptacle blank and the erected second receptacle blank when they are placed face-to-face to maintain the face-to-face placing.

[0024] According to another embodiment, a smoking article blank assembly comprises a first receptacle blank and a second receptacle blank, the first receptacle blank and the second receptacle blank each comprising a bottom panel and four side panels erectable around the bottom panel to form a receptacle for a plurality of smoking articles arranged with their longitudinal axes orthogonal to the bottom panel, the bottom panel comprising a bottom portion and a flap portion parallel to the bottom portion which is divided in half by a fold line parallel to the bottom portion, the flap portion having a dimension orthogonal to the fold line which is not greater than twice the dimension orthogonal to the fold line of the bottom portion of the other receptacle blank, and a slot between the fold portion and an adjacent side panel depending from the bottom panel, the slot having a length the same as the distance by which the flap portion extends further than the bottom portion; the flap portion and the bottom portion of each receptacle blank configured such that when erected each flap portion forms a flap that can be inserted into the other receptacle to lie against the base of that receptacle when the first and second receptacles are placed with their side panels which are adjacent to the slots face-to-face.

[0025] Each flap portion may extend fully across its associated bottom panel and each bottom portion may extend half-way across its associated bottom panel. This gives flaps large enough to lift all the smoking articles in each receptacle, in a simple blank configuration that allows the bottom panels to be the same for both receptacle blanks.

[0026] The blank assembly may further comprise an outer blank erectable around the erected first receptacle blank and the erected second receptacle blank when placed face-to-face to connect the erected first and second receptacle blanks so that they are rotatable about a hinge line coincident with the edges of the bottom panels of the first and second receptacle blanks having the slots. The outer blank may comprise a lid portion erectable to form a hinged lid that can be closed over both the erected first receptacle blank and the erected second receptacle blank when they are placed face-to-face to maintain the face-to-face placing.

BRIEF DESCRIPTION OF THE DRAWINGS

[0027] For a better understanding of the invention and to show how the same may be carried into effect reference is now made by way of example to the accompanying drawings in which:

Figure 1 shows a perspective view of a pack for smoking articles according to an embodiment of the invention, the pack in an open position; Figures 2A and 2B show cross-sectional side views of the lower part of the pack of Figure 1 respectively.
in a closed position and an open position;
Figures 2C and 2D show cross-sectional side views of the lower part of a pack according to another embodiment in a closed position and an open position;
Figures 2E and 2F show cross-sectional side views of the lower part of a pack according to a further embodiment in a closed position and an open position;
Figure 2G shows a plan view of the base of the pack of Figures 2E and 2F;
Figure 3 shows a plan view of first and second rotatable flaps according to an embodiment of the invention;
Figure 4 shows a perspective view of the pack of Figure 1 in a closed position;
Figure 5 shows a perspective view of the pack of Figure 4 in a closed position and an open position;
Figure 6 shows a perspective view of a pack according to a further embodiment, in an open position;
Figures 7A and 7B show cross-sectional side views of the lower part of a pack according to a yet further embodiment, in an open position;
Figures 7A and 7B show cross-sectional side views of the lower part of a pack according to a further embodiment, with a rotatable flap in an unrotated and a rotated position respectively;
Figure 8 shows a perspective view of the pack of Figures 7A and 7B with the rotatable flap unrotated;
Figure 9 shows a perspective view of a pack according to a further embodiment, in an open position;
Figure 10A shows a perspective view of a carton for packs of smoking articles according to an embodiment of the invention, the carton in an open position;
Figure 10B shows a perspective view of a carton according to another embodiment;
Figure 11 shows a plan view of a blank for making a first receptacle of a pack for smoking articles according to an embodiment of the invention;
Figure 12 shows a perspective view from below of the lower part of a receptacle made from the blank of Figure 11;
Figure 13 shows a plan view of a blank for making a second receptacle of a pack comprising a first receptacle made from the blank of Figure 11;
Figure 14 shows a perspective view of the lower part of a receptacle made from the blank of Figure 13;
Figure 15 shows a plan view of an outer blank for erecting around first and second receptacles made from the blanks of Figures 11 and 13, to make a completed pack;
Figure 16 shows a plan view of a blank for making a first receptacle of a pack for smoking articles according to a further embodiment;
Figure 17 shows a plan view of a blank for making a second receptacle of a pack comprising a first receptacle made from the blank of Figure 16;
Figure 18 shows a perspective view of a receptacle made from the blank of Figure 16; and
Figure 19 shows an outer blank for erecting around first and second receptacles made from the blanks of Figures 16 and 17, to make a completed pack.

**DETAILED DESCRIPTION**

[0028] Figure 1 shows a perspective view of a pack for smoking articles according to a first embodiment of the invention, the pack being shown in an open position. The pack 10 comprises a first receptacle 12 and a second receptacle 14. Each receptacle 12, 14 has a parallelepiped shape. The first receptacle 12 comprises a bottom wall 16, and four side walls extending from the bottom wall 16. The side walls comprise two major side walls 18 opposite to one another, and two minor side walls 20 opposite to one another and extending between the two major side walls. The side walls 18, 20 are dimensioned such that the receptacle 12 can contain a row of smoking articles 22, such as cigarettes or cigars, arranged in parallel each with a lower end against the bottom wall 16 and with their longitudinal axes parallel to the side walls 18, 20. The face of the receptacle 12 opposite to the bottom face 16 is open, to give an opening 24 through which smoking articles 22 contained in the receptacle 12 in the manner described above can be dispensed if moved upwards substantially along their longitudinal axes.

[0029] The second receptacle 14 has the same construction as the first receptacle 12, comprising a bottom wall and four side walls extending therefrom to contain a row of smoking articles 22, with an opening 24 opposite to the bottom wall.

[0030] The first and second receptacles 12, 14 are hinged together along a hinge line 26 that runs along an edge of the bottom wall 16 and a major side wall 18 of each receptacle 12, 14. The receptacles 12, 14 can be rotated relative to one another about this hinge line 26 between a closed position in which the two major side walls 18 having the hinge line 26 along an edge lie against one another face-to-face, and an open position in which these major side walls 18 are apart.

[0031] The pack 10 also comprises a lid 28 having a top wall 30, two minor side walls 32 and two major side walls 34. A second hinge line 36 joins a lower edge of one major side wall 34a to the upper edge of the major side wall 18 of the first receptacle that does not include the first hinge line 26 connecting the receptacles 12, 14. The opposite major side wall 34b of the lid 28 has a greater height (dimension in the direction of the longitudinal axes of smoking articles in the receptacles) than the major side wall 34a having the second hinge line 36. The lid 28 is rotatable about the hinge line 36 between a closed position and an open position (shown in Figure 1). In the closed position, the two receptacles 12, 14 are rotated to their closed position, the top wall 30 is opposite and parallel to the bottom walls 16 of the receptacles 12, 14, and the minor and major side walls 32, 34 of the lid are coextensive with the major and minor side walls 18, 20 of the receptacles 12, 14. The greater height of the larger major side wall 34b of the lid 28 means that this wall
to lift the smoking articles 22 as described above, and is the part located inside the receptacle and which rotates rotatable flap 28 comprises an interior portion 40, which

In the open position of the lid 28, the openings 24 of the first and second receptacles 12, 14 are exposed so that smoking articles 22 can pass through. Also, the lid 28 no longer holds the first and second receptacles 12, 14 against one another in their closed position, so they can be rotated apart into their open position (as shown in Figure 1).

Each receptacle 12, 14 further comprises a rotatable flap 38 arranged in its lower end substantially parallel to the bottom wall 16. The rotatable flap 38 is operable to lift the smoking articles 22 up and away from the bottom wall 16 so that the smoking articles 22 move in a direction substantially along their longitudinal axes so as to protrude partially through the opening 24 of the receptacle. The rotatable flap 38 is a planar structure dimensioned to fit inside the receptacle and extend substantially over the bottom wall 16, so that the lower ends of the smoking articles 22 rest against the rotatable flap 38. In addition, the rotatable flap is configured to be rotatable about an edge that lies substantially along an edge of the receptacle between the wall 16 and a major side wall 18. Hence the line of rotation is parallel to the plane of the row of smoking articles 22 and orthogonal to the longitudinal axes of the smoking articles. In this example, this edge is the edge along which the first hinge line 26 connecting the first and second receptacles 12, 14 lies.

