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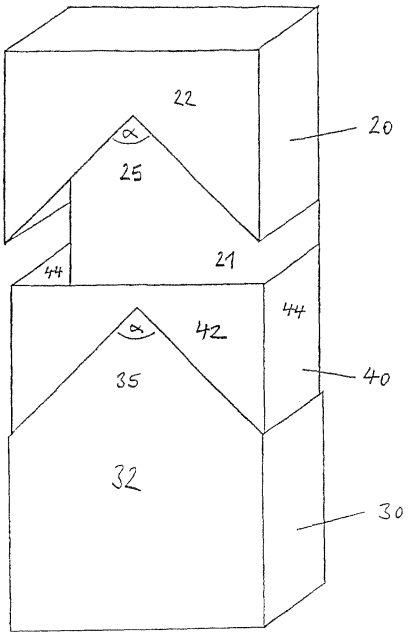
(54) **Package with sliding lid**

(57) The subject invention deals with a pack with a first and a second part which are connected to each other and which are linearly moveable relative to each other from a closed position to an open position and vice versa wherein the first and second part are mating completely along an interface line (50).

Fig.3



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Description

[0001] The subject invention relates to packs in general and in particular to packs (or packages) for tobacco products, such as elongate smokable articles.

[0002] A currently very popular pack type for tobacco products and also for other articles such as food stuffs or sweets is the so-called "flip-top" or hinge-lid pack. Such pack is characterized by a box part containing the' articles to be packaged and a lid part hinged to the end of the rear side of the box part. Typically, such pack has an inner frame inside the box part which extends up from the box part into the lid part as the latter opens and closes.

[0003] An undesired phenomenon of hinge-lid packs is the "smiling effect", which denotes a gap between the box part and the lid part and prevents complete closure of the pack. This effect is undesirable because it can lead to, for example, an inadvertent loss of pack contents, increased oxygen or air exposure of the contents, or an increased loss of flavor.

[0004] There are many proposals in the prior art aiming at reducing the "smiling effect". For example EP 204 933 B1 and EP 205 766 B1 disclose hinge-lid packs with rounded or beveled longitudinal edges having "ears" on the edges of the collar side walls or an interlocking mechanism on the front wall; EP 650 907 B1 discloses hinge-lid packs wherein the collar side walls are shaped such that an increased friction with the lid side walls results.

[0005] It is an object of the subject invention to provide novel and improved packs which reduce or avoid said disadvantage of the hinge-lid pack.

[0006] The present invention provides a pack comprising a first part and a second part which parts are connected to each other and which are continuously and linearly moveable relative to each other from the closed position of the pack to an open position, and vice versa, that is from an open position to the closed position. The first part and the second part are linearly moveable relative to each other along the longitudinal axis of the pack or along the transversal axis of the pack.

[0007] The first part or box part is suitable to serve as a receptacle and the second part is suitable to serve as a lid.

[0008] The receptacle is the part of the pack which can hold the goods of the pack, that is the article or articles to be packaged. The receptacle comprises a bottom wall (which is at the same time the bottom wall of the pack) and at least one receptacle wall which is attached to the bottom wall. The bottom wall can take various forms. For example, if the bottom wall is circular or oval, advantageously there is only one receptacle wall which is attached to the circular or oval bottom wall along its circumference. If the bottom wall is essentially rectangular (or square) - including such bottom walls with one, two, three or four rounded corners - there are at maximum four discernible receptacle walls, namely a front wall, a rear wall and two side walls. The edges between those walls may optionally be rounded or beveled. However, one or more of the walls may be missing and/or be reduced in size. For example the front wall may be missing or reduced in size and/or one or both side walls can be reduced in size such that the receptacle sides are not completely covered by the side walls. If the bottom wall is polygonal (for example octagonal) there are discernible at maximum a corresponding number of receptacle walls (for example at maximum a total of eight receptacle walls in case of an octagonal bottom wall). For example, in the event of packs with beveled edges the receptacle can be made from an octagonal bottom wall with a front wall, a rear wall and two side walls and the four remaining receptacle walls being formed by the beveled edges of the front wall, the rear wall and the side walls. In general, bottom and receptacle walls are preferably adapted to each other such that a receptacle wall or receptacle walls corresponding to the form of the bottom wall are provided, and one or more but not all of the maximally possible receptacle walls may be missing. Thus, a receptacle results which is closed on the bottom and at least partially closed on its sides. The top part of the receptacle (being directed towards the lid) is at least partially and preferably completely open. Thus, the receptacle bottom wall is located opposite to the at least partially open receptacle top. Moreover, preferably the receptacle walls are perpendicular to the bottom wall. It is particularly preferred that the receptacle comprises an inner frame or a collar.

[0009] The second part, alternatively referred to as the lid part of the pack of the invention comprises a top wall of (which is at the same time the top wall of the pack) and at least one lid wall attached to said top wall. The top wall and the lid wall or walls are preferably adapted to each other such that a lid wall or lid walls corresponding to the form of the top wall are provided. One or more but not all of the maximally possible lid walls may be missing. The lid wall is or the lid walls are adapted to the top wall such that a lid results which is closed on the top and at least partially closed on its sides. The bottom of the lid (which is directed towards the receptacle) is at least partially and preferably completely open. Thus, the lid top wall is located opposite to the at least partially open lid bottom. Preferably the lid wall is or the lid walls are perpendicular to the top wall. For example, a lid with an essentially rectangular (or square) top wall is combined with a front wall, a rear wall and two side walls - preferably at least one and even more preferred more than one or all edges between the four walls may be rounded.

[0010] The two parts of the pack, receptacle and lid, preferably have open meeting sides. Thus the receptacle and the lid each provide for a space. Upon closure of the pack, these two spaces merge into one single space. This allows that goods in the pack which in the open position are only held in the receptacle extend beyond the receptacle into the lid in the closed position. This applies, for example, in the event that the pack contents consists of elongate goods, such as cigarettes.

[0011] The first (receptacle) part and the second (lid) part of the pack of the invention are connected to each

other such that under regular and intended handling conditions the two parts are not separated from each other when the pack is fully opened. Intended handling conditions include repeated opening and closing of the pack until all contained articles are removed. The connection of the two parts is of an essentially permanent nature and not adversely affected or destroyed during the opening of the pack. Such essentially permanent connection may be obtained, for example, by application of an adhesive, such as glue, to fix suitable connection means to the walls of the receptacle, the lid, or both. Alternatively, the connection between the receptacle part and the lid part may, for example, be established by mechanical means. The connection is generally achieved by one or more suitable connecting means, which connect the receptacle with the lid, for example a thread, a strip, a strand, a filament, a flap, a tongue or a tongue-like part (hereinafter collectively referred to as a tongue), or any combination thereof. A particularly preferred connecting means is a tongue. Said tongue can be an integral part of the receptacle, or of the lid, or a separate part. In the latter case one end of the tongue is typically attached to one of the two pack parts, for example to the receptacle, and the other end of the tongue is fixed to the other pack part, for example to the lid. Advantageously, the tongue is made from the same material as the pack, for example the materials mentioned below, such as cardboard and paper. The tongue may or may not be part of the same blank the lid is made of. Optionally the tongue may be folded, for example z-folded. Preferably, the tongue has a sheet-like structure. That is, it is relatively thin and its width substantially corresponds to or is smaller than the width of the receptacle wall or the lid wall, in particular smaller than the receptacle rear wall or the lid rear wall. The tongue is designed such that it allows for sufficient rigidity during the opening and closing of the pack, in particular when the tongue moves up and down between the receptacle rear wall and the content of the pack.