Rotation of the flap 38 about this edge line causes the flap 38 to rotate away from the bottom wall 16 so that it acts against the lower ends of all smoking articles 22 accommodated in the receptacle and urges them upwards towards the opening 24. The relative dimensions of the receptacle 12, 14 and the rotatable flap 38 mean that the smoking articles are only moved a relatively small distance compared to their overall length, and hence they only protrude partially out through the opening 24. In this position, each smoking article can be easily grasped and pulled fully from the receptacle, but are not lifted so far by the rotatable flap 38 to be at risk of falling out of the receptacle 12, 14. The smoking articles are thereby dispensed conveniently from the pack.

In this embodiment, rotation of the rotatable flaps 38 is effected by the rotation of the receptacles 12, 14 about the first hinge line 26. To achieve this, each rotatable flap 28 comprises an interior portion 40, which is the part located inside the receptacle and which rotates to lift the smoking articles 22 as described above, and an exterior portion 42 which extends from the interior portion 40 outside the receptacle, and is substantially coplanar with the interior portion 40. Each receptacle has a slot 44 in its major side wall 18 immediately adjacent to the first hinge line 26; this allows the exterior portion 42 of the rotatable flap 38 to extend outside the receptacle. Further, the exterior portion 42 of each rotatable hinge 38 also extends through the slot in the other receptacle, so that the exterior portion 42 is located inside the other receptacle. Each exterior portion 42 is fixed inside the other receptacle, in this example by being glued or otherwise fastened to the bottom wall 16 of that receptacle. Hence, each rotatable flap 38 has an interior portion 40 located inside its associated receptacle that is moveable within that receptacle to lift the smoking articles therein, and a fixed exterior portion 42 located inside the other receptacle that is immovable within the said other receptacle. In each case, the exterior portion 42 of one rotatable flap 38 is fixed to the bottom wall 16 of the relevant receptacle, and the interior portion 40 of the other rotatable flap overlies the exterior portion 42 of the said rotatable flap 38 so that the smoking articles 22 can rest on the interior portion 40 for lifting. This can be achieved by an interlocking arrangement of the two rotatable flaps 38, as is discussed further below.

The fixing of the exterior portions 42 of the rotatable flaps 38 to the inside of the bottom walls 16 means that when the receptacles 12, 14 are rotated apart from one another into their open position, the interior portions 40 move away from the bottom walls 16 to act on the smoking articles 22 and urge them through the openings 24, owing to the coplanar arrangement of the two portions of each flap 38 and their fixed relationship to one another.

Figure 2A shows a cross-sectional side view of the lower part of the pack 10 with the first and second receptacles 12, 14 in their closed position. In this position, both the interior portions 40 and the exterior portions 42 of the rotatable flaps lie flat in the bottom of the receptacles, parallel to the bottom walls 16. In each receptacle 12, 14, the ends of the smoking articles 22 rest against the interior portion 42 for that receptacle, and the exterior portion 44 of the flap of the other receptacle is sandwiched between the interior portion 42 and the bottom wall 16. The rotatable flaps 38 extend through the slots 44 and interlock in a collapsed X-shape.

Figure 2B shows a cross-sectional side view of the lower part of the pack 10 with the first and second receptacles 12, 14 in their open position. The movement of the receptacles causes the rotatable flaps 38 to move into an open X-configuration, in which the interior portions 40 rotate away from the bottom walls 16 and push the smoking articles 22 upwards.

Figure 3 shows an example design for the rotatable flaps 38. Each flap 38 is planar and is divided into an interior portion 40 dimensioned to fit inside the bottom wall of a first receptacle, and an outer portion 42 dimensioned to fit inside the bottom wall of a second receptacle. The interior and exterior portions are thus continuous with each other. However, each flap 38 also has a slot 46...
running along its midline, between the interior portion 42 and the exterior portion 44, for substantially half of the length of the flap 38. These slots 46 are slotted into each other along their full lengths, so that the rotatable flaps 38 can lie on top of each other, with the two interior portions 40 overlying the two exterior portions 42, as required. Other interlocking and interengaging arrangements of the two rotatable flaps that achieve the same result may alternatively be used if desired. Also, the exterior portion of a rotatable flap need not be the same size as the interior portion. The size of the interior portion is determined by how many smoking articles are to be lifted (see further below), but the exterior portion needs merely be large enough to allow a firm enough fastening to the inside of the receptacle and a rigid enough relationship between the two portions for them to remain coplanar when the receptacles are rotated apart.

The embodiment of Figure 1 has the interior portions of the rotatable flaps of both receptacles dimensioned to extend across the full width of the receptacles so as to lift all smoking articles in the receptacles whenever the receptacles are rotated to their open position. This allows every smoking article to be dispensed by the rotatable flaps, even when there are only a few or one left in the receptacle. Also, all the smoking articles in the receptacle are lifted together, which is convenient for offering the pack around a group of smokers.

However, the configuration shown in Figure 1 can be adapted for the dispensing of fewer than all the smoking articles in the receptacle. When a pack of smoking articles is newly opened, it can be difficult to extract a first smoking article if they are tightly packed. Once the first is removed, the packing becomes looser, and a second and subsequent smoking articles are easier to take out. To address this particular problem, the rotatable flaps may be dimensioned such they only lift a single smoking article, or just a few smoking articles.

Figure 5 shows a perspective view of a pack 50 (shown in the open position) according to this embodiment. The pack 50 has the same construction as the pack 10 of Figure 1, comprising two receptacles 12, 14 overlying the two exterior portions 42, as required. The interior portion of a rotatable flap need not be the same size as the interior portion. The size of the interior portion is determined by how many smoking articles are to be lifted (see further below), but the exterior portion needs merely be large enough to allow a firm enough fastening to the inside of the receptacle and a rigid enough relationship between the two portions for them to remain coplanar when the receptacles are rotated apart.

The rotatable flaps described thus far have each comprised a separate piece of planar material that is secured by its exterior portion inside one receptacle and extends by its interior portion into the other receptacle. An alternative design is for a rotatable flap that comprises an interior portion only, which is formed in one piece with a part of one receptacle adjacent to the hinge line. Hence the exterior part is integral with the receptacle other than the receptacle having the rotatable flap inside. This removes the need to secure a separate flap into the receptacle. The interior portion therefore comprises a flap protruding from a first receptacle and extending into the interior of the second receptacle to sit under the ends of the smoking articles in the second receptacle. The flap is arranged to maintain a fixed relation with the first receptacle so that it rotates with respect to the second receptacle when the pack is opened about the hinge line, to push upwards on the smoking articles. For example, the flap may protrude from the inner major side wall of the first pack, or from the bottom face of the first pack.

Figures 2C and 2D show cross-sectional side
views of the lower part of a pack with a flap protruding from the inner major side wall of a receptacle. In Figure 2C the pack is shown in a closed position, so that the inner major side walls 18 of the first receptacle 12 and the second receptacle 14 are face-to-face. The inner major side wall 18 of the first receptacle 12 has a slot 44 at its base, along the lower edge of the major side wall 18. The inner major wall 18 of the second receptacle 14 has a flap 40 protruding from its lower edge substantially at right angles. The flap 40 passes through the slot 44 into the interior of the first receptacle 12, so that it lies substantially flush with the bottom face of the first receptacle 12. The end of smoking articles 22 in the first receptacle therefore rest on the flap 40.

When the pack is opened by rotating the first and second receptacles 12, 14 away from one another, the flap 40 rotates together with the second receptacle 14 and therefore moves relative to the first receptacle 12 and the smoking articles 22 therein, pushing the smoking articles 22 upwards. If the flap 40 is confined to one side of the pack only, a second flap can be provided in the other side of the pack, protruding from the inner major face of the first receptacle 12 into the second receptacle 14 so that opening of the pack also ejects smoking articles from the second receptacle.

Figures 2E and 2F show cross-sectional side views of the lower part of a pack with a flap protruding from the bottom face of a receptacle. In Figure 2E the pack is shown in the closed position, with the inner major side walls of the two receptacles 12, 14 facing each other. The bottom face 16 of the second receptacle 14 extends past the inner major wall 18 of the second receptacle, to form a flap 40 protruding from the bottom face 16 and in the same plane. The flap 40 protrudes sufficiently far to extend into the first receptacle 12 through a slot or gap at the lower edge of the inner major face of the first receptacle, so that the ends of smoking articles 22 in the first receptacle 12 rest on the flap 40. In this particular example, the flap 40 actually defines the bottom face of the first receptacle 12. This arrangement may also be applied to the embodiment of Figures 2C and 2D. Alternatively, the present embodiment could include a bottom face for the first receptacle 12, which is over lain by the flap 40.

Figure 2F shows the pack in the open position, with the first and second receptacles rotating away from each other. As in the previous examples, rotation of the second receptacle 14 relative to the first receptacle 12 causes the flap 40 to pivot upwards and push the smoking articles 22 in the first receptacle out of the pack.

In this example, the flap can be formed from a cut-out portion of the bottom face of the first receptacle, if the bottom faces of the first and second receptacles are integrally formed one with the other. Figure 2G shows a view of the base of the pack in the closed position, with a first flap 40a cut out from the bottom face 16 of the first receptacle 12, but continuous with the bottom face 16 of the second receptacle 14, and a second flap 40b cut out from the bottom face 16 of the second receptacle 14 but continuous with the bottom face 16 of the first receptacle 12. When the pack is opened by rotating the receptacles about the hinge line 26 in the bottom face 16, the first flap 40a pushes against smoking articles in the first receptacle 12 and the second flap 40b pushes against smoking articles in the second receptacle 14. If preferred, only one flap may be provided.

If desired, an additional piece of pack material can be laid over the bottom face of the pack to cover the openings that result from forming the flaps in this way. Alternatively, the two receptacles can be formed such that their bottom faces are separate. One or both bottom faces may then have a protruding flap which is inserted into a slot or aligned with an aperture in the lower edge of bottom face of the other receptacle. Then, an additional piece of pack material is adhered over the bottom faces or otherwise engaged onto or around the receptacles to couple them together and form the hinge line.

The rotatable flaps described above in relation to packs comprising two receptacles hinged together may also be used in conjunction with packs comprising a single receptacle. As before, it is proposed that a rotatable flap be disposed in the base of a smoking article receptacle, extending across all or part of the width of the receptacle and rotatable about a line parallel to the plane of the smoking articles in the receptacle and orthogonal to their longitudinal axes, so that rotation of the flap lifts the smoking articles and urges them upwards through an opening opposite to the base of the pack. However, for a single receptacle pack, it is not possible to utilise the rotation of two hinged packs to actuate the rotatable flap.

Therefore, in the present embodiment, the rotatable flap comprises an interior portion and an exterior portion, as before, with the flap extending through a slot at the base of the side wall of the receptacle. In this case, though, the exterior portion is formed at angle with the interior portion. In the case of a parallelepiped receptacle, the angle is preferably substantially a right angle. This gives an exterior portion which lies flat against the outside of the side wall of the receptacle when the interior portion lies flat against the inside of the bottom wall of the receptacle, the smoking articles being contained fully in the receptacle with their lower ends resting on the interior portion. To rotate the interior portion and dispense the smoking articles, the smoker grasps the exterior portion and pivots it away from the side wall, rotating it about the dividing line between the interior and exterior portions, which is the point where the rotatable flap extends through the side wall of the receptacle. This causes simultaneous rotation of the interior portion, so that it pushes against the smoking articles to move them through the opening.

Figure 7A shows a cross-sectional side view of the lower part of a pack 70 according to this embodiment. The pack 70 comprises a single receptacle 72 having a bottom wall 74 and four upstanding side walls, which is
deep enough to accommodate two parallel rows of smoking articles 22 (the planes of the two rows being orthogonal to the plane of the page). One major side wall 76 has a slot 78 along its bottom edge, through which a rotatable flap 80 extends. The interior portion 82 of the rotatable flap 80 is located inside the receptacle 72 with the ends of the smoking articles 22 resting thereon. The exterior portion 84 of the rotatable flap 80 is at right angles to the interior portion 82, and lies outside the receptacle 72. Figure 7A shows the rotatable flap in a first position in which the interior portion 82 is flush with the bottom wall 74 and the exterior portion 84 is flush with the outside of the major side wall 76 immediately above the slot 78. The smoking articles 22 are contained within the receptacle 72.

Figure 7B shows pack 70 of Figure 7A with the rotatable flap 80 in a second, dispensing position. The exterior portion 84 has been rotated away from the major side wall 76, thereby turning the interior portion 82 to lift the smoking articles 22.

Figure 8 shows an exterior perspective view of the pack 70. The exterior portion 84 of the rotatable flap is provided with a cut-out 86 in its upper edge to facilitate grasping by the user. Other shapes of exterior portion are not precluded, however.

The interior portion 82 of this embodiment is illustrated as extending across the full depth of the receptacle 72 so that smoking articles in both rows are lifted by the rotatable flap 80. However, a shallower interior portion 82 that engages only the cigarettes in the row 88 closest to the exterior portion 84 may be provided instead. The smoking articles in the other row 90 may be moved forward onto the interior portion 82 by shaking or tilting the pack 70.

Further, the interior portion need not extend across the full width of the receptacle so as to lift every smoking article in a row. Instead, the interior portion may be sized to contact just one or a few smoking articles, similar to the rotating flaps described with regard to Figure 5. The exterior portion may similarly not extend over the full width of the receptacle, and may match the width of the interior portion.

Alternatively, the interior portion and the exterior portion may have different widths across the receptacle. For example, the interior portion may be configured to lift a whole row of smoking articles and the exterior portion may have a smaller width so as to give a pack with a different outer appearance than that of Figure 8, the exterior portion being instead a relatively small tab. In another example, the interior portion may be small, to lift just one or two smoking articles, and the exterior portion may be wider, to give a larger element for easy grasping to actuate the rotatable flap.

In a further alternative, the rotatable flap may be situated on the side of the receptacle, so that it extends through a slot in one of the minor side walls instead of a major side wall. The configuration and operation of such a flap is the same as for a flap in the major side wall, and the interior portion may extend a short or long distance under the row or rows of smoking articles to lift a small or large number of smoking articles when rotated. The exterior portion 84a of a rotatable flap of this type is indicated in phantom in Figure 8.

Figure 9 shows a perspective view of a pack according to a still further alternative of this embodiment. The pack 100 comprises a first receptacle 12 and a second receptacle 14 rotatably hinged to the first receptacle 12 so that in a closed position the major side walls 18 of the receptacles lie face-to-face. A hinged lid 28, connected to the other major wall of the first receptacle 12 can be closed over the tops of the two receptacles 12, 14 when they are in the closed position. In this example, however, the receptacles are hinged vertically, along an edge between a major side wall 18 and a minor side wall 20. Hence, opening the pack by rotating the receptacles 12, 14 away from each other about the hinge line 102 is similar to opening a book or a wallet. Unlike previous examples, this rotation does not actuate any rotatable flap for urging cigarettes. A rotatable flap of the type described with respect to Figures 7A, 7B and 8 is provided for the second receptacle 14. The rotatable flap extends through a slot (not shown) in the bottom edge of the inner major side wall 18 of the second receptacle 14, and the exterior portion 84 of the rotatable flap lies flush against the inner major side wall 18 when the flap is in its unrotated position. Hence, when the pack 100 is closed, the exterior portion 84 of the flap is concealed between the inner major side walls 18. A further rotatable flap (not shown) may be similarly provided for the first receptacle 12 if desired. Also, the flap or flaps may be positioned in other of the side walls (major or minor).

Any of the examples described herein can be modified to accommodate a different number of rows of smoking articles, by altering the depth of the receptacles. For example, one or both of the receptacles of the packs in Figure 1 and 9 may be made deeper to hold two rows of smoking articles, so that the pack as a whole contains three or four rows. The single receptacle pack of Figures 7A, 7B and 8 may dimensioned hold one, two, three or more rows. For example, a pack can be configured to hold twenty smoking articles in the conventional manner of three nested rows of seven, six and seven smoking articles. For a single receptacle pack, the receptacle contains all three rows, and for a double receptacle pack, one receptacle contains one row of seven and one row of six, and the other receptacle contains one row of seven. For any number of rows in a receptacle, the interior flap can be arranged to reach under all the rows, or fewer than all the rows.

A pack having one or more rotatable flaps according to the invention may comprise more than two hinged receptacles. The receptacles may be hinged in any combination of hinge lines at the bottom of the receptacles (as in Figure 1) and hinge lines at the side of the receptacles (Figure 9). Hinge lines at the bottom may or may not operate a rotatable flap as in Figures 1 and 6.
Alternative designs of lid to those illustrated may be used. Also, the pack may be configured in accordance with the outer dimensions of any standard conventional smoking article pack, or with other outer dimensions as the manufacturer desires. Other conventional smoking article package features may also be incorporated, such as square edges, rounded edges, ovale edges or bevelled edges.