[0012] The packs according to the invention are characterized in that they lack a hinge, meaning that the lid part and the receptacle part are not connected along a hinge line, as is the case for a conventional hinge-lid pack. Rather, the packs of the invention are characterized in that the two parts are continuously moveable in a linear movement relative to each other between the open position and the closed position (and not as in case of a hinge, in a circular movement). This linear movement can also be described as a drawer-like movement.

[0013] It is preferred that in the closed position the pack does not have any open sides. It is further preferred that the meeting open sides of receptacle and lid are adapted to each other. In the closed position the two parts of the packs of the invention are abutting against each other, that is the free edges of the lid part are abutting against the opposed, correspondingly shaped edges of the receptacle part along a pre-designed mating line. Said mating line can be designed to take any desired form, and may be straight, wave-like, curved, rectangular or triangular, or any combination thereof. It is also possible that one or more lid wall or walls and/or one or more receptacle wall or walls have a cut-out portion. Preferably such cut-out portions are at corresponding and matching positions of the lid wall and the receptacle wall and have corresponding forms (for example each may be in the form of a semi-circle). The cut-out portions (for example in the form of a circle made of two semi-circles) may facilitate the opening of the pack.

[0014] In some prior art packs the lid portion is put over the receptacle portion of the pack in order to obtain a closed pack. In other words, the lid is telescoped over the receptacle. As a consequence, rims around at least three or more surfaces of those packs are obtained. In contrast thereto, the closed packs of the subject invention exhibit preferably no or only one rim. In other words, on closing the subject packs by moving the lid linearly to the receptacle these two parts meet each other along a single well defined interface or mating line. The lid and receptacle part of prior art packs meet each other along interface or mating surfaces because the lid is at least partially slipped over the receptacle.

[0015] The combination of the above-described feature of two hollow spaces with the linear movement of the parts embodying said hollow spaces and meeting of the two parts along a well-defined mating line is a particularly preferred embodiment of the subject invention.

[0016] As mentioned above, the receptacle wall or walls and the lid wall or walls are preferably perpendicular to the (receptacle) bottom wall and (lid) top wall. Moreover, it is preferred that the form of bottom wall and top wall are adapted to each other and have corresponding geometric forms so that the resulting pack preferably has the form of a rectangular parallelepiped (in case of rectangular bottom and top walls, with or without rounded or beveled corners) or the form of a cylinder (in case of round or oval bottom and top walls). However, it is also possible that receptacle and lid walls are not perpendicular to the bottom or top walls, respectively. In that case the resulting pack can have the form, for example of a pyramid (with a square receptacle bottom wall and a lid top wall reduced to single point) or of a truncated cone (with a rectangular receptacle bottom wall and a rectangular but smaller lid top wall). In that event it is preferred that the pack has a constant cross-section along the distance of the linear movement.

[0017] The packs according to the invention provide further advantages, including, for example, an increased surface area in the open position, as compared with a conventional hinge-lid pack. Such increased surface area may be useful for example for consumer communication or information purposes. Additionally, the packs of the invention facilitate content retention or aroma preservation within the pack. They also combine the rigidity known from hinge-lid packs with the handling benefit of known soft packs.

[0018] The present invention relates to the packs per se as well as to the packs charged with content. While

generally useful for various types of articles, the novel packs of the invention are particularly useful for tobacco products, for example elongate smoking articles, preferably cigarettes. The size and the shape of the packs are chosen such as to suitably accommodate the intended content. For example, the size of cigarette packs may be chosen to accommodate for example 10, 20 or 25 cigarettes.

[0019] Preferably, the packs of the invention have the form of a rectangular parallelepiped. Optionally, one or more, preferably all of the (longitudinal) edges of the packs of the invention may be beveled or rounded. Particularly preferred packs of the invention are cigarette packs wherein the cigarettes are aligned parallel to the longitudinal axis of the packs.

[0020] In a first and preferred sub-group, the subject invention provides packs wherein the receptacle and the lid are connected with each other via any suitable connecting means which is fixed to, or an integral part of, the lid and which is moveable within the receptacle. Preferably, such connecting means is a tongue. If desired, additional connecting means may be present to support the connecting function of the tongue.

[0021] To access the pack content the consumer can open the packs by continuously and linearly moving (or sliding) the lid away from the receptacle. To close the pack, the lid is moved towards the receptacle.

[0022] Separation of the lid from the receptacle is avoided by the presence of one or more connecting means. Preferably, the means is fixed to the lid or is even part thereof and which is moveable within the receptacle. Advantageously, the connecting means is fixed to one of the inner sides of the lid. In order to avoid separation of the two pack parts on opening of the pack, the connecting means, such as the tongue, is also fixed to the receptacle in a suitable way. For example, one suitable way to fix the connecting means to the receptacle is by mechanical interaction, such as the interlocking of a flap at the lower end of the tongue with one or more means with one or more suitable counterparts of the receptacle. In particular, the tongue can be an extension of the lid rear wall (for example an integral extension or an extension fixed to the inner lid rear wall), extending beyond the lower lid edge and into the receptacle (in the closed and open positions). Advantageously, the tongue has a sheet-like form having substantially the same width as the inner side of the receptacle rear wall. Thus, the tongue is guided on the one side by the rear wall of the receptacle and on the other side by the contents of the pack. The tongue may be fixed to the receptacle rear wall, in particular to the edge formed by receptacle rear wall and the bottom wall. This allows a defined extent of linear movement which is essentially determined by the length of the tongue.

[0023] As mentioned above, the tongue may be fixed to only one part of the pack or be an integral component thereof, for example the lid. The connection to the second part, for example the receptacle, which is necessary to avoid accidental separation of the two parts of the pack, e.g. during the opening process, is generated during the linear movement, advantageously during the opening process. For example, the tongue which is fixed to the lid may comprise a first flap at its unfixed end which first flap interacts with one or more second flap or flaps included in the rear wall of the receptacle part which wall is parallel to and next to the tongue. It is important that the first and the second flaps are arranged such as to allow for interaction between them. Advantageously, the flaps and the interaction between them are designed such that they limit the extent of linear opening movement. For example, the first and the second flaps may be bent in opposite directions, e.g. inwards and outwards, resulting in interlocking or interdigitating interaction.