Regarding materials, packs according to the invention may be made from folded blanks of cardboard or stiff paper, in a similar manner to conventional cigarette packs. The rotatable flap or flaps can be made from any material that is sufficiently stiff or resilient and rigid or semi-rigid to provide the required lifting of the smoking articles without significant bending, buckling or tearing. Suitable materials include cardboard, stiff paper and plastics materials. Conveniently, for flaps which are not formed integrally with the side wall or bottom face of a receptacle, the interior and exterior portions of a rotatable flap can be fabricated as a single unit from one piece of material. Alternatively, the two portions could be cut out separately and joined together afterwards at the appropriate angle.

In this document, terms such as upper, lower, top, bottom, height, width, depth, etc, are used for clarity and convenience, and should be understood to refer to the appropriate parts of a pack when in the upright orientation of Figures 4 and 8. These terms are not intended to be in any way limiting, since a pack will often be in a different orientation when in use.

The invention may also be applied to cartons for holding packs of cigarettes, cigars, or other smoking articles. Conventionally, individual packs of smoking articles (containing for example twenty smoking articles) are sometimes packed into larger cartons, each of which holds for example ten packs. The present invention can be used to dispense the packs from the carton by use of one or more rotatable flaps.

For example, a carton can be provided as shown in Figure 10A, where the carton 101 is configured similarly to the pack of Figure 1. The carton 101, shown open in a perspective view, comprises two receptacles 112, 114, each shaped and dimensioned to receive five packs 122 (only one of which is shown, in the interests of clarity) arranged in a row with their major side walls facing, and the bottom faces of the pack facing the bottom faces of the receptacles. The receptacles 112, 114 are hinged together by a hinge line 126 along the lower edge of their inner side walls 118, where the lower edge is parallel to the row of packs 122 in each receptacle 112, 114. Each receptacle 112, 114 has a rotatable flap 140 arranged in its base, in the interlocking X-configuration of Figures 2A, 2B and 3. Therefore, if the receptacles 112, 114 are rotated away from one another along the hinge line 126, the rotatable flaps 140 pivot away from the bottom faces of their respective receptacles 112, 114 and lift the packs 122 upwards so that they protrude a small distance out of the receptacles and can be more easily removed. The carton 101 is provided with a hinged lid 128 joined to the outer side wall of the first receptacle opposite to the side wall 118 having the hinge line 126.

Alternatively, the carton can be shaped and dimensioned to accommodate five packs in each receptacle, where the packs are arranged in a row with their minor side walls facing and their bottom faces against the bottom faces of the receptacles. The receptacles are then hinged together along a hinge line parallel to the row of packs at the lower edge of inner side walls of the receptacles. This gives a carton of the same size and shape as conventional ten-pack smoking article cartons.

A carton with one or more rotating flaps in accordance with the present invention can be configured in accordance with any of the embodiments and examples described with respect to packs. The only changes required are an increase in dimensions, a possible increase in the strength of the material used to make the carton, and that the flap or flaps should preferably be fabricated from material which is stronger, more rigid or more resilient than material that might be used for flaps in packs, so that the carton flaps are able to push the greater weight of a pack or packs compared to one or more smoking articles.

For example, a carton may have a single receptacle and a rotatable flap with an exterior portion arranged to be actuable by hand, similar to the embodiments of Figures 7A, 7B and 8.

Figure 10B shows a perspective view of a carton with such a flap. The carton 170 is dimensioned to receive ten packs of smoking articles in two rows of five, where the packs in each row are arranged with their minor side walls facing, and the two rows are arranged so that the major side walls of the packs in one row face the major side walls of the packs in the other row. This is in accordance with the conventional ten-pack carton design mentioned above. One of the major side faces of the carton has a slot for reception of a rotatable flap, the exterior portion 184 of which lies flat against the carton 170 in its unrotated position. The exterior portion 184 has a cut-out notch in its upper edge to facilitate user actuation.

The present invention also relates to blanks for forming packs for smoking articles having rotatable flaps for dispensing the smoking articles from the packs.

A first embodiment of a blank relates to a pack in which the rotatable flap is formed from an extension of the side face of one receptacle that passes through an aperture in the bottom face of the other receptacle, where the receptacles are formed separately. Such a pack can be formed from an assembly comprising three blanks.

Figure 11 shows a plan view of a first receptacle blank 144, errectable to form a first receptacle. The first receptacle blank 144 comprises a bottom panel 147 for forming a bottom face of the receptacle, and having two long edges and two short edges. Major side panels 145, 146 depend from the long edges, via fold lines 148 and...
The bottom panel 147 has an aperture 190 cut in it. In this example, the aperture 190 is positioned centrally with respect to the long sides of the bottom panel 147, and extends across the full width of the bottom panel 147 from one long side 148 to the other 149. The aperture 190 should have at least one edge coincident with a long edge 148, 149 of the bottom panel 147.

To erect the blank, each of the fold lines 148, 149, 154, 155, 156 and 157 is folded to form a right angle between its associated panels. The minor side panels 150, 151 of one major side panel 145 are overlapped over the minor side panels 152, 153 of the other major side panel 146, and the minor side panels are glued together.

The blank forms an open box-like receptacle with four sides and a bottom face, and an aperture 190 in the bottom face. In this example, the receptacle has a depth (corresponding to the short sides of the bottom panel) sufficient to accommodate two rows of smoking articles in a nested arrangement.

Figure 13 shows a plan view of a second receptacle blank 162, erectable to form a second receptacle. The second receptacle blank 162 comprises a bottom panel 165 for forming a bottom face of the receptacle, and having two long edges and two short edges. Major side panels 163, 164 depend from the long edges, via fold lines 174 and 175. One major side panel 163 has longitudinal margins 171, 172 from each of which depends a minor side panel 166, 167, the margins 171, 172 being further fold lines. The other major side panel 164 similarly has longitudinal margins 173, 174 from each of which depends a minor side panel 168, 169, the margins 172, 173 being further fold lines. Each minor side panel has a width substantially equal to the short edges of the bottom panel 165.

The bottom panel 165 and one major side panel 164 have a flap 192 cut out from them. The flap 192 extends across the bottom panel 165 and part way up the adjacent major side panel 164, and hence has a perimeter defined in the bottom panel 165 and the major side panel 164 that runs between two end points 193, 194 located on the fold line 175, being the long edge of the bottom panel 165 opposite to the long edge from which the major side panel 164 in which the flap 192 is cut depends. Thus, the flap 192 is free from the major side panel 164 and the bottom panel 165 but connected to the blank 162 along the opposite long edge 175 of the bottom panel 65. The fold line running along the long edge 174 adjacent to the major side panel in which the flap is cut does not extend across the flap 192. The flap 192 is positioned centrally along the long edge 174. In this example, the flap 192 has a T-shape, with the crossbar of the T remote from the edge of long edge 174. Thus, the remote or free end of the flap 192 is wider than the remainder of the flap. The height (extent from the long edge 175) of the upright of the T is not greater than twice the short edge of the bottom panel 147 of the first receptacle blank (in this example, this is also the size of the aperture in the bottom panel), and the flap 192 has a fold line 195 substantially half-way up the upright part, parallel to the long edge 175. The cross-bar of the T has a height not greater than the short edges of the bottom panel 165 of the second receptacle blank 162.

The second receptacle blank is erected in the same way as the first receptacle blank, by forming right-angled folds along the fold lines between the panels, overlapping the minor side panels of the two major panels, and gluing the minor side panels together. In addition, the flap 192 is erected. A right-angled fold is formed between the flap 192 and the adjacent major side panel 164 so that the flap becomes coplanar with the bottom panel 165 but protrudes outwardly from the second receptacle. Also, the flap 192 is folded under on itself along its fold line 195, and the crossbar of the T passes back through the aperture in the bottom wall 165 and the major side wall 164 left by folding the flap 192 outwards, so that the crossbar lies flat against the inner surface of the bottom panel 165. The flap 192 may be secured in this position by adhesive if desired.

Figure 14 shows a perspective view of the lower part of the erected second receptacle blank 162. The blank forms an open box-like receptacle with four sides and a bottom face. The flap 192 protrudes from the second receptacle coplanar with the bottom face, on the side of the second receptacle opposite to that of the major side panel from which the flap 192 was cut. In this example, the second receptacle has a depth (corresponding to the short sides of the bottom panel) sufficient to accommodate one row of smoking articles. Hence, in combination with the first receptacle, a total of three rows of smoking articles can be provided, perhaps in the conventional 7-6-7 arrangement. However, if preferred, either or both receptacles may be sized to hold a different number of smoking articles and rows.