[0024] A flap may be an integral or a separate part of the tongue, or a wall. In case of the flap being an integral part it may be constructed by bending a small part of the free edge of the wall or of the tongue outwards or inwards. Alternatively, a flap may be constructed by attaching an additional element to the wall or the tongue. Said additional element may extend over part of or all of the entire width of the wall, preferably the rear wall, or the tongue. Preferably, the flap is made of the same material as the pack. However, other suitable materials such as plastics, metals, or laminates may also be used. The flap can be glued or otherwise fixed to the wall or the tongue.

[0025] The first and the second flaps may be of the same or of different shape. Preferably, one flap, for example the wall flap, can have a rectangular shape, and the other flap, for example the tongue flap, can have a tapered shape that is a triangle or a semi-circle. Other forms such as comb-like or undulated structures are also possible. The employment of differently shaped first and second flaps may improve their ability to interact. For example, the flap of the receptacle rear wall may have a rectangular shape and the tongue flap may have the shape of a semi-circle.

[0026] Upon opening of the pack the lid is linearly moved away from the receptacle until the tongue flap and the rear wall flap interlock. This is the final opening position. One advantage of such pack is that no additional connecting means, such as a thread, strip, strand, or filament, is needed for providing the connection between the lid and the receptacle. Another advantage is a high flexibility in the design of the pack. For example, since the receptacle part and the lid part are made from two different blanks, they can be produced separately and be made from different materials.

[0027] The tongue optionally may be folded. Then it can be fixed to the inner side of the receptacle, preferably to the receptacle bottom or front walls. The extent of movement is then determined by the difference of the tongue length in folded and unfolded condition. Alternatively and/or additionally, the tongue may be fixed to the receptacle by one or more other connecting means, such as thin threads, allowing an extent of movement which is essentially determined by the length of the thread or

threads and the length of the tongue. In a further alternative, the tongue has a width smaller than the inner side of the receptacle rear wall, and it has one or two tabs which are directed sideward. The receptacle has a corresponding protrusion or protrusions which is or are located towards the receptacle side walls and in the line of movement of the tongue. When opening the lid the tongue tab or tabs come in contact with the receptacle protrusion or protrusions and stop the opening movement.

[0028] For packs wherein the connecting means is a tongue it is in particular preferred that the extent of possible movement is such that in the fully or maximum open position the lid is far enough away from the receptacle (or free from the receptacle) so that it can be bent or swung away from the linear opening direction. This has the advantage that the content of the pack is more easily accessible.

[0029] According to the invention the subject packs lack a hinge. However, upon folding, bending or swinging the lid away from the linear opening direction a buckling or break in the lid rear wall or rear wall extension might occur as a result of these movements. It is also possible to provide a designed folding line in the lid rear wall or rear wall extension to ensure that folding or bending always occurs along the same designed line.

[0030] Preferably, the packs according to the first subgroup have an inner frame or a collar attached to the inner side of the receptacle which extends from the receptacle up into the lid in the closed position. Said arrangement has the advantage of providing additional protection and retention of the pack content. Additionally, the inner frame can provide guidance during the opening and closing movements of the lid. It is particularly preferred that the inner frame or collar extends across the front wall, across the left and right side walls and at least partially from the side walls across the rear wall of the pack. Thus, two collar rear wall extensions can result, one on each side of the rear wall and adjacent to the left and right collar side walls. The extensions in turn can each be divided into an upper and lower flap, one flap (the lower) being completely within the receptacle, and one flap (the upper) being only partially within the receptacle.

[0031] A particularly preferred pack according to the invention is obtained by combining this type of collar with a parallelepiped receptacle and a suitable lid which has an integrated or attached tongue said tongue being equipped with a flap at its unfixed end (see detailed description of this tongue embodiment below). The advantage of this combination is that the rear wall extensions of the collar provide for safe guidance of the tongue in that the lower part of the tongue is put between the lower collar extension flaps and the rear wall of the receptacle, and in that the upper part of the tongue is put between the upper collar extension flaps and the contents of the pack. Thus, one side of the tongue is in contact with the lower rear wall extension flaps of the collar, and the other side of the tongue is in contact with the upper rear wall extension flaps of the collar. This alternating contact results in safe guidance of the lid during the opening and closing movements conducted by the consumer and supports twist-free movements of the lid relative to the receptacle.

[0032] Another particularly preferred pack according to the subject invention is a parallelepiped pack comprising a receptacle part with an inner frame and a lid part wherein the connecting means between the parts is a tongue having a flap at the end extending into the receptacle which flap interlocks with the inner frame at the rear wall of the receptacle, thereby providing the connection between the two parts of the pack.

[0033] Preferably the packs according to the first preferred sub-group have the form of a rectangular parallelepiped, wherein the edges of the lid facing the receptacle at the open meeting sides form at least one cut-out portion and preferably two cut-out portions on opposite sides, for example on the rear side and the front side. The cut-out portion or portions can have various forms, such as circles, semi-circles, triangles and in particular isosceles triangles. The edges of the receptacle facing the lid at the meeting open sides form a counterpart to and mate with a corresponding cut-out portion of the lid facing the receptacle. Preferably, the two counterparts on opposite sides mate with the cut-out portions and have the form of isosceles triangle or triangles. These packs have the advantage that the consumer, irrespective of whether he is a left-hander or right-hander, can hold the pack with the left or right hand, and the thumb, and more preferably also the forefinger in case of two cut-out portions, in both cases being located on the receptacle counterpart or counterparts in the form of an isosceles triangle or triangles, that is in an ideal position so that the pack can be hold very firmly and opened easily.

[0034] As a second and preferred sub-group the subject invention provides packs wherein the receptacle and the lid are connected with each other via a suitable connecting means which is fixed to or an integral part of the receptacle and wherein the receptacle is movable within the lid. The connecting means is as defined above in conjunction with the first sub-group. It is, however, preferred for the packs of the second sub-group that the connecting means is a tongue which is part of or identical with the receptacle rear wall, optionally in combination with one or more threads.

[0035] In a first embodiment of this second sub-group the receptacle comprises a rear wall, a bottom wall, at least one, preferably two side walls but no front wall. The side wall or walls can be reduced in size (for example to a semi-circle or a triangle) so that they do not completely cover (extend across) the receptacle side or sides. The lid comprises a top wall, a rear wall, a front wall and at least one, preferably two side walls. Preferably, the bottom wall and the top wall have a rectangular shape. The side wall or walls can be reduced in size (for example with cut-out portions in the form of a semi-circle or a tri-

angle) such that they do not completely cover the lid side or sides but correspond with the reduced receptacle side wall or walls. Thus, when the pack is in the closed position all sides are completely closed due to the fitting (proper) combination of partial receptacle side walls and partial lid side walls.