To form a hinged pack, the first and second receptacles are placed in a face-to-face configuration. The major side panel of the second receptacle to which the flap 192 is adjacent is placed face to face with a major side panel of the first receptacle which has a lower edge to which the aperture 190 in the bottom panel is adjacent (either of the two major side panels in the present example, in which the aperture extends across the full width of the bottom panel). The flap 192 is thereby aligned with the aperture 190 so that the flap 192 overlaps the aperture 190. (Note that the flap and aperture may be offset from the centre of the bottom panels, and/or the flap-aperture pair may be provided in the opposite recepta-
cles, or a second oppositely arranged flap-panel pair may be provided). An outer blank is then erected around the first and second receptacles to couple them together by a hinge line running along the inner long edges of the bottom panels.

[0088] Figure 15 is a plan view of the outer blank 201. The outer blank 201 comprises a bottom panel 226 having two short edges 242, 243 and two long edges 228, 229. The short edges have a length substantially equal to the sum of the two short edges of the bottom panels 147, 165 of the first and second receptacle blanks 144, 162. The long edges 228, 229 have a length substantially the same as the length of the long edges of the bottom panels 147, 165 of the first and second receptacle blanks 144, 162. The long edges 228, 229 are each a fold line. A front panel 225 depends from one long edge 229, and a rear panel 224 depends from the other long edge 228. Also, the bottom panel 226 has a hinge line 240 running across it, parallel to the long edges 228, 229, and spaced from the long edge 228 from which the rear panel 224 depends by a distance equal to the width of the minor side panels of the second receptacle blank 162, and spaced from the other long edge 229 by a distance substantially equal to the width of the minor side panels of the first receptacle blank 144.

[0089] The front panel 225 has longitudinal margins 230, 231 forming fold lines, from each of which depends a side panel 232, 233. Each side panel 232, 233 has a width substantially equal to the sum of the widths of the minor side panels of the first and second receptacle blanks. Also, each side panel 232, 233 has a line of separation parallel to the longitudinal margin 230, 231 and spaced therefrom by the width of the side walls of the first receptacle blank 144.

[0090] The rear panel 224 has longitudinal margins 236, 237 forming fold lines, from each of which depends a side panel 238, 239. Each side panel 238, 239 has a width substantially equal to the width of the minor side panels of the second receptacle blank 262. The rear panel also has an upper margin 27 from which depends a lid portion 102. The lid portion comprises a plurality of panels erectable to form a conventional hinged lid of the type commonly employed for hinged lid smoking article packs. The upper margin 27 forms a hinge line connecting the hinged lid to the pack.

[0091] To form the pack, the outer blank 201 is erected around the first and second receptacles. On one technique, the two receptacles are placed in their face-to-face positions, and then placed on the rear panel 224 so that the second receptacle is in contact with the rear panel 224. The aperture caused by erecting the flap is thereby covered by the rear panel 224. The side panels 238, 239 of the rear panel 224 are folded up against the minor side panels of the second receptacle, and secured in place with adhesive. The bottom panel 226 of the outer blank 201 is then folded up against the bottom panels 147, 165 of the first and second receptacles, and secured in place with adhesive placed away from the flap 192 and the aperture 190. The front panel 225 is folded down over the exposed major side panel of the first receptacle, and the side panels 232, 232 are folded over the side panels of the first receptacle and the side panels 238, 239 of the rear panel 224 and secured to each with adhesive. The lid portion 202 is folded and assembled in the usual manner and can be closed down over the adjacent open ends of the first and second receptacles.

[0092] Finally, the side walls 232, 233 are cut along the lines of separation 234, 241. Once this is done, the first and second receptacles are joined only by the bottom panel 226 of the outer blank, and can be pivoted away from each other about the hinge line 240. This rotates the flap 192 up through the aperture 190 to dispense smoking articles from the pack, in the previously described manner.

[0093] A second embodiment of a blank relates to a pack in which rotatable flaps are provided in the bases of two hinged receptacles, the rotatable flaps being in the form of an interlocking X, as described above with respect to Figures 2A and 2B. Unlike Figures 2A and 2B, however, the flaps are formed integrally with the receptacles, so that each receptacle and the flap attached to it that rotates within the other receptacle are formed from one blank.

[0094] Figure 16 shows a plan view of a first receptacle blank erectable into a first receptacle for smoking articles. The first receptacle blank 300 comprises a bottom panel 301 having two opposite long edges and two opposite short edges. Each long edge 312, 313 forms a fold line. A major side panel 302, 303 depends from each long edge 312, 313. A first major side panel 302 has longitudinal side margins 304, 305, from each of which depends a minor side panel 306, 307. The longitudinal side margins 304, 305 also form fold lines. Similarly, the second major side panel 303 has longitudinal margins 308, 309 forming fold lines and from which depend minor side panels 309, 310. The minor side panels 306, 307 of the first major side panel 302 have substantially the same width as the minor side panels of the second major side panel 303.

[0095] The bottom panel comprises two parts, a bottom portion 314 and a flap portion 315. The bottom portion 314 forms a bottom face of the first receptacle when the blank 300 is erected, and the flap portion 315 forms a rotatable flap for ejecting smoking article from an adjacent second receptacle. The division between the bottom portion 314 and the flap portion 315 is parallel to the long sides of the bottom panel 301. The bottom portion 314 extends only halfway across the bottom panel 301, from one short edge to the midpoint of the adjacent long edge 312, and has a dimension orthogonal to the long edge 312 substantially equal to the width of the minor side panels. This dimension defines the depth of the erected first receptacle. The flap portion 315 extends all the way across its adjacent long edge 313, and is divided in half by a fold line 317 parallel to the long edge 313. Also, the flap portion 315 has a dimension in the direction...
orthogonal to the long edge 313 that is not greater than twice the corresponding dimension of a bottom portion 334 of a second receptacle blank 320 to be described later. Finally, the flap portion 315 is divided from its adjacent major side panel 303 by a slot 316 running along the long edge 313. The slot 316 runs from the short edge of the bottom panel 301 opposite to the short edge from which the bottom portion 314 extends to the midpoint of the long edge 313 (which is aligned with the midpoint of the opposite long edge 312).

Figure 17 shows a plan view of a second receptacle blank 320. This is substantially the same as the first receptacle blank 300, in that it comprises a bottom panel 321, two major side panels 322, 323 and four minor side panels 326, 327, 331, 331 arranged in the same manner as the corresponding panels of the first receptacle blank 300. The bottom panel 321 similarly comprises a bottom portion 334 and a flap portion 335, the flap portion 335 divided from its adjacent major side panel 322 by a slot 336 and having a fold line 337 dividing it in half. The bottom portion 334 has a dimension orthogonal to the adjacent long edge 332 that defines the depth of the erected second receptacle, and is substantially equal to the width of the minor side panels. The flap portion 335 has a dimension orthogonal to the adjacent long edge 32 which is not greater than twice the corresponding dimension of the bottom portion 314 of the first receptacle blank 300.

The bottom portions 314, 334 and the slots 316, 336 are situated on the same sides of their respective blanks. In other words, both blanks have substantially the same configuration, rather than being mirror images. In each case, however, the major side panel 303, 322 adjacent to the slot 316, 336 is the side panel which will be face-to-face with the other receptacle in the assembled pack. Hence, this should be taken into account in any pack in which the receptacles are non-identical, such as if one receptacle holds two rows of smoking articles and the other holds one row. In the example of Figures 16 and 17 both receptacles are sized to hold one row only and hence have the same depth, but the major and minor side panels are shaped so that the open pack slopes down from rear to front, so the blanks 300, 320 are not the same.

The blanks 300, 320 are each erected in the same way. The blank is folded over on itself along the fold line 317, 337 across the flap portion 315, 335, to form a flap having a double thickness of material. The two halves of the flap may be secured together by adhesive. Then, the two fold lines 312, 313, 332, 333 along the long sides of the bottom panel 315, 335 are folded in opposite directions, so that the fold line adjacent to the flap portion 315, 335 is folded as a mountain fold and the fold line adjacent to the bottom portion 314, 334 is folded as a valley fold. This gives a bottom face to the receptacle with the two major side panels standing upright from it, and the flap protruding outwardly from the receptacle coplanar as the bottom face. Then, the minor side panels are all folded inwards at right angles, overlapped and secured to one another with adhesive. Once erected, the lower parts of the first and second receptacles look the same.

Figure 18 shows a perspective view of the first receptacle made from the first receptacle blank 300. The erected second receptacle has the same appearance. The receptacle has four side faces upstanding from a base formed by the bottom portion 314 of the bottom panel 301. However, because the bottom portion 314 extends only halfway across the bottom panel 301, half of the base is an aperture 318. A flap formed from the folded flap portion 315 protrudes from the receptacle in the same plane as the bottom face. However, owing to the slot 316 and the aperture 318 the flap is only attached to the adjacent major side wall 302 and the base over half its length, the other half of its length forming a free end.

To form a hinged pack with rotating flaps, the first and second receptacles are placed face to face using the major side walls from which the flaps protrude, and the free end of each flap is inserted through the aperture in the base of the other receptacle. The free end of the flap therefore overlays the inner surface of the part of the base of the other receptacle formed by the bottom portion of the bottom panel of the original blank, and the other end of the flap covers the aperture part of the base. Thus, the base of each receptacle has the flap of the other receptacle extending over its full width. Rotation of the receptacles with respect to each other pivots the flaps so that any smoking articles in the receptacles are pushed upwards out of the receptacles.

The two receptacles need to be secured together in hinged fashion at their bottom faces to form a pack. Other blanks may be used to achieve the same result, however. The outer blank 400 comprises a bottom panel 401 having two opposite long edges and two opposite short edges. In the direction of the short edges, the bottom panel has a dimension equal to the sum of the depth of the first and second receptacles. A hinge line 416 runs across the bottom panel 401, separating it into two parts corresponding to the relative depths of the two receptacles. The long edges 404, 405 form fold lines. A front panel 403 depends from the opposite long edge 405, having longitudinal side margins 406, 407 and three from which side panels 408, 409 depend. The side panels 408, 409 have a width substantially equal to the depth of the second receptacle. A rear panel 402 depends from the opposite long edge 404, having longitudinal margins 410, 411 from which depend side panels 412, 413 having a width substantially equal to the depth of the first receptacle. The rear panel 402 also has an upper margin 415 defining a hinge line from which a lid portion 414 depends. The lid portion 414 comprises a plurality of panels connected by fold lines which can be erected to form a conventional smoking article pack hinged lid.

To form the completed pack, the two recepta-
A pack (10) for smoking articles comprising a first receptacle, the flap may be sized to lift one or more rows. if more than one row of smoking articles is present in a receptacle. The bottom panel 401 does not then bend in operation, and the hinging effect occurs solely between the receptacles. As an alternative, the hinge line 416 may be omitted, and the bottom panel 401 not glued to the bottom faces of the receptacles. The bottom panel 401 does not then bend in operation, and the hinging effect occurs solely between the receptacles.

The flaps of this embodiment may be modified so that they extend over less than the full width of the receptacles. Also, the point at which the two flaps engage may be shifted from the midpoint of the bottom face, and if more than one row of smoking articles is present in a receptacle, the flap may be sized to lift one or more rows.

Claims

1. A pack (10) for smoking articles comprising a first receptacle (12) for receiving a plurality of smoking articles arranged parallel to one another, the receptacle having an opening (24) at a first end through which the smoking articles may be dispensed along a direction parallel to their longitudinal axes, and a rotatable flap (38) positioned inside a second end of the first receptacle opposite the first end, which when rotated contacts an end of at least one smoking article through the opening, characterised by a second receptacle (14) for receiving a plurality of smoking articles arranged parallel to one another, the second receptacle having an opening (24) at a first end through which the smoking articles may be dispensed along a direction parallel to their longitudinal axes; wherein the second receptacle is rotatably joined to the first receptacle by a hinge (26) at their second ends; the rotatable flap (38) of the first receptacle extends to the second receptacle and comprises an interior portion (40) disposed inside the first receptacle for contacting an end of at least one smoking article therein, and an exterior portion (42) integral with or secured to the second receptacle; and rotation of the first and second receptacles away from one another about the hinge causes rotation of the rotatable flap so as to urge the at least one smoking article in the first receptacle through the opening of the first receptacle.

2. A pack for smoking articles according to claim 1, in which the second receptacle comprises a rotatable flap (38) positioned inside a second end of the second receptacle opposite the first end, which when rotated contacts an end of at least one smoking article in the second receptacle and urges the at least one smoking article through the opening; the rotatable flap of the second receptacle extending to the first receptacle and comprising an interior portion (40) disposed inside the second receptacle for contacting an end of at least one smoking article therein, and an exterior portion (42) integral with or secured to the first receptacle; rotation of the first and second receptacles away from one another about the hinge causing rotation of the rotatable flap of the second receptacle so as to urge the at least one smoking article in the second receptacle through the opening of the second receptacle.

3. A pack for smoking articles according to claim 1 or 2, in which the interior and exterior portions (40, 42) of the rotatable flap or flaps are coplanar.

4. A pack for smoking articles according to claim 3, in which the rotatable flap or flaps are parallel with bottom walls of the first receptacle and the second receptacle when the receptacles are unrotated with respect to one another.

5. A pack for smoking articles according to any one of the preceding claims comprising a lid (30) configured to cover the openings of both receptacles.

6. A pack for smoking articles according to claim 5, in which the lid is hingedly attached to one of the receptacles.

7. A pack for smoking articles according to any one of the preceding claims, in which the or each rotatable flap (38) is configured to contact the ends of all smoking articles received in the receptacle.

8. A pack for smoking articles according to any one of the preceding claims, in which the or each rotatable flap (38) is configured to contact the ends of less than the maximum number of smoking articles that can be received in the receptacle.

9. A pack for smoking articles according to any preceding claim, in which the pack is fabricated from one or more foldable blanks.
10. A smoking article pack blank assembly comprising a first receptacle (112) for receiving a plurality of packs (122) of smoking articles arranged in one or more rows, the receptacle having an opening at a first end through which the packs may be dispensed along a direction substantially perpendicular to the row(s), and a rotatable flap (140) positioned inside a second end of the receptacle opposite the first end, which when rotated contacts an end of at least one pack and urges the at least one pack through the opening characterised by a second receptacle (114) for receiving a plurality of packs of smoking articles arranged in one or more rows, the second receptacle having an opening at a first end through which the packs may be dispensed along a direction substantially perpendicular to the row(s); wherein the second receptacle (114) is rotatably joined to the first receptacle by a hinge (126) at their second ends; the rotatable flap (140) of the first receptacle extends to the second receptacle and comprises an interior portion disposed inside the first receptacle for contacting an end of at least one pack therein, and an exterior portion integral with or secured to the second receptacle (114); the second receptacle (114) comprises a rotatable flap (140) positioned inside a second end of the second receptacle opposite the first end, which when rotated contacts an end of at least one pack in the second receptacle and urges the at least one pack through the receptacle, the rotatable flap of the second receptacle extending to the first receptacle and comprising an interior portion disposed inside the second receptacle for contacting an end of at least one pack therein, and an exterior portion integral with or secured to the first receptacle; and rotation of the first and second receptacles (112, 114) away from one another about the hinge (126) causes rotation of the rotatable flaps (140) so as to urge the at least one pack (122) in the first receptacle (112) through the opening of the first receptacle and the at least one pack in the second receptacle (114) through the opening of the second receptacle.

13. A smoking article pack blank assembly comprising a first receptacle blank (144) and a second receptacle blank (162), the first receptacle blank (144) comprising a bottom panel (147) and four side panels erectable around the bottom panel (147) to form a first receptacle for a plurality of smoking articles arranged with their longitudinal axes orthogonal to the bottom panel (147), and an aperture in the bottom panel, the aperture (190) having at least one edge coincident with an edge of the bottom panel (147); and the second receptacle blank (162) comprising a bottom panel (165) and four side panels erectable around the bottom panel (165) to form a second receptacle for a plurality of smoking articles arranged with their longitudinal axis orthogonal to the bottom panel, and a flap (192) cut out from the bottom panel (165) and a side panel (164) depending from the bottom panel (165) along a perimeter running between two points (193, 194) located on the edge of the bottom panel opposite to an edge from which the said side panel (164) depends; the flap (192) and the aperture (190) positioned so as to be aligned when the erected blanks are placed such that the side panel (163) of the second receptacle blank (162) opposite the side panel (164) having the flap (192) is face to face with a side panel of the first receptacle blank having the aperture (190) adjacent to its edge.