[0036] As a result of the opening movement the lid partially overlaps in the open position with the receptacle. An opening on the pack front side results. For example, in case of cigarette packs, such arrangement allows for an opening on the pack front side with one or more cigarettes lying in full length in the opening so that these cigarettes can easily be taken out of the pack. This has the advantage that the pack goods are easily accessible.

[0037] In a second embodiment of the second subgroup the receptacle comprises a rear wall, a (preferably rectangular) bottom wall, at least two side walls and a front wall. One or more of the walls may have a reduced size. For example one of the side walls, the front wall and the rear wall are reduced in size, that is they have cut-out portions, for example in the form of a square, a semicircle or a triangle, so that these walls do not completely cover the respective side or sides, but only a part thereof. The cut-out portions are located on adjacent parts of the walls. The lid comprises a (preferably rectangular) top wall, a rear wall, a front wall and at least two side walls. One of the side walls, the front wall and the rear wall are reduced in size, that is they have cut-out portions in the form of, for example a square, a semi-circle or a triangle. The cut-out portions are located on adjacent parts of the walls such that they do not completely cover the respective side or sides but preferably essentially correspond to the cut-out portions on the receptacle. Thus, when the pack is closed all sides are completely closed due to the fitting (mating) combination of partial receptacle walls with partial lid walls.

[0038] Said pack then has a lid which in the open position overlaps with the receptacle on two opposite sides. An opening on one of the sides of the pack results. This is a further position for an easy removal of goods from the pack. It has the advantage that, because of the relatively small opening, the risk of content inadvertently falling out of the pack is reduced.

[0039] The consumer can open such packs according to the second sub-group by moving the lid away from the receptacle or close it by moving the lid towards the receptacle. Separation of the lid from the receptacle is avoided by the connecting means which is fixed to the receptacle, or preferably, to certain parts or points of the receptacle, typically to one of the inner sides of the receptacle. The tongue may be an extension of or preferably an integral part of the receptacle rear wall (thus, an extension fixed to the inner receptacle rear wall or preferably a direct extension thereof), extending into the lid in the closed and open positions. The tongue (or the receptacle rear wall) typically has a sheet-like form having essentially the same width and preferably also essentially the same height as the inner side of the lid rear wall, such that the lid rear wall and the receptacle rear wall are completely mating in closed position. Preferably the tongue is fixed to the lid front wall, in particular to the edge formed by lid front wall and top wall. This allows a defined extent of linear movement which is essentially determined by the length of the tongue. The tongue optionally may be folded. Then it can be fixed to the inner side of the lid, preferably to the lid top or front walls. The extent of movement is then determined by the difference of the tongue length in folded and unfolded condition. Alternatively and/or additionally, the tongue may be fixed to the lid by one or more other connecting means, such as thin threads, allowing an extent of movement which is essentially defined by the length of the thread or threads and the length of the tongue. In a further alternative, the tongue has a width smaller than the inner side of the lid rear wall, and it has one or two tabs which are directed sideward. The lid has corresponding protrusion or protrusions which are located towards the lid side walls and in the line of movement of the tongue. When opening the lid the tongue tab or tabs come in contact with the lid protrusion or protrusions and stop the opening movement. In another alternative the tongue can be fixed to only one pack part or is part of said part. This alternative has already been described above along with the embodiments of the first and preferred sub-group, and is similarly applicable for this embodiment. Thus, this is a further possibility to fasten the connecting means, for example the tongue, with the receptacle and to control the extent of the linear opening movement.

[0040] In a particularly preferred embodiment of the second sub-group the tongue is formed by the rear wall of the receptacle which is mating completely with the rear wall of the lid. In this embodiment the receptacle further comprises a receptacle bottom wall and one or two receptacle side walls (preferably in the form of isosceles triangle or triangles) but without a receptacle front wall so that the pack goods can very easily be removed.

[0041] It is preferred that the packs according to the second preferred sub-group are in the form of a rectangular parallelepiped, wherein the edges of the lid facing the receptacle at the open meeting sides form at least one cut-out portion and preferably two cut-out portions on opposite sides, for example on the lid sides. The cut-out portion or portions can have various forms, such as circles, semi-circles, triangles and in particular isosceles triangles. The edges of the receptacle facing the lid at the meeting open sides form a counterpart to and mate with a corresponding cut-out portion of the lid facing the receptacle. Preferably, the two counterparts on opposite sides mate with the cut-out portions and have the form of isosceles triangle or triangles. These packs have the advantage that the consumer, irrespective of whether he is a left-hander or right-hander, can hold the pack with the left or right hand, and the thumb, and more preferably also the forefinger in case of two cut-out portions, in both cases being located on the receptacle counterpart or counterparts in the form of an isosceles triangle or trian-

gles, that is in an ideal position so that the pack can be held very firmly and opened easily.

[0042] Particularly preferred embodiments out of all possible alternatives described above are packs wherein a tongue is attached to the lid or is an integral part of the lid, and wherein the tongue flap is an integral part of the tongue and is made by bending the unfixed end of the tongue outwards, and wherein the receptacle comprises a flap which flap is an integral part of the receptacle's rear wall and is made by bending the top edge of the rear wall inwards into the space defined by the receptacle walls. These specific packs further comprise a designed bending line in the lid's rear wall extension (which might also be seen as a part of the tongue that is an integral part of the lid) allowing the lid to be precisely swung away along said bending line. These embodiments aggregate all subject advantages in comparison to the prior art hinge-lid or soft packs, including an increased surface area, improved content retention and aroma preservation, excellent handling properties, good stability, and ease of production.

[0043] The packs according to the subject invention can be made from various materials or combination of materials. Suitable materials are known in the art and include, for example, paper, for example coated or laminated paper, cardboard, plastic, wood, for example soft wood, velvet, velvet-like materials, leather and/or metal, with paper and cardboard being preferred. The materials are selected such as to meet the desired properties of the pack.

[0044] The packages according to the subject invention can be made from separate blanks, for example one blank for the receptacle and one blank for the lid. The blanks for each part are folded such that the first and the second part with their respective front wall, rear wall, side wall, top wall and bottom wall (as far as the same are present), are formed. For materials which cannot be folded, the respective walls are suitably attached to each other, for example by gluing, so that again the separate first and second parts result. These are then connected to each other by suitable connecting means, for example by the use of an adhesive or a thread to yield the final packs.

[0045] The invention is illustrated by the following figures, wherein

Fig. 1 is a front side view of a cigarette pack 10 exemplifying the first preferred sub-group in closed position,

Fig. 2 is a view of the cigarette pack 10 of Fig. 1 along line II-II,

Fig. 3 shows a view of cigarette pack 10 of Fig. 1 in open position,

Fig. 4 is a top view of a cigarette pack 10 exemplifying a first embodiment of the second preferred subgroup in open position,

Fig. 5 is a top view of a further cigarette pack 10 exemplifying a second embodiment of the second preferred subgroup,

Fig. 6 is a view of a cigarette pack 10 similar to Fig. 1 along line II-II, and

Fig. 7 shows the design and location of a flap 90 on tongue 21 of the pack of Fig. 6.

[0046] Like parts in the figures are designated with like numerals.

[0047] The closed cigarette pack 10 of Fig. 1 made of regular cardboard has a lid 20 with front wall 22, side walls 24, rear wall 26 and top wall 28 and a receptacle 30 with front wall 32, side walls 34, rear wall 36 and bottom wall 38. Receptacle 30 and lid 20 are mating along an interface line 50. The receptacle 30 is designed to hold a group of cigarettes, e.g. 20 cigarettes, of normal size.

[0048] Fig. 2 shows a cross-section of the cigarette pack 10 along line II-II. Top wall 28, bottom wall 38 and rear walls 26 and 36 can be seen, and a tongue 21, which is fixed by an adhesive to the inner side of lid rear wall 26 and which has extensions such that in the closed position, as in Figs. 1 and 2, it covers except for a small gap at the lower end of the receptacle rear wall 36 essentially all of the inner sides of rear walls 26 and 36. Tongue 21 is connected at its lower end by thread 23 to the bottom wall 38, for example by small drops of adhesive on the tongue 21 and on the bottom wall 38. The length of the thread 23 defines the distance the lid 20 can be moved or drawn out of the receptacle 30. Fig. 2 further shows front walls 22 and 32 and a collar 40 which is also made of cardboard and glued to the inner side of receptacle front wall 32. Collar 40 typically extends, as shown in Fig. 2, beyond the receptacle 30 and, in the closed position of pack 10, into the lid 20 and along receptacle front wall 32 and receptacle side walls 34. In this embodiment the collar does not extend across the receptacle rear wall 36. Further shown is the mating line 50 against which the receptacle part 30 and the lid part 20 abut.

[0049] Fig. 3 shows the cigarette pack 10 (cigarettes are not shown in Fig. 3) of Figs. 1 and 2 in open position. The receptacle 30 and the lid 20 as well as the collar 40 with its front wall 42 and its side walls 44 can be seen. Moreover, tongue 21 and collar 40 are visible.

[0050] As can be seen from Figs. 1, 2 and 3, the lid front wall 22 has at its lower edge a cut-out portion 25 in the form of an isosceles triangle with a mating counterpart 35 on the receptacle 30, which also has the form of an isosceles triangle. The same mating isosceles triangles on the lid 20 and the receptacle 30 can be provided on the rear side of the box as can be seen from the cross-section shown in Fig. 2. The angle α is preferably about 90°.

[0051] As can be seen from Figs. 1 and 3, opening and closing can easily be achieved by way of holding the receptacle 30 and putting, for example a thumb on the isosceles triangle 35 and pulling on the lid for opening or pushing on the lid for closing.

[0052] Fig. 4 concerns a different embodiment accord-

ing to the subject invention, namely a cigarette pack 10 according to the first embodiment of the second preferred sub-group. The cigarette package 10 of Fig. 4 is provided with the lid 20 with lid front wall 22, side walls 24, top wall 29 and rear wall 26. Further provided is the receptacle 30 with its bottom wall 39 and its side walls 34. As can further be seen, a receptacle front wall is missing in the cigarette pack 10 of Fig. 4, and the receptacle rear wall 36 is at the same time also the tongue which extends into the lid 20.

[0053] The cigarette pack 10 in Fig. 4 is in the open position and it can be seen that the consumer can, for opening and closing, grip the receptacle side walls 34 (which are both in the preferred form of an isosceles triangle) with, for example thumb and forefinger and the lid with the other hand so that then receptacle 30 and lid 20 can be moved away from or towards each other. The cigarette pack 10 in Fig. 4 is empty but it can easily be imagined that cigarettes wrapped in an inner liner can be hold within the receptacle 30. In the event that use of an inner liner is undesirable, the receptacle side walls 34 can be designed in a different way such that complete side walls and, if desired, also a complete top wall is formed. The risk of cigarettes falling out of the cigarette pack can thus be avoided.

[0054] Fig. 5 shows an example of the second embodiment of the preferred cigarette packs 10 according to the second subgroup with a lid part 20 (with lid front wall 22, lid top wall 29, lid rear wall 26 and lid side walls 24) and the receptacle 30 (with receptacle front wall 32, receptacle bottom walls 39, receptacle rear wall 36 and receptacle side walls 34), which can be moved in and out of the lid 20. As for the other cigarette packs 10 shown, also the pack 10 of Fig. 5 can have the isosceles triangles on the lid 20. As is evident from Fig. 5, an opening 46 results on one side of the cigarette pack 10 which is relatively small compared to normal cigarette packs so that the risk that cigarettes inadvertently are lost from the cigarette pack is considerably reduced.

[0055] Fig. 6 shows a cross-section analogue to Fig. 2 of a pack similar to the pack of Fig. 1. The difference is the connecting means. Tongue 21 comprises an integral flap 90 made by bending the unfixed end or edge of tongue 21 outwards. Receptacle rear wall 36 comprises a flap 91 made by bending the top edge of wall 36 inwards. Fig. 7 is a rear view of the lid 20 of the pack of Fig. 6. The lid 20 includes rear wall 26 and tongue 21 showing the design of flap 90 made by bending the unfixed end of tongue 21 outwards. The flap's curved edges 92 allow for easy interaction with the receptacle rear wall flap 91.

Claims

1. A pack comprising a first part and a second part which parts are connected to each other, **characterized in that** both parts are linearly moveable relative to each other from a closed position to an open position and vice versa, and **in that** the first and second part are mating completely along an interface line (50).

2. Pack according to claim 1, **characterized in that** both parts are linearly moveable relative to each other between the closed position and the open position of the pack, and **in that** the free edges of the first part abut against the opposed free edges of the second part.

3. Pack according to any preceding claims which is a cigarette pack (10).

4. Pack according to any preceding claims wherein the pack has a constant cross-section along the distance of the linear movement.

5. Pack according to any preceding claim which is made of paper, cardboard, plastic, wood, velvet, a velvet-like material, textile, leather, metal or any combination of such materials.

6. Pack according to any preceding claim which has the form of a rectangular parallelepiped.

7. Pack according to claim 6 wherein at least one, preferably all of the longitudinal edges are rounded or beveled.

8. Pack according to any one of claims 1 to 7 wherein the first part is a receptacle (30) and the second part is a lid (20) and the receptacle (30) and the lid (20) are connected with each other by means of a connecting means, preferably a tongue (21) which is fixed to or part of the lid (20) and which is movable within the receptacle (30).