14. A smoking article pack blank assembly according to claim 13, in which the flap (192) extends from the edge of its associated bottom panel (165) by a distance not greater than the distance by which the aperture (190) extends from the edge of its associated bottom panel (147).

15. A smoking article pack blank assembly according to claim 13, in which the flap has a fold line (195) parallel to the edge of its associated bottom panel (165) and extends from the edge of its associated bottom panel (165) by a distance such that when the flap is folded along the fold line, the flap has a dimension from the edge of its associated bottom panel not greater than the distance by which the aperture extends from the edge of its associated bottom panel.

Patentansprüche

1. Verpackung (10) für Rauchartikel, die einen ersten Aufnahmebehälter (12) zum Aufnehmen mehrerer Rauchartikel, die zueinander parallel angeordnet sind, umfasst, wobei der Aufnahmebehälter an einem ersten Ende eine Öffnung (24) besitzt, durch die die Rauchartikel in einer Richtung parallel zu ihren Längsachsen ausgegeben werden können, und eine drehbare Klappe (38) besitzt, die in einem zweiten Ende des ersten Aufnahmebehälters gegenüber dem ersten Ende angeordnet ist und die, wenn sie gedreht wird, mit einem Ende wenigstens eines Rauchartikels in Kontakt gelangt und den wenig-
stens einen Rauchartikel durch die Öffnung drängt, _gekennzeichnet durch_ einen zweiten Aufnahmebehälter (14), um mehrere Rauchartikel aufzunehmen, die zueinander parallel angeordnet sind, wobei der zweite Aufnahmebehälter an einem ersten Ende eine Öffnung (24) besitzt, _durch_ die die Rauchartikel in einer Richtung parallel zu ihren Längsachsen ausgegeben werden können; wobei der zweite Aufnahmebehälter mit dem ersten Aufnahmebehälter _durch_ ein Scharnier (26) an ihren zweiten Enden drehbar verbunden ist; die drehbare Klappe (38) des ersten Aufnahmebehälters sich zu dem zweiten Aufnahmebehälter erstreckt und einen inneren Abschnitt (40), der in dem ersten Aufnahmebehälter angeordnet ist, um mit einem Ende wenigstens eines darin befindlichen Rauchartikels in Kontakt zu gelangen, und einen äußeren Abschnitt (42), der mit dem zweiten Aufnahmebehälter einteilig ausgebildet oder daran befestigt ist, aufweist; und eine Drehung des ersten und des zweiten Aufnahmebehälters voneinander weg um das Scharnier eine Drehung der drehbaren Klappe (38) hervorruft, um den wenigstens einen Rauchartikel in dem zweiten Aufnahmebehälter _durch_ die Öffnung des ersten Aufnahmebehälters zu drängen.

2. Verpackung für Rauchartikel nach Anspruch 1, wobei der zweite Aufnahmebehälter eine drehbare Klappe (38) umfasst, die in einem zweiten Ende des zweiten Aufnahmebehälters gegenüber dem ersten Ende positioniert ist und die dann, wenn sie gedreht wird, mit einem Ende wenigstens eines Rauchartikels in Kontakt gelangt und den wenigstens einen Rauchartikel durch die Öffnung drängt; die drehbare Klappe des zweiten Aufnahmebehälters sich zu dem ersten Aufnahmebehälter erstreckt und einen inneren Abschnitt (40), der in dem zweiten Aufnahmebehälter angeordnet ist, um mit einem Ende wenigstens eines darin befindlichen Rauchartikels in Kontakt zu gelangen, und einen äußeren Abschnitt (42), der einteilig mit dem ersten Aufnahmebehälter ausgebildet oder daran befestigt ist, aufweist; eine Drehung des ersten und des zweiten Aufnahmebehälters voneinander weg um das Scharnier eine Drehung der drehbaren Klappe des zweiten Aufnahmebehälters hervorruft, um den wenigstens einen Rauchartikel in dem zweiten Aufnahmebehälter _durch_ die Öffnung des zweiten Aufnahmebehälters zu drängen.

3. Verpackung für Rauchartikel nach Anspruch 1 oder 2, wobei der innere und der äußere Abschnitt (40, 42) der einen oder der mehreren drehbaren Klappen planar sind.

4. Verpackung für Rauchartikel nach Anspruch 3, wobei die eine oder die mehreren drehbaren Klappen zu Bodenwänden des ersten Aufnahmebehälters und des zweiten Aufnahmebehälters parallel sind, wenn die Aufnahmebehälter relativ zueinander nicht gedreht sind.

5. Verpackung für Rauchartikel nach einem der vorhergehenden Ansprüche, die einen Deckel (30) umfasst, der konfiguriert ist, um die Öffnungen beider Aufnahmebehälter abzudecken.

6. Verpackung für Rauchartikel nach Anspruch 5, wobei der Deckel an einem der Aufnahmebehälter scharnierartig befestigt ist.

7. Verpackung für Rauchartikel nach einem der vorhergehenden Ansprüche, wobei die oder jede drehbare Klappe (38) konfiguriert ist, um mit den Enden aller in dem Aufnahmebehälter aufgenommenen Rauchartikel in Kontakt zu gelangen.

8. Verpackung für Rauchartikel nach einem der vorhergehenden Ansprüche, wobei die oder jede drehbare Klappe (38) konfiguriert ist, um mit den Enden von weniger als der maximalen Anzahl von Rauchartikeln, die in dem Aufnahmebehälter aufgenommen werden können, in Kontakt zu gelangen.

9. Verpackung für Rauchartikel nach einem vorhergehenden Anspruch, wobei die Verpackung aus einem oder mehreren faltbaren Zuschnitten gefertigt ist.

10. Verpackung für Rauchartikel nach einem vorhergehenden Anspruch, wobei die Aufnahmebehälter eine Parallelepiped-Form haben, die durch eine Bodenwand und vier Seitenwände, die sich von der Bodenwand im Wesentlichen rechtwinklig erstrecken, definiert ist.

11. Verpackung nach einem vorhergehenden Anspruch, wobei der erste und der zweite Aufnahmebehälter mit Zigaretten gefüllt sind.

12. Karton (101) für Verpackungen von Rauchartikeln, der einen ersten Aufnahmebehälter (112) für die Aufnahme mehrerer Verpackungen (122) von Rauchartikeln, die in einer oder in mehreren Reihen angeordnet sind, umfasst, wobei der Aufnahmebehälter an einem ersten Ende eine Öffnung besitzt, durch die die Verpackungen in einer Richtung, die zu den Reihen im Wesentlichen senkrecht ist, ausgegeben werden können, und eine drehbare Klappe (140) be- sitzt, die in einem zweiten Ende des Aufnahmebehälters gegenüber dem ersten Ende angeordnet ist und die dann, wenn sie gedreht wird, mit einem Ende wenigstens einer Verpackung in Kontakt gelangt und die wenigstens eine Verpackung durch die Öffnung
Rauchartikel-Verpackungszuschnittanordnung, die einen zweiten Aufnahmebehälter (114), um mehrere Verpackungen von Rauchartikeln, die in einer oder in mehreren Reihen angeordnet sind, aufzunehmen, wobei der zweite Aufnahmebehälter an einem ersten Ende eine Öffnung besitzt, durch die die Verpackungen in einer Richtung, die zu den Reihen im Wesentlichen senkrecht ist, ausgegeben werden können; wobei der zweite Aufnahmebehälter (114) mit dem ersten Aufnahmebehälter durch ein Scharnier (126) an ihren zweiten Enden drehrbar verbunden ist; die drehbare Klappe (140) des ersten Aufnahmebehälters sich zu dem zweiten Aufnahmebehälter erstreckt und einen inneren Abschnitt, der in dem ersten Aufnahmebehälter angeordnet ist, um mit einem Ende wenigstens einer darin befindlichen Verpackung in Kontakt zu gelangen, und einen äußeren Abschnitt, der mit dem zweiten Aufnahmebehälter (114) einteilig ausgebildet oder daran befestigt ist, aufweist; der zweite Aufnahmebehälter (114) eine drehbare Klappe (140) umfasst, die in einem zweiten Ende des zweiten Aufnahmebehälters gegenüber dem ersten Ende positioniert ist und dann, wenn sie gedreht wird, mit einem Ende wenigstens einer Verpackung in dem zweiten Aufnahmebehälter in Kontakt gelangt und die wenigstens eine Verpackung durch die Öffnung drängt, wobei die drehbare Klappe des zweiten Aufnahmebehälters sich zu dem ersten Aufnahmebehälter erstreckt und einen inneren Abschnitt, der in dem zweiten Aufnahmebehälter angeordnet ist, um mit einem Ende wenigstens einer darin befindlichen Verpackung in Kontakt zu gelangen, und einen äußeren Abschnitt, der mit dem ersten Aufnahmebehälter einteilig ausgebildet oder daran befestigt ist, aufweist; und eine Drehung des ersten und des zweiten Aufnahmebehälters (112, 114) voneinander weg um das Scharnier (126) eine Drehung der drehbaren Kappen (140) hervorruft, um die wenigstens eine Verpackung (122) in dem ersten Aufnahmebehälter (112) durch die Öffnung des ersten Aufnahmebehalters zu drängen und um die wenigstens eine Verpackung in dem zweiten Aufnahmebehälter (114) durch die Öffnung des zweiten Aufnahmebehälters zu drängen.