9. Pack according to claim 8 wherein an inner frame (40) is attached to the inner side of the receptacle (30), the inner frame (40) extending beyond the receptacle (30) and into the lid (20) in the closed position.

10. Pack according to claim 8 or claim 9 wherein in the open position the lid (20) can be swung or bent away from the linear opening direction.

11. Pack according to any one of claims 8 to 10 in the form of a rectangular parallelepiped wherein the edges of the lid (20) facing the receptacle (30) at the open meeting sides form at least one cut-out portion (25) and preferably two cut-out portions (25) on opposite sides, such that the cut-out portion(s) (25) has/have the form of isosceles triangle(s), and the edges of the receptacle (30) facing the lid at the open meeting sides form one counterpart (35) mating with the

cut-out portion (25) and preferably two counterparts (35) on opposite sides mating with the cut-out portions (25) and having the form of isosceles triangle (s) .

12. Pack according to any one of claims 8 to 11 wherein the tongue (21) in the pack's open position is partially in the receptacle (30).

13. Pack according to any one of claims 1 to 7 wherein the first part is a receptacle (30) and the second part is a lid (20) and the receptacle (30) and the lid (20) are connected with each other via a tongue or other connecting means which is fixed to or part of the receptacle (30) and which is movable within the lid (20).

14. Pack according to claim 13 wherein in the open position the lid (20) partially overlaps with the receptacle (30).

15. Pack according to claim 13 or claim 14 which has in the open position an opening (46) on the front side of the pack (10).

16. Pack according to any one of claims 13 to 15 in the form of a rectangular parallelepiped wherein the free edges of the lid (20) facing the receptacle (30) at the open meeting sides form at least one cut-out portion (25) such that the cut-out portion (25) has the form of an isosceles triangle and the free edges of the receptacle (30) facing the lid (20) at the open meeting sides form one counterpart (35) abutting against the cut-out portion (25).

17. Pack according to claim 13 or claim 14 wherein in the open form the lid (20) overlaps the receptacle (30) on two opposite sides.

18. Pack according to claim 17 which has in the open position an opening (46) on one of the sides of the pack.

19. Pack according to any one of claims 13 to 18 wherein the tongue in the pack's open position is partially in the lid (20).

20. Pack according to any one of claims 8 to 19, in particular any one of claims 8 to 12, wherein the tongue (21) and the receptacle (30) each comprise one or more flaps (90, 91), and wherein the flap or flaps of the tongue interlock with the flap or flaps of the receptacle in the opened position of the pack.

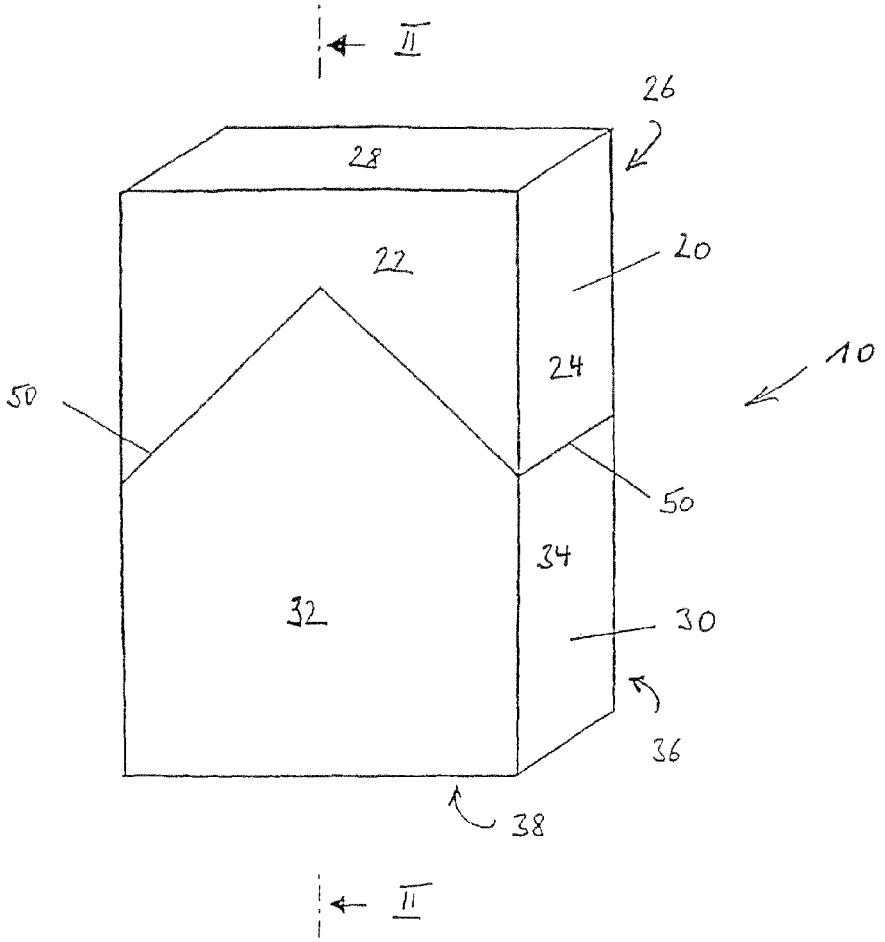
21. Pack according to claim 20, wherein the flaps (90, 91) are integral or separate parts of the tongue (21) or the receptacle (30).

22. Pack according to claim 20 or claim 21, wherein the tongue flap (90) has a different shape than the receptacle flap or flaps (91).

23. Pack according to any one of claims 20 to 22, wherein

- the tongue (21) is attached to the lid (20),
- the tongue flap (90) is an integral part of the tongue (21) and is made by bending the unfixed end of the tongue (21) outwards, and
- the receptacle flap (91) is an integral part of the receptacle's rear wall (36) and is made by bending the top edge of the rear wall (36) inwards.

Fig.1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II

Fig.2

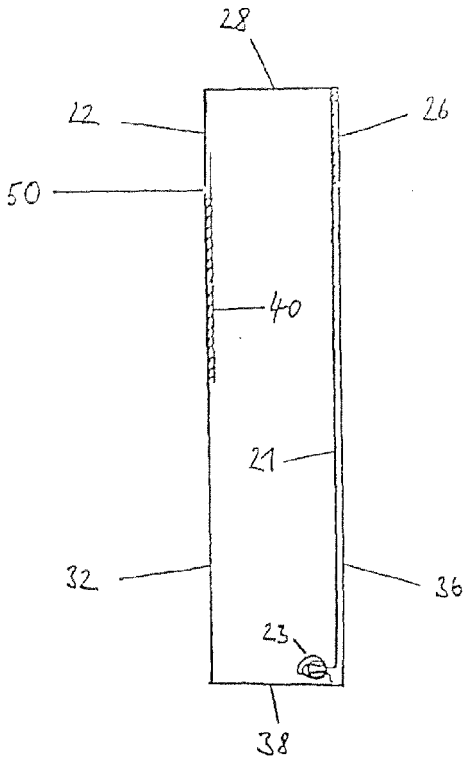
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Fig.3

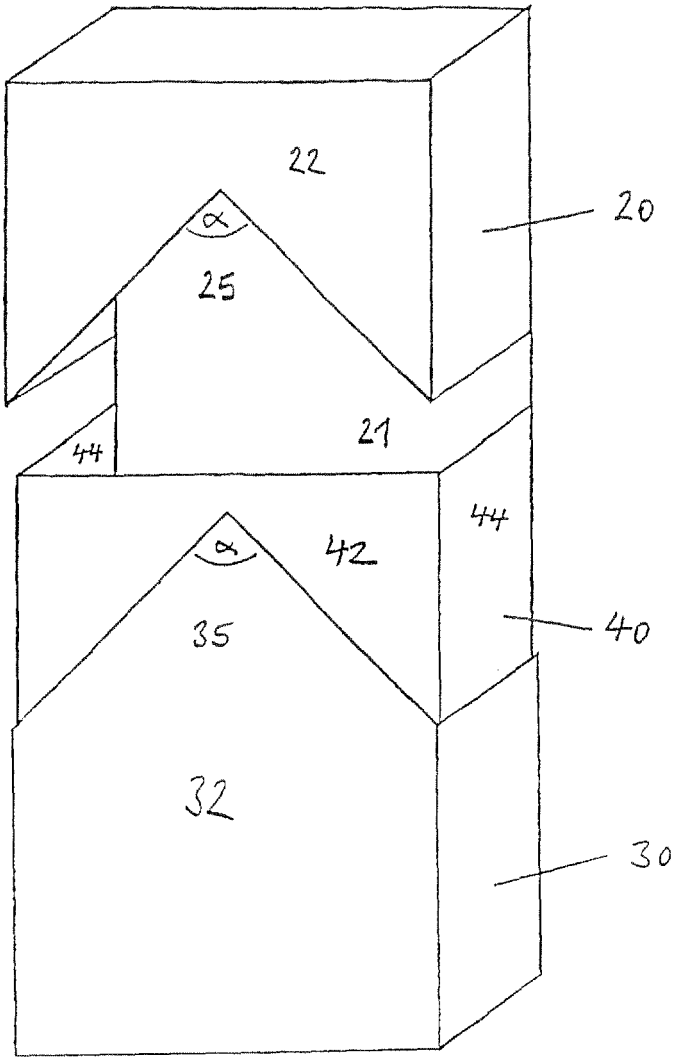


Fig.4

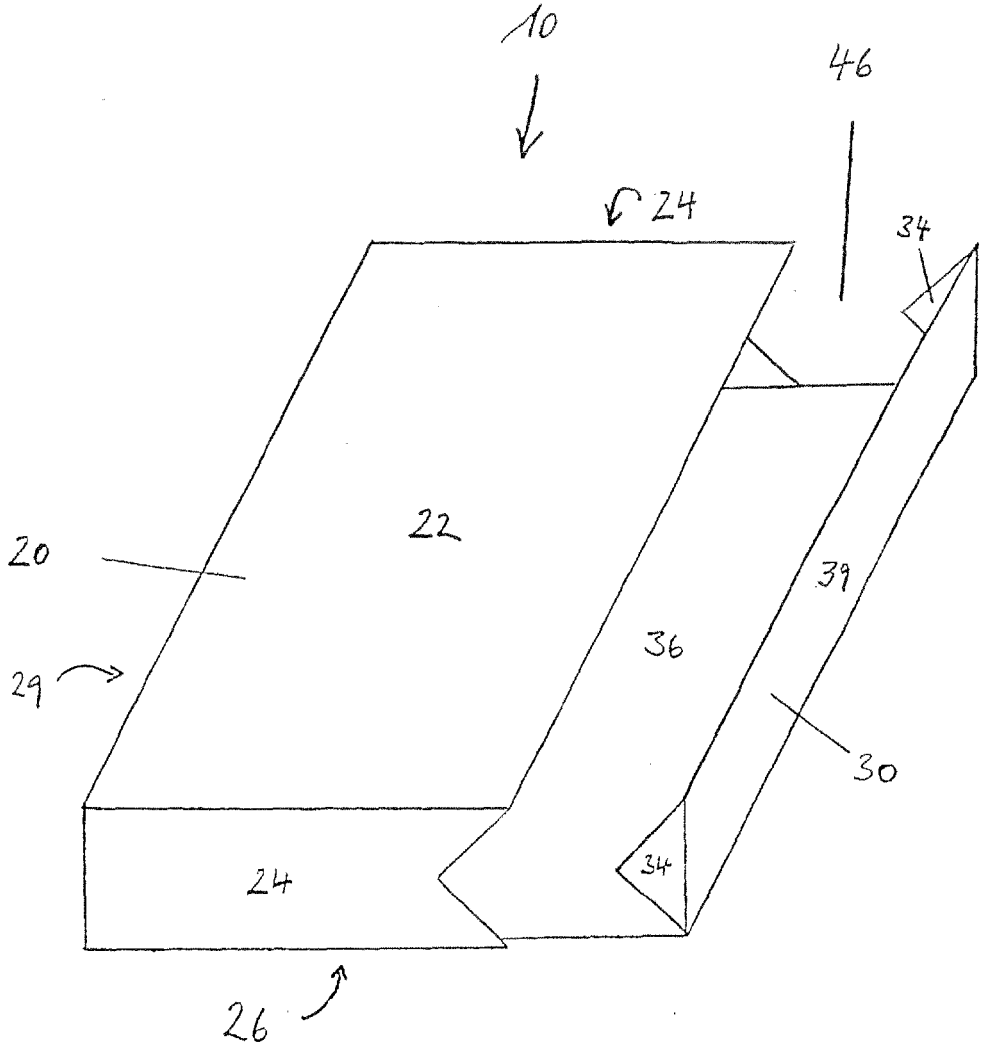