14. Rauchartikel-Verpackungszuschnittanordnung nach Anspruch 13, wobei sich die Klappe (192) von der Kante ihrer zugeordneten Bodenplatte (165) um eine Strecke erstreckt, die nicht größer ist als die Strecke, um die sich die Öffnung (190) von der Kante ihrer zugeordneten Bodenplatte (147) erstreckt.

15. Rauchartikel-Verpackungszuschnittanordnung nach Anspruch 13, wobei die Klappe eine Faltlinie (195) parallel zu der Kante ihrer zugeordneten Bodenplatte (165) besitzt und sich von der Kante ihrer zugeordneten Bodenplatte (165) um eine Strecke erstreckt, derart, dass dann, wenn die Klappe längs der Faltlinie gefaltet ist, die Klappe eine Abmessung von der Kante ihrer zugeordneten Bodenplatte besitzt, die nicht größer ist als die Strecke, um die sich die Öffnung von der Kante ihrer zugeordneten Bodenplatte erstreckt.

Revendications

1. Paquet (10) pour articles à fumer comprenant un premier réceptacle (12) pour recevoir une pluralité d’articles à fumer, agencés parallèlement entre eux, le réceptacle ayant une ouverture (24) au niveau d’une première extrémité, à travers laquelle les articles à fumer peuvent être distribués le long d’une direction parallèle à leurs axes longitudinal engage du roulement (38) positionné à l’intérieur d’une deuxième extrémité du premier réceptacle opposée à la première extrémité, qui, lorsqu’il tourne, entre en contact avec une extrémité du au moins un article à fumer et pousse le au moins un article à fumer à travers l’ouverture,
2. Paquet d’articles à fumer selon la revendication 1, dans lequel le deuxième réceptacle comprend un rabat rotatif (38) positionné à l’intérieur d’une deuxième extrémité du deuxième réceptacle opposée à la première extrémité, qui lorsqu’il tourne, entre en contact avec une extrémité du au moins un article à fumer, et une partie extérieure (42) solidaire ou fixée au deuxième réceptacle ; et la rotation des premiers et deuxième réceptacles à distance l’un de l’autre autour de la charnière provoque la rotation du rabat rotatif afin de pousser le au moins un article à fumer dans le premier réceptacle à travers l’ouverture du premier réceptacle.

3. Paquet pour articles à fumer selon la revendication 1 ou 2, dans lequel les parties intérieure et extérieure (40, 42) du rabat ou des rabats rotatif(s) sont complémentaires.

4. Paquet pour articles à fumer selon la revendication 3, dans lequel le rabat ou les rabats rotatif(s) sont parallèles avec les parois inférieures du premier réceptacle et du deuxième réceptacle lorsque les réceptacles ne tournent pas l’un par rapport à l’autre.

5. Paquet pour articles à fumer selon l’une quelconque des revendications précédentes, comprenant un couvercle (30) configuré pour recouvrir les ouvertures des deux réceptacles.

6. Paquet pour articles à fumer selon la revendication 5, dans lequel le couvercle est fixé par charnière à l’un des réceptacles.

7. Paquet pour articles à fumer selon l’une quelconque des revendications précédentes, dans lequel le ou chaque rabat rotatif (38) est configuré pour entrer en contact avec les extrémités de tous les articles à fumer reçus dans le réceptacle.

8. Paquet pour articles à fumer selon l’une quelconque des revendications précédentes, dans lequel le paquet est fabriqué à partir d’une ou de plusieurs ébauches pliables.

9. Paquet selon l’une quelconque des revendications précédentes, dans lequel les premier et deuxième réceptacles sont remplis de cigarettes.

10. Paquet pour articles à fumer selon l’une quelconque des revendications précédentes, dans lequel les réceptacles ont une forme parallélépipédique définie par une paroi inférieure et quatre parois latérales s’étendant à partir de la paroi inférieure sensiblement en angle droit.

11. Paquet selon l’une quelconque des revendications précédentes, dans lequel le ou chaque rabat rotatif (38) est configuré pour entrer en contact avec les extrémités d’un nombre inférieur au nombre maximum d’articles à fumer qui peuvent être reçus dans le réceptacle.

12. Carton (101) pour paquets d’articles à fumer comprenant un premier réceptacle (112) pour recevoir une pluralité de paquets (122) d’articles à fumer agencés sur une ou plusieurs rangées, le réceptacle ayant une ouverture au niveau d’une première extrémité à travers laquelle les paquets peuvent être répartis le long d’une direction sensiblement perpendiculaire à la rangée (aux rangées), et un rabat rotatif (140) positionné à l’intérieur d’une deuxième extrémité du réceptacle opposée à la première extrémité, qui lorsqu’il est entraîné en rotation, entre en contact avec une extrémité d’au moins un paquet et pousse le au moins un paquet à travers l’ouverture, caractérisé par un deuxième réceptacle (114) pour recevoir une pluralité de paquets d’articles à fumer agencés sur une ou plusieurs rangées, le deuxième réceptacle ayant une ouverture au niveau d’une première extrémité à travers laquelle les paquets peuvent être répartis le long d’une direction sensiblement perpendiculaire à la rangée (aux rangées) ;
dans lequel :

le deuxième réceptacle (114) est assemblé de manière rotative au premier réceptacle par une charnière (126) au niveau de leurs deuxièmes extrémités ;

le rabat rotatif (140) du premier réceptacle s’étend vers le deuxième réceptacle et comprend une partie intérieure disposée à l’intérieur du premier réceptacle pour entrer en contact avec une extrémité du au moins un paquet, et une partie extérieure solidaire ou fixée au deuxième réceptacle (114) ;

le deuxième réceptacle (114) comprend un rabat rotatif (140) positionné à l’intérieur d’une deuxième extrémité du deuxième réceptacle opposée à la première extrémité qui, lorsqu’il est entraîné en rotation, entre en contact avec une extrémité d’au moins un paquet dans le deuxième réceptacle et pousse le au moins un paquet à travers l’ouverture, le rabat rotatif du deuxième réceptacle s’étendant jusqu’au premier réceptacle et comprenant une partie intérieure disposée à l’intérieur du deuxième réceptacle pour entrer en contact avec une extrémité du au moins un paquet, et une partie extérieure solidaire ou fixée au premier réceptacle ; et

la rotation des premier et deuxième réceptacles (112, 114) à distance l’un de l’autre autour de la charnière (126) provoque la rotation des rabats rotatifs (140) afin de pousser le au moins un paquet (122) dans le premier réceptacle (112) à travers l’ouverture du premier réceptacle et le au moins un paquet dans le deuxième réceptacle (114) à travers l’ouverture du deuxième réceptacle.

14. Ensemble d’ébauche de paquet d’articles à fumer selon la revendication 13, dans lequel le rabat (192) s’étend à partir du bord de son panneau inférieur associé (165) sur une distance non supérieure à la distance sur laquelle l’ouverture (190) s’étend à partir du bord de son panneau inférieur associé (147).

15. Ensemble d’ébauche de paquet d’articles à fumer selon la revendication 13, dans lequel le rabat a une ligne de pliage (195) parallèle au bord de son panneau inférieur associé (165) et s’étend à partir du bord de son panneau inférieur associé (165) sur une distance de sorte que lorsque le rabat est plié le long de la ligne de pliage, le rabat a une dimension à partir du bord de son panneau inférieur associé non supérieure à la distance sur laquelle l’ouverture s’étend à partir du bord de son panneau inférieur associé.
REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 1842891 A [0004]  
- US 1588104 A [0005]  
- DE 3924165 A [0007]  
- US 1953418 A [0007]