Fig.5

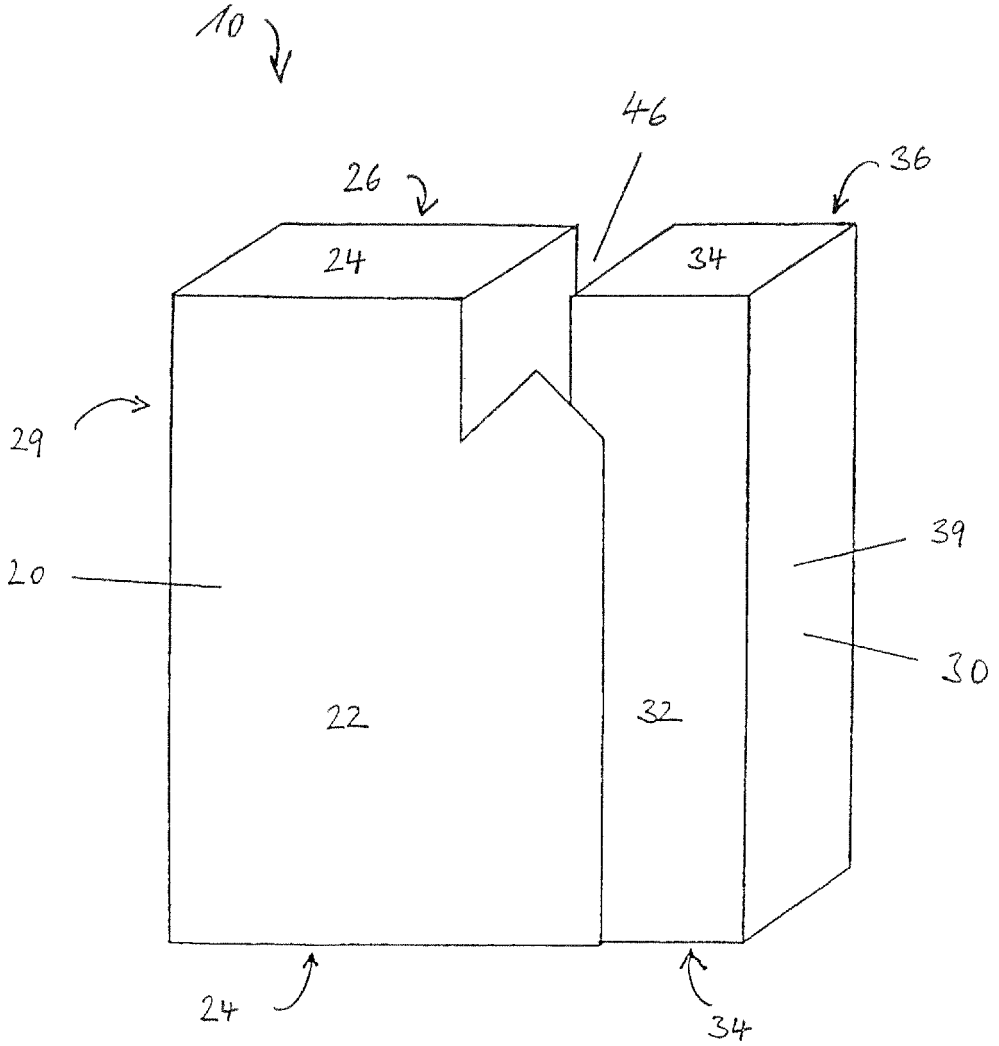


Fig.6

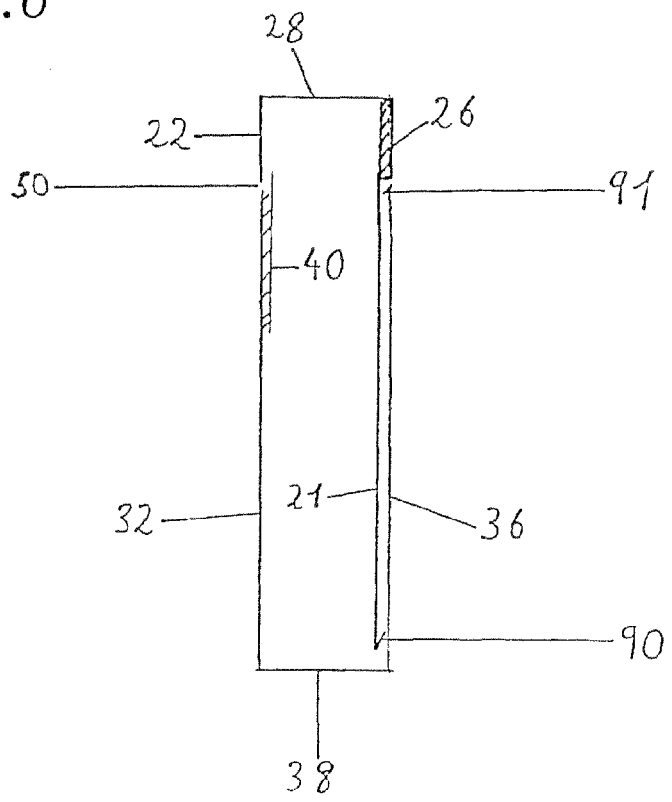
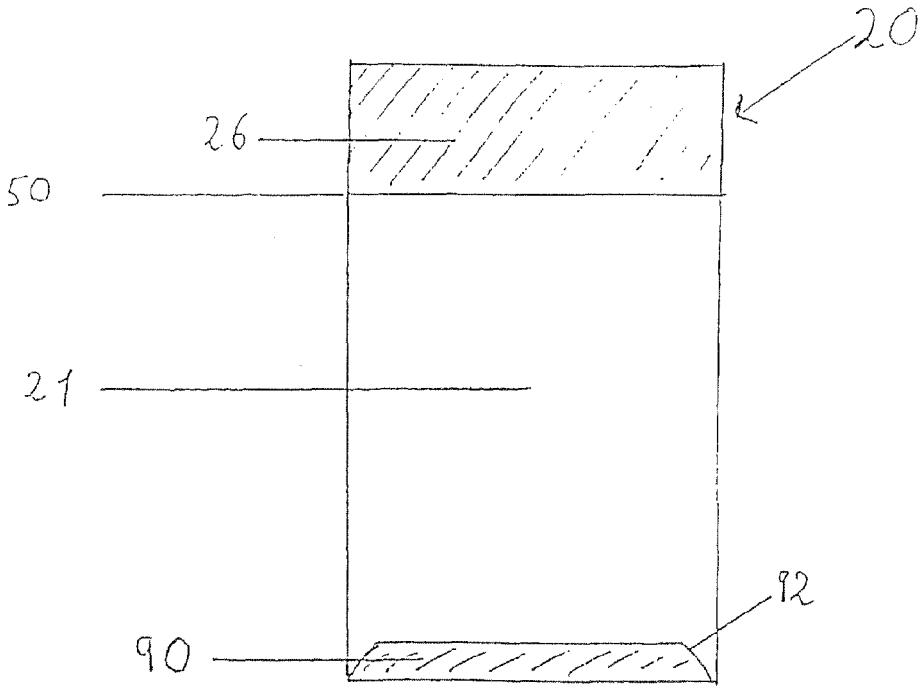


Fig.7



REFERENCES CITED IN THE DESCRIPTION

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